



**Payment Card Industry (PCI)**

# **Point-to-Point Encryption (P2PE)**

**Reporting Instructions for P2PE Solution Report on Validation  
(Solution P-ROV)**

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## **Solution P-ROV Reporting Instructions**

**For PCI P2PE Standard v1.1  
Hardware/Hardware P2PE solutions**

September 2012

## Document Changes

Date	Document Version	Description	Pages
September 2012	1.0	To introduce Solution P-ROV Reporting Instructions for PCI Point-to-Point Encryption (P2PE) solutions. This document is intended for use with version 1.1 of the P2PE Standard, for Hardware/Hardware P2PE solutions.	

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## Introduction

The PCI Point-To-Point Encryption (P2PE) Standard defines requirements and testing procedures for validating P2PE solutions. The six domains of P2PE requirements are:

- Domain 1: Encryption Device Management
- Domain 2: Application Security
- Domain 3: Encryption Environment
- Domain 4: Segmentation between Encryption and Decryption Environments
- Domain 5: Decryption Environment and Device Management
- Domain 6: P2PE Cryptographic Key Operations

There are two sets of testing procedures for Domain 2: one for the application vendors and the development environment, and one for the solution providers and the solution environment. The Domain 2 application vendor assessment is documented in the Application P-ROV. The Domain 2 solution provider assessment is included in the Solution P-ROV together with assessment findings for all other P2PE domains.

At a high level, the Solution P-ROV and Application P-ROV address the P2PE Domains as follows:

Solution P-ROV	Application P-ROV
<ul style="list-style-type: none"><li>▪ Domain 1</li><li>▪ Domain 2 – Solution Provider Assessment</li><li>▪ Domain 3</li><li>▪ Domain 4 (not applicable for hardware/hardware)</li><li>▪ Domain 5</li><li>▪ Domain 6</li></ul>	<ul style="list-style-type: none"><li>▪ Domain 2 – Application Vendor Assessment</li></ul>

POI applications used in P2PE solutions are assessed as follows:

- POI applications which have access to clear-text account data must be evaluated against all P2PE Domain 2 Requirements. These applications must undergo both an Application Vendor Assessment and also be included in a Solution Provider Assessment for each solution they are used in.
- POI applications that do not have any access to clear-text account data are assessed only as part of the applicable Solution Provider Assessment, and must be documented in the Solution P-ROV.

A summary of the Domain 2 assessment processes for Application Vendors and Solution Providers is provided below:

	<b>Domain 2 Application Vendor Assessment</b>	<b>Domain 2 Solution Provider Assessment</b>
<i>Assessed entity:</i>	Application Vendor	Solution Provider
<i>Domain 2 Testing Procedures:</i>	Application Vendor Testing Procedures	Solution Provider Testing Procedures
<i>Report used to document assessment:</i>	Application P-ROV	Solution P-ROV
<i>Types of POI applications to be assessed:</i>	<ul style="list-style-type: none"> <li>All POI applications with access to clear-text account data</li> </ul>	<ul style="list-style-type: none"> <li>All POI applications with access to clear-text account data</li> <li>All POI applications without access to clear-text account data (subset of Domain 2 requirements)</li> </ul>
<i>Description of assessment:</i>	<ul style="list-style-type: none"> <li>The Domain 2 application vendor assessment covers the development environment and SDLC procedures, application coding, and verification of the application Implementation Guide content.</li> </ul>	<ul style="list-style-type: none"> <li>The Domain 2 solution provider assessment includes ensuring the application's Implementation Guide is followed, and reviewing operational procedures and controls related to implementation and maintenance of the application within a particular P2PE solution.</li> </ul>
<i>Relationship to P2PE solution assessments:</i>	<ul style="list-style-type: none"> <li>Domain 2 Application Vendor assessment is performed separately from any P2PE solution assessment that the application may be used in.</li> </ul>	<ul style="list-style-type: none"> <li>Domain 2 Solution Provider assessment is included as part of the P2PE solution assessment for each solution the application is used in.</li> </ul>
<i>Validation / listing:</i> <sup>*</sup>	<ul style="list-style-type: none"> <li>Application P-ROV submitted to PCI SSC for applications to be accepted and listed on PCI SSC List of Validated P2PE Applications</li> </ul>	<ul style="list-style-type: none"> <li>Solution P-ROV submitted to PCI SSC for solutions to be listed on PCI SSC List of Validated P2PE Solutions</li> <li>All POI applications included in solution listing</li> </ul>

**Note:** If an application is developed in-house by the solution provider for use only in their own solution, the application vendor testing procedures must be assessed separately to the solution provider testing procedures. Both an Application P-ROV and a Solution P-ROV are required.

<sup>\*</sup> Please refer to the P2PE Program Guide for details of the listing processes for P2PE applications and P2PE solutions.

The P2PE assessor should complete the P2PE Solution P-ROV using the applicable PCI SSC template and these Reporting Instructions. The template for creating and completing a P2PE Solution Report on Validation (Solution P-ROV) is defined in the *Solution P-ROV Template for PCI P2PE Standard v1.1 – Hardware/Hardware P2PE solutions*. P2PE assessors must use the Solution P-ROV Template to document the results of a P2PE solution assessment when validating a PCI P2PE solution.

This document, *Solution P-ROV Reporting Instructions for PCI P2PE Standard v1.1 - Hardware/Hardware P2PE solutions*, provides instructions and guidance for the P2PE assessor to ensure that a consistent level of reporting is maintained.

**Solution P-ROVs must be completed in accordance with the PCI SSC Template and its corresponding Reporting Instructions.**

All details relevant to the P2PE assessor's findings should be clearly identified and documented in the appropriate place within the Solution P-ROV. The information recorded in the Solution P-ROV must provide enough detail and coverage to verify that the solution is compliant with all P2PE requirements.

## **Solution P-ROV Content**

At a high level, the Solution P-ROV provides a comprehensive summary of testing activities performed and information collected during a P2PE solution assessment. The P2PE assessor should clearly describe how the validation activities were performed and how the resultant findings were reached for each section of the P-ROV.

As defined in the *P2PE Solution P-ROV Template for PCI P2PE Standard v1.1 – Hardware/Hardware P2PE solutions*, the Solution P-ROV includes the following sections:

- Section 1: Contact Information and Report Date
- Section 2: Executive Summary
- Section 3: Details and Scope of Solution Assessment
- Section 4: Findings and Observations

**Section 1**, “Contact Information and Report Date,” includes the contact information for all parties involved, as well as the timeframe in which the assessment occurred, and the version of the P2PE Standard used to assess the solution.

**Section 2**, “Executive Summary,” contains a high-level overview of the solution undergoing the review. The information provided in this section should give the reader an overall understanding of the P2PE solution.

**Section 3**, “Details and Scope of Solution Assessment,” includes details about the solution itself, as well as the solution provider's environment and processes.

If these first three sections are not thoroughly and accurately documented, the assessment findings will not have proper context.

**Section 4**, “Findings and Observations,” contains details of the P2PE assessor's findings for each P2PE requirement and testing procedure. The P2PE assessor should document how the testing procedures were performed and how the results of these procedures led the assessor to reach their findings. All findings and observations should be supported by and consistent with the information reported in Sections 1 through 3.

## P2PE Assessor Documentation

A P2PE solution assessment involves thorough testing and assessment activities from which the P2PE assessor will generate detailed work papers. These work papers contain comprehensive records of the assessment activities, and should be retained and protected in accordance with PCI SSC program requirements.

Not all the information in the work papers will be included in the P-ROV. The P-ROV is effectively a summary of all the evidence collected, and while the information presented in the P-ROV is derived from the work papers, the P-ROV itself should not be a replication of every piece of evidence collected.

## How to Use the P-ROV Reporting Instructions

These P-ROV Reporting Instructions identify the information and level of detail to be recorded in each section of the Solution P-ROV, as defined in the P2PE Solution P-ROV Template. Reporting instructions are provided for all sections of the Solution P-ROV as follows:

Instructions for P-ROV sections 1-3 are presented in two columns:

- **Solution P-ROV Section (P2PE Template)** – Corresponds to the PCI SSC Solution P-ROV Template.
- **Reporting Details** – Outlines the information and level of detail to be provided for each item in the Solution P-ROV template.

Instructions for P-ROV section 4 (Findings and Observations) are presented as follows:

- Where tables are provided in the Solution P-ROV Template:
  - **Solution P-ROV Section (P2PE Template)** – Corresponds to the PCI SSC Solution P-ROV Template.
  - **Reporting Details** – Outlines the information and level of detail to be provided for each item in the Solution P-ROV template.

- P2PE Requirements:

- **P2PE Requirements and Testing Procedures** – Corresponds to the requirements and testing procedures from the P2PE Standard. Note that the Requirements are presented in rows and Testing Procedures are presented in the first column.
  - **Reporting Details** – Outlines the information and level of detail to be provided for each P2PE testing procedure.
- Note:** The format of responses in an Solution P-ROV is not expected to mirror the format in the Reporting Details column. The information provided in the Reporting Details column is bulleted for ease of readability. It is not intended that P2PE assessors follow this format when writing a P-ROV; however, assessors should ensure that all the required information is included in each response.
- **Reporting Methodology** – Identifies which methods used by the P2PE assessor to collect the requisite evidence are to be reported for each testing procedure. Note that these methods may not be all-inclusive of those used during an assessment, and the P2PE assessor may need to employ additional methods to reach a compliant finding. Where additional methods are used to validate a finding, the P2PE assessor should include details of these in the Solution P-ROV.

**Note:** The check marks (✓) in the Reporting Methodology column correspond to the instructions in the Reporting Details column. Together, the Reporting Details and Reporting Methodology provide the detailed reporting instruction for each testing procedure.



## Reporting Methodology

The reporting methodologies to be documented for each testing procedure are identified with a check mark (✓) in the Reporting Methodology column. The different reporting methodologies are described in the following table.

Reporting Methodology	Description
<i>Observe systems, configurations</i>	<ul style="list-style-type: none"> <li>▪ P2PE assessor observes actual system components and/or specific files or configurations.</li> <li>▪ May include different configuration files, settings, or other parameters on each system observed.</li> <li>▪ Observation may require assistance from appropriate personnel (e.g., developers or support personnel).</li> <li>▪ Observation verifies that such parameters are set to produce a specified outcome.</li> </ul>
<i>Review Documentation</i>	<ul style="list-style-type: none"> <li>▪ P2PE assessor reviews documentation provided by the assessed entity.</li> <li>▪ Documentation may include, but is not limited to: policies, procedures, processes, configuration standards, network diagrams, POI device vendor security guidance, other vendor documentation, reports, logs, audit trails, training materials, application manuals, and industry standards and best practices.</li> <li>▪ Reviews of documentation verify the inclusion of items specified in the requirement/testing procedure.</li> </ul>
<i>Interview Personnel</i>	<ul style="list-style-type: none"> <li>▪ P2PE assessor interviews person or persons as appropriate for the requirement/testing procedure.</li> <li>▪ Results of interviews may demonstrate that an action has or has not been performed, or that the interviewee has particular knowledge or understanding.</li> </ul>
<i>Observe process, state</i>	<p>P2PE assessor observations may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>▪ Descriptions of testing methods used (for example, penetration testing techniques, forensic tools, etc.)</li> <li>▪ Actions of people performing or not performing a task or procedures</li> <li>▪ Behavior of applications or system components in response to an action</li> <li>▪ Communications and network traffic</li> <li>▪ Environmental conditions, including physical controls</li> <li>▪ Walk-through of a process or procedure to verify the steps being performed</li> <li>▪ Other evidence or output resulting from a task or action</li> <li>▪ Observation may require assistance from appropriate personnel.</li> <li>▪ Observation verifies a specified result or outcome.</li> </ul>

Reporting Methodology	Description
<i>Identify sample</i>	<ul style="list-style-type: none"> <li>▪ P2PE assessor selects a representative sample as appropriate for the requirement/testing procedure.</li> <li>▪ Justification of sample provides assurance that controls are uniformly and consistently applied to all items.</li> <li>▪ Where sample information is documented in a designated table, the applicable table number and sample set number(s) should be clearly identified in the response for each testing procedure the sample was used for.</li> </ul>
<i>Verify PIM (P2PE Instruction Manual) content</i>	<ul style="list-style-type: none"> <li>▪ This methodology is included for Domain 3 only.</li> <li>▪ P2PE assessor reviews the <i>P2PE Instruction Manual</i> (PIM) provided by the solution provider.</li> <li>▪ Reviews of the PIM verify the inclusion of proper instructions and guidance for merchants as specified in the requirement/testing procedure</li> <li>▪ Reviews of the PIM verify that the included items are relevant to the specific solution and provide accurate and effective instructions (where applicable).</li> </ul>

**Note:** Reporting Methodology checkmarks are presented in orange-colored cells, except for “Verify PIM content” checkmarks, which are in green-colored cells. This is intended to assist the P2PE assessor identify PIM requirements from other types of testing methodologies in Domain 3.

## Solution P-ROV Reporting Details

Instructions provided in the Reporting Details column correspond with one or more checked columns in the Reporting Methodologies column, for each requirement/testing procedure. Guidance for understanding the instructions used in the Reporting Details column is provided below.

- **Example instructions: “Identify the document that defines...” and/or “Confirm the document includes...”**
  - ❖ Identify the reviewed document by name. (**Note:** The term “document” may refer to multiple documents or documentation sets.)
  - ❖ Where documentation is required to include specific procedures, the assessor must verify that the document contains actual procedures that the solution provider has implemented, and does not simply repeat the requirement or testing procedure.
  - ❖ The assessor should confirm that the documented processes, policies, or procedures are in place and being followed, and not merely that a document exists.
  - ❖ By identifying a document in the P-ROV, the assessor is attesting that the processes, policies, procedures, or practices contained in that document are sound.
  - ❖ Ensure all identified documents are also included in the list of all documentation reviewed, under “Details and Scope of Solution Assessment” in the Solution P-ROV.

- **Example instruction: “Identify the personnel interviewed who confirm that...”**
  - ❖ Identify the roles or positions of the personnel interviewed.
  - ❖ The personnel identified must have confirmed that the requirement has been met – for example, that a process is followed or activities have been performed, etc.
  - ❖ If the testing procedure identifies personnel in a specific position to be interviewed, ensure that personnel in those positions are in fact interviewed.
    - If a specific position doesn’t exist, the assessor should identify the appropriate personnel to interview. Explain how the identified personnel meet the intent of the specified position. For example, if a testing procedure includes interviewing key custodians, the assessor should ensure that they interview personnel who perform key-custodian duties as part of their job function. Note that such personnel may not have the exact title “Key Custodian”, but their title may still indicate that they are in fact the appropriate personnel to interview. If the job title does not reflect the specified role, the assessor should verify that the person interviewed does in fact perform the role applicable to the testing procedure.
  - ❖ Ensure all interviewed persons are also included in the list of personnel interviewed, under “Details and Scope of Solution Assessment” in the Solution P-ROV.
- **Example instruction: “Identify the methods/tools used ...”**
  - ❖ Identify the specific tools or methods used to perform a particular activity – for example, to perform a forensic examination or penetration test.
  - ❖ Include any details relevant to how the tools/methods were configured or used to provide assurance of their outcome
- **Example instruction: “Describe how findings/results were used to verify that...”**
  - ❖ Describe how the results of a defined activity – for example, results from a forensic examination or penetration test – provided verification that the requirement has been met
  - ❖ Describe any specific results or observations particularly relevant to the assessor’s finding.
- **Example instruction: “Describe how observation of process verified that...”**
  - ❖ Identify and describe the process, procedure, action, or state that was observed.
  - ❖ Identify any personnel or system components that were part of the observation.
  - ❖ Describe any situational or environmental factors relevant to the observation.
  - ❖ Describe how the observations provide assurance that the requirement/testing procedure is satisfied.

- **Example instruction: “Identify the sample of...”**
  - ❖ Identify the number and type of items included in each sample.
  - ❖ Include any other details relevant to the sample.
  - ❖ It is not necessary to identify the names of every sampled item in the P-ROV; however, assessors may provide a list if it improves clarity or better explains their findings. Irrespective of whether item names are recorded in the P-ROV, the assessor must maintain a detailed record of each sampled item in their work papers.
  - ❖ Samples must be representative of the solution provider systems and/or processes.
  - ❖ The sample size and types of items in the sample must be appropriate to provide assurance that the requirement has been met.
  - ❖ The sample size and types of items in the sample must be relevant for the particular requirement/testing procedure.
  - ❖ For some Domains, a table has been provided to facilitate recording of sampling details (for example, samples of POI devices for Domains 1 and 3). If there is no sampling table referenced, the P2PE assessor should record sampling details in the response as instructed.
- **Example instruction: “Confirm the P2PE Instruction Manual (PIM) includes...”**
  - ❖ Provide a statement that the assessor verified the PIM contains the required information – for example, device handling instructions, guidance, device security information, etc.
  - ❖ It is not intended that sections of the PIM be copied into the P-ROV.
  - ❖ It is not sufficient for the PIM to simply restate requirements from the P2PE Standard: the PIM must provide details on how to implement procedures or perform tasks as needed to meet the requirement.
  - ❖ The assessor must validate that information provided in the PIM is accurate and effective (for example, instructions work correctly, POI device details are accurately identified, etc.)

## “Not Applicable” Requirements

If a P2PE requirement or testing procedure is determined to be “not applicable” (N/A), this should be clearly identified in the response. Findings of “in place” due to the control being “N/A” must include an explanation of why the control was determined to be not applicable and a detailed description of the testing and observations performed by the assessor to verify that the control is not applicable for the given solution.

## General Guidance

Do's and Don'ts:

- DO:**
- Follow the PCI SSC Solution P-ROV template
  - Document all sections in the order specified, with consistent numbering, titles, and headings
  - Read and understand the intent of each requirement and testing procedure
  - Provide a response for every testing procedure
  - Provide sufficient detail and information to demonstrate a finding of “in place”
  - Describe how a requirement was verified as being met, not just that it was verified
  - Ensure the response addresses all parts of the testing procedure
  - Ensure the response covers all applicable processes and/or functions
  - Perform an internal quality assurance review of the P-ROV for clarity, accuracy, and quality
- DON'T:**
- Don't submit a Solution P-ROV to PCI SSC until all requirements are verified as being in place
  - Don't include forward-looking statements or project plans in the assessment findings
  - Don't simply repeat or echo the testing procedure in the response – the response should reflect actual activities performed by the assessor and how the results of those activities led the assessor to an “in place” finding
  - Don't copy responses from one testing procedure to another– each response should apply to its corresponding testing procedure
  - Don't copy responses from previous assessments
  - Don't include information that is not relevant to the assessment or individual findings

## Solution P-ROV Reporting Instructions for PCI P2PE Standard v1.1

Solution P-ROV Section (P2PE Template)	Reporting Details
<b>1. Contact Information and Report Date</b>	
1.1 Contact information <ul style="list-style-type: none"> <li>• Solution provider contact information</li> <li>• P2PE Assessor Company contact information</li> <li>• P2PE Assessor contact information</li> <li>• P2PE Assessor Quality Assurance (QA) primary contact information</li> </ul>	<b>Provide contact details in the table provided for the following:</b> <ul style="list-style-type: none"> <li>• P2PE solution provider</li> <li>• P2PE Assessor Company</li> <li>• P2PE Assessor who performed the assessment</li> <li>• P2PE Assessor Quality Assurance (QA) primary contact</li> </ul>
1.2 Date and timeframe of validation	<b>Complete the following in the table provided:</b> <ul style="list-style-type: none"> <li>• Date of Report – provide the date this Solution P-ROV was completed</li> <li>• Timeframe of assessment – identify the timeframe during which the solution was validated, including:               <ul style="list-style-type: none"> <li>○ The total time taken to complete the overall assessment (start date to completion date)</li> <li>○ Actual time the assessor spent performing assessment activities (including Lab time)</li> </ul> </li> </ul>
1.3 P2PE Version	<b>Complete the following in the table provided:</b> <ul style="list-style-type: none"> <li>• Identify the version of the <i>P2PE Solution Requirements and Testing Procedures</i> used for the solution assessment.</li> </ul>
<b>2. Executive Summary</b>	
2.1 P2PE Solution Details <ul style="list-style-type: none"> <li>• P2PE solution name</li> <li>• Description of P2PE solution provider (e.g., payment gateway, acquirer, multi-acquirer payment processor, etc.)</li> <li>• Description of the types of POI devices used in solution (e.g. unattended kiosks, payment terminals for use with in-store POS, etc.)</li> <li>• Description of the typical merchant that uses this solution (Include specific industries or channels the solution is intended for)</li> </ul>	<b>Complete the following in the table provided:</b> <ul style="list-style-type: none"> <li>• Name of P2PE solution</li> <li>• Description of P2PE solution provider (e.g., payment gateway, acquirer, multi-acquirer payment processor, etc.)</li> <li>• Description of the types of POI devices used in solution (e.g. unattended kiosks, payment terminals for use with in-store POS, etc.)</li> <li>• Description of the typical merchant that uses this solution (Include specific industries or channels the solution is intended for)</li> </ul>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p>2.2 Entities involved in P2PE solution</p> <ul style="list-style-type: none"> <li>• Entities performing key injection</li> <li>• Entities performing remote key distribution</li> <li>• Entities performing Certificate Authority (CA) function</li> <li>• Entities performing Registration Authority (RA) function</li> <li>• P2PE Solution Provider-authorized Integrator/Resellers (if applicable)</li> <li>• Other entities involved in P2PE solution (if applicable)</li> </ul>	<p><b>In the table provided:</b> Provide name and location details for all entities performing the identified roles:</p> <ul style="list-style-type: none"> <li>• Entities performing key injection functions</li> <li>• Entities performing remote key distribution functions</li> <li>• Entities performing Certificate Authority (CA) function</li> <li>• Entities performing Registration Authority (RA) function</li> <li>• Entities who are authorized by the P2PE Solution Provider as Integrators/Resellers of the P2PE solution (if applicable)</li> <li>• Any other entities performing a function relevant to the P2PE solution, not covered by one of the above. Include a description of the role/function performed by these entities.</li> </ul>
<p>2.3 P2PE Solution Listing Details</p> <ul style="list-style-type: none"> <li>• Is the solution already listed on the PCI SSC List of Validated P2PE Solutions? (Yes/No) <i>If Yes, provide PCI SSC listing number.</i></li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>• Identify whether the solution is already listed on the PCI SSC List of Validated P2PE Solution, and if so, provide the current listing number.</li> </ul> <p><i>For example, if this solution assessment is being performed as part of the solution's revalidation.</i></p>

Solution P-ROV Section (P2PE Template)	Reporting Details
<ul style="list-style-type: none"> <li>List of POI devices and applications for inclusion in solution listing <ul style="list-style-type: none"> <li>POI device type name/ identifier</li> <li>POI device manufacturer, model and number:</li> <li>PTS approval number for POI device:</li> <li>POI Hardware version #:</li> <li>POI Firmware version #:</li> <li>List of all Applications on the POI device</li> <li>Application version #</li> <li>Application has access to clear-text account data (Yes/No)?</li> <li>For all applications with access to clear-text account data: provide PCI SSC listing number (if applicable), or status of Application P-ROV (if known)</li> </ul> </li> </ul> <p><i>This information will be used for the PCI SSC List of Validated P2PE Solutions</i></p>	<p><b>Using the table provided:</b></p> <ul style="list-style-type: none"> <li>Complete a separate table for all POI device types used in P2PE solution</li> <li>Provide the following details for each POI device type: <ul style="list-style-type: none"> <li>POI device type name/ identifier – unique identifier for each type of POI device used on the P2PE solution (this name/identifier should be used consistently throughout the document)</li> <li>POI device manufacturer, model and number</li> <li>PTS approval number for POI device – provide the PCI SSC PTS approval number for the specific POI device listing</li> <li>POI Hardware version # – provide the hardware version number from the PTS list on the PCI SSC website. The hardware version number must be listed with SRED as a "function provided"</li> <li>POI Firmware version # – provide the firmware version number from the PTS list on the PCI SSC website. The firmware version number must be listed with SRED as a "function provided"</li> <li>List of all Applications on the POI device – list the POI applications, one per line.</li> <li>For each application on a particular POI device type, provide the following: <ul style="list-style-type: none"> <li>Application version #</li> <li>Whether the application has access to clear-text account data (Yes/No)?</li> <li>For all applications <u>with</u> access to clear-text account data, provide PCI SSC listing number (if applicable), or status of Application P-ROV (if known)*</li> </ul> </li> </ul> </li> </ul> <p><b>* Note:</b> An Application P-ROV must be submitted and accepted by PCI SSC for all applications with access to clear-text account data.</p>
<p>2.4 P2PE Decryption Environments</p> <ul style="list-style-type: none"> <li>Entity</li> <li>Location</li> <li>Date of last PCI DSS validation</li> <li>P2PE endpoint system identifier/description (e.g. HSM)</li> </ul>	<p><b>Using the table provided:</b></p> <p>Identify all decryption environments used in the P2PE solution and provide the following details:</p> <ul style="list-style-type: none"> <li>Entity that owns / houses the decryption environment</li> <li>Location of the decryption environment</li> <li>Date of last PCI DSS validation for the decryption environment</li> <li>Identifier and/or description of the P2PE endpoint system in that decryption environment (e.g. identity of HSM)</li> </ul>



Solution P-ROV Section (P2PE Template)	Reporting Details
<p>2.5 Overview of P2PE solution data flow</p> <ul style="list-style-type: none"> <li>Provide a high-level data flow diagram of the solution that illustrates: <ul style="list-style-type: none"> <li>Flows and locations of P2PE-encrypted account data</li> <li>Flows and locations of cleartext account data</li> <li>Location of critical system components (e.g. HSMs, host processing systems)</li> <li>All entities the solution connects to for payment transmission or processing, including processors/acquirers.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide one or more high level diagrams(s) showing details of all account data flows through the P2PE solution.</li> <li>Ensure the diagram(s) are clearly labeled and include the following: <ul style="list-style-type: none"> <li>All flows and locations of P2PE-encrypted account data</li> <li>All flows and locations of cleartext account data</li> <li>Locations of critical system components (e.g. HSMs, host processing systems)</li> <li>All entities the solution connects to for payment transmission or processing, including processors/acquirers.</li> </ul> </li> </ul> <p><b>Note:</b> The diagram should identify where merchant entities fit into the data flow, without attempting to identify individual merchants. For example P2PE-encrypted account data could be illustrated as flowing between an icon that represents all merchant customers to an icon that represents the solution provider's decryption environment.</p>
<p>2.6 Multi-Acquirer / Multi-Solution Solutions</p> <ul style="list-style-type: none"> <li>Do multiple acquirers or multiple solution providers manage one or more P2PE solutions on the same POI device?</li> </ul> <p><i>If Yes, complete the following:</i></p> <ul style="list-style-type: none"> <li>Describe how management of the multi-acquirer or multi-provider solutions is divided between entities:</li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Identify whether multiple acquirers or multiple solution providers manage one or more P2PE solutions on the same POI device.</li> </ul> <p><i>If Yes, complete the following:</i></p> <ul style="list-style-type: none"> <li>Describe how management of the multi-acquirer or multi-provider solutions is divided between entities</li> </ul>
<ul style="list-style-type: none"> <li>If multiple acquirers or multiple solution providers manage one or more P2PE solutions on the same POI device, complete the following: <ul style="list-style-type: none"> <li>POI name/ identifier</li> <li>Identify other P2PE solutions on the POI device</li> <li>Is the other solution already listed, currently being assessed in a separate P2PE assessment, or included as part of this P2PE assessment?</li> <li>If solution is already listed, provide PCI SSC listing number</li> <li>If solution being assessed separately, identify P2PE assessor company performing assessment (if known)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>If multiple acquirers or multiple solution providers do manage one or more P2PE solutions on the same POI device, provide the following information: <ul style="list-style-type: none"> <li>POI name/ identifier for all POI device types that support multiple solutions, solution providers or acquirers</li> <li>Identify by name all other P2PE solutions on the POI device</li> <li>For all other P2PE solutions on the POI device: <ul style="list-style-type: none"> <li>Identify whether the solution is already listed on the PCI SSC website, or whether it is currently being assessed in a separate P2PE assessment, or whether it has already been assessed and the Solution P-ROV accompanies this P2PE solution P-ROV?</li> <li>If the solution is already listed, provide PCI SSC listing number</li> <li>If the solution has been assessed or is being assessed separately, identify the P2PE assessor company performing assessment (if known)</li> </ul> </li> </ul> </li> </ul>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p>2.7 P2PE Instruction Manual (PIM) Details</p> <ul style="list-style-type: none"> <li>For each type of POI used in the solution (as identified in 2.3 above), provide details of the PIM used and validated for this assessment: <ul style="list-style-type: none"> <li>POI device type name(s) / identifier(s)</li> <li>Title of the PIM:</li> <li>Date of the PIM:</li> <li>Version of the PIM:</li> </ul> </li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>For each type of POI used in the solution (as identified in section 2.3 of the P-ROV Executive Summary), provide the following details: <ul style="list-style-type: none"> <li>Identify all POI device type name(s) / identifier(s) covered in the PIM. All POI device type names/identifiers from section 2.3 must be included.</li> <li>Title of the PIM</li> <li>Date of the PIM</li> <li>Version of the PIM</li> </ul> </li> </ul> <p><b>Note:</b> If there is more than one PIM in the solution – for example, if the solution provider provides separate a PIM for different types of POI devices – the assessor should make copies of the table provided as needed to report their findings for each POI device type.</p>
<p>2.8 Summary of P2PE Solution Compliance Status</p> <ul style="list-style-type: none"> <li>P2PE Domain</li> <li>Compliant – Yes / No</li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Indicate compliance for each of the P2PE Domains in the appropriate column.</li> </ul> <p><b>Note:</b> Only compliant P2PE solutions will be reviewed by PCI SSC for acceptance and listing. Do not submit a Solution P-ROV to PCI SSC if the solution does not meet P2PE Requirements.</p>
<h3>3. Details and Scope of Application Assessment</h3>	
<p>3.1 Scoping Details</p> <ul style="list-style-type: none"> <li>Document how the P2PE assessor validated the accuracy of the P2PE scope for the assessment, including: <ul style="list-style-type: none"> <li>The methods or processes used to identify all elements in scope of the P2PE solution assessment</li> <li>Confirm that the scope of the assessment is accurate and covers all components and facilities for the P2PE solution:</li> </ul> </li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Provide details of how the P2PE assessor validated the accuracy of the P2PE scope for the assessment, including: <ul style="list-style-type: none"> <li>Description of the methods or processes used to identify all entities, facilities, processes and system components in scope for the P2PE solution assessment</li> <li>Confirm that the scope of the assessment is accurate and covers all components and facilities for the P2PE solution:</li> </ul> </li> </ul>
<p>3.2 Segmentation at Solution Provider</p> <ul style="list-style-type: none"> <li>Identify coverage of PCI DSS compliance to solution provider environment (e.g. all solution provider environments, decryption environment only, decryption environment and some other environments, etc.):</li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Identify the coverage of the most recent PCI DSS compliance assessment to solution provider environment.</li> </ul> <p><b>Note:</b> To ensure the P2PE decryption environment is PCI DSS compliant (as required in P2PE Domain 5), the solution provider may choose to segment their PCI DSS-compliant P2PE decryption environment from their other networks/ environments; alternatively, the solution provider may choose to ensure that their entire environment is PCI DSS compliant. If the P2PE decryption environment is not segmented, the solution provider's entire network must be covered by their PCI DSS assessment.</p>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><i>If the solution provider's PCI DSS compliance does not cover all solution provider environments:</i></p> <ul style="list-style-type: none"> <li>Describe how the solution provider has implemented network segmentation to isolate P2PE environments from any non-PCI DSS environments:</li> </ul>	<p><i>If the solution provider provider's PCI DSS compliance does not cover all solution provider environments,</i></p> <ul style="list-style-type: none"> <li>Describe how network segmentation is implemented to isolate P2PE decryption environments from any non-PCI DSS compliant environments, for example: <ul style="list-style-type: none"> <li>Identify the technologies and supporting processes used.</li> <li>Briefly describe how the segmentation controls are enforced and monitored.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Describe how the P2PE assessor validated the effectiveness of the segmentation</li> </ul>	<ul style="list-style-type: none"> <li>Briefly describe the methods used by the assessor to validate the effectiveness of the segmentation (for example, examined configurations of implemented technologies, review of PCI DSS scoping exercise from most recent PCI DSS assessment, etc.)</li> </ul>
<p>3.3 Solution Network Diagram</p> <ul style="list-style-type: none"> <li>Provide one or more high-level network diagrams to illustrate the functioning of the P2PE solution, including: <ul style="list-style-type: none"> <li>Locations of critical facilities, including the solution provider's decryption environment, key-injection and loading facilities, etc.</li> <li>Location of critical components within the P2PE decryption environment, such as HSMs and other SCDs, host systems, cryptographic key stores, etc., as applicable</li> <li>Location of systems performing key management functions</li> <li>Connections into and out of the decryption environment</li> <li>Other necessary components, as applicable to the particular solution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide one or more high-level network diagrams as needed to illustrate the functioning of the P2PE solution.</li> <li>Ensure the diagram(s) are clearly labeled and include the following: <ul style="list-style-type: none"> <li>Locations of all critical facilities, including the solution provider's decryption environment, key-injection and loading facilities, etc.</li> <li>Location of critical components within the P2PE decryption environment, such as HSMs and other SCDs (e.g. key-injection devices, application-signing devices), host systems, cryptographic key stores, etc., as applicable to the particular solution.</li> <li>Location of systems performing key management functions</li> <li>Connections into and out of the decryption environment</li> <li>Other necessary components, as applicable to the particular solution</li> </ul> </li> </ul>
<p>3.4 Facilities</p> <ul style="list-style-type: none"> <li>Lab environment <ul style="list-style-type: none"> <li>Identify and describe the lab environment used for this assessment, including whether the lab was provided by the P2PE assessor or the solution provider.</li> <li>Address of the lab environment used for this assessment</li> </ul> </li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Provide details of the lab environment used for this assessment, including: <ul style="list-style-type: none"> <li>A brief description of the lab setup (for example, number and types of systems, platforms, testing tools, etc.), and whether the lab was provided by the P2PE assessor or the solution provider</li> <li>The address of the Lab</li> </ul> </li> </ul>

Solution P-ROV Section (P2PE Template)	Reporting Details
<ul style="list-style-type: none"> <li>List of all facilities INCLUDED in this solution assessment: <ul style="list-style-type: none"> <li>Description and purpose of facility included in assessment</li> <li>Address of facility</li> </ul> </li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Provide details of facilities included in the assessment (for example, development environments) Include facilities belonging to the solution provider and any third parties (e.g. third-party key-injection facility): <ul style="list-style-type: none"> <li>Description and purpose of facility included in assessment</li> <li>Address of facility</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>List of facilities used in P2PE solution that were EXCLUDED from this solution assessment:* <ul style="list-style-type: none"> <li>Description and purpose of facility excluded from the assessment</li> <li>Address of facility</li> <li>Explanation why the facility was excluded</li> <li>Details of any separate assessments performed for the facility, including how the other assessment was verified to cover all components in scope for this solution</li> </ul> </li> </ul> <p><b>* Note:</b> Does not include merchant locations.</p>	<ul style="list-style-type: none"> <li>Identify and describe any locations or environments relevant to the P2PE solution that were EXCLUDED from the scope of the review as follows: <ul style="list-style-type: none"> <li>Provide a description and identify the purpose of the facility that was excluded from the assessment</li> <li>Provide the address of facility excluded from the assessment</li> <li>Provide an explanation why the facility was excluded from the assessment</li> <li>Provide details of any separate assessments performed for the facility, including how the other assessment was verified to cover all components in scope for this solution</li> </ul> </li> </ul>
<p>3.5 Key management processes</p> <ul style="list-style-type: none"> <li>Description of Cryptographic Key Management Processes. Provide one or more high-level diagrams showing all key management processes, including: <ul style="list-style-type: none"> <li>Key Generation</li> <li>Key Distribution / Loading / Injection onto POI devices</li> <li>Other Key Distribution / Loading / Injection activities</li> <li>Key Storage</li> <li>Key Usage</li> <li>Key Archiving (if applicable)</li> </ul> </li> </ul> <p><b>Note:</b> include both logical and physical components – e.g. network traffic flows, locations of safes, use of secure couriers, etc.</p>	<ul style="list-style-type: none"> <li>Provide one or more high-level diagrams showing all key management processes</li> <li>Ensure the diagram(s) are clearly labeled and include: <ul style="list-style-type: none"> <li>Key Generation</li> <li>Key Distribution / Loading / Injection onto POI devices</li> <li>Other Key Distribution / Loading / Injection activities</li> <li>Key Storage</li> <li>Key Usage</li> <li>Key Archiving (if applicable)</li> </ul> </li> </ul>
<p>Description of Cryptographic Keys used in P2PE Solution :</p> <ul style="list-style-type: none"> <li>Provide a brief description* of all types of cryptographic keys used in the solution, as follows: <ul style="list-style-type: none"> <li>Key type / description</li> <li>Purpose/ function of the key</li> </ul> </li> </ul> <p><b>* Note:</b> A detailed Key Matrix is included in Domain 6</p>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Provide a brief description of all types of cryptographic keys used in the P2PE solution, including: <ul style="list-style-type: none"> <li>A description of each type of cryptographic key used</li> <li>A description of the purpose/ function of the type of key</li> </ul> </li> </ul> <p><b>* Note:</b> This information must be consistent with that provided in Domain 6.</p>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p>3.6 Documentation and personnel interviews</p> <ul style="list-style-type: none"> <li>Provide list of all documentation reviewed for this assessment <ul style="list-style-type: none"> <li>Document Name (including version, if applicable)</li> <li>Brief description of document purpose</li> <li>Document date</li> </ul> </li> </ul>	<p><b>In the table provided:</b></p> <ul style="list-style-type: none"> <li>Provide list of all documentation reviewed for this assessment (including but not limited to solution provider policies and procedures, device vendor security guidance, etc.), as follows: <ul style="list-style-type: none"> <li>Document Name (including version, if applicable)</li> <li>Brief description of document purpose</li> <li>Document date</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Provide list of all personnel interviewed for this assessment <ul style="list-style-type: none"> <li>Name</li> <li>Company</li> <li>Job Title</li> <li>Topics covered</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide list of all personnel interviewed for this assessment, as follows: <ul style="list-style-type: none"> <li>Name – provide the individual’s first and last name</li> <li>Company – provide the company / organization where the individual works</li> <li>Job Title – provide the individual’s job title</li> <li>Topics covered – provide a brief description of all topics covered during interviews with the person</li> </ul> </li> </ul>
<b>4. Findings and Observations</b>	
<ul style="list-style-type: none"> <li>P2PE assessors must use the PCI SSC template</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the PCI SSC defined template is used for the Solution P-ROV</li> <li>Ensure that the correct Solution P-ROV template is used according to the: <ul style="list-style-type: none"> <li>Type of P2PE solution</li> <li>Version of the P2PE Standard that the assessment was based on</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Include descriptions of tests performed other than those included in the testing procedures column</li> </ul>	<ul style="list-style-type: none"> <li>Describe tests performed other than those included in the testing procedures column.</li> <li>Identify any resultant findings that the assessor feels are relevant to the assessment, but that do not fall under a P2PE requirement:</li> </ul>
<ul style="list-style-type: none"> <li>If the assessor determines that a requirement is not applicable for a given application, an explanation must be included in the “In Place” column for that requirement.</li> </ul>	<ul style="list-style-type: none"> <li>If a requirement is deemed to be “in place” due to being N/A, document as such in the “Findings” column, and provide details of how the requirement was verified as being N/A.</li> </ul>

## Domain 1: Encryption Device Management

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 1.1 – List of all POI device types used in P2PE solution</b></p> <ul style="list-style-type: none"> <li>• POI device type name/ identifier*</li> <li>• POI manufacturer</li> <li>• POI model name and number</li> <li>• PTS approval number</li> <li>• POI Hardware version # with SRED listed as a "function provided"</li> <li>• POI Firmware version # with SRED listed as a "function provided"</li> <li>• Application name and version number for all applications included in the PTS assessment</li> <li>• Total number of POI devices used in solution</li> </ul> <p><i>* <b>Note:</b> POI device types must be identified separately for each hardware version and for each firmware version</i></p> <p><i>Variations in POI device characteristics must not be combined into a single row; each specific POI device type must be individually listed in this table. POI details should be consistent with those identified for listing in Executive Summary section 2.3.</i></p>	<p>Complete Table 1.1 for all types of POI devices in the solution.</p> <ul style="list-style-type: none"> <li>• POI device type name/ identifier – must be consistent with POI device type name/ identifier in section 2.3 of the Executive Summary.</li> <li>• Identify the POI manufacturer.</li> <li>• Identify the POI model name and number.</li> <li>• Identify the PTS approval number – PCI SSC PTS approval number for the specific POI device listing.</li> <li>• Identify the POI Hardware version number from the PTS list on the PCI SSC website, with SRED listed as a "function provided".</li> <li>• Identify the POI Firmware version number from the PTS list on the PCI SSC website, with SRED listed as a "function provided".</li> <li>• Provide the name and application version number of any applications resident within the device that were included in the PTS assessment Application, per the PTS list on the PCI SSC website.</li> <li>• Provide the total number of POI devices used in solution, at the time of the assessment.</li> </ul> <p><i><b>Note:</b> All POI device types must be represented in Table 1.1.</i></p> <p><i>Variations in POI device characteristics must not be combined into a single row; use a separate row for each specific POI device type.</i></p>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 1.2 – Samples of POI Devices assessed for Domain 1 Testing Procedures</b></p> <ul style="list-style-type: none"> <li>• POI Sample Set #1 <ul style="list-style-type: none"> <li>○ Sample Set Number and Description</li> <li>○ POI device type name/ identifier (per Table 1.1)</li> <li>○ Sample Size (Number of each device type assessed for Domain 1 Testing Procedures)</li> <li>○ Sampling Rationale – How sample size was determined to be appropriate and representative of the overall population</li> <li>○ Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• POI Sample Set #2 – Per above</li> <li>• POI Sample Set #3 – Per above</li> </ul> <p>And so on...</p> <p><b>Note:</b> Every POI device type listed in Table 1.1 must be included in every sample set in Table 1.2</p>	<p>Complete Table 1.2 to identify the sample of POI devices assessed for particular Domain 1 testing procedures. For each POI Sample Set identified, provide the following:</p> <ul style="list-style-type: none"> <li>• POI Sample Set #1 <ul style="list-style-type: none"> <li>○ POI Sample Set # and Description <ul style="list-style-type: none"> <li>▪ Ensure POI Sample Sets are consecutively numbered</li> <li>▪ Include a brief description that identifies one sample set from another and is consistent with the purpose of the sample – for example, POIs awaiting deployment, POIs in storage, etc.</li> </ul> </li> <li>○ POI device type name/ identifier – each sample must be representative of all POI device types used in the solution</li> <li>○ Sample Size – number of each device type assessed for the applicable Domain 1 Testing Procedure(s)</li> <li>○ Sampling Rationale – how the assessor determined the sample size was appropriate and representative of the overall population of POI devices</li> <li>○ Specific Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• POI Sample Set #2 – Per above</li> <li>• POI Sample Set #3 – Per above</li> <li>• And so on... Add rows as needed to document additional sample sets – e.g. from POI Sample Set #1 to POI Sample Set #N.</li> </ul>
<p><b>Table 1.3 – List of SCD device types used for Domain 1 operations</b></p> <ul style="list-style-type: none"> <li>• SCD device type identifier</li> <li>• SCD manufacturer</li> <li>• SCD model name and number</li> <li>• Brief description of device function/ purpose in P2PE solution</li> <li>• Device location(s)</li> <li>• Number of devices at each location</li> </ul> <p><i>This includes SCDs used to generate or load cryptographic keys, encrypt keys, or sign applications to be loaded onto POI devices. Examples include HSMs, key-injection/loading devices (KLDs) and other devices that generate or load keys or sign applications and/or whitelists.</i></p>	<p>Complete Table 1.3 for all SCD device types used for Domain 1 operations.</p> <p>This includes SCDs used to generate or load cryptographic keys, encrypt keys, or sign applications to be loaded onto POI devices. Examples include HSMs, key-injection/loading devices (KLDs) and other devices that generate or load keys or sign applications and/or whitelists.</p> <p>Provide the following for each SCD:</p> <ul style="list-style-type: none"> <li>• SCD device type identifier</li> <li>• SCD manufacturer</li> <li>• SCD model name and number</li> <li>• Brief description of device function/ purpose in P2PE solution</li> <li>• Device location(s)</li> <li>• Number of devices at each location</li> </ul>



Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 1.4 – Samples of SCDs assessed for Domain 1 Testing Procedures</b></p> <ul style="list-style-type: none"> <li>• SCD Sample Set #1 <ul style="list-style-type: none"> <li>○ Sample Set Number and Description</li> <li>○ SCD device type identifier (per Table 1.3)</li> <li>○ Device location</li> <li>○ Sample Size for each location (Number of devices assessed at each location)</li> <li>○ Sampling Rationale How sample size was determined to be appropriate and representative of the overall population</li> <li>○ Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• SCD Sample Set #2 – Per above</li> <li>• SCD Sample Set #3 – Per above</li> </ul> <p>And so on...</p>	<p>Complete Table 1.4 to identify the sample of SCDs assessed for particular Domain 1 testing procedures. For each SCD Sample Set identified, provide the following:</p> <ul style="list-style-type: none"> <li>• SCD Sample Set #1 <ul style="list-style-type: none"> <li>○ SCD Sample Set # and Description <ul style="list-style-type: none"> <li>▪ Ensure SCD Sample Sets are consecutively numbered</li> <li>▪ Include a brief description that identifies one sample set from another and is consistent with the purpose of the sample – for example, SCDs awaiting deployment, SCDs in storage, etc.</li> </ul> </li> <li>○ SCD device type identifier – each sample must be representative of all SCD device types used in the solution</li> <li>○ Device location – location of SCD type</li> <li>○ Sample Size – number of each device type assessed for the applicable Domain 1 Testing Procedure(s)</li> <li>○ Sampling Rationale – how the assessor determined the sample size was appropriate and representative of the overall population of SCDs</li> <li>○ Specific Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• SCD Sample Set #2 – Per above</li> <li>• SCD Sample Set #3 – Per above</li> <li>• And so on... Add rows as needed to document additional sample sets – e.g. from SCD Sample Set #1 to SCD Sample Set #N.</li> </ul>



Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 1.5 – Samples of Transactions and POI Devices assessed for Domain 1 Testing Procedures</b></p> <ul style="list-style-type: none"> <li>Transaction Sample Set #1 <ul style="list-style-type: none"> <li>Sample Set Number and Description</li> <li>POI device name/ identifier *</li> <li>Transaction type (all supported transaction types to be included, e.g. purchase, refund, cancellation, clearing, etc.)</li> <li>Brief description of sampled transaction</li> <li>Number of transactions observed for each transaction type</li> <li>Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>Transaction Sample Set #2 – Per above</li> </ul> <p>And so on...</p> <p><b>Note:</b> Every POI device type listed in Table 1.1 must be included in every sample set in Table 1.5</p>	<p>Complete Table 1.5 to identify the sample of Transactions and POI Devices assessed for particular Domain 1 testing procedures. For each Transaction Sample Set identified, provide the following:</p> <ul style="list-style-type: none"> <li>Transaction Sample Set #1 <ul style="list-style-type: none"> <li>Transaction Sample Set # and Description <ul style="list-style-type: none"> <li>Ensure Transaction Sample Sets are consecutively numbered</li> <li>Include a brief description that identifies one sample set from another and is consistent with the purpose of the sample</li> </ul> </li> <li>POI device name/ identifier – each sample must be representative of all POI device types used in the solution</li> <li>Transaction types included in the sample (all supported transaction types to be included, e.g. purchase, refund, cancellation, clearing, etc.)</li> <li>Brief description of sampled transaction type</li> <li>Number of transactions observed for each transaction type</li> <li>Specific Domain 1 Testing Procedures this sample was assessed against</li> </ul> </li> <li>Transaction Sample Set #2 – Per above</li> <li>And so on... Add rows as needed to document additional sample sets – e.g. from Transaction Sample Set #1 to Transaction Sample Set #N.</li> </ul>

P2PE Domain 1  Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
1A-1 The security characteristics of secure cryptographic devices (SCDs) provide tamper-resistance, detection, and response features to help prevent successful attacks involving penetration, monitoring, manipulation, modification, or substitution of the devices to recover protected data.						
1A-1.1 Encryption operations must be performed using a device approved per the PCI PTS program (for example, a PCI-approved PED or SCR), with SRED (secure reading and exchange of data) listed as a “function provided.” The PTS approval listing must match the deployed devices in the following characteristics: <ul style="list-style-type: none"><li>Model name and number</li><li>Hardware version number</li><li>Firmware version number</li><li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li></ul>						
1A-1.1.a For all types of POI devices used in the solution, examine a sample of devices and device configurations, and review the list of approved PTS devices at <a href="http://www.pcisecuritystandards.org">www.pcisecuritystandards.org</a> to verify that all POI devices used in this solution are listed, with a valid SSC listing number, on the PCI SSC website as Approved PCI PTS Devices with SRED listed as a “function provided.”	<ul style="list-style-type: none"><li>Confirm that all types of POI devices used in the solution are identified in Table 1.1.</li><li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure</li><li>For each device in the sample, describe how devices and/or device configurations were examined to verify they are consistent with the list of Approved PCI PTS Devices as follows:<ul style="list-style-type: none"><li>Each POI device type is listed as an Approved PCI PTS Device with a valid SSC listing number</li><li>The device listing shows SRED as a “function provided” for the device type</li></ul></li></ul>	✓	✓			✓

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1A-1.1.b</b> Examine POI device configurations and review the PCI SSC list of Approved PCI PTS Devices to verify that all of the following POI device characteristics match the PCI PTS listing for the SRED function of each device: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each device in the sample, describe how POI device configurations were examined to determine the following device characteristics: <ul style="list-style-type: none"> <li>Model name and number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li> </ul> </li> <li>For each device in the sample, confirm that the following device characteristics are listed with SRED as a "function provided" on the PCI SSC list of Approved PCI PTS Devices: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li> </ul> </li> </ul>	✓	✓			✓
<b>1A-1.1.1</b> SRED capabilities must be enabled and active.						
<b>1A-1.1.1.a</b> Examine the solution provider's documented procedures to verify that procedures are defined to ensure that SRED capabilities are enabled and active on all POI devices prior to devices being deployed to merchant environments.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines procedures for ensuring SRED capabilities are enabled and active on all POI devices prior to devices being deployed to merchant environments.</li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1A-1.1.1.b</b> Interview personnel and observe processes to verify that the implemented processes include ensuring that SRED capabilities are enabled and active on all devices prior to devices being deployed to merchant environments.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Processes are implemented to ensure that all POI devices have SRED capability enabled and active</li> <li>Processes are performed prior to devices being deployed to merchant environments.</li> </ul> </li> <li>For all POI device types identified in Table 1.1, describe how processes were observed to ensure that SRED capabilities are enabled and active prior to devices being deployed to merchant environments.</li> </ul>			✓	✓	
<b>1A-1.1.1.c</b> For a sample of all POI devices used in the solution, review POI device configurations to verify that all POI devices used in the solution have SRED capabilities enabled and active (that is, the POI devices are operating in “encrypting mode”) prior to devices being deployed to merchant environments.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each device in the sample, describe how observation of device configurations verified that SRED capabilities are enabled and active prior to devices being deployed to merchant environments.</li> </ul>	✓				✓
<b>1A-1.2</b> POIs must be configured to use only SRED-validated capture mechanisms for accepting and processing P2PE transactions.						
<b>1A-1.2.a</b> Examine documented deployment procedures to verify that POIs must be configured to use only SRED-validated capture mechanisms for accepting and processing P2PE transactions.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines device deployment procedures.</li> <li>For each device deployment procedure, confirm that the documented procedures include configuring POIs to use only SRED-validated capture mechanisms for accepting and processing P2PE transactions.</li> </ul>		✓			
<b>1A-1.2.b</b> For all types of POI devices used in the solution, examine a sample of device configurations to verify that only SRED-validated capture mechanisms are configured to accept P2PE transactions.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each device in the sample, describe how observation of device configurations verified that only SRED-validated capture mechanisms are configured to accept P2PE transactions.</li> </ul>	✓				✓
<b>1A-1.2.1</b> All capture mechanisms provided by the solution provider that are not SRED validated must be disabled or otherwise prevented from being used for P2PE transactions, and cannot be enabled by the merchant.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1A-1.2.1.a</b> Examine POI configuration and deployment procedures to verify they include either: <ul style="list-style-type: none"> <li>Disabling all capture mechanisms that are not SRED validated, or</li> <li>Implementing configurations that prevent all non-SRED validated capture mechanisms from being used for P2PE transactions.</li> </ul>	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines POI configuration and deployment procedures.</li> <li>Confirm that the documented procedures for each device type include either: <ul style="list-style-type: none"> <li>Disabling all capture mechanisms that are not SRED validated, or</li> <li>Implementing configurations that prevent all non-SRED validated capture mechanisms from being used for P2PE transactions.</li> </ul> </li> </ul>		✓			
<b>1A-1.2.1.b</b> Verify that the documented procedures include ensuring that all non-SRED validated capture mechanisms are disabled or otherwise prevented from being used for P2PE transactions prior to devices being deployed to merchant environments.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, confirm that the documented procedures (identified in 1A-1.2.1.a) include ensuring that the procedures for disabling or otherwise preventing use of non-SRED validated capture mechanisms for P2PE transactions are performed prior to devices being deployed to merchant environments.</li> </ul>		✓			
<b>1A-1.2.1.c</b> For all types of POI devices used in the solution, examine a sample of device configurations to verify: <ul style="list-style-type: none"> <li>All non-validated capture mechanisms are either disabled or configured to prevent their use for P2PE transactions, prior to devices being deployed to merchant environments.</li> <li>Disabled capture mechanism cannot be enabled by the merchant, and/or the configurations that prevent capture mechanisms from being used for P2PE transactions cannot be enabled by the merchant.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each device in the sample, describe how observation of device configurations verified that: <ul style="list-style-type: none"> <li>All non-validated capture mechanisms are either disabled or configured to prevent their use for P2PE transactions, prior to devices being deployed to merchant environments</li> <li>Disabled capture mechanism cannot be enabled by the merchant, and/or the configurations that prevent capture mechanisms from being used for P2PE transactions cannot be enabled by the merchant.</li> </ul> </li> </ul>	✓				✓
<b>1A-1.3</b> Clear-text account data must not be disclosed to any component or device outside of the PCI-approved POI device prior to being transmitted to the solution provider's decryption environment.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1A-1.3.a</b> Examine documented transaction processes and data flows to verify that clear-text account data is not disclosed to any component or device outside of the PCI-approved POI prior to being transmitted to the solution provider's decryption environment.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines transaction processes and data flows</li> <li>Confirm that the documented processes and data flows define that clear-text account data is not disclosed to any component or device outside of the PCI-approved POI prior to being transmitted to the solution provider's decryption environment.</li> </ul>		✓			
<b>1A-1.3.b</b> Using forensic tools and/or other data tracing methods, inspect a sample of transactions to verify that clear-text account data is not disclosed to any component or device outside of the PCI-approved POI prior to being transmitted to the solution provider's decryption environment.	<ul style="list-style-type: none"> <li>Identify the forensic tools and/or other data tracing methods used</li> <li>Identify the sample set number from Table 1.5 that describes the sample of POI devices and transactions assessed for this testing procedure</li> <li>For all observed transactions, describe how observation of the transactions using forensic tools and/or other data tracing methods verified that clear-text account data is not disclosed to any component or device outside of the PCI-approved POI prior to being transmitted to the solution provider's decryption environment</li> </ul>				✓	✓
<b>1A-1.3.1</b> Any cryptographic keys that can be used to decrypt account data must not exist on any device outside of the PCI-approved POI device or the solution provider's decryption environment.						
<b>1A-1.3.1.a</b> Examine documented key-management policies and procedures to verify cryptographic keys that can be used to decrypt account data must not exist on any device outside of the PCI-approved POI or the solution provider's decryption environment.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines key-management policies and procedures.</li> <li>Confirm that the documented procedures for each device type require that cryptographic keys which can be used to decrypt account data must not exist on any device outside of the PCI-approved POI or the solution provider's decryption environment.</li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1A-1.3.1.b</b> Examine documented data flows and observe a sample of transactions to verify cryptographic keys that can be used to decrypt account data do not exist on any device outside of the PCI-approved POI, other than within the solution provider's decryption environment.	<ul style="list-style-type: none"> <li>Identify the document containing data flows</li> <li>Identify the sample set number from Table 1.5 that describes the sample of POI devices and transactions assessed for this testing procedure</li> <li>For all observed transactions, describe how observation of the transactions and examination of documented data flows verified that cryptographic keys which can be used to decrypt account data do not exist on any device outside of the PCI-approved POI, other than within the solution provider's decryption environment.</li> </ul>		✓		✓	✓
<b>1B-1</b> Employ device management at initial key-loading facility and pre-use until placed into service, and for any POI devices returned to the key-management facility, or the vendor or their agent, for repair or other disposition.						
<b>1B-1.1</b> POIs and other SCDs must be placed into service only if there is assurance that the equipment has not been substituted or subjected to unauthorized modifications or tampering prior to the loading of cryptographic keys.						
<b>1B-1.1.a</b> Review documented procedures to confirm that processes are defined to provide the following assurances prior to the loading of cryptographic keys: <ul style="list-style-type: none"> <li>POIs have not been substituted or subjected to unauthorized modifications or tampering.</li> <li>SCDs used for key injection/loading or signing have not been substituted or subjected to unauthorized modifications or tampering.</li> </ul>	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, identify the document that defines processes to be followed prior to key loading.</li> <li>For each SCD device type in Table 1.3, identify the document that defines processes to be followed prior to key loading.</li> <li>Confirm the documented processes provide the following assurances prior to the loading of cryptographic keys:               <ul style="list-style-type: none"> <li>POIs have not been substituted</li> <li>POIs have not been subjected to unauthorized modifications or tampering</li> <li>SCDs used for key injection/loading or signing have not been substituted</li> <li>SCDs used for key injection/loading or signing have not been subjected to unauthorized modifications or tampering</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.b</b> Observe processes and interview personnel to verify that processes are followed to provide the following assurances prior to the loading of cryptographic keys: <ul style="list-style-type: none"> <li>POIs have not been substituted or subjected to unauthorized modifications or tampering.</li> <li>SCDs used for key injection/loading or signing have not been substituted or subjected to unauthorized modifications or tampering.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that processes are implemented to provide the following assurances prior to the loading of cryptographic keys: <ul style="list-style-type: none"> <li>POIs have not been substituted</li> <li>POIs have not been subjected to unauthorized modifications or tampering</li> <li>SCDs used for key injection/loading or signing have not been substituted</li> <li>SCDs used for key injection/loading or signing have not been subjected to unauthorized modifications or tampering</li> </ul> </li> <li>For all POI device types identified in Table 1.1, describe how processes were observed to provide the following assurances prior to the loading of cryptographic keys: <ul style="list-style-type: none"> <li>POIs have not been substituted</li> <li>POIs have not been subjected to unauthorized modifications or tampering</li> </ul> </li> <li>For all SCD device types identified in Table 1.3, describe how processes were observed to provide the following assurances prior to the loading of cryptographic keys: <ul style="list-style-type: none"> <li>SCDs used for key injection/loading or signing have not been substituted</li> <li>SCDs used for key injection/loading or signing have not been subjected to unauthorized modifications or tampering</li> </ul> </li> </ul>			✓	✓	
<b>1B-1.1.1</b> Controls must be implemented to protect POIs and other SCDs from unauthorized access up to point of deployment. Controls must include the following:						



P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.1.a</b> Review documented procedures to verify controls are defined to protect POIs and other SCDs from unauthorized access up to point of deployment.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the document that defines controls to protect POIs from unauthorized access up to point of deployment.</li> <li>For all SCD device types identified in Table 1.3, identify the document that defines controls to protect SCDs from unauthorized access up to point of deployment.</li> </ul>		✓			
<b>1B-1.1.1.b</b> Verify that documented procedures include 1B-1.1.1.1 through 1B-1.1.1.3 below.	<ul style="list-style-type: none"> <li>For each POI device type in Table 1.1, confirm that the documented procedures (identified in 1B-1.1.1.a) include the following: <ul style="list-style-type: none"> <li>Access to all POIs must be documented, defined, logged and controlled to ensure that unauthorized individuals cannot access, modify, or substitute any device.</li> <li>POIs must not use default keys (such as keys that are pre-installed for testing purposes) or passwords.</li> <li>All personnel with access to POIs must be documented in a formal list and authorized by management.</li> </ul> </li> <li>For each SCD device type in Table 1.3, confirm that the documented procedures (identified in 1B-1.1.1.a) are defined to ensure the following: <ul style="list-style-type: none"> <li>Access to all SCDs must be documented, defined, logged and controlled to ensure that unauthorized individuals cannot access, modify, or substitute any device.</li> <li>SCDs must not use default keys (such as keys that are pre-installed for testing purposes) or passwords.</li> <li>All personnel with access to SCDs must be documented in a formal list and authorized by management.</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.1.1</b> Access to all POIs and other SCDs is documented, defined, logged, and controlled such that unauthorized individuals cannot access, modify, or substitute any device.						
<b>1B-1.1.1.1.a</b> Examine access-control documentation and device configurations to verify that access to all POIs and key injection/loading devices is defined and documented.	<ul style="list-style-type: none"> <li>Identify the access-control document that defines and documents: <ul style="list-style-type: none"> <li>Access to all POIs.</li> <li>Access to all key injection/loading devices.</li> </ul> </li> <li>Identify the following sample set numbers: <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>Sample set from Table 1.4 that describes the sample of SCD devices assessed for this testing procedure</li> </ul> </li> <li>For each POI device in the sample, describe how observation of the configuration settings verified that access to all POIs is defined in accordance with the access-control documentation.</li> <li>For each SCD in the sample, describe how observation of the configuration settings verified that access to all key injection/loading devices is defined in accordance with the access-control documentation.</li> </ul>	✓	✓			✓

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.1.1.b</b> For a sample of POIs and other SCDs, observe authorized personnel accessing devices and examine access logs to verify that access to all POIs and other SCDs is logged.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI device in the sample:             <ul style="list-style-type: none"> <li>Identify the authorized personnel observed accessing the devices</li> <li>Identify the access logs examined.</li> <li>Describe how examination of the access logs verified that access to all POIs is logged.</li> </ul> </li> <li>Identify the sample set number from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> <li>For each SCD in the sample:             <ul style="list-style-type: none"> <li>Identify the authorized personnel who were observed accessing the devices</li> <li>Identify the access logs examined.</li> <li>Describe how examination of the access logs verified that access to all SCDs is logged.</li> </ul> </li> </ul>		✓		✓	✓
<b>1B-1.1.1.1.c</b> Examine implemented access controls to verify that unauthorized individuals cannot access, modify, or substitute any POI or other SCD.	<ul style="list-style-type: none"> <li>Describe how observation of access controls verified that unauthorized individuals cannot access, modify, or substitute any POI</li> <li>Describe how observation of access controls verified that that unauthorized individuals cannot access, modify, or substitute any SCD</li> </ul>				✓	

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.1.2</b> POIs and other SCDs do not use default keys (such as keys that are pre-installed for testing purposes) or passwords.						
<b>1B-1.1.1.2</b> Examine vendor documentation or other information sources to identify default keys (such as keys that are pre-installed for testing purposes), passwords, or data. Observe implemented processes and interview personnel to verify that default keys or passwords are not used.	<p>For all POI device types identified in Table 1.1:</p> <p>Identify vendor documentation, or other information sources, that identify default keys, passwords, and data</p> <p>Identify the personnel interviewed who confirm that default keys or passwords are not used.</p> <p>Describe how observation of implemented processes verified that default keys or passwords are not used</p> <p>For all SCD device types identified in Table 1.3:</p> <p>Identify vendor documentation, or other information sources, that identify default keys, passwords, and data.</p> <p>Identify the personnel interviewed who confirm that default keys or passwords are not used.</p> <p>Describe how observation of implemented processes verified that default keys or passwords are not used.</p>		✓	✓	✓	
<b>1B-1.1.1.3</b> All personnel with access to POIs and other SCDs are documented in a formal list and authorized by management.						
<b>1B-1.1.1.3.a</b> Examine documented authorizations to verify: <ul style="list-style-type: none"> <li>All personnel with access to POIs and other SCDs are documented in a formal list</li> <li>All personnel with access to POIs and other SCDs are authorized by management.</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1:               <ul style="list-style-type: none"> <li>Identify the documented authorizations</li> <li>Confirm that the documented authorizations verify:                   <ul style="list-style-type: none"> <li>All personnel with access to POIs are documented in a formal list</li> <li>All personnel with access to POIs are authorized by management</li> </ul> </li> </ul> </li> <li>For all SCD device types identified in Table 1.3:               <ul style="list-style-type: none"> <li>Identify the documented authorizations</li> <li>Confirm that the documented authorizations verify:                   <ul style="list-style-type: none"> <li>All personnel with access to SCDs are documented in a formal list</li> <li>All personnel with access to SCDs are authorized by management</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.1.1.3.b</b> For a sample of POIs and other SCDs, examine implemented access controls to verify that only personnel documented and authorized in the formal list have access to devices.	<ul style="list-style-type: none"> <li>Identify the following sample set numbers:             <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI device in the sample, describe how observation of implemented access controls verified that only personnel documented and authorized in the formal list have access to devices.</li> <li>For each SCD in the sample, describe how observation of implemented access controls verified that only personnel documented and authorized in the formal list have access to devices.</li> </ul>		✓		✓	✓
<b>1B-1.2</b> Protect SCDs from unauthorized access, modification, or substitution, from receipt through to installation and use.						
<b>1B-1.2.1</b> A documented “chain-of-custody” process must be in place to ensure that all POIs and other SCDs are controlled from receipt through to installation and use. The chain of custody must include records to identify personnel responsible for each interaction with the devices.						
<b>1B-1.2.1.a</b> Examine documented procedures to verify that a chain-of-custody process is required for all POIs and other SCDs from receipt through to installation and use.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the documented procedure that defines the chain-of-custody process.</li> <li>Confirm that the documented chain-of-custody process is required for all POIs from receipt through to installation and use.</li> </ul> </li> <li>For all SCD device types identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the documented procedure that defines the chain-of-custody process</li> <li>Confirm that the documented process is required for all SCDs from receipt through to installation and use</li> </ul> </li> </ul>		✓		✓	

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.2.1.b</b> For a sample of POIs and other SCDs, review documented records and interview responsible personnel to verify that chain of custody is maintained from receipt through to installation and use for: <ul style="list-style-type: none"> <li>All POIs</li> <li>All devices used for key injection/loading or signing</li> </ul>	<ul style="list-style-type: none"> <li>Identify the following sample set numbers: <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Describe how the documented records verify that chain of custody is maintained from receipt through to installation and use for all POIs.</li> <li>Identify the responsible personnel interviewed who confirm that chain of custody is maintained from receipt through to installation and use for all POIs.</li> </ul> </li> <li>For each SCD in the sample: <ul style="list-style-type: none"> <li>Describe how the documented records verify that chain of custody is maintained from receipt through to installation and use for all devices used for key injection/loading or signing.</li> <li>Identify the responsible personnel interviewed who confirm that chain of custody is maintained from receipt through to installation and use for all devices used for key injection/loading or signing.</li> </ul> </li> </ul>		✓	✓		✓
<b>1B-1.2.1.c</b> Verify the chain-of-custody records identify personnel responsible for each interaction with the devices.	<ul style="list-style-type: none"> <li>For the sample of POI devices identified in testing procedure 1B-1.2.1.b, confirm that the observed chain-of-custody records identify personnel responsible for each interaction with the devices.</li> <li>For the sample of SCDs identified in testing procedure 1B-1.2.1.b, confirm that the observed chain-of-custody records identify personnel responsible for each interaction with the devices.</li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.2.2</b> Controls, including the following, must be in place to ensure that all installed devices are from a legitimate source:						
<b>1B-1.2.2.a</b> Examine documented purchasing, receipt, and deployment procedures to confirm that controls are defined for ensuring that all received devices are from a legitimate source.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the document that defines purchasing, receipt and deployment procedures.</li> <li>Confirm that the documented procedures define controls for ensuring that all received devices are from a legitimate source.</li> </ul> </li> <li>For all SCD device types identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the document that defines purchasing, receipt and deployment procedures.</li> <li>Confirm that the documented procedures define controls for ensuring that all received devices are from a legitimate source.</li> </ul> </li> </ul>		✓			
<b>1B-1.2.2.b</b> Confirm that the documented procedures include 1B-1.2.2.1 through 1B-1.2.2.2 below.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, confirm that the documented procedures (identified in 1B-1.2.2.a) include the following:             <ul style="list-style-type: none"> <li>Device serial numbers are compared to the serial number documented by the sender for all POIs, and records of serial-number verifications are maintained</li> <li>Documentation used to validate the device serial numbers is received via a separate communication channel than the device and is not received in the same shipment as the device</li> </ul> </li> <li>For all SCD device types identified in Table 1.3, confirm that the documented procedures (identified in 1B-1.2.2.a) include the following:             <ul style="list-style-type: none"> <li>Device serial numbers are compared to the serial number documented by the sender for all SCDs, and records of serial-number verifications are maintained</li> <li>Documentation used to validate the device serial numbers is received via a separate communication channel than the device and is not received in the same shipment as the device</li> </ul> </li> </ul>		✓			

P2PE Domain 1  Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.2.2.1</b> Device serial numbers must be compared to the serial numbers documented by the sender to ensure device substitution has not occurred. A record of device serial-number validations must be maintained. <i><b>Note:</b> Examples of how serial numbers may be documented by the sender include but are not limited to: purchase order, shipping waybill, manufacturer's invoice, or similar document.</i>						
<b>1B-1.2.2.1.a</b> Interview responsible personnel to verify that device serial numbers are compared to the serial number documented by the sender for all POIs and other SCDs.	<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that device serial numbers are compared to the serial number documented by the sender for all POIs.</li><li>Identify the responsible personnel interviewed who confirm that device serial numbers are compared to the serial number documented by the sender for all SCDs.</li></ul>			✓		



P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.2.2.1.b</b> For a sample of received POIs and other SCDs, observe records of serial-number validations to verify: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the following sample set numbers: <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI in the sample: <ul style="list-style-type: none"> <li>Identify the sender documentation used to verify device serial numbers</li> <li>Describe how observation of serial-number validation records verified: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul> </li> </ul> </li> <li>For each SCD in the sample: <ul style="list-style-type: none"> <li>Identify the sender documentation used to verify device serial numbers</li> <li>Describe how observation of serial-number validation records verified: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul> </li> </ul> </li> </ul>		✓			✓

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.2.2.2</b> Documentation used for validating device serial numbers must be received via a separate communication channel and must not have arrived with the device shipment.						
<b>1B-1.2.2.2</b> For a sample of received POIs and other SCDs, review delivery records and interview responsible personnel to verify that documentation used to validate the device serial numbers was received via a separate communication channel than the device and was not received in the same shipment as the device.	<ul style="list-style-type: none"> <li>Identify the following sample set numbers:             <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI in the sample:             <ul style="list-style-type: none"> <li>Describe how the delivery records confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device, and was not received in the same shipment as the device.</li> <li>Identify the responsible personnel interviewed who confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device and was not received in the same shipment as the device</li> </ul> </li> <li>For each SCD in the sample:             <ul style="list-style-type: none"> <li>Describe how the delivery records confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device, and was not received in the same shipment as the device.</li> <li>Identify the responsible personnel interviewed who confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device and was not received in the same shipment as the device</li> </ul> </li> </ul>		✓	✓		✓
<b>1B-1.3</b> Dual-control mechanisms must exist to help prevent substitution of POIs and other SCDs. This applies to both in-service and spare or backup devices.  <b>Note:</b> Procedural controls, which may be a combination of physical barriers and logical controls, may exist to support the prevention and detection of substituted cryptographic devices, but cannot supplant the implementation of dual-control mechanisms.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.3.a</b> Examine documented procedures to verify that dual-control mechanisms are defined to: <ul style="list-style-type: none"> <li>Prevent substitution of POIs, both in-service and spare or backup devices.</li> <li>Prevent substitution of SCDs, both in-service and spare or backup devices.</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1, identify the document that defines dual-control mechanisms to prevent substitution of POIs, both in-service and spare or backup devices.</li> <li>For all SCD device types in Table 1.3, identify the document that defines dual-control mechanisms to prevent substitution of POIs, both in-service and spare or backup devices.</li> </ul>		✓			
<b>1B-1.3.b</b> Examine dual-control mechanisms in use to verify that the mechanisms: <ul style="list-style-type: none"> <li>Prevent substitution of POIs, both in-service and spare or backup devices.</li> <li>Prevent substitution of key injection/loading devices, both in-service and spare or backup devices.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of the implemented dual-control mechanisms verified that the mechanisms: <ul style="list-style-type: none"> <li>Prevent substitution of POIs, both in-service and spare or backup devices.</li> <li>Prevent substitution of key injection/loading devices, both in-service and spare or backup devices</li> </ul> </li> </ul>		✓			
<b>1B-1.4</b> Implement physical protection of POIs and other SCDs from the manufacturer's facility up to the point of key-insertion or inspection, through one or more of the following: <ul style="list-style-type: none"> <li>Transportation using a trusted courier service (for example, via bonded carrier). The devices are then securely stored until key-insertion occurs.</li> <li>Use of physically secure and trackable packaging (for example, pre-serialized, counterfeit-resistant, tamper-evident packaging). The devices are then stored in such packaging, or in secure storage, until key-insertion occurs.</li> <li>A secret, device-unique "transport-protection token" is loaded into the secure storage area of each SCD at the manufacturer's facility. Before key-insertion, the SCD used for key-insertion verifies the presence of the correct "transport-protection token" before overwriting this value with the initial key.</li> </ul>						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.4.a</b> Examine documented procedures to verify they require physical protection of POIs and other SCDs, from the manufacturer's facility up to the point of key-insertion or inspection, through one or more of the defined methods.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the document that defines procedures for physical protection of POIs from the manufacturer's facility up to the point of key-insertion or inspection</li> <li>Confirm the documented procedures require use of one or more of the defined methods (Requirement 1B-1.4).</li> </ul> </li> <li>For all SCD device types in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the document that defines procedures for physical protection of SCDs from the manufacturer's facility up to the point of key-insertion or inspection</li> <li>Confirm the documented procedures require use of one or more of the defined methods (Requirement 1B-1.4).</li> </ul> </li> </ul>		✓			
<b>1B-1.4.b</b> Interview responsible personnel to verify that one or more of the defined methods are in place to provide physical device protection for POIs and other SCDs, from the manufacturer's facility up to the point of key-insertion.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that one or more of the defined methods are in place to provide physical device protection for POIs, from the manufacturer's facility up to the point of key-insertion.</li> <li>Identify the responsible personnel interviewed who confirm that one or more of the defined methods are in place to provide physical device protection for other SCDs, from the manufacturer's facility up to the point of key-insertion.</li> </ul>			✓		

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.4.c</b> For a sample of received POIs and other SCDs, observe processes and physical protections in use (for example, storage locations, packaging, device configurations), to verify that the defined methods are implemented for POIs and other SCDs, up to the point of key-insertion.	<ul style="list-style-type: none"> <li>Identify the following sample set numbers:             <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI in the sample, describe how observation of processes and physical protections verified that the defined methods are implemented for the POIs up to the point of key-insertion.</li> <li>For each SCD in the sample, describe how observation of processes and physical protections verified that the defined methods are implemented for the POIs up to the point of key-insertion.</li> </ul>				✓	✓
<b>1B-1.5</b> Inspect and test all POIs and other SCDs immediately prior to key-insertion to ensure that devices are legitimate and have not been subject to any unauthorized modifications. Procedures must include the following:						
<b>1B-1.5.a</b> Examine documented procedures to verify they require inspection and testing of POIs and other SCDs immediately prior to key-insertion, to ensure that devices are legitimate and have not been subject to any unauthorized modifications.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1, identify the document that defines procedures for inspection and testing of POIs immediately prior to key-insertion, to ensure that devices are legitimate and have not been subject to any unauthorized modifications.</li> <li>For all SCD device types in Table 1.3, identify the document that defines procedures for inspection and testing of SCDs immediately prior to key-insertion, to ensure that devices are legitimate and have not been subject to any unauthorized modifications.</li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.5.b</b> Verify documented procedures include 1B-1.5.1 through 1B-1.5.4 below.	<ul style="list-style-type: none"> <li>For all POI device type in Table 1.1, confirm that the documented procedures for inspection and testing of POIs (identified in 1B-1.5.a) include:               <ul style="list-style-type: none"> <li>Running self-tests to ensure the correct operation of the device</li> <li>Installing (or re-installing) devices only after confirming that the device has not been tampered with or compromised</li> <li>Physical and/or functional tests and visual inspection to confirm that physical and logical controls and anti-tamper mechanisms are not modified or removed</li> <li>Maintaining records of the tests and inspections, and retaining records for at least one year</li> </ul> </li> <li>For all SCD device type in Table 1.1, confirm that the documented procedures for inspection and testing of POIs (identified in 1B-1.5.a) include:               <ul style="list-style-type: none"> <li>Running self-tests to ensure the correct operation of the device</li> <li>Installing (or re-installing) devices only after confirming that the device has not been tampered with or compromised</li> <li>Physical and/or functional tests and visual inspection to confirm that physical and logical controls and anti-tamper mechanisms are not modified or removed</li> <li>Maintaining records of the tests and inspections, and retaining records for at least one year</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.5.1</b> Running self-tests to ensure the correct operation of the device.						
<b>1B-1.5.1</b> Examine records of device inspections and tests, and observe tests in progress to verify that self-tests are run on POIs and other SCDs to ensure the correct operation of the device.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the records of device inspections examined.</li> <li>Describe the observed tests in progress</li> <li>Describe how observation of documented records and tests in progress verified that self-tests are run on POIs to ensure the correct operation of the device.</li> </ul> </li> <li>For all SCDs device types in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the records of device inspections examined.</li> <li>Describe the observed tests in progress</li> <li>Describe how observation of documented records and tests in progress verified that self-tests are run on SCDs to ensure the correct operation of the device</li> </ul> </li> </ul>		✓		✓	
<b>1B-1.5.2</b> Installing (or re-installing) devices only after confirming that the device has not been tampered with or compromised.						
<b>1B-1.5.2</b> Observe inspection processes and interview responsible personnel to verify that devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.	<ul style="list-style-type: none"> <li>Identify the responsible personnel who confirm that:             <ul style="list-style-type: none"> <li>POI devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.</li> <li>SCDs are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised</li> </ul> </li> <li>Describe how observation of the inspection processes verified that:             <ul style="list-style-type: none"> <li>POI devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.</li> <li>SCDs are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.</li> </ul> </li> </ul>			✓	✓	
<b>1B-1.5.3</b> Physical and/or functional tests and visual inspection to confirm that physical and logical controls and anti-tamper mechanisms are not modified or removed.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.5.3</b> Observe inspection processes and interview responsible personnel to confirm processes include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that inspection processes include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> <li>Describe how the inspection processes were observed to include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> </ul> </li> <li>For all SCD device types in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that inspection processes include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> <li>Describe how the inspection processes were observed to include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> </ul> </li> </ul>			✓	✓	
<b>1B-1.5.4</b> Maintaining records of the tests and inspections, and retaining records for at least one year.						
<b>1B-1.5.4.a</b> Examine records of inspections and interview responsible personnel to verify records of the tests and inspections are maintained.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1:             <ul style="list-style-type: none"> <li>Identify the records of inspections examined.</li> <li>Identify the responsible personnel interviewed who confirm that records of the tests and inspection are maintained</li> </ul> </li> <li>For all SCD device types in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the records of inspections examined.</li> <li>Identify the responsible personnel interviewed who confirm that records of the tests and inspection are maintained</li> </ul> </li> </ul>		✓	✓		



P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.5.4.b</b> Examine records of inspections to verify records are retained for at least one year.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1, describe how examination of inspection records verified that records are retained for at least one year.</li> <li>For all SCD device types in Table 1.1, describe how examination of inspection records verified that records are retained for at least one year.</li> </ul>		✓			
<b>1B-1.6</b> Maintain inventory-control and monitoring procedures to accurately track device locations from receipt of the device until ready to ship. The inventory-control and monitoring procedures must provide for the following:						
<b>1B-1.6.a</b> Examine documented inventory-control and monitoring procedures to confirm they define methods for tracking device locations from receipt until the device is ready to ship.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1: <ul style="list-style-type: none"> <li>Identify the document that defines inventory-control and monitoring procedures.</li> <li>Confirm that the documented procedures define methods for tracking device locations from receipt until the device is ready to ship.</li> </ul> </li> <li>For all SCD device types in Table 1.3: <ul style="list-style-type: none"> <li>Identify the document that defines inventory-control and monitoring procedures.</li> <li>Confirm that the documented procedures define methods for tracking device locations from receipt until the device is ready to ship.</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.6.b</b> Verify documented procedures include 1B-1.6.1 through 1B-1.6.3 below.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1, confirm that the documented inventory-control and monitoring procedures (identified in 1B-1.6.a) include the following: <ul style="list-style-type: none"> <li>Devices are entered into the asset registry as soon as possible after receipt of the device, and no later than key loading</li> <li>Devices are protected against unauthorized substitution or modification until all applicable keys have been loaded</li> <li>Control and monitoring procedures provide for detection of lost or stolen equipment and notification to authorized personnel</li> </ul> </li> <li>For all SCD device types in Table 1.1, confirm that the documented inventory-control and monitoring procedures (identified in 1B-1.6.a) include the following: <ul style="list-style-type: none"> <li>Devices are entered into the asset registry as soon as possible after receipt of the device, and no later than key loading</li> <li>Devices are protected against unauthorized substitution or modification until all applicable keys have been loaded</li> <li>Control and monitoring procedures provide for detection of lost or stolen equipment and notification to authorized personnel</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.6.c</b> For a sample of devices, review the documented device inventory and observe device locations to verify that the inventory-control and monitoring procedures accurately track device locations.	<ul style="list-style-type: none"> <li>Identify the following sample set numbers:             <ul style="list-style-type: none"> <li>Sample set from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Sample set from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> </ul> </li> <li>For each POI in the sample:             <ul style="list-style-type: none"> <li>Identify the documented device inventory.</li> <li>Identify the observed device locations.</li> <li>Describe how review of the documented inventory and observation of POI device locations verified that inventory-control and monitoring procedures accurately track device locations.</li> </ul> </li> <li>For each SCD in the sample:             <ul style="list-style-type: none"> <li>Identify the documented device inventory.</li> <li>Identify the observed device locations.</li> <li>Describe how review of the documented inventory and observation of SCD locations verified that inventory-control and monitoring procedures accurately track device locations.</li> </ul> </li> </ul>		✓		✓	✓
<b>1B-1.6.1</b> As soon as possible upon receipt and no later than key loading, the device serial number is entered into the inventory-control system.						
<b>1B-1.6.1</b> Review documented device inventories and interview personnel to verify that devices are entered into the asset registry as soon as possible after receipt of the device, and no later than key loading.	<ul style="list-style-type: none"> <li>Identify the documented inventory of POI device reviewed</li> <li>Identify the documented inventory of SCDs reviewed</li> <li>Identify the personnel interviewed who confirm that:             <ul style="list-style-type: none"> <li>POIs are entered into the asset registry (device inventory) as soon as possible after receipt of the device, and no later than key loading.</li> <li>SCDs are entered into the asset registry (device inventory) as soon as possible after receipt of the device, and no later than key loading.</li> </ul> </li> </ul>		✓	✓		
<b>1B-1.6.2</b> Devices are protected against unauthorized substitution or modification until all applicable keys have been loaded. <b>Note:</b> This includes any cryptographic keys needed for the operation of the device and any keys used to encrypt account data.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.6.2</b> Review implemented controls and interview personnel to verify that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1 <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> <li>Describe how observation of the implemented controls verified that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> </ul> </li> <li>For all SCD device types in Table 1.1 <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> <li>Describe how observation of the implemented controls verified that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> </ul> </li> </ul>			✓	✓	
<b>1B-1.6.3</b> Control and monitoring procedures must provide for detection of lost or stolen equipment and notification to authorized personnel.						
<b>1B-1.6.3</b> Review implemented controls and interview personnel to verify that procedures are implemented to detect lost or stolen devices and notify authorized personnel.	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1 <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures are implemented to detect lost or stolen devices and notify authorized personnel.</li> <li>Describe how the implemented controls were observed to detect lost or stolen devices and notify authorized personnel.</li> </ul> </li> <li>For all SCD device types in Table 1.1 <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures are implemented to detect lost or stolen devices and notify authorized personnel.</li> <li>Describe how the implemented controls were observed to detect lost or stolen devices and notify authorized personnel.</li> </ul> </li> </ul>			✓	✓	

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.7</b> When the POI is shipped from the key-loading facility to the initial point of use (or an intermediary facility), procedures are implemented to ensure that the device is tracked and that it arrives unaltered at its destination.						
<b>1B-1.7</b> Examine documented procedures, interview responsible personnel, and observe processes for shipping POI devices to verify that the following are in place: <ul style="list-style-type: none"> <li>Controls to ensure that device location is known and tracked throughout the entire shipping process</li> <li>Controls to ensure devices arrive unaltered</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types in Table 1.1 <ul style="list-style-type: none"> <li>Identify the document that defines procedures for shipping POI devices.</li> <li>Identify the responsible personnel interviewed who confirm that processes are implemented for shipping POI devices.</li> <li>Describe how observation of processes for shipping POI devices verified that: <ul style="list-style-type: none"> <li>Controls are in place to ensure that device location is known and tracked throughout the entire shipping process</li> <li>Controls are in place to ensure devices arrive unaltered</li> </ul> </li> </ul> </li> </ul>		✓	✓	✓	
<b>1B-1.7.1</b> If POI devices are stored en route, processes must be in place to account for the location of every device at any point in time.						
<b>1B-1.7.1</b> Examine device shipping procedures and records, and interview personnel to determine if POI devices are stored en route. If devices are stored en route, examine device shipping records for a sample of POIs and interview personnel to verify processes are in place to account for the location of every device at any point in time.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, Identify the document that defines device shipping procedures</li> <li>Identify whether the documented procedures include POI devices being stored en route</li> <li>Identify the personnel interviewed who confirm whether POI devices are stored en route.</li> </ul>		✓	✓		
	<i>If POI devices are stored en route:</i> <ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI in the sample: <ul style="list-style-type: none"> <li>Describe how examination of the device shipping records verified the location of the device is accounted for at any point in time</li> <li>Identify the personnel interviewed who confirm that processes are in place to account for the location of every device at any point in time.</li> </ul> </li> </ul>		✓	✓		✓

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-1.7.2</b> Documented procedures are in place and implemented to transfer accountability for POI devices from the key-loading facility.						
<b>1B-1.7.2</b> For a sample of POI devices, examine device shipping records and interview personnel to verify accountability for the device is formally transferred from the key-loading facility to the destination.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 1.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI in the sample:             <ul style="list-style-type: none"> <li>Describe how examination of the device shipping records verified accountability for the device is formally transferred from the key-loading facility to the destination.</li> <li>Identify the personnel interviewed who confirm that accountability for the device is formally transferred from the key-loading facility to the destination.</li> </ul> </li> </ul>		✓	✓		✓
<b>1B-2</b> Procedures must be in place and implemented to protect any SCDs, and ensure the destruction of any cryptographic keys or key material within such devices, when removed from service, retired at the end of the deployment lifecycle, or returned for repair.						
<b>1B-2.1</b> Procedures are in place to ensure that any SCDs to be removed from service, retired, or returned for repair are not intercepted or used in an unauthorized manner, as follows:						
<b>1B-2.1.a</b> Examine documented procedures to verify that procedures are defined for any SCDs to be removed from service, retired, or returned for repair.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3, identify the document that defines procedures for any SCDs to be removed from service, retired, or returned for repair.</li> </ul>		✓			
<b>1B-2.1.b</b> Verify documented procedures include 1B-2.1.1 through 1B-2.1.5 below.	<ul style="list-style-type: none"> <li>For all SCD device types in Table 1.3, confirm that the documented procedures (identified in 1B-2.1.a) include the following:             <ul style="list-style-type: none"> <li>Affected entities are notified before devices are returned</li> <li>Devices are transported via trusted carrier service</li> <li>Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging</li> <li>Devices are tracked during the return process</li> <li>Once received, devices remain in their packaging until ready for repair or destruction</li> </ul> </li> </ul>		✓			

P2PE Domain 1  Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
1B-2.1.1 Affected entities are notified before devices are returned.						
1B-2.1.1 Interview responsible personnel and examine device-return records to verify that affected entities are notified before devices are returned.	<ul style="list-style-type: none"><li>For all SCD device types in Table 1.3:<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that affected entities are notified before devices are returned.</li><li>Describe how examination of device-return records verified that affected entities are notified before devices are returned.</li></ul></li></ul>		✓	✓		
1B-2.1.2 Devices are transported via trusted carrier service—for example, bonded carrier.						
1B-2.1.2 Interview responsible personnel and examine device-return records to verify that devices are transported via trusted carrier service—for example, bonded carrier.	<ul style="list-style-type: none"><li>For all SCD device types in Table 1.3:<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that devices are transported via trusted carrier service.</li><li>Describe how examination of device-return records verified that devices are transported via trusted carrier service.</li></ul></li></ul>		✓	✓		
1B-2.1.3 Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.						
1B-2.1.3 Interview responsible personnel and observe device-return processes and packaging to verify that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.	<ul style="list-style-type: none"><li>For all SCD device types identified in Table 1.3:<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li><li>Describe how observation of device-return processes and packaging verified that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li></ul></li></ul>			✓	✓	
1B-2.1.4 Devices are tracked during the return process.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-2.1.4</b> Interview responsible personnel and examine device-return records to verify that devices are tracked during the return process	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are tracked during the return process</li> <li>Describe how examination of the device-return records verified that devices are tracked during the return process.</li> </ul> </li> </ul>		✓	✓		
<b>1B-2.1.5</b> Once received, devices remain in their packaging (as defined in 1B-2.1.3) until ready for repair or destruction.						
<b>1B-2.1.5</b> Interview responsible personnel and observe device-return processes to verify that once received, devices remain in their packaging (defined in 1B-2.1.3) until ready for destruction.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that once received, devices remain in their packaging (as defined in 1B-2.1.3) until ready for destruction.</li> <li>Describe how observation of device-return processes verified that received devices remain in their packaging until ready for destruction.</li> </ul> </li> </ul>			✓	✓	
<b>1B-2.2</b> When SCDs are removed from service, permanently or for repair, all keys and key material, and all account data stored within the device must be rendered irrecoverable. Processes must include the following: <b>Note:</b> Without proactive key-removal processes, devices removed from service can retain cryptographic keys in battery-backed RAM for days or weeks. Likewise, host/hardware security modules (HSMs) can also retain keys—and more critically, the master file key—resident within these devices. Proactive key-removal procedures must be in place to delete all such keys from any SCD being removed from the network.						



P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-2.2</b> Verify that documented procedures for removing SCDs from service include the following: <ul style="list-style-type: none"> <li>Procedures require that all keys and key material, and all account data stored within the device be securely destroyed.</li> <li>Procedures cover all devices removed from service permanently or for repair.</li> <li>Procedures include 1B-2.2.1 through 1B-2.2.4 below.</li> </ul>	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3, identify the document that defines procedures for removing SCDs from service.</li> <li>Confirm that documented procedures: <ul style="list-style-type: none"> <li>Require that all keys and key material, and all account data stored within the device, be securely destroyed</li> <li>Cover all devices removed from service permanently or for repair</li> </ul> </li> <li>Confirm that documented procedures include: <ul style="list-style-type: none"> <li>Dual control is implemented for all critical decommissioning processes</li> <li>Keys and data storage (including account data) are rendered irrecoverable or devices physically destroyed to prevent the disclosure of any sensitive data or keys</li> <li>SCDs being decommissioned are tested and inspected to ensure keys and account data have been rendered irrecoverable</li> <li>Records of the tests and inspections are maintained for at least one year</li> </ul> </li> </ul>		✓			
<b>1B-2.2.1</b> Dual control is implemented for all critical decommissioning processes.						
<b>1B-2.2.1</b> Interview personnel and observe processes for removing SCDs from service to verify that dual control is implemented for all critical decommissioning processes.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that dual control is implemented for all critical decommissioning processes.</li> <li>Describe how observation of processes for removing SCDs from service verified that dual control is implemented for all critical decommissioning processes.</li> </ul> </li> </ul>			✓	✓	
<b>1B-2.2.2</b> Key and data storage (including account data) are rendered irrecoverable (for example, zeroized). If data cannot be rendered irrecoverable, devices must be physically destroyed to prevent the disclosure of any sensitive data or keys.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-2.2.2</b> Interview personnel and observe processes for removing SCDs from service to verify that all key and data storage (including account data) is rendered irrecoverable (for example, zeroized), or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that all key and data storage (including account data) is rendered irrecoverable, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> <li>Describe how observation of processes for removing SCDs from service verified that all key and data storage (including account data) is rendered irrecoverable, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> </ul> </li> </ul>			✓	✓	
<b>1B-2.2.3</b> SCDs being decommissioned are tested and inspected to ensure keys and account data have been rendered irrecoverable.						
<b>1B-2.2.3</b> Interview personnel and observe processes for removing SCDs from service to verify that tests and inspections of devices are performed to confirm that keys and account data have been rendered irrecoverable.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that tests and inspections are performed to confirm that keys and account data have been rendered irrecoverable for SCDs being removed from service</li> <li>Describe how observation of the processes verified that the tests and inspections performed confirm that keys and account data have been rendered irrecoverable.</li> </ul> </li> </ul>			✓	✓	
<b>1B-2.2.4</b> Records of the tests and inspections (as required in 1B-2.2.3) are maintained for at least one year.						
<b>1B-2.2.4</b> Interview personnel and observe records to verify that records of the tests and inspections (as required in 1B-2.2.4) are maintained for at least one year.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that records of the tests and inspections are maintained for at least one year</li> <li>Describe how examination of documented records verified that records of the tests and inspections are maintained for at least one year.</li> </ul> </li> </ul>		✓	✓		

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-3</b> Any SCD capable of generating or loading cryptographic keys, encrypting keys, or signing applications to be loaded onto a POI device, is protected against unauthorized use. This requirement applies to HSMs, key-injection/loading devices (KLDs) and any other devices used to generate or load keys or to sign applications or whitelists for loading onto POIs.						
<b>1B-3.1</b> For HSMs and other SCDs used for the generation or loading of cryptographic keys for use in POI devices, or for signing applications and/or whitelists to be loaded into a POI device, procedures must be documented and implemented to protect against unauthorized access and use. Required procedures and processes include the following:						
<b>1B-3.1.a</b> Examine documented procedures to confirm that they specify protection against unauthorized access and use for HSMs and other devices used for the generation or loading of cryptographic keys for use in POI devices, or for signing applications and/or whitelists to be loaded into a POI device.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for protection against unauthorized access and use for:               <ul style="list-style-type: none"> <li>HSMs and other devices used for the generation or loading of cryptographic keys for use in POI devices</li> <li>Devices used for signing applications and/or whitelists to be loaded into a POI device.</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-3.1.b</b> Verify that documented procedures include 1B-3.1.1 through 1B-3.1.4 below.	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 1B-3.1.a) include the following: <ul style="list-style-type: none"> <li>Devices must not be authorized for use except under the dual control of at least two authorized people</li> <li>Passwords used for dual control must each be of at least five decimal digits (or an equivalent size)</li> <li>Dual control must be implemented: <ul style="list-style-type: none"> <li>To enable any manual key-encryption functions and any key-encryption functions that occur outside of normal transaction processing;</li> <li>To enable application-signing functions;</li> <li>To place the device into a state that allows for the input or output of clear-text key components;</li> <li>For all access to key-loading devices (KLDs) and authenticated application-signing devices.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>1B-3.1.1</b> Devices must not be authorized for use except under the dual control of at least two authorized people. <b>Note:</b> Dual control consists of logical and/or physical characteristics. For example, dual control may be implemented for logical access via two individuals with two different passwords, or for physical access via a physical lock that requires two individuals each with a different high-security key.						
<b>1B-3.1.1</b> Observe dual-control mechanisms and device-authorization processes to confirm that logical and/or physical characteristics are in place that prevent the device being authorized for use except under the dual control of at least two authorized people.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Describe how dual-control mechanisms and device-authorization processes were observed to ensure that logical and/or physical characteristics are in place that prevent the device being authorized for use except under the dual control of at least two authorized people.</li> </ul> </li> </ul>	✓			✓	
<b>1B-3.1.1.1</b> Passwords used for dual control must each be of at least five decimal digits (or an equivalent size).						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-3.1.1.1</b> Observe password policies and configuration settings to confirm that passwords used for dual control must be at least five decimal digits (or an equivalent size).	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3:               <ul style="list-style-type: none"> <li>Identify the document that defines password policies</li> <li>Confirm the documented policies require that passwords used for dual control must be at least five decimal digits (or an equivalent size).</li> <li>Describe how observation of configuration settings verified that passwords used for dual control must be at least five decimal digits (or an equivalent size).</li> </ul> </li> </ul>	✓	✓			
<b>1B-3.1.2</b> Dual control must be implemented for the following: <ul style="list-style-type: none"> <li>To enable any manual key-encryption functions and any key-encryption functions that occur outside of normal transaction processing;</li> <li>To enable application-signing functions;</li> <li>To place the device into a state that allows for the input or output of clear-text key components;</li> <li>For all access to key-loading devices (KLDs) and authenticated application-signing devices.</li> </ul>						
<b>1B-3.1.2</b> Examine dual-control mechanisms and observe authorized personnel performing the defined activities to confirm that dual control is implemented for the following: <ul style="list-style-type: none"> <li>To enable any manual key-encryption functions, and any key-encryption functions that occur outside of normal transaction processing;</li> <li>To enable application-signing functions;</li> <li>To place the device into a state that allows for the input or output of clear-text key components;</li> <li>For all access to KLDs and authenticated application-signing devices.</li> </ul>	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3:               <ul style="list-style-type: none"> <li>Identify the authorized personnel performing the defined activities</li> <li>Describe how examination of dual-control mechanisms and observation of authorized personnel verified that dual control is implemented:                   <ul style="list-style-type: none"> <li>To enable any manual key-encryption functions, and any key-encryption functions that occur outside of normal transaction processing;</li> <li>To enable application-signing functions;</li> <li>To place the device into a state that allows for the input or output of clear-text key components;</li> <li>For all access to KLDs and authenticated application-signing devices.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>1B-3.1.3</b> Devices must not use default passwords.						

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-3.1.3.a</b> Examine password policies and documented procedures to confirm default passwords must not be used for HSMs, KLDs, and other SCDs used to generate or load cryptographic keys, or to sign applications or whitelists.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the document that defines password policies and procedures</li> <li>Confirm the documented policies and procedures require that default passwords must not be used for HSMs, KLDs, and other SCDs used to generate or load cryptographic keys, or to sign applications or whitelists.</li> </ul> </li> </ul>		✓			
<b>1B-3.1.3.b</b> Observe device configurations and interview device administrators to verify HSMs, KLDs and other SCDs used to generate or load cryptographic keys, or to sign applications or whitelists, do not use default passwords.	<ul style="list-style-type: none"> <li>Identify the device administrators interviewed who confirm that HSMs, KLDs and other SCDs used to generate or load cryptographic keys, or to sign applications or whitelists, do not use default passwords.</li> <li>Identify the sample set number from Table 1.4 that describes the sample of SCDs assessed for this testing procedure.</li> <li>Describe how observation of the device configurations verified: <ul style="list-style-type: none"> <li>HSMs, KLDs and other SCDs used to generate or load cryptographic keys do not use default passwords.</li> <li>SCDs used to sign applications or whitelists do not use default passwords.</li> </ul> </li> </ul>	✓		✓		✓
<b>1B-3.1.4</b> To detect any unauthorized use, devices are at all times either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging, or</li> <li>Under the continuous supervision of at least two authorized people.</li> </ul>						
<b>1B-3.1.4.a</b> Examine documented procedures to confirm that they require devices are either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging at all times, or</li> <li>Under the continuous supervision of at least two authorized people at all times.</li> </ul>	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3, identify the document that defines procedures requiring devices are either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging at all times, or</li> <li>Under the continuous supervision of at least two authorized people at all times.</li> </ul> </li> </ul>		✓			

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-3.1.4.b</b> Interview responsible personnel and observe devices and processes to confirm that devices are either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging at all times, or</li> <li>Under the continuous supervision of at least two authorized people at all times.</li> </ul>	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging at all times, or</li> <li>Under the continuous supervision of at least two authorized people at all times.</li> </ul> </li> <li>Describe how observation of the devices and processes verified that devices are either: <ul style="list-style-type: none"> <li>Locked in a secure cabinet and/or sealed in tamper-evident packaging at all times, or</li> <li>Under the continuous supervision of at least two authorized people at all times.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>1B-4</b> Documented procedures exist and are demonstrably in use to ensure the security and integrity of SCDs placed into service, initialized, deployed, used, and decommissioned.						
<b>1B-4.1</b> All affected parties are aware of required processes and provided suitable guidance on the secure procedures for devices placed into service, initialized, deployed, used, and decommissioned.						
<b>1B-4.1</b> Examine documented procedures/ processes and interview responsible personnel to verify that all affected parties are aware of required processes and are provided suitable guidance on procedures for devices placed into service, initialized, deployed, used, and decommissioned	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the document that defines secure procedures for devices placed into service, initialized, deployed, used, and decommissioned</li> <li>Identify the responsible personnel interviewed</li> <li>Describe how examination of documented procedures and interviews with the responsible personnel verified that all affected parties are: <ul style="list-style-type: none"> <li>Aware of required processes</li> <li>Provided suitable guidance on procedures for devices placed into service, initialized, deployed, used, and decommissioned.</li> </ul> </li> </ul> </li> </ul>		✓	✓		

P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-4.2</b> Procedures that govern access to SCDs, including HSMs, key-injection/loading devices (KLDs), and any other devices used to generate or load keys or sign applications for loading onto POIs, must be documented, implemented, and known to data-center personnel and any others involved with the physical security of such devices. HSM protections must include at least the following:						
<b>1B-4.2.a</b> Examine documented procedures to verify that procedures are defined that govern access to all SCDs.	<ul style="list-style-type: none"> <li>For all SCD device types identified in Table 1.3, identify the document that defines procedures that govern access to all SCDs.</li> </ul>		✓			
<b>1B-4.2.b</b> Verify that procedures governing access to HSMs include at least those defined in Requirements 1B-4.2.1 – 1B-4.2.4 below	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 1B-4.2.a) include the following: <ul style="list-style-type: none"> <li>Any physical keys needed to activate the HSM are stored securely</li> <li>If multiple physical keys are needed to activate the HSM: <ul style="list-style-type: none"> <li>They are assigned to separate designated custodians, and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys</li> </ul> </li> <li>Anti-tamper sensors are enabled as required by the security policy of the HSM</li> <li>When HSMs are connected to online systems, they are not enabled in a sensitive state</li> </ul> </li> </ul>		✓			
<b>1B-4.2.c</b> Interview data-center personnel and others responsible for the physical security of the devices to verify that the documented procedures are known.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 1.3: <ul style="list-style-type: none"> <li>Identify the data-center personnel and other responsible personnel interviewed</li> <li>Describe how interviews with the responsible personnel verified that the documented procedures for the physical security of devices are known.</li> </ul> </li> </ul>			✓		



P2PE Domain 1 Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-4.2.1</b> Any physical keys needed to activate the HSM are stored securely.						
<b>1B-4.2.1</b> Interview responsible personnel and observe key-storage locations and security controls to verify that any physical keys needed to activate the HSM are stored securely.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 1.3:             <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that any physical keys needed to activate the HSM are stored securely.</li> <li>Describe how observation of the key-storage locations and security controls verified that any physical keys needed to activate the HSM are stored securely.</li> </ul> </li> </ul>			✓	✓	
<b>1B-4.2.2</b> If multiple physical keys are needed to activate the HSM: <ul style="list-style-type: none"> <li>They are assigned to separate designated custodians, and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul>						
<b>1B-4.2.2</b> If multiple physical keys are needed to activate the HSM, interview responsible personnel and observe key operations to verify that: <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians, and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 1.3, identify whether multiple physical keys are needed to activate any HSM</li> </ul>				✓	
	<i>If multiple physical keys are needed to activate any HSM:</i> <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that:             <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians, and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys</li> </ul> </li> <li>Describe how observation of key operations verified that:             <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians, and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys</li> </ul> </li> </ul>			✓	✓	
<b>1B-4.2.3</b> Anti-tamper sensors are enabled as required by the security policy of the HSM.						
<b>1B-4.2.3</b> Examine HSM security policy and HSM anti-tamper controls to verify that anti-tamper sensors are enabled as required by the security policy of the HSM.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 1.3, describe how examination of the HSM security policy and HSM anti-tamper controls verified that anti-tamper sensors are enabled as required by the security policy of the HSM.</li> </ul>	✓			✓	

P2PE Domain 1  Solution Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>1B-4.2.4</b> When HSMs are connected to online systems, they are not enabled in a sensitive state. <i><b>Note:</b> A “sensitive state” allows an HSM to perform privileged or sensitive functions that are not available during routine HSM operations. Examples of sensitive functions include but are not limited to: loading of key components, outputting clear-text key components, and altering HSM configuration.</i>						
<b>1B-4.2.4</b> Examine HSM configurations and observe processes to verify that HSMs are not enabled in a sensitive state when connected to online systems.	<ul style="list-style-type: none"><li>For all HSMs identified in Table 1.3, describe how observation of the HSM configuration settings and processes verified that HSMs are not enabled in a sensitive state when connected to online systems.</li></ul>	✓			✓	

## Domain 2: Application Security

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 2.1 – List of POI Applications with access to clear-text account data (<i>All Domain 2 Requirements apply</i>)</b></p> <ul style="list-style-type: none"> <li>• Application name</li> <li>• Application version #</li> <li>• Application vendor name</li> <li>• Brief description of application function/purpose</li> <li>• POI device type name/identifier application is installed on</li> </ul>	<p>Complete Table 2.1 for all POI applications in the solution that have access to clear-text account data. Provide the following:</p> <ul style="list-style-type: none"> <li>• Application name</li> <li>• Application version number</li> <li>• Application vendor name</li> <li>• Brief description of application function/purpose</li> <li>• POI device type name/ identifier – must be consistent with POI device type name/ identifier in section 2.3 of the Executive Summary and in Table 1.1 (Domain 1).</li> </ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• <i>All POI device types must be represented in both Tables 2.1 and 2.2.</i></li> <li>• <i>Use a separate row for each specific application version and POI device type.</i></li> <li>• <i>If a POI device type has no applications on it, record “None” in the Application Name column for that POI device type.</i></li> <li>• <i>There is no need to submit Domain 2 Requirements and Testing Procedures if there are no POI applications in use on any POI device.</i></li> </ul>
<p><b>Table 2.2 – List of POI Applications with <u>NO ACCESS</u> to clear-text account data (<i>Domain 2 Requirements 2A-3 apply</i>)</b></p> <ul style="list-style-type: none"> <li>• Application name</li> <li>• Application version #</li> <li>• Application vendor name</li> <li>• Brief description of application function/purpose</li> <li>• POI device type name/identifier application is installed on</li> </ul>	<p>Complete Table 2.2 for all POI applications in the solution that do not have any access to clear-text account data. Provide the following:</p> <ul style="list-style-type: none"> <li>• Application name</li> <li>• Application version number</li> <li>• Application vendor name</li> <li>• Brief description of application function/purpose</li> <li>• POI device type name/ identifier – must be consistent with POI device type name/ identifier in section 2.3 of the Executive Summary and in Table 1.1 (Domain 1).</li> </ul> <p><b>All Notes for Table 2.1 apply for Table 2.2.</b></p>

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
2A-1 The application does not retain PAN or SAD after application processing is completed.						
2A-1.1 The application does not store PAN or SAD data after processing is completed (even if encrypted). <i>Storage of encrypted PAN data is acceptable during the business process of finalizing the payment transaction if needed (for example, offline transactions). However, at all times, SAD is not stored after the completion of the transaction.</i>						
2A-1.1 For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine device-storage locations and device logs to verify that PAN and SAD are not stored after application processing is completed.	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1:<ul style="list-style-type: none"><li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li><li>Describe the test transactions performed that simulate all functions of the application.</li><li>For each test transaction performed, describe how examination of device-storage locations and device logs verified that:<ul style="list-style-type: none"><li>PAN are not stored after application processing is completed</li><li>SAD are not stored after application processing is completed.</li></ul></li></ul></li></ul>	✓			✓	
2A-1.2 A process is in place to securely delete any PAN or SAD stored during application processing.						
2A-1.2 For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine device-storage locations and device logs to verify that all stored PAN and SAD are rendered irrecoverable.	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1:<ul style="list-style-type: none"><li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li><li>Describe the test transactions performed that simulate all functions of the application.</li><li>For each test transaction performed, describe how examination of device-storage locations and device logs verified that:<ul style="list-style-type: none"><li>All stored PAN are rendered irrecoverable.</li><li>All stored SAD are rendered irrecoverable.</li></ul></li></ul></li></ul>	✓			✓	
2A-2 The application does not transmit clear-text PAN or SAD outside of the device, and only uses communications methods included in the scope of the PCI-approved POI device evaluation.						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2A-2.1</b> The application only exports PAN or SAD data that has been encrypted by the firmware of the PCI-approved POI device, and does not export clear-text PAN or SAD outside of the device. <b>Note:</b> Output of clear-text data that is verified as being unrelated to any of the PCI payment brands is acceptable. The security of this process is assessed at Requirement 2A-2.4.						
<b>2A-2.1</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine device-storage locations and device logs to verify that the application does not output clear-text account data outside of the device.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1:               <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the test transactions performed that simulate all functions of the application.</li> <li>For each test transaction performed, describe how examination of device-storage locations and device logs verified that the application does not output clear-text account data outside of the device</li> </ul> </li> </ul>	✓			✓	
<b>2A-2.2</b> The application only uses internal communication methods (including all inter-process communication and authentication methods) included in the PCI-approved POI device evaluation. These internal communication methods must be documented. <b>Note:</b> This applies to all internal communications within the device, including when account data is passed between applications, or to an area of memory or internal file that could be accessed by other applications, or back to the approved firmware of the POI.						
<b>2A-2.2.a</b> Examine solution provider's documentation that shows all applications, data flows, interactions, etc., within POI device to verify that all internal communication and authentication methods are documented in accordance with the application's <i>Implementation Guide</i> .	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1:               <ul style="list-style-type: none"> <li>Identify the document that details all applications, data flows, interactions, etc., within the POI device, for all devices on which the application will be used.</li> <li>Identify the application's <i>Implementation Guide</i> reviewed.</li> <li>Confirm that all internal communication and authentication methods are documented in accordance with the application's <i>Implementation Guide</i>.</li> </ul> </li> </ul>		✓			

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<p><b>2A-2.2.b</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application.</p> <p>Examine the dataflow during transactions to verify that the application only uses inter-process communication methods approved as part of the PCI-approved POI device evaluation.</p>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the test transactions performed that simulate all functions of the application.</li> <li>For each test transaction performed, describe how examination of the dataflow during the transaction verified that the application only uses inter-process communication methods approved as part of the PCI-approved POI device evaluation (as documented in the application's <i>Implementation Guide</i>).</li> </ul> </li> </ul>	✓			✓	
<p><b>2A-2.3</b> The application only uses external communication methods included in the PCI-approved POI device evaluation.</p> <p><i>For example, the POI may provide an IP stack approved per the PTS Open Protocols module that allows for the use of the SSL/TLS protocol, or the device may provide serial ports or modems approved by the PTS evaluation to communicate transaction data encrypted by its PCI PTS SRED functions.</i></p> <p>Security of applications where the POI device implements an IP stack is covered at Requirement 2B-2.1.</p>						
<p><b>2A-2.3.a</b> Examine solution provider's documentation that shows all applications, data flows, interactions, etc., within POI device to verify that all external communication methods are documented and in accordance with the application's <i>Implementation Guide</i>.</p>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the document that details all applications, data flows, interactions, etc., within the POI device, for all devices on which the application will be used.</li> <li>Identify the application's <i>Implementation Guide</i> reviewed.</li> <li>Confirm that all external communication methods are documented in accordance with the application's <i>Implementation Guide</i>.</li> </ul> </li> </ul>		✓			

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2A-2.3.b</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine communication methods to verify that the application does not use any communication methods that were not approved as part of the PCI-approved POI device evaluation.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1:             <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the test transactions performed that simulate all functions of the application.</li> <li>For each test transaction performed, describe how examination of the dataflow during the transaction verified that the application only uses communication methods that were approved as part of the PCI-approved POI device evaluation (as documented in the application's <i>Implementation Guide</i>).</li> </ul> </li> </ul>	✓			✓	
<b>2A-2.4</b> Ensure that any application functions (for example, "whitelists") that allow for the output of clear-text data limits that output to <i>only</i> non-PCI payment brand accounts/cards, and that additions or changes to application functions are implemented as follows: <ul style="list-style-type: none"> <li>Cryptographically authenticated by the PCI-approved POI device's firmware</li> <li>Implemented only by authorized personnel</li> <li>Documented as to purpose and justification</li> <li>Reviewed and approved prior to implementation</li> </ul> <b>Note:</b> Requirement 2C-2.1.2 prohibits unauthenticated changes or updates to applications or application functions (for example, "whitelists").						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<p><b>2A-2.4.a</b> Interview solution-provider personnel and review documented procedures to verify that any application functions that output clear-text card data are implemented as follows:</p> <ul style="list-style-type: none"> <li>Only non-PCI payment brand accounts/cards are output in clear-text from such application functions</li> <li>Cryptographic authentication between the device and the application functions are established in accordance with device vendor's security guidance.</li> <li>Only authorized personnel are allowed to initiate cryptographic authentication to sign or add application functions for output of clear-text data.</li> <li>Records are maintained of any changes/additions, including description and justification for the function added, who authorized it, and confirmation that it was reviewed to only output non-PCI payment accounts/cards.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for any application functions that output clear-text card data.</li> <li>Confirm that documented procedures for the output of clear-text card data include: <ul style="list-style-type: none"> <li>Only non-PCI payment brand accounts/cards are output in clear-text from such application functions</li> <li>Cryptographic authentication between the device and the application functions are established in accordance with device vendor's security guidance.</li> <li>Only authorized personnel are allowed to initiate cryptographic authentication to sign or add application functions for output of clear-text data.</li> <li>Records are maintained of any changes/additions, including description and justification for the function added, who authorized it, and confirmation that it was reviewed to only output non-PCI payment accounts/cards.</li> </ul> </li> <li>Identify solution-provider personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Only non-PCI payment brand accounts/cards are output in clear-text from such application functions</li> <li>Cryptographic authentication between the device and the application functions are established in accordance with device vendor's security guidance.</li> <li>Only authorized personnel are allowed to initiate cryptographic authentication to sign or add application functions for output of clear-text data.</li> <li>Records are maintained of any changes/additions, including description and justification for the function added, who authorized it, and confirmation that it was reviewed to only output non-PCI payment accounts/cards.</li> </ul> </li> </ul> </li> </ul>		✓	✓		



P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2A-2.4.b</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine device output sources to verify the application meets the following: <ul style="list-style-type: none"> <li>Only outputs clear-text data for non-PCI payment brand accounts/cards.</li> <li>Cryptographic authentication is correctly established for any application functions, using the PCI-approved POI device's firmware for cryptographic authentication.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the test transactions performed that simulate all functions of the application.</li> <li>For each test transaction performed, describe how examination of device output sources verified that: <ul style="list-style-type: none"> <li>The application outputs clear-text data only for non-PCI payment brand accounts/cards.</li> <li>Cryptographic authentication is correctly established for any application functions, using the PCI-approved POI device's firmware for cryptographic authentication.</li> </ul> </li> </ul> </li> </ul>	✓			✓	
<b>2A-2.4.c</b> Review records of changes/additions, and confirm that all changes/additions to application functions are documented, and that the documentation includes description and justification for the function added, who authorized it, and confirmation that it was reviewed to only output non-PCI payment accounts/cards.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the records of changes and/or additions to application functions that were reviewed.</li> <li>Describe how examination of the records and observation of application functions verified that all changes and/or additions to application functions are documented.</li> <li>Confirm that each record of change/addition to application functions includes: <ul style="list-style-type: none"> <li>Description and justification for the added or changed function</li> <li>Identity of person who authorized the change/addition</li> <li>Confirmation that the change/addition was reviewed to ensure that only non-PCI payment accounts/card data is output in clear text.</li> </ul> </li> </ul> </li> </ul>		✓		✓	
<b>2A-3</b> All applications without a business need do not have access to account data. <b>Note:</b> Requirements at 2A-3 are the only requirements applicable to applications on PCI-approved POI devices with no access to account data (for example, a loyalty or advertising application).						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2A-3.1</b> Applications on the device that do not have a business need to access account data must only communicate with the device via application program interfaces (APIs) provided by the SRED firmware that do not provide access to account data.						
<b>2A-3.1.a</b> Examine the POI device vendor's security guidance to identify which APIs are intended for use by applications that do not need access to account data. Review the solution provider's documented processes, and confirm the following is included: <ul style="list-style-type: none"> <li>A list of all APIs and their functions, including which give access to account data and which do not</li> <li>Confirmation that the function of each API in the solution provider's documentation matches the POI device vendor's security guidance</li> <li>A list of all applications and which APIs each use</li> <li>Documented business need for all applications on the device with access to account data</li> <li>Confirmation that any applications without a business need for access to account data only use those APIs that do not give access to account data</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify the document that defines the POI device vendor's security guidance, for all devices on which the application will be used.</li> <li>Identify the solution provider's document reviewed</li> <li>Confirm that the solution provider's documented processes include: <ul style="list-style-type: none"> <li>A list of all device APIs and their functions, including which give access to account data and which do not</li> <li>Confirmation that the function of each API in the solution provider's documentation matches the POI device vendor's security guidance</li> <li>A list of all applications and the APIs each application uses</li> <li>Documented business need for all applications on the device with access to account data</li> <li>Confirmation that any applications without a business need for access to account data only use those APIs that do not give access to account data</li> </ul> </li> </ul> </li> </ul>		✓			
<b>2A-3.1.b</b> Interview solution-provider personnel and observe device operations to verify that that any applications that do not have a need to access clear-text account data only use the APIs specified in the POI device vendor's security guidance that do not provide access to clear-text account data.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify solution-provider personnel interviewed who confirm that the application only uses the APIs specified in the POI device vendor's security guidance that do not provide access to clear-text account data.</li> <li>Describe the device operations observed.</li> <li>Describe how observation of device operations verified that the application only uses APIs specified in the POI device vendor's security guidance which do not provide access to clear-text account data.</li> </ul> </li> </ul>	✓		✓		

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2A-3.2</b> All applications on the device that do not have a business need to access account data are authenticated with an approved security protocol of the POI.						
<b>2A-3.2.a</b> Review the solution provider's documented processes to confirm that applications with no need to see clear-text data must be authenticated using an approved security protocol of the POI.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify the solution provider's document that defines processes for authenticating applications.</li> <li>Confirm the documented processes include that the application must be authenticated using an approved security protocol of the POI, for all devices on which the application will be used.</li> </ul> </li> </ul>		✓			
<b>2A-3.2.b</b> Interview solution-provider personnel and observe device operations to verify that applications with no need to access clear-text account data are authenticated to the device using an approved security protocol.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify solution-provider personnel interviewed who confirm that the application is authenticated to the device using an approved security protocol.</li> <li>Describe the device operations observed.</li> <li>Describe how observation of device operations verified that the application is authenticated to the device using an approved security protocol, for all devices on which the application will be used.</li> </ul> </li> </ul>	✓		✓		
<b>2A-3.3</b> For applications that do not need access to account data, dual control is required for the application-signing process.						
<b>2A-3.3.a</b> Review the solution provider's documented processes to confirm that dual control is required to authenticate applications with no need to see clear-text data.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify the solution provider's document that defines application-signing processes.</li> <li>Confirm the documented processes require dual control to authenticate the application.</li> </ul> </li> </ul>		✓			
<b>2A-3.3.b</b> Interview solution-provider personnel and observe an application update to confirm that application-signing is done under dual control.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.2: <ul style="list-style-type: none"> <li>Identify solution-provider personnel interviewed who confirm that application-signing is performed under dual control.</li> <li>Describe application updates observed.</li> <li>Describe how observation of the application update process verified that dual control is used for application-signing.</li> </ul> </li> </ul>	✓		✓		

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2B-1</b> The application is developed according to industry-standard software development life cycle practices that incorporate information security.						
<b>2B-1.1</b> Applications are developed based on industry best practices and in accordance with the POI device vendor's security guidance, and information security is incorporated throughout the software development life cycle. These processes must include the following:						
<b>2B-1.1</b> Review the solution provider's documented processes, and confirm they follow any guidance specified in the <i>Implementation Guide</i> related to configuring the application on the device.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the solution provider's document that defines processes related to configuring the application on the device, for all devices on which the application will be used.</li> <li>Confirm the documented processes define that that the processes follow any guidance specified in the Implementation Guide related to configuring the application on the device.</li> </ul> </li> </ul>		✓			
<b>2B-1.2</b> Application code and any non-code configuration options, such as "whitelists," are reviewed prior to release and after any significant change, using manual or automated vulnerability-assessment processes to identify any potential vulnerabilities or security flaws. The review process includes the following:						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<p><b>2B-1.2</b> Review the solution provider's documented processes and interview solution-provider personnel, and confirm the following processes are in place:</p> <ul style="list-style-type: none"> <li>Changes to application "whitelists" are reviewed prior to release and after any significant change to confirm that they will not result in the exposure of PCI payment-brand accounts/cards.</li> <li>Changes to application "whitelists" are reviewed for any potential vulnerabilities or security flaws, using manual or automated vulnerability-assessment processes.</li> <li>Found vulnerabilities are corrected and updated for applications in the field (installed on devices) after vulnerabilities are found, when the application vendor provides an update, or when the software vendor notifies the solution provider of a vulnerability that the solution provider needs to address.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the solution provider's document that defines processes for reviewing changes to applications.</li> <li>Confirm the documented processes include the following: <ul style="list-style-type: none"> <li>Changes to application "whitelists" are reviewed prior to release and after any significant change, to confirm that they will not result in the exposure of PCI payment-brand accounts/cards.</li> <li>Changes to application "whitelists" are reviewed for any potential vulnerabilities or security flaws, using manual or automated vulnerability-assessment processes.</li> <li>Found vulnerabilities are corrected and updated for applications in the field (installed on devices) after vulnerabilities are found, when the application vendor provides an update, or when the software vendor notifies the solution provider of a vulnerability that the solution provider needs to address.</li> </ul> </li> <li>Identify solution-provider personnel interviewed who confirm the following processes are in place: <ul style="list-style-type: none"> <li>Changes to application "whitelists" are reviewed prior to release and after any significant change to confirm that they will not result in the exposure of PCI payment-brand accounts/cards.</li> <li>Changes to application "whitelists" are reviewed for any potential vulnerabilities or security flaws, using manual or automated vulnerability-assessment processes.</li> <li>Found vulnerabilities are corrected and updated for applications in the field (installed on devices) after vulnerabilities are found, when the application vendor provides an update, or when the software vendor notifies the solution provider of a vulnerability that the solution provider needs to address.</li> </ul> </li> </ul> </li> </ul>		✓	✓		
<p><b>2B-1.2.1</b> Review of code changes by individuals other than the originating author, and by individuals who are knowledgeable in code-review techniques and secure coding practices.</p>						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2B-1.2.1</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device), and perform test transactions that simulate all functions of the application. Examine device output sources to verify that any changes to “whitelists” do not result in the exposure of PCI payment-brand accounts/cards.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1:             <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the test transactions performed that simulate all functions of the application.</li> <li>For each test transaction performed, describe how examination of device output sources verified that any changes to “whitelists” do not result in the exposure of PCI payment-brand account/cards.</li> </ul> </li> </ul>	✓			✓	
<b>2B-1.3</b> Develop applications based on secure coding guidelines. Cover prevention of common coding vulnerabilities in software development processes.						
<b>2B-1.3</b> For all devices on which the application will be used in the solution, observe application and device operations as implemented in the solution (that is, all applications are installed on the device). Verify that the device and applications are not vulnerable to common vulnerabilities by performing manual or automated penetration testing that specifically attempts to exploit vulnerabilities relevant to the application (an example of such a vulnerability would include buffer overflows.)	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1:             <ul style="list-style-type: none"> <li>Confirm that application and device operations were observed as implemented in the solution (that is, all applications are installed on the device), for all devices on which the application will be used.</li> <li>Describe the penetration testing techniques used (including whether manual or automated (or both) techniques were used) to specifically attempt to exploit vulnerabilities relevant to the application.</li> <li>Describe how results of the penetration testing verified that the application is not vulnerable to common coding vulnerabilities.</li> </ul> </li> </ul>	✓			✓	

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
2B-1.4 All changes to application must follow change-control procedures. The procedures must include the following:						
2B-1.4 Review the solution provider's documented processes for implementing changes to applications, and interview solution-provider personnel, and confirm the following processes are in place: <ul style="list-style-type: none"><li>Guidance in the <i>Implementation Guide</i> is followed.</li><li>Any changes to applications include documented approval by appropriate authorized solution-provider personnel.</li><li>Any changes to applications are documented as to reason and impact of the change.</li></ul>	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1:<ul style="list-style-type: none"><li>Identify the document that defines the solution provider's change control processes.</li><li>Confirm that documented processes include the following:<ul style="list-style-type: none"><li>Guidance in the Implementation Guide related to application changes is followed.</li><li>Any changes to applications include documented approval by appropriate authorized solution-provider personnel.</li><li>Any changes to applications are documented as to reason and impact of the change.</li></ul></li><li>Identify solution-provider personnel interviewed who confirm that the following processes are in place:<ul style="list-style-type: none"><li>Guidance in the Implementation Guide related to application changes is followed.</li><li>Any changes to applications include documented approval by appropriate authorized solution-provider personnel.</li><li>Any changes to applications are documented as to reason and impact of the change.</li></ul></li></ul></li></ul>		✓	✓		
2B-2 The application is implemented securely, including the secure use of any resources shared between different applications.						
2B-2.1 The application is developed in accordance with the POI device vendor's security guidance, including specifying that If an application uses an IP stack, it must use the IP stack approved as part of the PCI-approved POI device evaluation. <i>Note: POI device vendor security guidance is intended for application developers, system integrators, and end-users of the platform to meet requirements in the PCI PTS Open Protocols module as part of a PCI-approved POI device evaluation.</i>						



P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
2B-2.1 Interview solution-provider personnel to determine that they have used only the approved IP stack, and that they have implemented the application in accordance with the <i>Implementation Guide</i> .	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm that:<ul style="list-style-type: none"><li>Only the approved IP stack is used, for all devices on which the application will be used.</li><li>The application has been implemented in accordance with the application’s <i>Implementation Guide</i> to ensure only the approved IP stack is used.</li></ul></li></ul>			✓		
2B-2.1.1 If an application uses the POI device’s IP stack and any of the related OP services, the application must securely use, and integrate with, the following device platform components in accordance with the POI device vendor’s security guidance, including but not limited to the following: <ul style="list-style-type: none"><li>IP and link layer (where implemented by the POI)</li><li>IP protocols (where implemented by the POI)</li><li>Security protocols, including specific mention if specific security protocols or specific configurations of security protocols are not to be used for financial applications and/or platform management</li><li>IP services, including specific mention if specific IP services or specific configurations of IP services are not to be used for financial applications and/or platform management (where implemented by the POI)</li><li>For each platform component listed above, follow the POI device vendor’s security guidance, as applicable to the application’s specific business processing, with respect to the following:<ul style="list-style-type: none"><li>Configuration and updates</li><li>Key management</li><li>Data integrity and confidentiality</li><li>Server authentication</li></ul></li></ul>						



P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2B-2.1.1</b> Interview solution-provider personnel to determine that they have used only the approved IP stack, and that they have implemented the application in accordance with the <i>Implementation Guide</i> .	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Only the approved IP stack is used, for all devices on which the application will be used.</li> <li>The application has been implemented in accordance with any instructions provided in the application's Implementation Guide on how to securely configure any configurable options, as applicable to the application's specific business processing, including: <ul style="list-style-type: none"> <li>Vulnerability assessment</li> <li>Configuration and updates</li> <li>Key management</li> <li>Data integrity and confidentiality</li> <li>Server authentication</li> </ul> </li> </ul> </li> </ul>			✓		
<b>2B-2.2</b> The application-development process includes secure integration with any resources shared with or between applications						
<b>2B-2.2.a</b> Review the solution provider's documentation to confirm that any shared resources they integrated into the application meet the following: <ul style="list-style-type: none"> <li>That any guidance from the <i>Implementation Guide</i> is included</li> <li>Shared resources are identified and documented</li> <li>Instructions for how the application should be configured to ensure secure integration with shared resources (where the integration has been done by the solution provider).</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the document that defines how shared resources they integrated into the application.</li> <li>Confirm the documented procedures include that any shared resources integrated into the application must meet the following: <ul style="list-style-type: none"> <li>Any guidance from the <i>Implementation Guide</i> for secure integration with shared resources is included</li> <li>Shared resources are identified and documented</li> <li>Instructions for how the application should be configured to ensure secure integration with shared resources.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>2B-2.2.b</b> Interview solution-provider personnel to determine that they have integrated any shared resources in accordance with the <i>Implementation Guide</i> .	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm that any shared resource have been integrated in accordance with the application's Implementation Guide.</li> </ul>			✓		
<b>2B-3</b> The application vendor uses secure protocols, provides guidance on their use, and has performed integration testing on the final application.						

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2B-3.1</b> The application developer's process includes full documentation, and integration testing of the application and intended platforms, including the following:						
<b>2B-3.1.1</b> The application developer provides key-management security guidance describing how keys and certificates have to be used. <i>Examples of guidance include what SSL certificates to load, how to load account-data keys (through the firmware of the device), when to roll keys, etc., The application does not perform account-data encryption since that is performed only in the firmware of the PCI-approved POI device.)</i>						
<b>2B-3.1.1.a</b> Review the solution provider's documentation and confirm their documented processes include application developer key-management security guidance.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify the solution provider's document that includes application developer key-management security guidance.</li> </ul>		✓			
<b>2B-3.1.1.b</b> Interview solution-provider personnel to confirm that they follow key-management security guidance in accordance with the <i>Implementation Guide</i>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm that the key-management security guidance is followed in accordance with the Implementation Guide.</li> </ul>			✓		
<b>2B-4</b> Applications do not implement any encryption or key-management functions in lieu of SRED encryption. All such functions are performed by the approved SRED firmware of the device. <b>Note:</b> <i>The application may add, for example, SSL encryption to existing SRED encryption, but cannot bypass or replace SRED encryption.</i>						
<b>2B-4.1</b> Applications do not bypass or render ineffective any encryption or key-management functions implemented by the approved SRED functions of the device. At no time should clear-text keys or account data be passed through an application that has not undergone SRED evaluation.						
<b>2B-4.1</b> Interview solution-provider personnel and observe implementation processes to confirm that the application is installed in accordance with the <i>Implementation Guide</i> .	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify solution-provider personnel interviewed who confirm that the application is installed in accordance with the Implementation Guide, to ensure that the application does not bypass or render ineffective any encryption or key-management functions implemented by the approved SRED functions of the device.</li> <li>Describe how the implementation process was observed to confirm the application is installed in accordance with instructions in the <i>Implementation Guide</i>.</li> </ul> </li> </ul>			✓	✓	

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
2C-1 New vulnerabilities are discovered and applications are tested for those vulnerabilities on an ongoing basis.						
2C-1.2 Software vendors must establish and implement a process to develop and deploy critical security updates to address discovered security vulnerabilities in a timely manner. <i>Note: A “critical security update” is one that addresses an imminent risk to account data.</i>						
2C-1.2.a Obtain and examine processes for deploying application security upgrades, and verify they include deployment of critical security updates within 30 days of receipt from the software vendor.	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1, identify the document that defines processes ensuring critical security updates are deployed within 30 days of receipt from the software vendor.</li></ul>		✓			
2C-1.2.b Interview responsible solution-provider personnel to confirm that critical application security updates are deployed within 30 days of receipt from software vendor.	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1, identify responsible solution-provider personnel interviewed who confirm that critical application security updates are deployed within 30 days of receipt from the software vendor</li></ul>			✓		
2C-2 Applications are installed and updates are implemented only via trusted, signed, authenticated processes using an approved security protocol evaluated for the PCI-approved POI device.						
2C-2.1 Ensure that all application installations and updates are authenticated as follows:						
2C-2.1 To confirm that all application installations and updates are authenticated, verify the following:						
2C-2.1.1 All application installations and updates only use an approved security protocol of the POI.						
2C-2.1.1.a Review the solution provider’s documentation and confirm their documented processes include using the guidance in the application’s <i>Implementation Guide</i> for any application installations and updates.	<ul style="list-style-type: none"><li>For all applications identified in Table 2.1:<ul style="list-style-type: none"><li>Identify the solution provider’s document that defines processes for application installations and updates.</li><li>Confirm the documented processes include guidance from the application’s <i>Implementation Guide</i> for any application installations and updates.</li></ul></li></ul>		✓			

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2C-2.1.1.b</b> Interview responsible personnel and observe installation and update processes to confirm that installations and updates are only done using an approved security protocol.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that application installations and updates use only an approved security protocol (as instructed in the application's Implementation Guide).</li> <li>Describe the installations and updates observed.</li> <li>Describe how observation of installation and update processes verified that only an approved security protocol is used for all installations and updates.</li> </ul> </li> </ul>			✓	✓	
<b>2C-2.1.3</b> The application developer includes guidance for whoever signs the application (including for whitelists), including requirements for dual control over the application-signing process.						
<b>2C-2.1.3</b> Confirm the following through interview with solution provider and by observing an application update: <ul style="list-style-type: none"> <li>Application-signing processes specified in the Implementation Guide are followed.</li> <li>Updates to applications are signed.</li> <li>Application-signing is done under dual control.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify solution-provider personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Application-signing processes specified in the <i>Implementation Guide</i> are followed.</li> <li>Updates to applications are signed.</li> <li>Application-signing is done under dual control.</li> </ul> </li> <li>Describe the application updates observed.</li> <li>Describe how observation of application updates verified that: <ul style="list-style-type: none"> <li>Application-signing processes specified in the <i>Implementation Guide</i> are followed.</li> <li>Updates to applications are signed.</li> <li>Application-signing is done under dual control.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>2C-3</b> Maintain instructional documentation and training programs for the application's installation, maintenance/upgrades, and use.						
<b>2C-3.1</b> The process to develop, maintain, and disseminate an <i>Implementation Guide</i> for the application's installation, maintenance, upgrades and general use includes the following:						
<b>2C-3.1</b> Confirm that the solution provider has a current copy of the <i>Implementation Guide</i> .	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1: <ul style="list-style-type: none"> <li>Identify the Implementation Guide used by the solution provider</li> <li>Confirm the <i>Implementation Guide</i> is current.</li> </ul> </li> </ul>		✓			

P2PE Domain 2 Solution Provider Assessment Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>2C-3.1.2</b> Review of the <i>Implementation Guide</i> at least annually and upon changes to the application or the P2PE Domain 2 requirements, and update as needed to keep the documentation current with: <ul style="list-style-type: none"> <li>Any changes to the application (for example, device changes/upgrades and major and minor software changes).</li> <li>Any changes to the <i>Implementation Guide</i> requirements in this document.</li> </ul>						
<b>2C-3.1.2.a</b> Interview solution-provider personnel to confirm they have read a current copy of the <i>Implementation Guide</i> and are familiar with the contents and instructions therein.	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm that they have read a current copy of the <i>Implementation Guide</i> and are familiar with the contents and instructions therein.</li> </ul>			✓		
<b>2C-3.1.3</b> Distribution to all new and existing application installers (for example, solution providers, integrator/resellers, etc.), and re-distribution to all existing application installers every time the guide is updated.						
<b>2C-3.1.3</b> Confirm the following via interviews with solution-provider personnel: <ul style="list-style-type: none"> <li>The solution provider receives periodic updates of the <i>Implementation Guide</i> from the software vendor.</li> <li>The solution provider has distributed the <i>Implementation Guide</i> to any outsourced integrators/resellers they use for their P2PE solution.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm: <ul style="list-style-type: none"> <li>The solution provider receives periodic updates of the <i>Implementation Guide</i> from the software vendor.</li> <li>The solution provider has distributed the <i>Implementation Guide</i> to any outsourced integrators/resellers they use for their P2PE solution.</li> </ul> </li> </ul>			✓		
<b>2C-3.2.1</b> Review the training materials for application installers on an annual basis and whenever new application versions are released. Updated as needed to ensure materials are current with the <i>Implementation Guide</i> .						
<b>2C-3.2.1</b> For the training materials provided by the software vendor for integrators/resellers, confirm the following via interviews with solution-provider personnel: <ul style="list-style-type: none"> <li>The solution provider has read and understands the training material.</li> <li>The solution provider has distributed the training material to any outsourced integrators/resellers they use for their P2PE solution.</li> </ul>	<ul style="list-style-type: none"> <li>For all applications identified in Table 2.1, identify solution-provider personnel interviewed who confirm: <ul style="list-style-type: none"> <li>The solution provider has read and understands the training material.</li> <li>The solution provider has distributed the training material to any outsourced integrators/resellers they use for their P2PE solution.</li> </ul> </li> </ul>			✓		

## Domain 3: Encryption Environment

**Note:** Domain 3 requirements and testing procedures apply to all POI device types identified in Table 1.1.

Use Table 1.1 (from Domain 1) as a reference for Domain 3.

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 3.1 – Samples of POI Devices assessed for Domain 3 Testing Procedures</b></p> <ul style="list-style-type: none"> <li>• POI Sample Set #1 <ul style="list-style-type: none"> <li>○ Number and Description</li> <li>○ POI device type name/ identifier (per Table 1.1)</li> <li>○ Sample Size (Number of each device type assessed for Domain 3 Testing Procedures)</li> <li>○ Rationale - How sample size was determined to be appropriate and representative of the overall population</li> <li>○ Domain 3 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• POI Sample Set #2 – Per above</li> <li>• POI Sample Set #3 – Per above</li> </ul> <p>And so on...</p> <p><b>Note:</b> Every POI device type listed in Table 1.1 (Domain 1) must be included in every sample set in Table 3.1.</p>	<p>Complete Table 3.1 to identify the sample of POI devices assessed for particular Domain 3 testing procedures. For each POI Sample Set identified, provide the following:</p> <ul style="list-style-type: none"> <li>• POI Sample Set #1 <ul style="list-style-type: none"> <li>○ POI Sample Set # and Description <ul style="list-style-type: none"> <li>▪ Ensure POI Sample Sets are consecutively numbered</li> <li>▪ Include a brief description that identifies one sample set from another and is consistent with the purpose of the sample</li> </ul> </li> <li>○ POI device type name/ identifier – each sample must be representative of all POI device types used in the solution</li> <li>○ Sample Size – number of each device type assessed for the applicable Domain 3 Testing Procedure(s)</li> <li>○ Rationale – how the assessor determined the sample size was appropriate and representative of the overall population of POI devices</li> <li>○ Specific Domain 3 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• POI Sample Set #2 – Per above</li> <li>• POI Sample Set #3 – Per above</li> <li>• And so on... Add rows as needed to document additional sample sets – e.g. from POI Sample Set #1 to POI Sample Set #N.</li> </ul>

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
3A-1 Solution provider maintains inventory-control and monitoring procedures to accurately track POI devices in their possession, and provides related instructions to merchants.							
3A-1.1 Maintain inventory-control and monitoring procedures to identify and locate all POI devices, including where devices are: <ul style="list-style-type: none"><li>Deployed</li><li>Awaiting deployment</li><li>Undergoing repair or otherwise not in use</li><li>In transit</li></ul>							
3A-1.1.a Examine documented inventory-control procedures to confirm the solution provider has defined methods to identify and locate all POI devices, including where devices are: <ul style="list-style-type: none"><li>Deployed</li><li>Awaiting deployment</li><li>Undergoing repair or otherwise not in use</li><li>In transit</li></ul>	<ul style="list-style-type: none"><li>Identify the document that defines the solution provider’s inventory-control procedures.</li><li>Confirm that the documented procedures define methods to identify and locate all POI devices, including where devices are<ul style="list-style-type: none"><li>Deployed</li><li>Awaiting deployment</li><li>Undergoing repair or otherwise not in use</li><li>In transit</li></ul></li></ul>		✓				
3A-1.1.b For a sample of devices, examine the documented device inventory and observe device locations to verify that the inventory-control and monitoring procedures identify and locate all POI devices.	<ul style="list-style-type: none"><li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure.</li><li>Identify the documented device inventory.</li><li>For each POI device in the sample, describe how examination of the documented device inventory and observation of device locations verified that the inventory-control and monitoring procedures identify and locate all POI devices.</li></ul>		✓		✓	✓	
3A-1.1.1 Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to maintain inventory-control and monitoring procedures to identify and locate all devices, including where devices are: <ul style="list-style-type: none"><li>Deployed</li><li>Awaiting deployment</li><li>Undergoing repair or otherwise not in use</li><li>In transit</li></ul>							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-1.1.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed procedures for merchants to maintain inventory-control and monitoring procedures to identify and locate all devices, including those where devices are: <ul style="list-style-type: none"> <li>• Deployed</li> <li>• Awaiting deployment</li> <li>• Undergoing repair or otherwise not in use</li> <li>• In transit</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes detailed procedures for merchants to maintain inventory-control and monitoring procedures to identify and locate all devices, including those where devices are: <ul style="list-style-type: none"> <li>◦ Deployed</li> <li>◦ Awaiting deployment</li> <li>◦ Undergoing repair or otherwise not in use</li> <li>◦ In transit</li> </ul> </li> </ul>						✓
<b>3A-1.2</b> Perform POI device inventories at least annually to detect removal or substitution of devices.							
<b>3A-1.2.a</b> Examine documented procedures to verify device inventories are required to be performed at least annually to detect removal or substitution of devices.	<ul style="list-style-type: none"> <li>• Identify the document that defines procedures for device inventories to be performed at least annually to detect removal or substitution of devices.</li> </ul>		✓				
<b>3A-1.2.b</b> Examine records of device inventories and interview personnel to verify that device inventories are performed at least annually.	<ul style="list-style-type: none"> <li>• Describe how examination of device inventory records verified that device inventories are performed at least annually.</li> <li>• Identify the personnel interviewed who confirm that device inventories are performed at least annually.</li> </ul>		✓	✓			
<b>3A-1.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to perform POI device inventories at least annually.							
<b>3A-1.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes: <ul style="list-style-type: none"> <li>• Detailed procedures for merchants to perform device inventories to detect removal or substitution of devices</li> <li>• Recommended frequency for performing device inventories, not to exceed annually</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes <ul style="list-style-type: none"> <li>◦ Detailed procedures for merchants to perform POI device inventories to detect removal or substitution of devices</li> <li>◦ Recommended frequency for performing POI device inventories, not to exceed annually</li> </ul> </li> </ul>						✓



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-1.3</b> Maintain a documented inventory of all POI devices to include at least the following: <ul style="list-style-type: none"> <li>• Make, model of device</li> <li>• Location (site/facility, and/or identity of merchant)</li> <li>• Serial number</li> <li>• General description</li> <li>• Photograph of device that clearly shows device type and model (to assist with identification of different devices)</li> <li>• Security seals, labels, hidden markings, etc.</li> <li>• Number and type of physical connections to device</li> <li>• Date of last inventory performed</li> <li>• Firmware version</li> <li>• Hardware version</li> <li>• Applications (including versions)</li> </ul>							
<b>3A-1.3.a</b> Verify through observation that a documented inventory of all POI devices is maintained.	<ul style="list-style-type: none"> <li>• Identify the documented inventory of all POI devices.</li> <li>• Describe how it was observed that all POI devices are included in the inventory</li> </ul>		✓		✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-1.3.b</b> Verify the documented inventory includes at least the following: <ul style="list-style-type: none"> <li>• Make, model of device</li> <li>• Location (site/facility, and/or identity of merchant)</li> <li>• Serial number</li> <li>• General description</li> <li>• Photograph of device that clearly shows device type and model (to assist with identification of different devices)</li> <li>• Security seals, labels, hidden markings, etc.</li> <li>• Number and type of physical connections to device</li> <li>• Date of last inventory</li> <li>• Firmware version</li> <li>• Hardware version</li> <li>• Any applications (including versions)</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the documented inventory (identified in 3A-1.3.a) includes at least the following for all POI devices: <ul style="list-style-type: none"> <li>○ Make, model of device</li> <li>○ Location (site/facility, and/or identity of merchant)</li> <li>○ Serial number</li> <li>○ General description</li> <li>○ Photograph of device that clearly shows device type and model</li> <li>○ Security seals, labels, hidden markings, etc.</li> <li>○ Number and type of physical connections to device</li> <li>○ Date of last inventory</li> <li>○ Firmware version</li> <li>○ Hardware version</li> <li>○ Any applications (including versions)</li> </ul> </li> </ul>		✓		✓	✓	
<b>3A-1.3.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to maintain an inventory of all POI devices used for P2PE, to include at least those items described in 3A-1.3.							
<b>3A-1.3.1.a</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes procedures and guidance for merchants to maintain an inventory of POI devices.	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes procedures and guidance for merchants to maintain an inventory of POI devices.</li> </ul>						✓

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-1.3.1.b</b> Verify the instructions include maintaining at least the following details: <ul style="list-style-type: none"> <li>• Make, model of device</li> <li>• Location (including site/facility, if applicable)</li> <li>• Serial number</li> <li>• General description</li> <li>• Security seals, labels, hidden markings, etc.</li> <li>• Number and type of physical connections to device</li> <li>• Date of last inventory performed</li> <li>• Firmware version</li> <li>• Hardware version</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes instructions for merchants to maintain at least the following details in their inventory of POI devices: <ul style="list-style-type: none"> <li>○ Make, model of device</li> <li>○ Location (including site/facility, if applicable)</li> <li>○ Serial number</li> <li>○ General description</li> <li>○ Security seals, labels, hidden markings, etc.</li> <li>○ Number and type of physical connections to device</li> <li>○ Date of last inventory performed</li> <li>○ Firmware version</li> <li>○ Hardware version</li> </ul> </li> </ul>						✓
<b>3A-1.3.2</b> Secure the documented inventory of POI devices from unauthorized access.							
<b>3A-1.3.2</b> Observe implemented controls and interview personnel to verify the documented inventory of devices is secured from unauthorized access.	<ul style="list-style-type: none"> <li>• Identify the personnel interviewed who confirm that the documented inventory of POI devices is secured from unauthorized access.</li> <li>• Describe how observation of the implemented controls verified that the documented inventory of POI devices is secured from unauthorized access.</li> </ul>			✓	✓		
<b>3A-1.3.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to secure the documented inventory of POI devices from unauthorized access.							
<b>3A-1.3.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes procedures and guidance for merchants to secure their documented inventory of devices from unauthorized access.	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes procedures and guidance for merchants to secure their documented inventory of devices from unauthorized access.</li> </ul>						✓
<b>3A-1.4</b> Implement procedures for detecting and responding to variances in the annual inventory, including missing or substituted POI devices. Response procedures must include inclusion of any procedures defined by all applicable PCI payment brands, including timeframes for incident reporting, and providing a point of contact for merchants to report missing/substituted devices.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-1.4.a</b> Examine documented procedures to verify that procedures are defined for responding to variances in the annual inventory, including: <ul style="list-style-type: none"> <li>Procedures to detect missing or substituted devices</li> <li>Procedures for responding to missing or substituted devices, including any procedures defined by all applicable PCI payment brands, including timeframes for incident reporting</li> <li>A point of contact for reporting missing/substituted devices.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for responding to variances in the annual inventory.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Procedures to detect missing or substituted devices</li> <li>Procedures for responding to missing or substituted devices, including any procedures defined by all applicable PCI payment brands, including timeframes for incident reporting</li> <li>A point of contact for reporting missing/substituted devices.</li> </ul> </li> </ul>		✓				
<b>3A-1.4.b</b> Interview personnel to verify that procedures for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices, are implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures are implemented for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices.</li> </ul>			✓			
<b>3A-1.4.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to detect and report variances in the annual inventory, including missing or substituted POI devices.							
<b>3A-1.4.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes: <ul style="list-style-type: none"> <li>Procedures for merchants to detect and report variances in the annual inventory, including missing or substituted device</li> <li>Point of contact for merchants to report missing or substituted devices</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes: <ul style="list-style-type: none"> <li>Procedures for merchants to detect and report variances in the annual inventory, including missing or substituted device</li> <li>Point of contact for merchants to report missing or substituted devices</li> </ul> </li> </ul>						✓
<b>3A-2</b> Solution provider physically secures POI devices in their possession when not deployed or being used, and provides related instructions to merchants.							
<b>3A-2.1</b> Physically secure the storage of POI devices awaiting deployment.							
<b>3A-2.1.a</b> Examine documented procedures to verify they include storing POI devices awaiting deployment in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing POI devices awaiting deployment in a physically secure location.</li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.1.b</b> Inspect storage locations for POI devices awaiting deployment, to verify that the location is physically secure.	<ul style="list-style-type: none"> <li>Identify storage locations for POI devices awaiting deployment.</li> <li>Describe how storage locations for POI devices awaiting deployment were observed to be physically secure.</li> </ul>				✓		
<b>3A-2.1.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to physically secure the storage of POI devices awaiting deployment.							
<b>3A-2.1.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions for storing POI devices awaiting deployment in a physically secure location.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes instructions for merchants for storing POI devices awaiting deployment in a physically secure location.</li> </ul>						✓
<b>3A-2.2</b> Physically secure the storage of POI devices undergoing repair or otherwise not in use.							
<b>3A-2.2.a</b> Examine documented procedures to verify they include storing POI devices undergoing repair, or otherwise not in use, in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing POI devices undergoing repair, or otherwise not in use, in a physically secure location</li> </ul>		✓				
<b>3A-2.2.b</b> Inspect storage locations for POI devices undergoing repair or otherwise not in use, to verify that the location is physically secure.	<ul style="list-style-type: none"> <li>Identify storage locations for POI devices undergoing repair or otherwise not in use.</li> <li>Describe how storage locations for POI devices undergoing repair or otherwise not in use were observed to be physically secure.</li> </ul>				✓		
<b>3A-2.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to physically secure the storage of POI devices undergoing repair or otherwise not in use							
<b>3A-2.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions for storing POI devices undergoing repair or otherwise not in use in a physically secure location.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes instructions for merchants for storing POI devices undergoing repair or otherwise not in use in a physically secure location.</li> </ul>						✓
<b>3A-2.3</b> Physically secure the storage of POI devices awaiting transport between sites/locations.							
<b>3A-2.3.a</b> Examine documented procedures to verify they include storing POI devices awaiting transport between sites/locations in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing POI devices awaiting transport between sites/locations in a physically secure location.</li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.3.b</b> Inspect storage locations for decryption devices awaiting transport between sites/locations, to verify that the location is secure.	<ul style="list-style-type: none"> <li>Identify storage locations for POI devices awaiting transport between sites/locations.</li> <li>Describe how storage locations for decryption devices awaiting transport between sites/locations were observed to be physically secure.</li> </ul>				✓		
<b>3A-2.3.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to physically secure the storage of POI devices awaiting transport between sites/locations.							
<b>3A-2.3.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions for storing POI devices awaiting transport between sites/locations in a physically secure location.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants for storing POI devices awaiting transport between sites/locations in a physically secure location.</li> </ul>						✓
<b>3A-2.4</b> Physically secure POI devices in transit, including: <ul style="list-style-type: none"> <li>Packing devices in tamper-evident packaging prior to transit.</li> <li>Implementing procedures for determining whether device packaging has been tampered with.</li> <li>Use of a defined secure transport method, such as bonded carrier or secure courier.</li> </ul>							
<b>3A-2.4.a</b> Examine documented procedures for the transportation of POI devices and verify that procedures include the following: <ul style="list-style-type: none"> <li>Procedures for packing POI devices in tamper-evident packaging prior to transit</li> <li>Procedures for determining whether device packaging has been tampered with</li> <li>Procedures for using a defined secure transport method, such as bonded carrier or secure courier</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types in table 3.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for transportation of POI devices</li> <li>Confirm that the documented procedures include:                   <ul style="list-style-type: none"> <li>Procedures for packing POI devices in tamper-evident packaging prior to transit</li> <li>Procedures for determining whether device packaging has been tampered with</li> <li>Procedures for using a defined secure transport method, such as bonded carrier or secure courier</li> </ul> </li> </ul> </li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.4.b</b> For a sample of device shipments, examine records of device transportation and interview personnel to verify that the following procedures are implemented: <ul style="list-style-type: none"> <li>POI devices are packed in tamper-evident packaging prior to transit</li> <li>Procedures are followed for determining whether device packaging has been tampered with</li> <li>Use of a defined secure transport method, such as bonded carrier or secure courier</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types in table 3.1, identify the personnel interviewed who confirm the following: <ul style="list-style-type: none"> <li>POI devices are packed in tamper-evident packaging prior to transit</li> <li>Procedures are followed for determining whether device packaging has been tampered with</li> <li>Use of a defined secure transport method, such as bonded carrier or secure courier</li> </ul> </li> <li>Identify the sample of device shipments examined (including shipment dates, device types, numbers of devices, etc.)</li> <li>For the sample of device shipments, describe how examination of transportation records and interviews with personnel verified that: <ul style="list-style-type: none"> <li>POI devices are packed in tamper-evident packaging prior to transit</li> <li>Procedures are followed for determining whether device packaging has been tampered with</li> <li>Use of a defined secure transport method, such as bonded carrier or secure courier</li> </ul> </li> </ul>		✓	✓		✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.4.1</b> Provide instructions to the merchant via the <i>P2PE Instruction Manual</i> for the merchant to physically secure POI devices in transit, to include at least those items described in 3A-2.4.							
<b>3A-2.4.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed procedures for merchants to physically secure POI devices being transported, including: <ul style="list-style-type: none"> <li>Procedures for packing the device using tamper-evident packaging prior to transit</li> <li>Procedures for inspecting device packaging to determine whether it has been tampered with, including specific details on how tamper-evidence may appear on the packaging used</li> <li>Defined secure transport method, such as bonded carrier or secure courier</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types in table 3.1, confirm that the P2PE Instruction Manual (PIM) includes detailed procedures for merchants to physically secure POI devices being transported, including: <ul style="list-style-type: none"> <li>Procedures for packing the device using tamper-evident packaging prior to transit</li> <li>Procedures for inspecting device packaging to determine whether it has been tampered with, including specific details on how tamper-evidence may appear on the packaging used</li> <li>Defined secure transport method, such as bonded carrier or secure courier</li> </ul> </li> </ul>						✓
<b>3A-2.4.2</b> Implement procedures to be followed upon determining that POI device packaging has been tampered with, including: Devices must not be deployed or used Procedures for returning device to authorized party for investigation Escalation procedures and contact details for reporting tamper-detection							
<b>3A-2.4.2.a</b> Examine documented procedures to verify they include procedures to be followed upon determining that device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>Devices must not be deployed or used</li> <li>Procedures for returning device to authorized party for investigation</li> <li>Contact details for reporting tamper-detection</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to be followed upon determining that device packaging has been tampered with.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Devices must not be deployed or used</li> <li>Procedures for returning device to authorized party for investigation</li> <li>Contact details for reporting tamper-detection</li> </ul> </li> </ul>		✓				



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.4.2.b</b> Interview personnel to verify that, upon determining that device packaging has been tampered with, the following procedures are implemented: <ul style="list-style-type: none"> <li>• Devices are not deployed or used</li> <li>• Procedures are followed for returning device to authorized party for investigation</li> <li>• Reporting of tamper-detection to defined contact details</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the personnel interviewed who confirm that, upon determining that device packaging has been tampered with, the following procedures are implemented: <ul style="list-style-type: none"> <li>◦ Devices are not deployed or used</li> <li>◦ Procedures are followed for returning device to authorized party for investigation</li> <li>◦ Reporting of tamper-detection to defined contact details</li> </ul> </li> </ul>			✓			
<b>3A-2.4.3</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to follow upon determining that POI device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>• Devices must not be deployed or used</li> <li>• Procedures for returning device to authorized party for investigation</li> <li>• Contact details for reporting tamper-detection</li> </ul>							
<b>3A-2.4.3</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for merchant to follow upon determining that device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>• Devices must not be deployed or used</li> <li>• Procedures for returning device to authorized party for investigation</li> <li>• Contact details for reporting tamper-detection</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to follow upon determining that device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>◦ Devices must not be deployed or used</li> <li>◦ Procedures for returning device to authorized party for investigation</li> <li>◦ Contact details for reporting tamper-detection</li> </ul> </li> </ul>						✓
<b>3A-2.5</b> Ensure POI devices are transported only between trusted sites/locations as follows: <ul style="list-style-type: none"> <li>• A list of trusted sites (e.g., vendor / maintenance provider, etc.) is maintained.</li> <li>• Only devices received from trusted sites/locations are accepted for use.</li> <li>• Procedures are defined in the event that devices are received from untrusted or unknown locations, including: <ul style="list-style-type: none"> <li>◦ Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>◦ Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>• Devices are sent only to trusted sites/locations.</li> </ul>							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.5.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) between which devices may be transported</li> <li>Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>Procedures to be followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted.</li> </ul> </li> <li>Procedures to ensure that devices are only sent to trusted sites/locations</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure POI devices are transported only between trusted sites/locations.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) between which devices may be transported</li> <li>Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>Procedures to be followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted.</li> </ul> </li> <li>Procedures to ensure that devices are only sent to trusted sites/locations</li> </ul> </li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<p><b>3A-2.5.b</b> For a sample of device shipments, examine records of device transportation and interview personnel to verify:</p> <ul style="list-style-type: none"> <li>Only devices received from trusted sites/ locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Only devices received from trusted sites/ locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul> </li> <li>Identify the sample of device shipments which were examined (including shipment dates, device types, numbers of devices, etc.)</li> <li>For the sample of device shipments, describe how examination of transportation records and interviews with personnel verified that: <ul style="list-style-type: none"> <li>Only devices received from trusted sites/ locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul> </li> </ul>		✓	✓		✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-2.5.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to only transport POI devices between trusted sites/locations, as described in 3A-2.5.							
<b>3A-2.5.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for transporting devices including: <ul style="list-style-type: none"> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) from which devices may be accepted for use</li> <li>Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>Procedures to be followed in the event that a device is received from an untrusted or unknown source location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) to which devices may be sent</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants for transporting devices, including: <ul style="list-style-type: none"> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) from which devices may be accepted for use</li> <li>Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>Procedures to be followed in the event that a device is received from an untrusted or unknown source location, including:</li> </ul> </li> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted <ul style="list-style-type: none"> <li>A list of trusted sites (e.g., vendor / maintenance provider, etc.) to which devices may be sent</li> </ul> </li> </ul>						✓
<b>3A-3</b> Solution provider has procedures to prevent and detect the unauthorized alteration or replacement of POI devices in their possession prior to and during deployment, and provides related instructions to merchants.							
<b>3A-3.1</b> Implement procedures to prevent and detect unauthorized modification, substitution, or tampering of POI devices prior to use. Procedures must include the following:							
<b>3A-3.1.1</b> Validate that serial numbers of received devices match sender records, and maintain records of serial-number verification. <b>Note:</b> Examples of how serial numbers may be documented by the sender include but are not limited to: purchase order, shipping waybill, manufacturer's invoice, or similar document.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3A-3.1.1.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>Procedures for comparing device serial numbers to the serial numbers documented by the sender</li> <li>Procedures for maintaining records of serial-number verifications</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the document that defines the following procedures: <ul style="list-style-type: none"> <li>Procedures for comparing device serial numbers to the serial numbers documented by the sender</li> <li>Procedures for maintaining records of serial-number verifications</li> </ul> </li> </ul>		✓			
<b>3A-3.1.1.b</b> For a sample of received POIs, observe records of serial-number validations and interview personnel to verify: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Device serial numbers for received device are verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained</li> </ul> </li> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Identify the sender documentation used to verify device serial numbers.</li> <li>Describe how observation of serial-number validations and interviews with personnel verified that: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul> </li> </ul> </li> </ul>		✓	✓		✓
<b>3A-3.1.2</b> Documentation used for validating device serial numbers must be received via a separate communication channel and must not have arrived with the device shipment.						
<b>3A-3.1.2.a</b> Examine documented procedures to verify that documentation used for validating device serial numbers must be received via a separate communication channel and must not arrive with the device shipment	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the document that defines procedures to ensure that documentation used for validating device serial numbers must be received via a separate communication channel and must not arrive with the device shipment</li> </ul>		✓			

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3A-3.1.2.b</b> For a sample of received POIs, review delivery records and interview personnel to verify that documentation used to validate the device serial number was received via a separate communication channel than the device and was not received in the same shipment as the device.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the personnel interviewed who confirm that documentation used to validate the device serial number is received via a separate communication channel than the device and is not received in the same shipment as the device.</li> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of delivery records and interviews with personnel verified that documentation used to validate the device serial number was received via a separate communication channel than the device and was not received in the same shipment as the device.</li> </ul>		✓	✓		✓
<b>3A-3.1.3</b> Perform pre-installation inspection procedures, including physical and functional tests and visual inspection, to confirm devices have not been tampered with or compromised.						
<b>3A-3.1.3.a</b> Examine documented procedures to verify that pre-installation inspection procedures are defined, including physical and functional tests and visual inspection, to confirm devices have not been tampered with or compromised.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 1.1, identify the document that defines pre-installation inspection procedures.</li> <li>Confirm that the documented pre-installation inspection procedures include physical and functional tests and visual inspection, to confirm devices have not been tampered with or compromised.</li> </ul>		✓			
<b>3A-3.1.3.b</b> Examine records of inspections, interview personnel performing device inspections and observe inspection process to confirm that POIs are subject to physical and functional tests as well as visual inspection prior to installation to confirm devices have not been tampered with or compromised.	<ul style="list-style-type: none"> <li>Identify the records of inspections examined (including device types and numbers).</li> <li>Identify the personnel interviewed who confirm that POIs are subject to physical and functional tests as well as visual inspection prior to installation to confirm devices have not been tampered with or compromised.</li> <li>Describe how observation of inspection records and interviews with personnel verified that POIs are subject to physical and functional tests as well as visual inspection prior to installation to confirm devices have not been tampered with or compromised.</li> </ul>		✓	✓	✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-3.1.4</b> Maintain devices in original, tamper-evident packaging or store devices in a physically secured location, until ready for use.							
<b>3A-3.1.4.a</b> Examine documented procedures to verify they require devices be maintained in original, tamper-evident packaging or stored in a physically secured location, until ready for use.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring devices be maintained in original, tamper-evident packaging or stored in a physically secured location, until ready for use.</li> </ul>		✓				
<b>3A-3.1.4.b</b> Observe devices to verify they are maintained in original, tamper-evident packaging or stored in a physically secured location, until ready for use.	<ul style="list-style-type: none"> <li>Describe how observation of devices verified that devices are maintained in original, tamper-evident packaging or stored in a physically secured location, until ready for use.</li> </ul>				✓		
<b>3A-3.1.5</b> Record device serial number in inventory-control system as soon as possible upon receipt and prior to installation							
<b>3A-3.1.5.a</b> Examine documented procedures to verify they require devices be entered into an inventory-control system as soon as possible upon receipt and prior to installation.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring devices be entered into an inventory-control system as soon as possible upon receipt and prior to installation.</li> </ul>		✓				
<b>3A-3.1.5.b</b> Review documented device inventories and interview responsible personnel to verify devices are entered into an inventory-control system as soon as possible after receipt of the device, and before installation.	<ul style="list-style-type: none"> <li>Identify the documented device inventories.</li> <li>Identify the personnel interviewed who confirm that devices are entered into an inventory-control system as soon as possible after receipt of the device, and before installation</li> <li>Describe how examination of documented device inventories and interviews with personnel verified that devices are entered into an inventory-control system as soon as possible after receipt of the device, and before installation.</li> </ul>		✓	✓			
<b>3A-3.1.6</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures, including those items described in 3A-3.1.1 through 3A-3.1.5, to prevent and detect unauthorized alteration or replacement of POI devices prior to installation and use.							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-3.1.6</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for merchants to implement procedures for preventing and detecting unauthorized modification, substitution, or tampering of POI devices prior to installation and use, including: <ul style="list-style-type: none"> <li>Procedures for matching device serial numbers to the serial numbers documented by the sender</li> <li>Procedures for maintaining records of serial-number verifications</li> <li>Defined method for transporting documents used for validating device serial numbers, via a separate communication channel and not with the device shipment</li> <li>Instructions for performing pre-installation inspection procedures, including physical and functional tests and visual inspection, to verify devices have not been tampered with or compromised</li> <li>Instructions for maintaining devices in original, tamper-evident packaging or in physically secure storage until ready for use</li> <li>Instructions for recording device serial numbers in merchant inventory-control system as soon as possible</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to implement procedures for preventing and detecting unauthorized modification, substitution, or tampering of POI devices prior to installation and use.</li> <li>Confirm defined procedures include: <ul style="list-style-type: none"> <li>Procedures for matching device serial numbers to the serial numbers documented by the sender</li> <li>Procedures for maintaining records of serial-number verifications</li> <li>Defined method for transporting documents used for validating device serial numbers, via a separate communication channel and not with the device shipment</li> <li>Instructions for performing pre-installation inspection procedures, including physical and functional tests and visual inspection, to verify devices have not been tampered with or compromised</li> <li>Instructions for maintaining devices in original, tamper-evident packaging or in physically secure storage until ready for use</li> <li>Instructions for recording device serial numbers in merchant inventory-control system as soon as possible</li> </ul> </li> </ul>						✓
<b>3A-3.2</b> Implement procedures to control and document all physical access to devices prior to deployment. Procedures to include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out. Retain access log for at least one year.</li> </ul>							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3A-3.2.a</b> Examine documented access procedures and verify they require controlling and documenting all physical access to devices, and include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> <li>Retaining access logs for at least one year</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines the procedures for controlling and documenting all physical access to devices prior to deployment.</li> <li>Confirm that documented procedures include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> <li>Retaining access logs for at least one year</li> </ul> </li> </ul>		✓			
<b>3A-3.2.b</b> Observe physical access controls to verify they include controlling and documenting all physical access to devices, and include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in/out</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of physical access controls verified that all physical access to devices, is controlled and documented, and includes: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in/out</li> </ul> </li> </ul> </li> </ul>			✓		
<b>3A-3.2.c</b> Examine access logs/records to verify it is retained for at least one year and contains, at a minimum, the following details: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul>	<ul style="list-style-type: none"> <li>Identify the access logs/records examined.</li> <li>Confirm the access logs/records contain, at a minimum, the following: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> <li>Describe how examination of the access logs/records verified they are retained for at least one year</li> </ul>		✓			

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3A-3.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures to control and document all physical access to devices prior to deployment. Procedures to include those items described in 3A-3.2.							
<b>3A-3.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for merchants to implement procedures for controlling and documenting all physical access to devices prior to deployment, including: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to implement procedures for controlling and documenting all physical access to devices prior to deployment, including <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> </ul> </li> </ul>						✓
<b>3A-3.3</b> Implement a documented audit trail to demonstrate that devices are controlled, and are not left unprotected, at all times from receipt through to installation.							
<b>3A-3.3.a</b> Examine documented procedures to verify a documented audit trail must be maintained to demonstrate that a devices are controlled, and not left unprotected, at all times from receipt through to installation.	<ul style="list-style-type: none"> <li>Identify the document that describes the procedures for maintaining a documented audit trail to demonstrate that devices are controlled, and not left unprotected, at all times from receipt through to installation.</li> </ul>		✓				
<b>3A-3.3.b</b> Examine audit trail records to verify a documented audit trail is maintained and demonstrates that devices are controlled, and not left unprotected, at all times from receipt through to installation.	<ul style="list-style-type: none"> <li>Identify the audit trail records examined.</li> <li>Describe how examination of the audit trail records verified that: <ul style="list-style-type: none"> <li>Documented audit trails are maintained</li> <li>Documented audit trails demonstrate that devices are controlled, and not left unprotected, at all times from receipt through to installation.</li> </ul> </li> </ul>		✓		✓		
<b>3A-3.3.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement an audit trail to demonstrate that a device is controlled, and not left unprotected, at all times from receipt through to installation							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-3.3.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to maintain an audit trail to demonstrate that devices are controlled, and not left unprotected, at all times from receipt through to installation.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to maintain an audit trail to demonstrate that devices are controlled, and not left unprotected, at all times from receipt through to installation</li> </ul>						✓
<b>3A-4</b> Solution provider provides instructions to merchants to physically secure devices to prevent unauthorized access, modification, or substitution while devices are deployed for use. This includes both attended and unattended devices (for example, kiosks, “pay-at-the-pump,” etc.).							
<b>3A-4.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to select appropriate locations for deployed devices, for example: <ul style="list-style-type: none"> <li>Control public access to devices such that public access is limited to only parts of the device a person is expected to use to complete a transaction (for example, PIN pad and card reader).</li> <li>Locate devices so they can be observed and/or monitored by authorized personnel (for example, during daily device checks performed by store/security staff).</li> <li>Locate devices in an environment that deters compromise attempts (for example, through use of appropriate lighting, access paths, visible security measures, etc.)</li> </ul>							
<b>3A-4.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to select appropriate locations for deployed devices, for example: <ul style="list-style-type: none"> <li>Controlling public access to devices such that public access is limited to only parts of the device a person is expected to use to complete a transaction</li> <li>Locating devices so they can be observed and/or monitored by authorized personnel</li> <li>Locating devices in an environment that deters compromise attempts</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1, confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for the merchant to select appropriate locations for deployed devices, for example:               <ul style="list-style-type: none"> <li>Controlling public access to devices such that public access is limited to only parts of the device a person is expected to use to complete a transaction</li> <li>Locating devices so they can be observed and/or monitored by authorized personnel</li> <li>Locating devices in an environment that deters compromise attempts</li> </ul> </li> </ul>						✓
<b>3A-4.2</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to physically secure deployed devices to prevent unauthorized removal or substitution, including examples of how devices can be physically secured.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-4.2</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to physically secure deployed devices to prevent unauthorized removal or substitution, including specific examples of how devices can be physically secured.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1, confirm that the P2PE Instruction Manual (PIM) includes: <ul style="list-style-type: none"> <li>Detailed instructions for merchants to physically secure deployed devices to prevent unauthorized removal or substitution</li> <li>Specific examples of how devices can be physically secured</li> </ul> </li> </ul>						✓
<b>3A-4.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures to prevent unauthorized removal or substitution of devices that cannot be physically secured (such as wireless or handheld devices). <i>For example, secure devices in a locked room when not in use, assign responsibility to specific individuals when in use, observe devices at all times, sign devices in/out, etc.</i>							
<b>3A-4.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions for the merchant to implement procedures to prevent unauthorized removal or substitution of devices that cannot be physically secured, such as wireless or handheld devices.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes instructions for merchants to implement procedures to prevent unauthorized removal or substitution of devices that cannot be physically secured, such as wireless or handheld devices.</li> </ul>						✓
<b>3A-5</b> Solution provider prevents unauthorized physical access to devices undergoing repair or maintenance while in their possession, and provides related instructions to merchants.							
<b>3A-5.1</b> Implement procedures for identification and authorization of third-party personnel (including repair/maintenance personnel) prior to granting access. Procedures must include the following:							
<b>3A-5.1.a</b> Examine documented procedures to verify they include identification and authorization of third-party personnel prior to granting access.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for identification and authorization of third-party personnel prior to granting access to devices undergoing repair or maintenance.</li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3A-5.1.b</b> Verify documented procedures include 3A-5.1.1 through 3A-5.1.5 below.	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 3A-5.1.a) include the following: <ul style="list-style-type: none"> <li>The identity and authorization of third-party personnel must be verified prior to granting access to devices</li> <li>Unexpected personnel must be denied access until fully validated and authorized.</li> <li>Once authorized, third-party personnel must be escorted and monitored at all times.</li> <li>A log of all third-party personnel access must be maintained</li> </ul> </li> </ul>		✓				
<b>3A-5.1.1</b> Verify the identity and authorization of third-party personnel prior to granting access to devices.							
<b>3A-5.1.1</b> Interview responsible personnel and observe processes to confirm that the identity and authorization of third-party personnel is verified prior to granting access to devices.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that the identity and authorization of third-party personnel is verified prior to granting access to devices.</li> <li>Describe how observation of processes verified that the identity and authorization of third-party personnel is verified prior to granting access to devices.</li> </ul>			✓	✓		
<b>3A-5.1.2</b> Unexpected personnel must be denied access until fully validated and authorized.							
<b>3A-5.1.2</b> Interview responsible personnel and observe processes to verify that unexpected personnel are denied access until fully validated and authorized.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that unexpected personnel are denied access until fully validated and authorized.</li> <li>Describe how observation of processes verified that unexpected personnel are denied access until fully validated and authorized.</li> </ul>			✓	✓		
<b>3A-5.1.3</b> Once authorized, third-party personnel must be escorted and monitored at all times.							
<b>3A-5.1.3</b> Interview responsible personnel and observe processes to verify that, once authorized, third-party personnel are escorted and monitored at all times.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that, once authorized, third-party personnel are escorted and monitored at all times.</li> <li>Describe how observation of processes verified that, once authorized, third-party personnel are escorted and monitored at all times.</li> </ul>			✓	✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3A-5.1.4</b> A log of all third-party personnel access is maintained.							
<b>3A-5.1.4</b> Examine access logs/records to verify that a log of all third-party personnel access is maintained in accordance with logging requirements defined in 3A-3.2.	<ul style="list-style-type: none"> <li>Identify the access logs/records examined</li> <li>Confirm the access logs/records contain, at a minimum, the following:             <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> <li>Describe how examination of the access logs/records verified they are retained for at least one year</li> </ul>		✓				
<b>3A-5.1.5</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures for identification and authorization of third-party personnel (including repair/maintenance personnel) prior to granting access. Procedures to include those items described in 3A-5.1.1 through 3A-5.1.4.							
<b>3A-5.1.5</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to implement procedures for identification and authorization of third-party personnel (including repair/maintenance personnel) prior to granting access, including: <ul style="list-style-type: none"> <li>Procedures for verifying the identity and authorization of third-party personnel prior to granting access to devices</li> <li>Instructions that unexpected personnel must be denied access unless fully validated and authorized</li> <li>Escorting and monitoring authorized personnel at all times</li> <li>Maintaining a log of all third-party personnel access</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to implement procedures for identification and authorization of third-party personnel (including repair/maintenance personnel) prior to granting access</li> <li>Confirm the instructions include:             <ul style="list-style-type: none"> <li>Procedures for verifying the identity and authorization of third-party personnel prior to granting access to devices</li> <li>Instructions that unexpected personnel must be denied access unless fully validated and authorized</li> <li>Escorting and monitoring authorized personnel at all times</li> <li>Maintaining a log of all third-party personnel access</li> </ul> </li> </ul>						✓
<b>3B-1</b> Solution provider securely maintains devices being returned, replaced, or disposed of, and provides related instructions to merchants.							
<b>3B-1.1</b> Implement procedures to ensure that devices to be removed from service, retired, or returned for repair, are not intercepted and used in an unauthorized manner, as follows.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-1.1.a</b> Examine documented procedures to verify that procedures are defined for any devices to be removed from service, retired, or returned for repair	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1, identify the document that defines procedures for any devices to be removed from service, retired, or returned for repair.</li> </ul>		✓				
<b>3B-1.1.b</b> Verify documented procedures include 3B-1.1.1 through 3B-1.1.5	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1, confirm that the documented procedures (identified in 3B-1.1.a) include the following: <ul style="list-style-type: none"> <li>Affected entities are notified before devices are returned.</li> <li>Devices are transported via trusted carrier service—for example, bonded carrier.</li> <li>Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> <li>Devices are tracked during the return process.</li> <li>Once received, devices remain in their packaging (as defined in 3B-1.1.3) until ready for repair or destruction.</li> </ul> </li> </ul>		✓				
<b>3B-1.1.1</b> Affected entities are notified before devices are returned.							
<b>3B-1.1.1</b> Interview responsible personnel and examine device-return records to verify that affected entities are notified before devices are returned.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that affected entities are notified before devices are returned.</li> <li>Describe how examination of device-return records verified that affected entities are notified before devices are returned.</li> </ul> </li> </ul>		✓	✓			
<b>3B-1.1.2</b> Devices are transported via trusted carrier service—for example, bonded carrier.							
<b>3B-1.1.2</b> Interview responsible personnel and examine device-return records to verify that devices are transported via trusted carrier service—for example, bonded carrier.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are transported via trusted carrier service – for example, bonded carrier.</li> <li>Describe how examination of device-return records verified that devices are transported via trusted carrier service.</li> </ul> </li> </ul>		✓	✓			



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-1.1.3</b> Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.							
<b>3B-1.1.3</b> Interview responsible personnel and observe device-return processes and packaging to verify that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> <li>Describe how observation of device-return processes and packaging verified that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> </ul> </li> </ul>			✓	✓		
<b>3B-1.1.4</b> Devices are tracked during the return process.							
<b>3B-1.1.4</b> Interview responsible personnel and examine device-return records to verify that devices are tracked during the return process.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are tracked during the return process.</li> <li>Describe how examination of the device-return records verified that devices are tracked during the return process.</li> </ul> </li> </ul>		✓	✓			
<b>3B-1.1.5</b> Once received, devices remain in their packaging (as defined in 3B-1.1.3) until ready for repair or destruction.							
<b>3B-1.1.5</b> Interview responsible personnel and examine device-return processes to verify that, once received, devices remain in their packaging (defined in 3B-1.1.3) until ready for repair or destruction.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that once received, devices remain in their packaging (as defined in 3B-1.1.3) until ready for destruction.</li> <li>Describe how observation of device-return processes verified that received devices remain in their packaging until ready for destruction.</li> </ul> </li> </ul>			✓	✓		



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-1.1.6</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures for securing devices being removed from service, retired, or returned for repair.							
<b>3B-1.1.6</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed procedures for the merchant to secure devices being returned or replaced, including: <ul style="list-style-type: none"> <li>Procedures and contact details for notifying affected entities—including the entity to which the device is being returned—before devices are returned</li> <li>Procedures for transporting devices via a trusted carrier service</li> <li>Procedures for packing and sending devices in serialized, counterfeit-resistant, and tamper-evident packaging</li> <li>Procedures to ensure the solution provider can track devices during the return process</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed procedures for merchants to secure devices being returned or replaced</li> <li>Confirm the instructions include: <ul style="list-style-type: none"> <li>Procedures and contact details for notifying affected entities – including the entity to which the device is being returned – before devices are returned</li> <li>Procedures for packing and sending devices in serialized, counterfeit-resistant, and tamper-evident packaging</li> <li>Procedures to ensure the solution provider can track devices during the return process</li> </ul> </li> </ul>						✓
<b>3B-1.2</b> Implement procedures for secure disposal of devices, to include the following:							
<b>3B-1.2</b> Examine documented procedures to verify procedures are defined for secure disposal of devices and include 3B-1.2.1 through 3B-1.2.2.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1, identify the document that defines procedures for secure disposal of devices</li> <li>Confirm the documented procedures include: <ul style="list-style-type: none"> <li>Return devices to authorized parties for disposal.</li> <li>Keys and data storage (including account data) must be rendered irrecoverable (for example, zeroized) prior to device disposal. If data cannot be rendered irrecoverable, the device must be physically destroyed to prevent the disclosure of any sensitive data or keys</li> </ul> </li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-1.2.1</b> Return devices to authorized parties for disposal.							
<b>3B-1.2.1</b> Interview responsible personnel and examine device-return processes to verify devices are returned only to authorized parties for disposal.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that devices are returned only to authorized parties for disposal.</li> <li>Describe how observation of device-return processes verified that devices are returned only to authorized parties for disposal.</li> </ul> </li> </ul>			✓	✓		
<b>3B-1.2.2</b> Keys and data storage (including account data) must be rendered irrecoverable (for example, zeroized) prior to device disposal. If data cannot be rendered irrecoverable, the device must be physically destroyed to prevent the disclosure of any sensitive data or keys.							
<b>3B-1.2.2</b> Interview personnel and observe processes for removing devices from service to verify that all key and data storage (including account data) is rendered irrecoverable (for example, zeroized) prior to disposal, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that all key and data storage (including account data) is rendered irrecoverable prior to disposal, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> <li>Describe how observation of the processes for removing devices from service verified that all key and data storage (including account data) is rendered irrecoverable prior to disposal, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> </ul> </li> </ul>			✓	✓		
<b>3B-1.2.3</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures for the secure disposal of devices.							
<b>3B-1.2.3</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to implement procedures for the secure disposal of devices, including: <ul style="list-style-type: none"> <li>Returning devices only to authorized parties for destruction (including a list of authorized parties)</li> <li>Procedures to render sensitive data irrecoverable, prior to device being shipped for disposal.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to implement procedures for the secure disposal of devices</li> <li>Confirm the instructions include: <ul style="list-style-type: none"> <li>Returning devices only to authorized parties for destruction</li> <li>A list of the authorized parties</li> <li>Procedures to render sensitive data irrecoverable, prior to device being shipped for disposal</li> </ul> </li> </ul>						✓

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2</b> Solution provider configures devices to fail closed if encryption mechanism fails, until either the P2PE encryption is restored or merchant opts out of using solution.							
<b>3B-2.1</b> Upon failure of the encryption mechanism, the device must immediately fail closed and/or be immediately removed, shut down, or taken offline until the P2PE encryption is restored. <b>Note:</b> Domain 5 requires that solution providers actively monitor traffic that is received into the decryption environment to confirm that the POI equipment in the merchant's encryption environment is not outputting clear-text CHD through some error or misconfiguration. Refer to 5D-2.							
<b>3B-2.1.a</b> Review documented procedures and interview responsible personnel to verify that upon failure of the encryption mechanism, POI devices are configured to immediately fail closed, and/or be immediately removed, shut down, or taken offline.	<ul style="list-style-type: none"> <li>For all POI device types identified in Table 3.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that upon failure of the encryption mechanism, POI devices are configured to immediately fail closed, and/or be immediately removed, shut down, or taken offline.</li> <li>Identify the responsible personnel interviewed who confirm that upon failure of the encryption mechanism, POI devices are configured to immediately fail closed, and/or be immediately removed, shut down, or taken offline.</li> </ul> </li> </ul>		✓	✓			
<b>3B-2.1.b</b> Observe POI device configurations to verify that POI devices are configured to, upon failure of the encryption mechanism, immediately fail closed, and/or be immediately shut down or taken offline.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI device in the sample, describe how observation of POI device configurations verified that POI devices are configured to, upon failure of the encryption mechanism, immediately fail closed, and/or be immediately shut down or taken offline.</li> </ul>	✓				✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.1.c</b> Observe devices during a simulated encryption failure to verify that devices immediately fail closed and/or are immediately removed/shut down/taken offline upon failure of the encryption mechanism.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Describe how a simulated encryption failure was performed</li> <li>Describe how observation of devices during a simulated encryption failure verified that the devices immediately fail closed and/or are immediately removed/shut down/taken offline upon failure of the encryption mechanism.</li> </ul> </li> </ul>				✓	✓	
<b>3B-2.1.1</b> The device cannot be re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using alternative controls and/or processing method.</li> </ul>							
<b>3B-2.1.1.a</b> Examine documented procedures to verify the POI devices must not be re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using an alternative controls and/or processing method.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for POI devices not to be re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using an alternative controls and/or processing method.</li> </ul> </li> </ul>		✓				
<b>3B-2.1.1.b</b> Verify the documented procedures include verifying that encryption functionality is restored before devices are re-enabled.	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 3B-2.1.1.a) include verifying that encryption functionality is restored before devices are re-enabled.</li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.1.1.c</b> Interview responsible personnel and observe implemented processes to verify that: <ul style="list-style-type: none"> <li>POI devices are not re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution, according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using an alternative processing method.</li> </ul> </li> <li>Encryption functionality is verified as being restored before devices are re-enabled.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm the following: <ul style="list-style-type: none"> <li>POI devices are not re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution, according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using an alternative processing method.</li> </ul> </li> <li>Encryption functionality is verified as being restored before devices are re-enabled.</li> </ul> </li> <li>Describe how observation of implemented processes verified that: <ul style="list-style-type: none"> <li>POI devices are not re-enabled until it is confirmed that either: <ul style="list-style-type: none"> <li>The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li> <li>The merchant has formally opted out from using the P2PE solution, according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using an alternative processing method.</li> </ul> </li> <li>Encryption functionality is verified as being restored before devices are re-enabled.</li> </ul> </li> </ul>			✓	✓		
<b>3B-2.1.1.d</b> Observe device configurations to verify devices are configured to remain closed until re-enabled by authorized personnel.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure.</li> <li>Describe how observation of device configurations verified that devices are configured to remain closed until re-enabled by authorized personnel.</li> </ul>	✓				✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.1.2</b> The solution provider must maintain a record of all encryption failures, to include the following: <ul style="list-style-type: none"><li>• Identification of affected device(s), including make, model, and serial number</li><li>• Identification of affected merchant, including specific sites/locations if applicable</li><li>• Date/time of encryption failure</li><li>• Date/time and duration of device downtime</li><li>• Date/time that encryption functionality was verified as being restored</li><li>• Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled</li></ul>							
<b>3B-2.1.2.a</b> Examine documented procedures to verify they require a record of all encryption failures to be maintained, including the following details: <ul style="list-style-type: none"><li>• Date/time of encryption failure</li><li>• Date/time and duration of device downtime</li><li>• Date/time that encryption functionality was verified as being restored</li><li>• Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled</li></ul>	<ul style="list-style-type: none"><li>• Identify the document that defines procedures requiring a record of all encryption failures to be maintained.</li><li>• Confirm documented records must include:<ul style="list-style-type: none"><li>◦ Date/time of encryption failure</li><li>◦ Date/time and duration of device downtime</li><li>◦ Date/time that encryption functionality was verified as being restored</li><li>◦ Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled.</li></ul></li></ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.1.2.b</b> Interview responsible personnel and observe implemented processes to verify that a record of all encryption failures is maintained, including the following details: <ul style="list-style-type: none"> <li>Date/time of encryption failure</li> <li>Date/time and duration of device downtime</li> <li>Date/time that encryption functionality was verified as being restored</li> <li>Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that a record of all encryption failures is maintained, including: <ul style="list-style-type: none"> <li>Date/time of encryption failure</li> <li>Date/time and duration of device downtime</li> <li>Date/time that encryption functionality was verified as being restored</li> <li>Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled.</li> </ul> </li> <li>Describe how observation of implemented processes verified that a record of all encryption failures is maintained, including the following details: <ul style="list-style-type: none"> <li>Date/time of encryption failure</li> <li>Date/time and duration of device downtime</li> <li>Date/time that encryption functionality was verified as being restored</li> <li>Details of whether any account data was transmitted from the P2PE POI device during the time that encryption was disabled.</li> </ul> </li> </ul>			✓	✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
3B-2.1.3 Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to follow in the event of a device encryption failure.							
<p><b>3B-2.1.3</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed instructions for the merchant to follow in the event of a device encryption failure.</p> <p>Verify the detailed instructions include ensuring that devices are not re-enabled for use until merchant has confirmed with solution provider that either:</p> <ul style="list-style-type: none"><li>• The issue has been resolved and P2PE-encryption functionality is restored and re-enabled, or</li><li>• The merchant has formally opted out from using the P2PE solution according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using alternative controls and/or processing method.</li></ul>	<ul style="list-style-type: none"><li>• Confirm that the P2PE Instruction Manual (PIM) includes detailed instructions for merchants to follow in the event of a device encryption failure.</li><li>• Confirm that the detailed instructions include ensuring devices are not re-enabled for use until the merchant has confirmed with the solution provider that either:<ul style="list-style-type: none"><li>◦ The issue has been resolved and P2PE encryption functionality is restored and re-enabled, or</li><li>◦ The merchant has formally opted out from using the P2PE solution according to the solution provider's opt-out procedures (as defined in Requirement 3B-2.2), and has accepted responsibility for using alternative controls and/or processing method.</li></ul></li></ul>						✓
<p><b>3B-2.2</b> The solution provider must document and implement an opt-out process for merchants to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.</p> <p>The process must include the following:</p>							
<p><b>3B-2.2.a</b> Examine documented procedures to verify the solution provider has a documented opt-out process for merchants to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.</p>	<ul style="list-style-type: none"><li>• Identify the document that defines the opt-out process for merchants to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.</li></ul>		✓				



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.2.b</b> Verify documented opt-out procedures include 3B-2.2.1 through 3B-2.2.4	<ul style="list-style-type: none"> <li>Confirm that the documented opt-out procedures (as identified in 3B-2.2.a) include: <ul style="list-style-type: none"> <li>Defined method of communication for merchants to advise the solution provider that they wish to opt out of the P2PE solution.</li> <li>Upon receipt of a merchant request to opt out of the P2PE solution, the solution provider must formally communicate to the merchant the procedures to be followed, and advise the merchant of all items defined in Requirement 3B-2.2.2.</li> <li>The process for merchants to acknowledge their acceptance of the opt-out conditions, including a mechanism for the solution provider to verify the authenticity of the acknowledgment as follows: <ul style="list-style-type: none"> <li>Verification that the acknowledgement originated from the merchant using the affected devices</li> <li>Verification that the acknowledgement was approved by merchant personnel authorized to make such an acknowledgement</li> </ul> </li> <li>The solution provider must maintain a record of all opt-out requests received, including all details defined Requirement 3B-2.2.4</li> </ul> </li> </ul>		✓				
<b>3B-2.2.1</b> Defined method of communication for merchants to advise the solution provider that they wish to opt out of the P2PE solution.							
<b>3B-2.2.1</b> Interview responsible personnel and observe processes to verify the defined method of communication is in place for merchants to advise the solution provider that they wish to opt out of the P2PE solution.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that the defined method of communication is in place for merchants to advise the solution provider that they wish to opt out of the P2PE solution.</li> <li>Describe how observation of implemented processes verified that the defined method of communication is in place for merchants to advise the solution provider that they wish to opt out of the P2PE solution,</li> </ul>			✓	✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.2.2</b> Upon receipt of a merchant request to opt out of the P2PE solution, the solution provider must formally communicate to the merchant the procedures to be followed, and advise the merchant of the following: <ul style="list-style-type: none"><li>• The security impact to the merchant’s account data and potential risks associated with processing transactions without P2PE protection.</li><li>• The merchant is responsible for implementing alternative controls to protect account data in lieu of the P2PE solution (such as the applicable PCI DSS requirements for secure data transmission, network security, etc.).</li><li>• The merchant is no longer eligible for the PCI DSS scope reduction which was afforded by the P2PE solution.</li><li>• The merchant is obligated to advise their acquirer that they are no longer using the P2PE solution.</li><li>• Processing transactions without P2PE protection may impact the merchant’s PCI DSS compliance validation, and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li><li>• If the merchant wishes to opt out of the P2PE solution, the merchant must provide formal acknowledgment and acceptance of the above and formally request that transactions be accepted without P2PE encryption.</li><li>• A defined method of communication for the merchant to provide their acknowledgement and acceptance of the above.</li></ul>							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<p><b>3B-2.2.2</b> Interview responsible personnel and observe implemented processes and communications to verify that upon receipt of a merchant request to opt out of the P2PE solution, the solution provider formally communicates to the merchant the procedures to be followed, and advises the merchant of the following:</p> <ul style="list-style-type: none"> <li>The security impact to the merchant's account data and potential risks associated with processing transactions without P2PE protection.</li> <li>The merchant is responsible for implementing alternative controls to protect account data in lieu of the P2PE solution (such as the applicable PCI DSS requirements for secure data transmission, network security, etc.)</li> <li>The merchant is no longer eligible for the PCI DSS scope reduction which was afforded by the P2PE solution.</li> <li>The merchant is obligated to advise their acquirer that they are no longer using the P2PE solution.</li> <li>Processing transactions without P2PE protection may impact the merchant's PCI DSS compliance validation and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li> <li>If the merchant wishes to opt out of the P2PE solution, the merchant must provide formal acknowledgment and acceptance of the above and formally request that transactions be accepted without P2PE encryption.</li> <li>A defined method of communication for the merchant to provide their acknowledgement and acceptance of the above.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that, upon receipt of a merchant request to opt out of the P2PE solution, the solution provider: <ul style="list-style-type: none"> <li>Formally communicates to the merchant the procedures to be followed</li> <li>Advises the merchant of the following: <ul style="list-style-type: none"> <li>The security impact to the merchant's account data and potential risks associated with processing transactions without P2PE protection.</li> <li>The merchant is responsible for implementing alternative controls to protect account data in lieu of the P2PE solution (such as the applicable PCI DSS requirements for secure data transmission, network security, etc.)</li> <li>The merchant is no longer eligible for the PCI DSS scope reduction which was afforded by the P2PE solution.</li> <li>The merchant is obligated to advise their acquirer that they are no longer using the P2PE solution.</li> <li>Processing transactions without P2PE protection may impact the merchant's PCI DSS compliance validation and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li> <li>If the merchant wishes to opt out of the P2PE solution, the merchant must provide formal acknowledgment and acceptance of the above and formally request that transactions be accepted without P2PE encryption.</li> <li>A defined method of communication for the merchant to provide their acknowledgement and acceptance of the above.</li> </ul> </li> </ul> </li> </ul>			✓			

*Continued on next page*

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
	<ul style="list-style-type: none"> <li>Describe how observation of implemented processes and examination of communications verified that, upon receipt of a merchant request to opt out of the P2PE solution, the solution provider:               <ul style="list-style-type: none"> <li>Formally communicates to the merchant the procedures to be followed</li> <li>Advises the merchant of the following:                   <ul style="list-style-type: none"> <li>The security impact to the merchant's account data and potential risks associated with processing transactions without P2PE protection.</li> <li>The merchant is responsible for implementing alternative controls to protect account data in lieu of the P2PE solution (such as the applicable PCI DSS requirements for secure data transmission, network security, etc.)</li> <li>The merchant is no longer eligible for the PCI DSS scope reduction which was afforded by the P2PE solution.</li> <li>The merchant is obligated to advise their acquirer that they are no longer using the P2PE solution.</li> <li>Processing transactions without P2PE protection may impact the merchant's PCI DSS compliance validation and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li> <li>If the merchant wishes to opt out of the P2PE solution, the merchant must provide formal acknowledgment and acceptance of the above and formally request that transactions be accepted without P2PE encryption.</li> <li>A defined method of communication for the merchant to provide their acknowledgement and acceptance of the above.</li> </ul> </li> </ul> </li> </ul>		✓		✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.2.3</b> The process for merchants to acknowledge their acceptance of the opt-out conditions must include a mechanism for the solution provider to verify the authenticity of the acknowledgment, including: <ul style="list-style-type: none"> <li>Verification that the acknowledgement originated from the merchant using the affected devices</li> <li>Verification that the acknowledgement was approved by merchant personnel authorized to make such an acknowledgement</li> </ul>							
<b>3B-2.2.3</b> Observe implemented processes and interview responsible personnel to confirm that the authenticity of the acknowledgment is verified, including: <ul style="list-style-type: none"> <li>Verification that the acknowledgement originated from the merchant using the affected devices</li> <li>Verification that the acknowledgement was approved by merchant personnel authorized to make such an acknowledgement</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that the authenticity of the acknowledgment is verified, including: <ul style="list-style-type: none"> <li>Verification that the acknowledgement originated from the merchant using the affected devices</li> <li>Verification that the acknowledgement was approved by merchant personnel authorized to make such an acknowledgement</li> </ul> </li> <li>Describe how observation of implemented processes verified that the authenticity of the acknowledgment is verified, including: <ul style="list-style-type: none"> <li>Verification that the acknowledgement originated from the merchant using the affected devices</li> <li>Verification that the acknowledgement was approved by merchant personnel authorized to make such an acknowledgement</li> </ul> </li> </ul>			✓	✓		
<b>3B-2.2.4</b> The solution provider must maintain a record of all opt-out requests received, including the following: <ul style="list-style-type: none"> <li>Identification of merchant submitting request</li> <li>Date initial request received</li> <li>Result of request (that is, the merchant chose to either accept the conditions and opt out of the solution, or chose to continue with the solution using P2PE devices)</li> <li>If merchant chose to accept the conditions and opt out of the solution: <ul style="list-style-type: none"> <li>Date formal acknowledgement received</li> <li>Identification of device(s) in use by the merchant that are no longer covered by the P2PE solution</li> </ul> </li> </ul>							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-2.2.4</b> Observe implemented processes and interview responsible personnel to verify a record of all received opt-out requests is maintained and includes: <ul style="list-style-type: none"> <li>• Identification of merchant submitting request</li> <li>• Date initial request received</li> <li>• Result of request</li> <li>• If merchant chose to accept the conditions and opt out of the solution: <ul style="list-style-type: none"> <li>◦ Date formal acknowledgement received</li> <li>◦ Identification of device(s) in use by the merchant that are no longer covered by the P2PE solution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identify the responsible personnel interviewed who confirm that a record of all received opt-out requests is maintained and includes: <ul style="list-style-type: none"> <li>◦ Identification of merchant submitting request</li> <li>◦ Date initial request received</li> <li>◦ Result of request</li> <li>◦ If merchant chose to accept the conditions and opt out of the solution: <ul style="list-style-type: none"> <li>▪ Date formal acknowledgement received</li> <li>▪ Identification of device(s) in use by the merchant that are no longer covered by the P2PE solution</li> </ul> </li> </ul> </li> <li>• Describe how observation of implemented processes verified that a record of all received opt-out requests is maintained and includes: <ul style="list-style-type: none"> <li>◦ Identification of merchant submitting request</li> <li>◦ Date initial request received</li> <li>◦ Result of request</li> <li>◦ If merchant chose to accept the conditions and opt out of the solution: <ul style="list-style-type: none"> <li>▪ Date formal acknowledgement received</li> <li>▪ Identification of device(s) in use by the merchant that are no longer covered by the P2PE solution</li> </ul> </li> </ul> </li> </ul>			✓	✓		
<b>3B-2.3</b> Provide instructions via the <i>P2PE Instruction Manual</i> , including details of the opt-out process and instructions for the merchant to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<p><b>3B-2.3</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it clearly describes the opt-out process and provides detailed instructions, including:</p> <ul style="list-style-type: none"> <li>Procedures for the merchant to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.</li> <li>The method of communication for merchants to advise the solution provider that they wish to opt out of the P2PE solution.</li> <li>That if they choose to opt out, the merchant must formally acknowledge that they accept responsibility for the following: <ul style="list-style-type: none"> <li>The security impact to the merchant's account data and potential risks associated with processing transactions without P2PE protection.</li> <li>Responsibility for implementing alternative controls to protect account data in lieu of the P2PE solution.</li> <li>That the merchant is no longer eligible for the PCI DSS scope reduction afforded by the P2PE solution.</li> <li>Advising their acquirer that they are no longer using the P2PE solution.</li> <li>That processing transactions without P2PE protection may impact the merchant's PCI DSS compliance validation and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li> <li>Formal request that transactions be accepted without P2PE encryption.</li> </ul> </li> <li>The method of communication that will be used for the merchant to provide their formal acknowledgement and acceptance of the above.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) clearly describes the opt-out process and provides detailed instructions</li> <li>Confirm that the P2PE Instruction Manual (PIM) provides detailed instructions, including: <ul style="list-style-type: none"> <li>Procedures for the merchant to follow in the event that, upon device encryption failure, the merchant chooses to opt out of the P2PE solution and process transactions without P2PE protection.</li> <li>The method of communication for merchants to advise the solution provider that they wish to opt out of the P2PE solution.</li> <li>That if they choose to opt out, the merchant must formally acknowledge that they accept responsibility for the following: <ul style="list-style-type: none"> <li>The security impact to the merchant's account data and potential risks associated with processing transactions without P2PE protection.</li> <li>Responsibility for implementing alternative controls to protect account data in lieu of the P2PE solution.</li> <li>That the merchant is no longer eligible for the PCI DSS scope reduction afforded by the P2PE solution.</li> <li>Advising their acquirer that they are no longer using the P2PE solution.</li> <li>That processing transactions without P2PE protection may impact the merchant's PCI DSS compliance validation and the merchant should confirm with their acquirer or payment brand, as applicable, for all PCI payment brands affected.</li> <li>Formal request that transactions be accepted without P2PE encryption.</li> </ul> </li> <li>The method of communication that will be used for the merchant to provide their formal acknowledgement and acceptance of the above.</li> </ul> </li> </ul>						✓

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
3B-3 Solution provider restricts access to devices to authorized personnel.							
3B-3.1 Solution provider ensures merchant has no administrative access to the device and cannot change anything on the device that could impact the security settings of the device.  Merchant access, if needed, must meet the following: <ul style="list-style-type: none"><li>• Be read-only.</li><li>• Only view transaction-related data.</li><li>• Cannot view or access encryption keys.</li><li>• Cannot view or access full PAN.</li><li>• Cannot view or access SAD.</li><li>• Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li><li>• Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li></ul>							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-3.1.a</b> Examine documented device configuration procedures and account privilege assignments to verify that merchant accounts are defined to meet the following access requirements: <ul style="list-style-type: none"> <li>No administrative access to the device is allowed.</li> <li>Cannot change anything on the device that could impact the security settings of the device.</li> <li>Be read-only.</li> <li>Only view transaction-related data.</li> <li>Cannot view or access encryption keys.</li> <li>Cannot view or access full PAN.</li> <li>Cannot view or access SAD.</li> <li>Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li> <li>Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines device configuration procedures</li> <li>Confirm the documented procedures are defined to meet the following access requirements: <ul style="list-style-type: none"> <li>No administrative access to the device is allowed.</li> <li>Cannot change anything on the device that could impact the security settings of the device.</li> <li>Be read-only.</li> <li>Only view transaction-related data.</li> <li>Cannot view or access encryption keys.</li> <li>Cannot view or access full PAN</li> <li>Cannot view or access SAD.</li> <li>Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li> <li>Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li> </ul> </li> </ul> </li> </ul> <p><i>Continued on next page</i></p>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
	<ul style="list-style-type: none"> <li>Describe how observation of account privilege assignments verified that merchant accounts are defined to meet the following access requirements:                             <ul style="list-style-type: none"> <li>No administrative access to the device is allowed.</li> <li>Cannot change anything on the device that could impact the security settings of the device.</li> <li>Be read-only.</li> <li>Only view transaction-related data.</li> <li>Cannot view or access encryption keys.</li> <li>Cannot view or access full PAN.</li> <li>Cannot view or access SAD.</li> <li>Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li> <li>Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li> </ul> </li> </ul>				✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-3.1.b</b> For a sample of all POI devices used in the solution, logon to the device using an authorized test merchant account. Verify that merchant-account access meets the following: <ul style="list-style-type: none"> <li>Be read-only.</li> <li>Only view transaction-related data.</li> <li>Cannot view or access encryption keys.</li> <li>Cannot view or access full PAN.</li> <li>Cannot view or access SAD.</li> <li>Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li> <li>Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Confirm that an authorized test merchant account was used to logon to the device</li> <li>Describe how the merchant-account access was verified to meet the following: <ul style="list-style-type: none"> <li>Be read-only.</li> <li>Only view transaction-related data.</li> <li>Cannot view or access encryption keys.</li> <li>Cannot view or access full PAN.</li> <li>Cannot view or access SAD.</li> <li>Cannot view or access device configuration settings which could impact the security controls of the device, or allow access to encryption keys or clear-text PAN and/or SAD.</li> <li>Cannot enable device interfaces or data-capture mechanisms that have been disabled by the solution provider.</li> </ul> </li> </ul> </li> </ul>				✓	✓	
<b>3B-3.1.c</b> Observe a sample of device configurations and interview responsible personnel to verify that the defined merchant-access requirements are configured for all devices used in the solution.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the responsible personnel interviewed who confirm that the defined merchant-access requirements are configured for all devices used in the solution.</li> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of the device configurations verified that the defined merchant-access requirements are configured.</li> </ul>	✓		✓		✓	

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-3.2</b> All solution-provider personnel with access to POI devices are documented in a formal list and authorized by management. The list of authorized personnel is reviewed at least annually.							
<b>3B-3.2.a</b> Examine documented authorizations to verify: <ul style="list-style-type: none"> <li>All personnel with access to devices are documented in a formal list.</li> <li>All personnel with access to devices are authorized by management.</li> <li>The list of authorized personnel is reviewed at least annually.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the documented authorizations examined</li> <li>Describe how examination of the documented authorizations verified that: <ul style="list-style-type: none"> <li>All personnel with access to devices are documented in a formal list.</li> <li>All personnel with access to devices are authorized by management.</li> <li>The list of authorized personnel is reviewed at least annually.</li> </ul> </li> </ul>		✓				
<b>3B-3.2.b</b> For a sample of all POI devices used in the solution, examine account-access configurations to verify that only personnel documented and authorized in the formal list have access to devices.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of the account-access configurations verified that only personnel documented and authorized in the formal list have access to devices.</li> </ul>	✓				✓	
<b>3B-3.3</b> Access and permissions on devices are granted based on least privilege and need to know.							
<b>3B-3.3.a</b> Examine documented access-control policies and procedures to verify that access and permissions must be assigned according to least privilege and need to know.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines access-control policies and procedures</li> <li>Confirm that documented policies and procedures require access and permissions to be assigned according to least privilege and need to know.</li> </ul> </li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-3.3.b</b> For a sample of all POI devices and personnel, observe configured accounts and permissions, and interview responsible personnel to verify that the level of access and permission granted are according to least privilege and need to know.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample:             <ul style="list-style-type: none"> <li>Identify the sample of personnel whose access was reviewed for this testing procedure.</li> <li>Identify the responsible personnel interviewed who confirm the level of access and permission for each sampled account.</li> <li>Describe how observation of the configured accounts and permissions and interviews with the responsible personnel verified that the level of access and permission granted are according to least privilege and need to know.</li> </ul> </li> </ul>	✓		✓		✓	
<b>3B-4</b> Solution provider provides features for secure remote access to devices deployed at merchant locations.							
<b>3B-4.1</b> Solution provider's authorized personnel use two-factor or cryptographic authentication for all remote access to merchant POIs over a public network (Internet). <i>Note: If cryptographic authentication is used, the update or file must be cryptographically signed under dual control.</i>							
<b>3B-4.1.a</b> Examine documented procedures to verify that either two-factor or cryptographic authentication must be used for all remote access to POI devices.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines procedures requiring either two-factor or cryptographic authentication must be used for all remote access to POI devices.</li> </ul>		✓				
<b>3B-4.1.b</b> Observe remote-access mechanisms and controls to verify that either two-factor or cryptographic authentication is configured for all remote access to POI devices.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how observation of remote-access mechanisms and controls verified that either two-factor or cryptographic authentication is configured for all remote access to POI devices.</li> </ul>	✓			✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3B-4.1.c</b> Interview personnel and observe authorized remote connection to verify that either two-factor or cryptographic authentication is used for all remote access to POI devices.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that either two-factor or cryptographic authentication is used for all remote access to POI devices.</li> <li>Describe how observation of authorized remote connections verified that either two-factor or cryptographic authentication is used for all remote access to POI devices.</li> </ul> </li> </ul>			✓	✓	
<b>3B-4.2</b> POIs must be configured to ensure that remote access is only permitted from the solution provider's authorized systems and only from the solution provider's secure decryption environment/network.						
<b>3B-4.2.a</b> Examine documented device-configuration procedures and interview personnel to verify that devices must be configured to permit remote access only from the solution provider's authorized systems, and only from the solution provider's secure decryption environment/network.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines device-configuration procedures</li> <li>Confirm the device-configuration procedures are defined to permit remote access: <ul style="list-style-type: none"> <li>Only from the solution provider's authorized systems, and</li> <li>Only from the solution provider's secure decryption environment/network.</li> </ul> </li> <li>Identify the personnel interviewed who confirm that devices must be configured to permit remote access only from the solution provider's authorized systems, and only from the solution provider's secure decryption environment/network.</li> </ul> </li> </ul>		✓	✓		
<b>3B-4.2.b</b> For all devices used in the solution, observe a sample of device configurations to verify that remote access is permitted only from the solution provider's authorized systems, and only from the solution provider's secure decryption environment/network.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of the device configurations verified that remote access is permitted only from the solution provider's authorized systems, and only from the solution provider's secure decryption environment/network.</li> </ul>	✓				✓

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-4.3</b> Merchants do not have remote access to the merchant POIs.							
<b>3B-4.3.a</b> Examine documented POI-configuration procedures and interview personnel to verify that devices must be configured to ensure merchants do not have remote access to the POIs.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines device-configuration procedures</li> <li>Confirm the documented procedures define that devices must be configured to ensure merchants do not have remote access to the POIs.</li> <li>Identify the personnel interviewed who confirm that devices must be configured to ensure merchants do not have remote access to the POIs.</li> </ul> </li> </ul>		✓	✓			
<b>3B-4.3.b</b> For all devices used in the solution, observe a sample of device configurations to verify that merchants do not have remote access to the POIs.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of the device configurations verified that merchants do not have remote access to the POIs.</li> </ul>	✓				✓	
<b>3B-4.4</b> Solution provider implements secure identification and authentication procedures for access to devices deployed at merchant locations, including: <b>Note:</b> <i>This applies to non-console and console access.</i>							
<b>3B-4.4.a</b> Examine documented identification and authentication procedures to verify secure identification and authentication procedures are defined for remote access to devices deployed at merchant locations.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines secure identification and authentication procedures for remote access to devices deployed at merchant locations.</li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-4.4.b</b> Verify documented procedures are defined for 3B-4.4.1 through 3B-4.4.3	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 3B-4.4.a) define procedures for the following: <ul style="list-style-type: none"> <li>Authentication credentials for solution-provider personnel that are unique for each merchant site</li> <li>Tracing all logical access to devices by solution-provider personnel to an individual user.</li> <li>Maintaining audit logs of all logical access to devices, and retaining access logs for at least one year.</li> </ul> </li> </ul>		✓				
<b>3B-4.4.1</b> Authentication credentials for solution-provider personnel that are unique for each merchant site							
<b>3B-4.4.1</b> Examine device configurations and authentication mechanisms to verify that solution-provider personnel have unique authentication credentials for each merchant site.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of device configurations and authentication mechanisms verified that solution-provider personnel have unique authentication credentials for each merchant site.</li> </ul>	✓				✓	
<b>3B-4.4.2</b> Tracing all logical access to devices by solution-provider personnel to an individual user.							
<b>3B-4.4.2.a</b> Examine device configurations and authentication mechanisms to verify that all logical access to devices can be traced to an individual user.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe how observation of device configurations and authentication mechanisms verified that all logical access to devices can be traced to an individual user.</li> </ul>	✓				✓	
<b>3B-4.4.2.b</b> Observe authorized logical accesses and examine access records/logs to verify that all logical access is traced to an individual user.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Describe the authorized logical accesses observed.</li> <li>Describe how observation of access records/logs verified that all logical access is traced to an individual user.</li> </ul> </li> </ul>		✓		✓	✓	
<b>3B-4.4.3</b> Maintaining audit logs of all logical access to devices, and retaining access logs for at least one year.							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3B-4.4.3.a</b> Observe authorized logical accesses and examine access records/logs to verify that an audit log of all logical access to devices is maintained.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample: <ul style="list-style-type: none"> <li>Describe the authorized logical accesses observed.</li> <li>Describe how observation of access records/logs verified that an audit log of all logical access to devices is maintained.</li> </ul> </li> </ul>		✓		✓	✓
<b>3B-4.4.3.b</b> Examine access records/logs to verify that access logs are retained for at least one year.	<ul style="list-style-type: none"> <li>Describe how observation of access records/logs verified that access logs are retained for at least one year.</li> </ul>		✓			
<b>3B-5</b> The solution provider protects POI devices from known vulnerabilities and implements procedures for secure updates to devices.						
<b>3B-5.1</b> Implement secure update processes for all firmware and software updates, including: <ul style="list-style-type: none"> <li>Integrity check of update</li> <li>Authentication of origin of the update</li> </ul>						
<b>3B-5.1.a</b> Examine documented procedures to verify secure update processes are defined for all firmware and software updates, and include: <ul style="list-style-type: none"> <li>Integrity checks of update</li> <li>Authentication of origin of the update</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines procedures for secure updates for all firmware and software updates</li> <li>Confirm that the defined procedures include: <ul style="list-style-type: none"> <li>Integrity checks of update</li> <li>Authentication of origin of the update</li> </ul> </li> </ul>		✓			

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-5.1.b</b> Observe a sample of firmware and software updates, and interview personnel to verify: <ul style="list-style-type: none"> <li>The integrity of the update is checked</li> <li>The origin of the update is authenticated</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>The integrity of firmware and software updates is checked</li> <li>The origin of firmware and software updates is authenticated</li> </ul> </li> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, identify the firmware and software updates that were observed</li> <li>Describe how observation of the firmware and software updates verified that: <ul style="list-style-type: none"> <li>The integrity of the update is checked</li> <li>The origin of the update is authenticated</li> </ul> </li> </ul>			✓	✓	✓	
<b>3B-5.2</b> Maintain an up-to-date inventory of POI system builds and conduct vulnerability assessments against all builds at least annually and upon any changes to the build.							
<b>3B-5.2.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>Procedures for maintaining an up-to-date inventory of POI system builds</li> <li>Procedures for conducting vulnerability assessments against all builds at least annually and upon any changes to the build</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines: <ul style="list-style-type: none"> <li>Procedures for maintaining an up-to-date inventory of POI system builds</li> <li>Procedures for conducting vulnerability assessments against all builds at least annually and upon any changes to the build.</li> </ul> </li> </ul>		✓				
<b>3B-5.2.b</b> Review documented inventory of devices (as required in 3A-1.3), and examine the inventory of system builds to verify: <ul style="list-style-type: none"> <li>The inventory includes all POI system builds.</li> <li>The inventory of POI system builds is up-to-date.</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how review of the documented inventory of devices (as identified in 3A-1.3), and examination of the inventory of system builds verified that: <ul style="list-style-type: none"> <li>The device inventory includes all POI system builds</li> <li>The inventory of POI system builds is up-to-date.</li> </ul> </li> </ul>	✓	✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-5.2.c</b> Observe results of vulnerability assessments and interview responsible personnel to verify vulnerability assessments are performed against all POI builds: <ul style="list-style-type: none"> <li>At least annually and</li> <li>Upon any changes to the build</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the vulnerability assessment results observed</li> <li>Describe how observation of vulnerability assessment results verified that vulnerability assessments are performed against all POI builds: <ul style="list-style-type: none"> <li>At least annually and</li> <li>Upon any changes to the build</li> </ul> </li> <li>Identify personnel interviewed who confirm that vulnerability assessments are performed against all POI builds: <ul style="list-style-type: none"> <li>At least annually and</li> <li>Upon any changes to the build</li> </ul> </li> </ul> </li> </ul>		✓	✓			
<b>3B-5.3</b> Develop and deploy patches and other device updates in a timely manner.							
<b>3B-5.3.a</b> Examine documented procedures to verify they include defined procedures for patches and other device updates to be developed and deployed in a timely manner.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines procedures for patches and other device updates to be developed and deployed in a timely manner.</li> </ul>		✓				
<b>3B-5.3.b</b> Examine patch-deployment records and device logs, and interview responsible personnel and to verify that patches and other device updates are developed and deployed in a timely manner.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the patch-deployment records and device logs examined.</li> <li>Describe how examination of patch-deployment records and device logs verified that patches and other device updates are developed and deployed in a timely manner.</li> <li>Identify the personnel interviewed who confirm that patches and other device updates are developed and deployed in a timely manner.</li> </ul> </li> </ul>		✓	✓			
<b>3B-5.4</b> Deliver updates in a secure manner with a known chain-of-trust.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-5.4.a</b> Examine documented procedures for device updates to verify they include delivering updates in a secure manner with a known chain-of-trust.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for device updates</li> <li>Confirm that defined procedures include delivering updates in a secure manner with a known chain-of-trust.</li> </ul> </li> </ul>		✓				
<b>3B-5.4.b</b> Observe processes for delivering updates and interview responsible personnel to verify that updates are delivered in a secure manner with a known chain-of-trust.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Describe how observation of processes for delivering updates verified that updates are delivered in a secure manner with a known chain-of-trust.</li> <li>Identify the personnel interviewed who confirm that updates are delivered in a secure manner with a known chain-of-trust.</li> </ul> </li> </ul>			✓	✓		
<b>3B-5.5</b> Maintain the integrity of patch and update code during delivery and deployment.							
<b>3B-5.5.a</b> Examine documented procedures for device updates to verify they define controls to maintain the integrity of all patch and update code during delivery and deployment.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, confirm documented procedures for device updates (identified in 3B-5.4.a), define controls to maintain the integrity of all patches and update code during delivery and deployment.</li> </ul>		✓				
<b>3B-5.5.b</b> Observe processes for delivering updates and interview responsible personnel to verify that the integrity of patch and update code is maintained during delivery and deployment.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Describe how observation of processes for delivering updates verified that the integrity of patch and update code is maintained during delivery and deployment.</li> <li>Identify the personnel interviewed who confirm that the integrity of patch and update code is maintained during delivery and deployment.</li> </ul> </li> </ul>			✓	✓		
<b>3B-5.5.c</b> Observe authorized personnel attempt to run the update process with arbitrary code to verify that the system will not allow the update to occur.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how observation of authorized personnel attempts to run the update process with arbitrary code verified that the system will not allow the update to occur.</li> </ul>				✓		
<b>3B-6</b> Secure account data when troubleshooting							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-6.1</b> Securely delete any PAN or SAD used for debugging or troubleshooting purposes. These data sources must be collected in limited amounts and collected only when necessary to resolve a problem, encrypted while stored, and deleted immediately after use.							
<b>3B-6.1.a</b> Examine the solution provider's procedures for troubleshooting customer problems and verify the procedures include: <ul style="list-style-type: none"> <li>PAN and/or SAD is never output to merchant environment</li> <li>Collection of PAN and/or SAD only when needed to solve a specific problem</li> <li>Storage of such data in a specific, known location with limited access</li> <li>Collection of only a limited amount of data needed to solve a specific problem</li> <li>Encryption of account data while stored</li> <li>Secure deletion of such data immediately after use</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines the solution provider's procedures for troubleshooting customer problems</li> <li>Confirm that procedures are defined for the following: <ul style="list-style-type: none"> <li>PAN and/or SAD is never output to merchant environment</li> <li>Collection of PAN and/or SAD only when needed to solve a specific problem</li> <li>Storage of such data in a specific, known location with limited access</li> <li>Collection of only a limited amount of data needed to solve a specific problem</li> <li>Encryption of account data while stored</li> <li>Secure deletion of such data immediately after use</li> </ul> </li> </ul> </li> </ul>		✓				

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-6.1.b</b> For a sample of recent troubleshooting requests, observe data collection and storage locations, and interview responsible personnel to verify the procedures identified at 3B-6.1.a were followed.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that the solution provider's procedures for troubleshooting customer problems (as defined in 3B-6.1.a) are followed</li> <li>Identify the sample of recent troubleshooting requests examined</li> <li>For each troubleshooting request in the sample, describe how observation of data collection and storage locations and interviews with personnel verified that the procedures defined in 3B-6.1.a were followed: <ul style="list-style-type: none"> <li>PAN and/or SAD is never output to merchant environment</li> <li>Collection of PAN and/or SAD only when needed to solve a specific problem</li> <li>Storage of such data in a specific, known location with limited access</li> <li>Collection of only a limited amount of data needed to solve a specific problem</li> <li>Encryption of account data while stored</li> <li>Secure deletion of such data immediately after use</li> </ul> </li> </ul> </li> </ul>			✓	✓	✓	
<b>3B-6.2</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to follow secure troubleshooting procedures.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-6.2</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes information for the merchant regarding the solution provider's troubleshooting processes, including that the solution provider ensures the following: <ul style="list-style-type: none"> <li>PAN and/or SAD is never output to the merchant environment</li> <li>Collection of PAN and/or SAD only when needed to solve a specific problem.</li> <li>Storage of such data only in specific, known locations with limited access.</li> <li>Collection of only a limited amount of data needed to solve a specific problem.</li> <li>Encryption of account data while stored</li> <li>Secure deletion of such data immediately after use</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes information for merchants regarding the solution provider's troubleshooting processes, including that the solution provider ensures the following: <ul style="list-style-type: none"> <li>PAN and/or SAD is never output to the merchant environment</li> <li>Collection of PAN and/or SAD only when needed to solve a specific problem.</li> <li>Storage of such data only in specific, known locations with limited access.</li> <li>Collection of only a limited amount of data needed to solve a specific problem.</li> <li>Encryption of account data while stored</li> <li>Secure deletion of such data immediately after use</li> </ul> </li> </ul>						✓
<b>3B-7</b> The P2PE solution provides auditable logs of any changes to critical functions of the POI device(s).							
<b>3B-7.1</b> Ensure that any changes to the critical functions of the POI are logged—either on the device or within the remote-management systems of the P2PE solution provider. Critical functions include application and firmware updates as well as changes to security-sensitive configuration options, such as whitelists or debug modes.							
<b>3B-7.1.a</b> Examine device and/or system configurations to verify that any changes to the critical functions of the POI are logged, including: <ul style="list-style-type: none"> <li>Changes to the applications within the device</li> <li>Changes to the firmware within the device</li> <li>Changes to any security-sensitive configuration options within the device (including whitelists and debug modes)</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how observation of device and/or system configurations verified that any changes to the critical functions of the POI are logged, including: <ul style="list-style-type: none"> <li>Changes to the applications within the device</li> <li>Changes to the firmware within the device</li> <li>Changes to any security-sensitive configuration options within the device (including whitelists and debug modes)</li> </ul> </li> </ul>	✓					

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3B-7.1.b</b> Observe authorized personnel perform authorized changes on POI devices, as follows, and examine log files to verify that all such activities result in a correlating log file: <ul style="list-style-type: none"> <li>Changes to the applications within the device</li> <li>Changes to the firmware within the device</li> <li>Changes to any security-sensitive configuration options within the device (including whitelists and debug modes)</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 3.2 that describes the sample of POI devices assessed for this testing procedure</li> <li>For each POI device in the sample, describe the authorized changes observed, including: <ul style="list-style-type: none"> <li>Changes to the applications within the device</li> <li>Changes to the firmware within the device</li> <li>Changes to any security-sensitive configuration options within the device (including whitelists and debug modes)</li> </ul> </li> <li>Describe how observation of the authorized changes and examination of log files verified that all such activities result in a correlating log file: <ul style="list-style-type: none"> <li>Changes to the applications within the device</li> <li>Changes to the firmware within the device</li> <li>Changes to any security-sensitive configuration options within the device (including whitelists and debug modes)</li> </ul> </li> </ul>		✓		✓	✓
<b>3B-8</b> Solution provider implements tamper-detection mechanisms for devices in their possession, and provides related instructions to merchants.						
<b>3B-8.1</b> Perform periodic physical inspections of devices in solution provider's possession to detect tampering or modification of devices. <b>Note:</b> Frequency of inspection should be appropriate for device location and usage. For example, it may be suitable to inspect POIs in secure storage at least quarterly.						
<b>3B-8.1.a</b> Examine documented procedures to verify they define: <ul style="list-style-type: none"> <li>Procedures for performing periodic inspections of devices to detect signs of tampering or modification, for all POI devices in the solution provider's possession</li> <li>The frequency of inspections</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for performing periodic inspections of devices to detect signs of tampering or modification</li> <li>Confirm the defined procedures include: <ul style="list-style-type: none"> <li>All POI devices in the solution provider's possession</li> <li>The frequency of inspections</li> </ul> </li> </ul> </li> </ul>		✓			



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3B-8.1.b</b> Observe inspection processes to verify that inspections detect tampering or modification of POI devices.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how the inspection processes were observed to detect tampering or modification of POI devices.</li> </ul>				✓	
<b>3B-8.1.c</b> Examine inspection records and interview personnel to verify that inspections are periodically performed according to the defined frequency for all POI devices in the solution provider's possession.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that inspections are periodically performed according to the defined frequency, for all POI devices in the solution provider's possession.</li> <li>Identify the inspections records examined</li> <li>Describe how examination of inspections records verified that inspections are periodically performed according to the defined frequency for all POI devices in the solution provider's possession.</li> </ul> </li> </ul>		✓	✓		
<b>3B-8.1.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to perform periodic physical inspections of devices to detect tampering or modification of devices. Detailed procedures for performing periodic physical inspections to include: <ul style="list-style-type: none"> <li>Description of tamper-detection mechanisms</li> <li>Guidance for physical inspections, including photographs or drawings of the device illustrating what the merchant is to inspect, for example: <ul style="list-style-type: none"> <li>Missing or altered seals or screws, extraneous wiring, holes in the device, or the addition of labels or other covering material that could be used to mask damage from device tampering.</li> <li>Instructions for weighing POI devices on receipt and then periodically for comparison with vendor specifications to identify potential insertion of tapping mechanisms within devices</li> </ul> </li> <li>Recommendations for frequency of inspections</li> </ul> <p><b>Note:</b> Frequency of inspection should be appropriate for device location and usage. For example, it may be suitable for merchants to inspect POIs in secure storage at least quarterly, and to inspect POIs in use at least weekly. If POIs cannot easily be inspected—for example, due to remote or inaccessible locations—alternative controls should be implemented to mitigate the risk of less-frequent inspections.</p>						

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-8.1.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes detailed procedures for merchants to perform periodic physical inspections of devices to detect tampering or modification. Verify instructions include: <ul style="list-style-type: none"> <li>Description of tamper-detection mechanisms</li> <li>Guidance for physical inspections, including photographs or drawings of the device illustrating what the merchant is to inspect, for example: <ul style="list-style-type: none"> <li>Missing or altered seals or screws, extraneous wiring, holes in the device, or the addition of labels or other covering material that could be used to mask damage from device tampering.</li> <li>Instructions for weighing POI devices on receipt and then periodically for comparison with vendor specifications to identify potential insertion of tapping mechanisms within devices</li> </ul> </li> <li>Recommendations for frequency of inspections</li> </ul>	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, confirm that the P2PE Instruction Manual (PIM) includes detailed procedures for merchants to perform periodic physical inspections of devices to detect tampering or modification.</li> <li>Confirm that instructions in the PIM include: <ul style="list-style-type: none"> <li>Description of tamper-detection mechanisms</li> <li>Guidance for physical inspections, including photographs or drawings of the device illustrating what the merchant is to inspect, for example: <ul style="list-style-type: none"> <li>Missing or altered seals or screws, extraneous wiring, holes in the device, or the addition of labels or other covering material that could be used to mask damage from device tampering.</li> <li>Instructions for weighing POI devices on receipt and then periodically for comparison with vendor specifications to identify potential insertion of tapping mechanisms within devices</li> </ul> </li> <li>Recommendations for frequency of inspections</li> </ul> </li> </ul>						✓
<b>3B-8.2</b> Implement tamper-detection mechanisms and/or processes for devices deployed in remote or unattended locations—for example, use cameras or other physical mechanisms to alert personnel to physical breach.							
<b>3B-8.2.a</b> Examine documented procedures to verify tamper-detection mechanisms and/or processes are defined for devices deployed in remote or unattended locations.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, identify the document that defines tamper-detection mechanisms and/or processes for devices deployed in remote or unattended locations.</li> </ul>		✓				
<b>3B-8.2.b</b> Observe tamper-detection mechanisms and/or processes in use to verify detection mechanisms and/or processes are implemented for devices deployed in remote or unattended locations.	<ul style="list-style-type: none"> <li>For all POI device types identified in table 3.1, describe how tamper-detection mechanisms and/or processes were observed to be implemented for devices deployed in remote or unattended locations.</li> </ul>				✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-8.2.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement tamper-detection mechanisms and/or processes for devices deployed in remote or unattended locations—for example, the use of cameras or other physical mechanisms to alert personnel to physical breach.							
<b>3B-8.2.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions for implementing tamper-detection mechanisms and/or processes for devices deployed in remote or unattended locations.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes instructions for implementing tamper-detection mechanisms and/or processes for devices deployed in remote or unattended locations.</li> </ul>						✓
<b>3B-8.3</b> Implement procedures for responding to tampered devices.							
<b>3B-8.3.a</b> Examine documented procedures to verify procedures are defined for responding to tampered devices.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for responding to tampered devices.</li> </ul>		✓				
<b>3B-8.3.b</b> Observe response processes and interview response personnel to verify procedures for responding to tampered devices are implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures for responding to tampered devices are implemented.</li> <li>Describe how observation of response processes verified that procedures for responding to tampered devices are implemented.</li> </ul>			✓	✓		
<b>3B-8.3.1</b> Provide instructions via the <i>P2PE Instruction Manual</i> for the merchant to implement procedures for responding to tampered devices.							
<b>3B-8.3.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes response procedures and contact details for merchants to report and respond to tampered devices.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes response procedures and contact details for merchants to report and respond to tampered devices</li> </ul>						✓
<b>3B-9</b> Solution provider implements mechanisms to monitor and respond to suspicious activity on POI devices deployed at merchant locations.							
<b>3B-9.1</b> Implement mechanisms to provide immediate notification of suspicious activity, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul>							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3B-9.1.a</b> Examine documented procedures to verify mechanisms are defined to provide immediate notification of potential security breaches, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines mechanisms to provide immediate notification of potential security breaches, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul> </li> </ul>		✓				
<b>3B-9.1.b</b> Observe notification mechanisms and interview response personnel to verify the mechanisms provide immediate notification of suspicious activity, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm the mechanisms provide immediate notification of suspicious activity, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul> </li> <li>Describe how notification mechanisms were observed to provide immediate notification of suspicious activity, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Disconnect/reconnect of devices (notification for known devices, but an alert if device is not recognized)</li> <li>Failure of any device security control</li> </ul> </li> </ul>			✓	✓		
<b>3B-9.1.1</b> Provide instructions and contact details via the <i>P2PE Instruction Manual</i> for the merchant to notify the solution provider of suspicious activity.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					Verify PIM Content
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	
<b>3B-9.1.1</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes instructions and contact details for the merchant to notify the solution provider of suspicious activity.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes instructions and contact details for merchants to notify the solution provider of suspicious activity.</li> </ul>						✓
<b>3B-9.2</b> Prepare incident-response procedures to respond to detection of potential security breaches, including but not limited to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul>							
<b>3B-9.2.a</b> Examine documented incident-response procedures and verify that procedures are defined for responding to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines incident-response procedures</li> <li>Confirm that procedures are defined for responding to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul> </li> </ul>		✓				
<b>3B-9.2.b</b> Observe incident-response processes and interview response personnel to verify procedures are implemented for responding to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures are implemented for responding to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul> </li> <li>Describe how incident-response processes were observed to be implemented for responding to: <ul style="list-style-type: none"> <li>Physical device breach</li> <li>Logical alterations to device (configuration, access controls)</li> <li>Connection of unrecognized device</li> <li>Failure of any device security control</li> </ul> </li> </ul>			✓	✓		

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
3C-1 Solution provider develops, maintains, and disseminates a <i>P2PE Instruction Manual (PIM)</i> to merchants							
3C-1.1 Develop and maintain <i>P2PE Instruction Manual (PIM)</i> and distribute PIM to merchants. Ensure PIM is available to merchants upon request. PIM must address the following:							
3C-1.1.a Examine documented procedures to verify mechanisms are defined to distribute the PIM to all merchants using the P2PE solution, and to provide PIM to merchants upon request.	<ul style="list-style-type: none"><li>Identify the document that defines mechanisms to:<ul style="list-style-type: none"><li>Distribute the PIM to all merchants using the P2PE solution</li><li>Provide PIM to merchants upon request.</li></ul></li></ul>		✓				
3C-1.1.b Interview responsible personnel and observe processes to verify PIM is distributed to all merchants using the P2PE solution and PIM is provided to merchants upon request.	<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that the PIM is:<ul style="list-style-type: none"><li>Distributed to all merchants using the P2PE solution</li><li>Provided to merchants upon request.</li></ul></li><li>Describe how observation of processes verified that the PIM is:<ul style="list-style-type: none"><li>Distributed to all merchants using the P2PE solution</li><li>Provided to merchants upon request.</li></ul></li></ul>			✓	✓		
3C-1.1.1 All requirements in this document wherever the <i>P2PE Instruction Manual (PIM)</i> is referenced.							
3C-1.1.1 Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it covers all related instructions, guidance and requirements in this document (summarized in Domain 3 PIM Annex).	<ul style="list-style-type: none"><li>Confirm that the P2PE Instruction Manual (PIM) covers all related instructions, guidance and requirements in this document (summarized in Domain 3 PIM Annex).</li></ul>						✓
3C-1.1.2 Specific instructions for installing and connecting POI devices to maintain the integrity of P2PE solution, including any permitted connections to other devices.							
3C-1.1.2 Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes specific instructions for installing and connecting POI devices to maintain the integrity of P2PE solution, including any permitted connections to other devices.	<ul style="list-style-type: none"><li>Confirm that the P2PE Instruction Manual (PIM) includes specific instructions for installing and connecting POI devices to maintain the integrity of P2PE solution, including any permitted connections to other devices.</li></ul>						✓
3C-1.1.3 Specific details of all PCI-approved POI components used in the P2PE solution.							

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3C-1.1.3</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes details of all PCI-approved POI components used in the P2PE solution.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes details of all PCI-approved POI components used in the P2PE solution.</li> </ul>						✓
<b>3C-1.1.4</b> If the P2PE solution includes or allows for a POI component that is not PCI-approved (for example, the P2PE solution provides a PCI-approved SCR which may be attached to a non PCI-approved component), the PIM includes detailed instructions for connecting the PCI-approved component to other devices and/or components in order to ensure the integrity of the P2PE solution is maintained.							
<b>3C-1.1.4</b> If the P2PE solution includes or allows for a POI component that is not PCI-approved (for example, the P2PE solution provides a PCI-approved SCR which may be attached to a non PCI-approved component), verify the PIM includes detailed instructions for connecting the PCI-approved component to other devices and/or components in order to ensure the integrity of the P2PE solution is maintained.	<ul style="list-style-type: none"> <li>Identify if the P2PE solution includes or allows for use of a POI component that is not PCI-approved</li> <li>If the P2PE solution includes or allows for use of a POI component that is not PCI-approved, confirm that the PIM includes detailed instructions for connecting the PCI-approved component to other devices and/or components in order to ensure the integrity of the P2PE solution is maintained.</li> </ul>	✓					✓
<b>3C-1.1.5</b> Specific guidance that if a PCI-approved POI component is connected to another device or data-capture mechanism (for example, if a PCI-approved SCR was connected to a non PCI-approved keypad), the non-PCI-approved capture mechanism is not secured by the P2PE solution, and the use of any such mechanisms to collect PCI payment-card data would negate any PCI DSS scope reduction which might otherwise have been provided by the P2PE solution's device. <b>Note:</b> <i>P2PE Requirement 1A-1.1 allows only PCI-approved POI devices to be used for accepting and processing P2PE transactions.</i>							
<b>3C-1.1.5</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes specific guidance that if a PCI-approved POI component is connected to another device or data-capture mechanism, the non-PCI-approved capture mechanism is not secured by the P2PE solution, and the use of any such mechanisms to collect PCI payment-card data would negate any PCI DSS scope reduction which might otherwise have been provided by the P2PE solution's device.	<ul style="list-style-type: none"> <li>Confirm that the P2PE Instruction Manual (PIM) includes specific guidance that if a PCI-approved POI component is connected to another device or data-capture mechanism: <ul style="list-style-type: none"> <li>The non-PCI-approved capture mechanism is not secured by the P2PE solution</li> <li>The use of any such mechanisms to collect PCI payment-card data would negate any PCI DSS scope reduction which might otherwise have been provided by the P2PE solution's device.</li> </ul> </li> </ul>						✓



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3C-1.1.6</b> Provides specific information that changing or attempting to change device configurations or settings would negate the solution's ability to provide PCI DSS scope reduction. Examples include, but are not limited to: <ul style="list-style-type: none"><li>Attempting to enable any device interfaces or data-capture mechanisms that were disabled on the P2PE solution POI device</li><li>Attempting to alter security configurations or authentication controls</li><li>Physically opening the device</li><li>Attempting to install applications onto the device</li></ul>							
<b>3C-1.1.6</b> Examine the <i>P2PE Instruction Manual (PIM)</i> to verify it includes specific information that changing or attempting to change device configurations or settings would negate the solution's ability to provide PCI DSS scope reduction. Examples include, but are not limited to: <ul style="list-style-type: none"><li>Attempting to enable any device interfaces or data-capture mechanisms that were disabled on the P2PE solution POI device</li><li>Attempting to alter security configurations or authentication controls</li><li>Physically opening the device</li><li>Attempting to install applications onto the device</li></ul>	<ul style="list-style-type: none"><li>Confirm the P2PE Instruction Manual (PIM) includes specific information that changing or attempting to change device configurations or settings would negate the solution's ability to provide PCI DSS scope reduction. Examples include, but are not limited to:<ul style="list-style-type: none"><li>Attempting to enable any device interfaces or data-capture mechanisms that were disabled on the P2PE solution POI device</li><li>Attempting to alter security configurations or authentication controls</li><li>Physically opening the device</li><li>Attempting to install applications onto the device</li></ul></li></ul>						✓
<b>3C-1.2</b> Review <i>P2PE Instruction Manual (PIM)</i> at least annually and upon changes to the solution or the PCI P2PE requirements. Update PIM as needed to keep the documentation current with: <ul style="list-style-type: none"><li>Any changes to the P2PE solution, and</li><li>Any changes to the requirements in this document.</li></ul>							



P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>3C-1.2.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>PIM must be reviewed at least annually and upon changes to the solution or changes to the PCI P2PE requirements</li> <li>PIM must be updated as needed to keep the document current with: <ul style="list-style-type: none"> <li>Any changes to the P2PE solution, and</li> <li>Any changes to the PCI P2PE requirements.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for reviewing and updating the PIM</li> <li>Confirm that defined procedures include: <ul style="list-style-type: none"> <li>PIM must be reviewed at least annually and upon changes to the solution or changes to the PCI P2PE requirements</li> <li>PIM must be updated as needed to keep the document current with: <ul style="list-style-type: none"> <li>Any changes to the P2PE solution, and</li> <li>Any changes to the PCI P2PE requirements.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>3C-1.2.b</b> Observe processes for reviewing and updating the PIM, and interview responsible personnel to verify: <ul style="list-style-type: none"> <li>PIM is reviewed at least annually and upon changes to the solution or changes to the PCI P2PE requirements</li> <li>PIM is updated as needed to keep the document current with: <ul style="list-style-type: none"> <li>Any changes to the P2PE solution, and</li> <li>Any changes to the PCI P2PE requirements.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm: <ul style="list-style-type: none"> <li>PIM is reviewed at least annually and upon changes to the solution or changes to the PCI P2PE requirements</li> <li>PIM is updated as needed to keep the document current with: <ul style="list-style-type: none"> <li>Any changes to the P2PE solution, and</li> <li>Any changes to the PCI P2PE requirements.</li> </ul> </li> </ul> </li> <li>Describe how observation of processes for reviewing and updating the PIM verified: <ul style="list-style-type: none"> <li>PIM is reviewed at least annually and upon changes to the solution or changes to the PCI P2PE requirements</li> <li>PIM is updated as needed to keep the document current with: <ul style="list-style-type: none"> <li>Any changes to the P2PE solution, and</li> <li>Any changes to the PCI P2PE requirements.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>3C-1.2.1</b> Communicate PIM updates to affected merchants, and provide merchants with updated PIM as needed.						
<b>3C-1.2.1.a</b> Examine documented procedures to verify they include communicating PIM updates to affected merchants and providing an updated PIM as needed.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for: <ul style="list-style-type: none"> <li>Communicating PIM updates to affected merchants</li> <li>Providing an updated PIM as needed.</li> </ul> </li> </ul>		✓			

P2PE Domain 3 Requirements and Testing Procedures	Reporting Details	Reporting Methodology					
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample	Verify PIM Content
<b>3C-1.2.1.b</b> Observe processes for reviewing and updating the PIM, and interview responsible personnel to verify PIM updates are communicated to affected merchants and an updated PIM is provided to merchants as needed.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that:             <ul style="list-style-type: none"> <li>PIM updates are communicated to affected merchants</li> <li>An updated PIM is provided to merchants as needed.</li> </ul> </li> <li>Describe how observation of processes for reviewing and updating the PIM verified that:             <ul style="list-style-type: none"> <li>PIM updates are communicated to affected merchants</li> <li>An updated PIM is provided to merchants as needed.</li> </ul> </li> </ul>			✓	✓		

## **Domain 4: Segmentation between Encryption and Decryption Environments**

Domain 4 is Not Applicable for P2PE Standard v1.1 – Hardware/Hardware solutions.

## Domain 5: Decryption Environment and Device Management

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 5.1 – List of all HSMs used in P2PE solution decryption environment</b></p> <ul style="list-style-type: none"> <li>• PCI PTS-approved HSMs <ul style="list-style-type: none"> <li>○ HSM device name/ identifier</li> <li>○ HSM manufacturer</li> <li>○ HSM model name and number</li> <li>○ Device location</li> <li>○ PTS listing number</li> <li>○ PTS approval class</li> <li>○ Approved HSM Hardware version #</li> <li>○ Approved HSM Firmware version #</li> <li>○ Applications (include version number) resident on the HSM which were included in the PTS assessment</li> </ul> </li> <li>• FIPS-approved HSMs <ul style="list-style-type: none"> <li>○ HSM device name/ identifier</li> <li>○ HSM manufacturer</li> <li>○ HSM model name and number</li> <li>○ Device location</li> <li>○ FIPS 140-2 listing number</li> <li>○ FIPS 140-2 certification level</li> <li>○ Approved HSM Hardware version #</li> <li>○ Approved HSM Firmware version #</li> </ul> </li> </ul> <p><b>Note:</b> HSMs must be individually identified.</p>	<p>Complete Table 5.1 for all HSM devices used in the solution.</p> <ul style="list-style-type: none"> <li>• Identify all PCI PTS-approved HSMs and provide the following: <ul style="list-style-type: none"> <li>○ Identify the HSM by device name/ identifier</li> <li>○ Identify the HSM manufacturer</li> <li>○ Identify the HSM model name and number</li> <li>○ Identify the location of the HSM device</li> <li>○ Identify the PTS approval number from the PCI SSC website listing</li> <li>○ Identify the PTS approval class from the PCI SSC website listing</li> <li>○ Identify the approved HSM hardware version number from the PTS list on the PCI SSC website</li> <li>○ Identify the approved HSM firmware version number from the PTS list on the PCI SSC website</li> <li>○ Applications (include version number) resident on the HSM which were included in the PTS assessment</li> </ul> </li> <li>• Identify all FIPS-approved HSMs and provide the following: <ul style="list-style-type: none"> <li>○ Identify the HSM by device name/ identifier</li> <li>○ Identify the HSM manufacturer</li> <li>○ Identify the HSM model name and number</li> <li>○ Identify the location of the HSM device</li> <li>○ Identify the FIPS 140-2 listing number</li> <li>○ Identify the FIPS 140-2 certification level</li> <li>○ Identify the approved HSM hardware version number from the FIPS listing</li> <li>○ Identify the approved HSM firmware version number from the FIPS listing</li> </ul> </li> </ul> <p><b>Note:</b> All HSMs must be included in Table 5.1.</p>

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 5.2 – Samples of HSMs assessed for Domain 5 Testing Procedures</b></p> <ul style="list-style-type: none"> <li>• HSM Sample Set #1 <ul style="list-style-type: none"> <li>○ Number and Description</li> <li>○ HSM device name/ identifier (per Table 5.1)</li> <li>○ Sample Size (Number of devices assessed for Domain 1 Testing Procedures)</li> <li>○ Rationale – How sample size was determined to be appropriate and representative of the overall population</li> <li>○ Domain 5 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• HSM Sample Set #2 – Per above</li> <li>• And so on...</li> </ul> <p><b>Note:</b> Sampling of HSMs is only permitted for specific requirements. * Every HSM Hardware # and Firmware # listed in Table 5.1 must be included in every sample set in Table 5.2</p>	<p>Complete Table 5.2 to identify the sample of HSMs assessed for particular Domain 5 testing procedures. For each HSM Sample Set identified, provide the following:</p> <ul style="list-style-type: none"> <li>• HSM Sample Set #1 <ul style="list-style-type: none"> <li>○ HSM Sample Set # and Description <ul style="list-style-type: none"> <li>▪ Ensure HSM Sample Sets are consecutively numbered</li> <li>▪ Include a brief description that identifies one sample set from another and is consistent with the purpose of the sample</li> </ul> </li> <li>○ HSM device type name/ identifier – each sample must be representative of all HSM device types used in the solution</li> <li>○ Sample Size – number of each device type assessed for the applicable Domain 5 Testing Procedure(s)</li> <li>○ Rationale – how the assessor determined the sample size was appropriate and representative of the overall population of HSMs</li> <li>○ Specific Domain 5 Testing Procedures this sample was assessed against</li> </ul> </li> <li>• HSM Sample Set #2 – Per above</li> <li>• And so on... Add rows as needed to document additional sample sets – e.g. from HSM Sample Set #1 to HSM Sample Set #N.</li> </ul>

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5A-1</b> Use approved decryption devices						
<b>5A-1.1</b> Ensure that all hardware security modules (HSMs) are either: <ul style="list-style-type: none"> <li>FIPS140-2 Level 3 or higher certified, or</li> <li>A PCI-approved HSM.</li> </ul>						
<b>5A-1.1.a</b> For all HSMs used in the solution, examine approval documentation (e.g., FIPS certification or PTS approval) and review the list of approved devices to verify that all HSMs used in the solution are either: <ul style="list-style-type: none"> <li>Listed on the NIST Cryptographic Module Validation Program (CMVP) list, with a valid listing number, and approved to FIPS 140-2 Level 3, or higher. Refer to <a href="http://csrc.nist.gov">http://csrc.nist.gov</a>.</li> <li>Listed on the PCI SSC website, with a valid SSC listing number, as Approved PCI PTS Devices under the approval class "HSM." Refer to <a href="https://www.pcisecuritystandards.org">https://www.pcisecuritystandards.org</a>.</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the approval documentation examined (FIPS certification or PTS approval)</li> <li>Confirm that the approval documentation for each HSM was confirmed to match the appropriate list of approved devices, verifying that all HSMs are either: <ul style="list-style-type: none"> <li>Listed on the NIST Cryptographic Module Validation Program (CMVP) list, with a valid listing number, and approved to FIPS 140-2 Level 3, or higher. Refer to <a href="http://csrc.nist.gov">http://csrc.nist.gov</a>.</li> <li>Listed on the PCI SSC website, with a valid SSC listing number, as Approved PCI PTS Devices under the approval class "HSM." Refer to <a href="https://www.pcisecuritystandards.org">https://www.pcisecuritystandards.org</a>.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>5A-1.1.b</b> Examine documented procedures and interview personnel to verify that all decryption operations are performed only by the FIPS-approved and/or PTS-approved HSMs identified in 5A-1.1.a.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that all decryption operations are performed only by the FIPS-approved and/or PTS-approved HSMs identified in Table 5.1</li> <li>Identify personnel interviewed who confirm that all decryption operations are performed only by the FIPS-approved and/or PTS-approved HSMs identified in Table 5.1</li> </ul>		✓	✓		
<b>5A-1.1.1</b> The approval listing must match the deployed devices in the following characteristics: <ul style="list-style-type: none"> <li>Model name and number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>For PCI-approved HSMs, any applications, including application version number, resident within the device which were included in the PTS assessment</li> </ul>						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5A-1.1.1.a</b> For all PCI-approved HSMs used in the solution, examine HSM devices and review the PCI SSC list of Approved PCI PTS Devices to verify that all of the following device characteristics match the PCI PTS listing for each HSM: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Any applications, including application version number, resident within the device which were included in the PTS assessment</li> </ul>	<ul style="list-style-type: none"> <li>For all PTS-approved HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Describe how HSMs were examined to determine the following device characteristics: <ul style="list-style-type: none"> <li>Model name and number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li> </ul> </li> <li>Confirm that all of the following device characteristics match the PCI PTS listing for each HSM: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> <li>Name and application version number of any applications resident within the device that were included in the PTS assessment</li> </ul> </li> </ul> </li> </ul>	✓	✓			
<b>5A-1.1.1.b</b> For all FIPS-approved HSMs used in the solution, examine HSM devices and review the NIST Cryptographic Module Validation Program (CMVP) list to verify that all of the following device characteristics match the FIPS140-2 Level 3 (or higher) approval listing for each HSM: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> </ul>	<ul style="list-style-type: none"> <li>For all FIPS-approved HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Describe how HSMs were examined to determine the following device characteristics: <ul style="list-style-type: none"> <li>Model name and number</li> <li>Hardware version number</li> <li>Firmware version number</li> </ul> </li> <li>Confirm that all of the following device characteristics match the FIPS140-2 Level 3 (or higher) approval listing for each HSM: <ul style="list-style-type: none"> <li>Model name/number</li> <li>Hardware version number</li> <li>Firmware version number</li> </ul> </li> </ul> </li> </ul>	✓	✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5A-1.1.2</b> If FIPS-approved HSMs are used, the FIPS approval must cover all functions used for the P2PE solution, including all cryptographic algorithms, data-protection mechanisms, and key-management processes.						
<b>5A-1.1.2</b> Examine FIPS approval documentation and HSM operational procedures to verify that the FIPS approval covers all HSM components and functions used for the P2PE solution, including all cryptographic algorithms, data-protection mechanisms, and key-management processes.	<ul style="list-style-type: none"> <li>For all FIPS-approved HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the FIPS approval documentation examined</li> <li>Identify the document that defines HSM operational procedures, including all components and functions used for the P2PE solution</li> <li>Confirm that all HSM components and functions used for the P2PE solution are covered by the FIPS approval, including: <ul style="list-style-type: none"> <li>all cryptographic algorithms</li> <li>all data-protection mechanisms, and</li> <li>all key-management processes</li> </ul> </li> </ul> </li> </ul>		✓			
<b>5A-1.1.3</b> If FIPS-approved HSMs are used, the HSM must be configured to operate in the FIPS-approved mode for all operations (including algorithms, data protection, key management, etc.), according to the FIPS140-2 Level 3 (or higher) certification.						
<b>5A-1.1.3.a</b> Examine documented HSM operational procedures to verify they require HSMs to be configured to operate in the FIPS-approved mode for all P2PE operations (including algorithms, data protection, key management, etc.), according to the FIPS140-2 Level 3 (or higher) certification.	<ul style="list-style-type: none"> <li>For all FIPS-approved HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the document that defines HSM operational procedures to ensure that HSMs must be configured to operate in the FIPS-approved mode according to the FIPS 140-2 Level 3 or higher certification for all P2PE operations, including: <ul style="list-style-type: none"> <li>all cryptographic algorithms</li> <li>all data-protection mechanisms, and</li> <li>all key-management processes</li> </ul> </li> </ul> </li> </ul>		✓			



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5A-1.1.3.b</b> Examine HSM configurations for all P2PE solution functions to verify that HSMs are configured to operate in the FIPS-approved mode for all operations (including algorithms, data protection, key management, etc.), according to the FIPS140-2 Level 3 (or higher) certification.	<ul style="list-style-type: none"> <li>For all FIPS-approved HSMs identified in Table 5.1:             <ul style="list-style-type: none"> <li>Describe how HSM configurations were observed for all P2PE solution functions</li> <li>Describe how observation of HSM configurations verified that HSMs are configured to operate in the FIPS-approved mode according to the FIPS140-2 Level 3 (or higher) certification for all P2PE solution operations, including:                 <ul style="list-style-type: none"> <li>all cryptographic algorithms</li> <li>all data-protection mechanisms, and</li> <li>all key-management processes</li> </ul> </li> </ul> </li> </ul>	✓				
<b>5A-1.2</b> Decryption devices (HSMs) must be deployed according to the security policy to which they have been approved. <b>Note:</b> Both FIPS140-2 and PCI HSM require that the decryption-device manufacturer makes available a security policy document to end users, which provides information on how the device must be installed, maintained, and configured to meet the compliance requirements under which it was approved.						
<b>5A-1.2</b> Examine the security policies for decryption devices and observe device implementations to verify HSMs are deployed in accordance with the security policy to which they have been approved.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1:             <ul style="list-style-type: none"> <li>Identify the security policy document provided by the HSM device manufacturer</li> <li>Describe how observation of HSM device implementations verified that HSMs are deployed in accordance with the security policy to which they have been approved.</li> </ul> </li> </ul>	✓	✓			
<b>5B-1</b> Maintain inventory-control and monitoring procedures for decryption devices.						
<b>5B-1.1</b> Maintain inventory-control and monitoring procedures to accurately track devices from receipt until decommissioning, including where devices are: <ul style="list-style-type: none"> <li>Deployed</li> <li>Awaiting deployment</li> <li>Undergoing repair or otherwise not in use</li> <li>In transit</li> </ul> The inventory-control and monitoring procedures must provide for the following:						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-1.1.a</b> Examine documented inventory-control procedures to confirm that they define methods for tracking device locations from receipt of the device until device decommissioning, including where devices are: <ul style="list-style-type: none"> <li>Deployed</li> <li>Awaiting deployment</li> <li>Undergoing repair or otherwise not in use</li> <li>In transit</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines inventory-control procedures.</li> <li>Confirm the documented procedures define methods for tracking device locations from receipt of the device decommissioning, including where devices are: <ul style="list-style-type: none"> <li>Deployed</li> <li>Awaiting deployment</li> <li>Undergoing repair or otherwise not in use</li> <li>In transit</li> </ul> </li> </ul>		✓			
<b>5B-1.1.b</b> Verify documented procedures include 5B-1.1.1 through 5B-1.1.3 below.	<ul style="list-style-type: none"> <li>Confirm the documented inventory-control procedures (identified in 5B-1.1.a) include the following: <ul style="list-style-type: none"> <li>Devices are entered into the inventory-control system as soon as possible after receipt of the device, and prior to installation</li> <li>Devices are protected against unauthorized substitution or modification until all applicable keys have been loaded</li> <li>Control and monitoring procedures provide for detection of lost or stolen equipment and notification to authorized personnel</li> </ul> </li> </ul>		✓			
<b>5B-1.1.c</b> Examine the documented device inventory and observe device locations to verify that the inventory-control and monitoring procedures accurately track device locations.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the documented device inventory.</li> <li>Identify the observed device locations.</li> <li>Describe how review of the documented inventory and observation of HSM locations verified that inventory-control and monitoring procedures accurately track device locations.</li> </ul> </li> </ul>		✓		✓	
<b>5B-1.1.1</b> Record device serial number in inventory-control system as soon as possible upon receipt and prior to installation.						
<b>5B-1.1.1</b> Review documented device inventories and interview personnel to verify that devices are entered into the inventory-control system as soon as possible upon receipt of the device, and prior to installation.	<ul style="list-style-type: none"> <li>Identify the documented device inventories reviewed.</li> <li>Identify personal interviewed who confirm that devices are entered into the inventory-control system as soon as possible upon receipt of the device, and prior to installation.</li> </ul>		✓	✓		

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-1.1.2</b> Devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.						
<b>5B-1.1.2</b> Observe implemented controls and interview personnel to verify that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> <li>Describe how observation of the implemented controls verified that devices are protected against unauthorized substitution or modification until all applicable keys have been loaded.</li> </ul>			✓	✓	
<b>5B-1.1.3</b> Control and monitoring procedures must provide for detection of lost or stolen equipment and notification to authorized personnel						
<b>5B-1.1.3</b> Observe implemented controls and interview personnel to verify that procedures are implemented to detect lost or stolen devices and notify authorized personnel.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures are implemented to detect lost or stolen devices and notify authorized personnel.</li> <li>Describe how the implemented controls were observed to detect lost or stolen devices and notify authorized personnel.</li> </ul>			✓	✓	
<b>5B-1.2</b> Perform device inventories at least annually to detect removal or substitution of devices.						
<b>5B-1.2.a</b> Examine documented procedures to verify device inventories are required to be performed at least annually to detect removal or substitution of devices.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for device inventories to be performed at least annually to detect removal or substitution of devices.</li> </ul>		✓			
<b>5B-1.2.b</b> Examine records of device inventories and interview personnel to verify that device inventories are performed at least annually.	<ul style="list-style-type: none"> <li>Describe how examination of device inventory records verified that device inventories are performed at least annually.</li> <li>Identify the personnel interviewed who confirm that device inventories are performed at least annually.</li> </ul>		✓	✓		

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-1.3</b> Maintain a documented inventory of all devices to include at least the following: <ul style="list-style-type: none"> <li>• Make, model, and hardware version of device</li> <li>• Location (including site/facility, if applicable)</li> <li>• Serial number</li> <li>• General description</li> <li>• Security seals, labels, hidden markings, etc.</li> <li>• Number and type of physical connections to device</li> <li>• Date of last inventory performed</li> <li>• Firmware version</li> <li>• Hardware version</li> <li>• Applications (including versions)</li> </ul>						
<b>5B-1.3.a</b> Verify through observation that a documented inventory of all devices is maintained.	<ul style="list-style-type: none"> <li>• Identify the documented inventory of all devices.</li> <li>• Describe how observation of devices and the documented inventory verified that all devices are included in the inventory.</li> </ul>		✓		✓	
<b>5B-1.3.b</b> Verify the documented inventory includes at least the following: <ul style="list-style-type: none"> <li>• Make, model, and hardware version of device</li> <li>• Location (including site/facility, if applicable)</li> <li>• Serial number</li> <li>• General description</li> <li>• Security seals, labels, hidden markings, etc.</li> <li>• Number and type of physical connections to device</li> <li>• Date of last inventory performed</li> <li>• Hardware version</li> <li>• Firmware version</li> <li>• Applications and versions</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm that the documented inventory (identified in 5B-1.3.a) includes at least the following for all devices: <ul style="list-style-type: none"> <li>○ Make, model, and hardware version of device</li> <li>○ Location (including site/facility, if applicable)</li> <li>○ Serial number</li> <li>○ General description</li> <li>○ Security seals, labels, hidden markings, etc.</li> <li>○ Number and type of physical connections to device</li> <li>○ Date of last inventory performed</li> <li>○ Hardware version</li> <li>○ Firmware version</li> <li>○ Applications and versions</li> </ul> </li> </ul>		✓			
<b>5B-1.3.1</b> Secure the documented inventory of devices from unauthorized access.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-1.3.1</b> Observe implemented controls and interview personnel to verify the documented inventory of devices is secured from unauthorized access.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that the documented inventory of devices is secured from unauthorized access.</li> <li>Describe how observation of the implemented controls verified that the documented inventory of devices is secured from unauthorized access.</li> </ul>			✓	✓	
<b>5B-1.4</b> Implement procedures for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices.						
<b>5B-1.4.a</b> Examine documented procedures to verify procedures are defined for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices.</li> </ul>		✓			
<b>5B-1.4.b</b> Interview personnel to verify procedures for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices, are implemented.	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm procedures are implemented for detecting and responding to variances in the annual inventory, including identification of missing or substituted devices.</li> </ul>			✓		
<b>5B-2</b> Physically secure decryption devices when not in use.						
<b>5B-2.1</b> Physically secure the storage of devices awaiting deployment.						
<b>5B-2.1.a</b> Examine documented procedures to verify they include storing decryption devices awaiting deployment in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing decryption devices awaiting deployment in a physically secure location.</li> </ul>		✓			
<b>5B-2.1.b</b> Inspect storage locations for decryption devices awaiting deployment, to verify that the location is physically secure.	<ul style="list-style-type: none"> <li>Identify storage locations for decryption devices awaiting deployment.</li> <li>Describe how storage locations for decryption devices awaiting deployment were observed to be physically secure.</li> </ul>				✓	
<b>5B-2.2</b> Physically secure the storage of devices undergoing repair or otherwise not in use.						
<b>5B-2.2.a</b> Examine documented procedures to verify they include storing decryption devices undergoing repair or otherwise not in use in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing decryption devices undergoing repair, or otherwise not in use, in a physically secure location.</li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-2.2.b</b> Inspect storage locations for decryption devices undergoing repair or otherwise not in use to verify that the location is physically secure.	<ul style="list-style-type: none"> <li>Identify storage locations for decryption devices undergoing repair or otherwise not in use.</li> <li>Describe how storage locations for decryption devices undergoing repair or otherwise not in use were observed to be physically secure.</li> </ul>				✓	
<b>5B-2.3</b> Physically secure the storage of devices awaiting transport between sites/locations.						
<b>5B-2.3.a</b> Examine documented procedures to verify they include storing decryption devices awaiting transport between sites/locations in a physically secure location.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for storing decryption devices awaiting transport between sites/locations in a physically secure location.</li> </ul>		✓			
<b>5B-2.3.b</b> Inspect storage locations for decryption devices awaiting transport between sites/locations to verify that the location is secure.	<ul style="list-style-type: none"> <li>Identify storage locations for decryption devices awaiting transport between sites/locations.</li> <li>Describe how storage locations for decryption devices awaiting transport between sites/locations were observed to be physically secure</li> </ul>				✓	
<b>5B-2.4</b> Physically secure devices in transit, including: <ul style="list-style-type: none"> <li>Packing devices in tamper-evident packaging prior to transit</li> <li>Implementing procedures for determining whether device packaging has been tampered with</li> <li>Use of a defined, secure transport method, such as bonded carrier or secure courier</li> </ul>						
<b>5B-2.4.a</b> Examine documented procedures for the transportation of decryption devices to verify they include: <ul style="list-style-type: none"> <li>Procedures for packing decryption devices in tamper-evident packaging prior to transit</li> <li>Procedures for determining whether device packaging has been tampered with</li> <li>Procedures for using a defined, secure transport method, such as bonded carrier or secure courier</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for the transportation of decryption devices.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Procedures for packing decryption devices in tamper-evident packaging prior to transit</li> <li>Procedures for determining whether device packaging has been tampered with</li> <li>Procedures for using a defined, secure transport method, such as bonded carrier or secure courier</li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-2.4.b</b> For a sample of device shipments, examine records of device transportation and interview personnel to verify that the following procedures are implemented: <ul style="list-style-type: none"> <li>Decryption devices are packed in tamper-evident packaging prior to transit.</li> <li>Procedures are followed for determining if device packaging has been tampered with.</li> <li>Use of a defined secure transport method, such as bonded carrier or secure courier.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm the following: <ul style="list-style-type: none"> <li>Decryption devices are packed using tamper-evident packaging prior to transit.</li> <li>Procedures are followed for determining if device packaging has been tampered with.</li> <li>Use of a defined secure transport method, such as a bonded carrier or secure courier.</li> </ul> </li> <li>Identify the sample of device shipments examined (including shipment dates, device types, numbers of devices, etc.)</li> <li>For the sample of device shipments, describe how examination of transportation records and interviews with personnel verified that: <ul style="list-style-type: none"> <li>Decryption devices are packed using tamper-evident packaging prior to transit.</li> <li>Procedures for determining if a device packaging has been tampered with.</li> <li>Use of a defined secure transport method, such as a bonded carrier or secure courier.</li> </ul> </li> </ul>		✓	✓		✓
<b>5B-2.4.1</b> Implement procedures to be followed upon determining that device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>Devices must not be deployed or used</li> <li>Procedures for returning device to authorized party for investigation</li> <li>Escalation procedures and contact details for reporting tamper-detection</li> </ul>						
<b>5B-2.4.1.a</b> Examine documented procedures to verify they include procedures to be followed upon determining that device packaging has been tampered with, including: <ul style="list-style-type: none"> <li>Devices must not be deployed or used</li> <li>Procedures for returning device to authorized party for investigation</li> <li>Contact details for reporting tamper-detection</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to be followed upon determining that device packaging has been tampered with.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Devices must not be deployed or used</li> <li>Procedures for returning device to authorized party for investigation</li> <li>Contact details for reporting tamper-detection</li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-2.4.1.b</b> Interview response personnel to verify that, upon determining that device packaging has been tampered with, the following procedures are implemented: <ul style="list-style-type: none"> <li>• Devices are not deployed or used.</li> <li>• Procedures are followed for returning device to authorized party for investigation.</li> <li>• Reporting of tamper-detection to defined contact details.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the personnel interviewed who confirm that, upon determining that device packaging has been tampered with, the following procedures are implemented: <ul style="list-style-type: none"> <li>◦ Devices are not deployed or used.</li> <li>◦ Procedures are followed for returning device to authorized party for investigation.</li> <li>◦ Reporting of tamper-detection to defined contact details</li> </ul> </li> </ul>			✓		
<b>5B-2.5</b> Ensure devices are only transported between trusted sites/locations, as follows: <ul style="list-style-type: none"> <li>• A list of trusted sites (e.g., vendor / maintenance provider, etc.) is maintained.</li> <li>• Only devices received from trusted sites/locations are accepted for use.</li> <li>• Procedures are defined in the event that devices are received from untrusted or unknown locations, including: <ul style="list-style-type: none"> <li>◦ Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>◦ Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>• Devices are sent only to trusted sites/locations</li> </ul>						



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-2.5.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>• A list of trusted sites (e.g., vendor / maintenance provider, etc.) between which devices may be transported</li> <li>• Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>• Procedures to be followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>○ Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>○ Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>• Procedures to ensure that devices are only sent to trusted sites/locations</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the document that defines procedures to ensure decryption devices are only transported between trusted sites/locations.</li> <li>• Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>○ A list of trusted sites (e.g., vendor / maintenance provider, etc.) between which devices may be transported</li> <li>○ Procedures to ensure that only devices received from trusted sites/locations are accepted for use</li> <li>○ Procedures to be followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>▪ Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>▪ Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>○ Procedures to ensure that devices are only sent to trusted sites/locations</li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<p><b>5B-2.5.b</b> For a sample of device shipments, examine records of device transportation and interview personnel to verify:</p> <ul style="list-style-type: none"> <li>Only devices received from trusted sites/locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul>	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Only devices received from trusted sites/locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul> </li> <li>Identify the sample of device shipments which were examined (including shipment dates, device types, numbers of devices, etc.)</li> <li>For the sample of device shipments, describe how examination of transportation records and interviews with personnel verified that: <ul style="list-style-type: none"> <li>Only devices received from trusted sites/locations are accepted for use.</li> <li>Procedures are followed in the event that a device is received from an untrusted or unknown location, including: <ul style="list-style-type: none"> <li>Procedures (including contact details for authorized parties) for verifying location from which device was sent</li> <li>Procedures to ensure devices are not used unless and until the source location is verified as trusted</li> </ul> </li> <li>Devices are only sent to trusted sites/locations</li> </ul> </li> </ul>		✓	✓		✓
<b>5B-3</b> Prevent and detect the unauthorized alteration or replacement of devices prior to and during deployment.						
<p><b>5B-3.1</b> Ensure devices are placed into service only if there is assurance that the equipment has not been subject to unauthorized modification, substitution, or tampering prior to being put into use.</p> <p><b>Note:</b> This requirement applies to HSMs and other SCDs used for decryption and/or key storage and/or other key-management functions and/or signing of whitelists within the decryption environment.</p>						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1a</b> Review documented procedures to confirm that processes are defined to provide assurance that devices have not been substituted or subjected to unauthorized modifications or tampering prior to being put into use.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to be followed prior to devices being put into use.</li> <li>Confirm the documented processes provide assurance that: <ul style="list-style-type: none"> <li>Devices have not been substituted prior to being put into use</li> <li>Devices have not been subjected to unauthorized modifications or tampering prior to being put into use</li> </ul> </li> </ul>		✓			
<b>5B-3.1b</b> Observe processes and interview personnel to verify that processes are followed to provide assurance that devices have not been substituted or subjected to unauthorized modifications or tampering prior to being put into use.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirmed that processes are implemented to provide assurance that: <ul style="list-style-type: none"> <li>Devices have not been substituted prior to being put into use</li> <li>Devices have not been subjected to unauthorized modifications or tampering prior to being put into use</li> </ul> </li> <li>Describe how processes were observed to provide assurance that: <ul style="list-style-type: none"> <li>Devices have not been substituted prior to being put into use</li> <li>Devices have not been subjected to unauthorized modifications or tampering prior to being put into use</li> </ul> </li> </ul>			✓	✓	
<b>5B-3.1.1</b> Implement controls to protect devices from unauthorized access up to deployment. Controls must include the following:						
<b>5B-3.1.1.a</b> Review documented procedures to verify they include protecting devices from unauthorized access up to deployment.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to protect devices from unauthorized access up to deployment.</li> </ul>		✓			
<b>5B-3.1.1.b</b> Verify documented procedures include 5B-3.1.1.1 through 5B-3.1.1.3 below.	<ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 5B-3.1.1.a) include the following: <ul style="list-style-type: none"> <li>Access to all devices is documented, defined, logged, and controlled</li> <li>Devices do not use default keys (such as keys that are pre-installed for testing purposes), passwords, or data.</li> <li>All personnel with access to devices are documented in a formal list and authorized by management. The list of authorized personnel is reviewed at least annually.</li> </ul> </li> </ul>		✓			
<b>5B-3.1.1.c</b> Verify procedures are implemented as follows:						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.1.1</b> Ensure access to all devices is documented, defined, logged, and controlled.						
<b>5B-3.1.1.1.a</b> Examine access-control documentation and device configurations to verify that access to all devices is defined and documented.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the access-control document that defines and documents access to all devices</li> <li>Describe how observation of device configurations verified that access to all devices is defined in accordance with the access-control documentation</li> </ul> </li> </ul>	✓	✓			
<b>5B-3.1.1.1.b</b> For a sample of devices, observe authorized personnel accessing devices and examine access logs to verify that access to all devices is logged.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample: <ul style="list-style-type: none"> <li>Identify the authorized personnel who were observed accessing the devices</li> <li>Identify the access logs examined.</li> <li>Describe how examination of the access logs verified that access to all devices is logged.</li> </ul> </li> </ul>		✓		✓	✓
<b>5B-3.1.1.1.c</b> Examine implemented access controls to verify that unauthorized individuals cannot access, modify, or substitute any device.	<ul style="list-style-type: none"> <li>Describe observation of access controls verified that unauthorized individuals cannot access, modify, or substitute any device.</li> </ul>	✓				
<b>5B-3.1.1.2</b> Devices do not use default keys (such as keys that are pre-installed for testing purposes), passwords, or data.						
<b>5B-3.1.1.2</b> Examine vendor documentation or other information sources to identify default keys (such as keys that are pre-installed for testing purposes), passwords, or data. Observe implemented processes and interview personnel to verify that default keys, passwords, or data are not used.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the vendor documentation or other information sources reviewed to identify default keys, passwords, or data.</li> <li>Identify the personnel interviewed who confirm that default keys, passwords or data are not used.</li> <li>Describe how observation of implemented processes verified that default keys, passwords, or data are not used.</li> </ul> </li> </ul>		✓	✓	✓	
<b>5B-3.1.1.3</b> All personnel with access to devices are documented in a formal list and authorized by management. The list of authorized personnel is reviewed at least annually.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.1.3.a</b> Examine documented authorizations to verify: <ul style="list-style-type: none"> <li>All personnel with access to devices are documented in a formal list.</li> <li>All personnel with access to devices are authorized by management.</li> <li>The list of authorized personnel is reviewed at least annually.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the documented authorizations examined</li> <li>Confirm that the documented authorizations verify: <ul style="list-style-type: none"> <li>All personnel with access to devices are documented in a formal list.</li> <li>All personnel with access to devices are authorized by management.</li> <li>The list of authorized personnel is reviewed at least annually.</li> </ul> </li> </ul>		✓			
<b>5B-3.1.1.3.b</b> For a sample of devices, examine account-access configurations to verify that only personnel documented and authorized in the formal list have access to devices.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how observation of account-access configurations verified that only personnel documented and authorized in the formal list have access to devices.</li> </ul>	✓	✓			✓
<b>5B-3.1.2</b> Implement a documented “chain-of-custody” to ensure that all devices are controlled from receipt through to installation and use. The chain-of-custody must include records to identify responsible personnel for each interaction with the devices.						
<b>5B-3.1.2.a</b> Examine documented processes to verify that the chain of custody is required for devices from receipt to installation and use.	<ul style="list-style-type: none"> <li>Identify the document that defines the chain-of-custody process</li> <li>Confirm that the documented chain-of-custody process is required for all devices from receipt to installation and use.</li> </ul>		✓			
<b>5B-3.1.2.b</b> For a sample of devices, review documented records and interview responsible personnel to verify the chain of custody is maintained from receipt to installation and use.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how the documented records verify that chain of custody is maintained from receipt through to installation and use for all devices</li> <li>Identify the personnel interviewed who confirm that chain-of-custody is maintained for all devices from receipt to installation and use.</li> </ul>		✓	✓		✓
<b>5B-3.1.2.c</b> Verify the chain of custody records identify responsible personnel for each interaction with the device	<ul style="list-style-type: none"> <li>For the sample identified in testing procedure 5B-3.1.2.b, confirm that the observed chain-of-custody records identify personnel responsible for each interaction with the devices.</li> </ul>		✓			
<b>5B-3.1.3</b> Implement controls, including the following, to ensure that all received devices are from a legitimate source:						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.3.a</b> Examine documented purchasing, receipt, and deployment procedures to confirm that they include verifying all received hardware components are from a legitimate source.	<ul style="list-style-type: none"> <li>Identify the document that defines purchasing, receipt and deployment procedures.</li> <li>Confirm that the procedures include verifying all received hardware components are from a legitimate source.</li> </ul>		✓			
<b>5B-3.1.3.b</b> Confirm that the documented procedures include 5B-3.1.3.1 through 5B-3.1.3.2 below.	<ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 5B-3.1.1.a) include the following: <ul style="list-style-type: none"> <li>Device serial numbers must be compared to the serial numbers documented by the sender to ensure device substitution has not occurred. A record of device serial-number verification must be maintained.</li> <li>Documentation used for this process must be received via a separate communication channel and must not have arrived with the shipment.</li> </ul> </li> </ul>		✓			
<b>5B-3.1.3.1</b> Device serial numbers must be compared to the serial numbers documented by the sender to ensure device substitution has not occurred. A record of device serial-number verification must be maintained. <b>Note:</b> Examples of how serial numbers may be documented by the sender include but are not limited to: purchase order, shipping waybill, manufacturer's invoice, or similar document						
<b>5B-3.1.3.1.a</b> Interview responsible personnel to verify that device serial numbers are compared to the serial number documented by the sender.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that device serial numbers are compared to the serial numbers documented by the sender.</li> </ul>			✓		

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<p><b>5B-3.1.3.1.b</b> For a sample of received devices, review sender documentation (for example, the purchase order, shipping waybill, manufacturer's invoice, or similar documentation) used to verify device serial numbers.</p> <p>Examine the record of serial-number validations to confirm the serial numbers for the received device were verified to match that documented by the sender.</p>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample: <ul style="list-style-type: none"> <li>Identify the sender documentation used to verify device serial numbers.</li> <li>Describe how observation of serial-number validations verified that: <ul style="list-style-type: none"> <li>Device serial numbers for the received device were verified to match that documented by the sender.</li> <li>Records of serial-number verifications are maintained.</li> </ul> </li> </ul> </li> </ul>		✓			✓
<p><b>5B-3.1.3.2</b> Documentation used for this process must be received via a separate communication channel and must not have arrived with the shipment.</p>						
<p><b>5B-3.1.3.2</b> For a sample of received devices, review delivery records and interview responsible personnel to verify that documentation used to validate the device serial number was received via a separate communication channel than the device and was not received in the same shipment as the device.</p>	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample: <ul style="list-style-type: none"> <li>Describe how the delivery records confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device, and was not received in the same shipment as the device.</li> <li>Identify the responsible personnel interviewed who confirm that documentation used to validate the device serial numbers was received via a separate communication channel than the device and was not received in the same shipment.</li> </ul> </li> </ul>		✓	✓		✓

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.4</b> Implement physical protection of devices from the manufacturer’s facility up to the point of key-insertion or inspection, through one or more of the following. <ul style="list-style-type: none"><li>• Transportation using a trusted courier service (for example, via bonded carrier). The devices are then securely stored until key-insertion occurs.</li><li>• Use of physically secure and trackable packaging (for example, pre-serialized, counterfeit-resistant, tamper-evident packaging). The devices are then stored in such packaging, or in secure storage, until key-insertion occurs.</li><li>• A secret, device-unique “transport-protection token” is loaded into the secure storage area of each device at the manufacturer’s facility. Before key-insertion, the SCD used for key-insertion verifies the presence of the correct “transport-protection token” before overwriting this value with the initial key.</li></ul>						
<b>5B-3.1.4.a</b> Examine documented procedures to confirm that they require physical protection of devices from the manufacturer’s facility up to the point of key-insertion or inspection, through one or more of the defined methods.	<ul style="list-style-type: none"><li>• For all HSMs identified in Table 5.1:<ul style="list-style-type: none"><li>◦ Identify the document that defines procedures for physical protection of devices from the manufacturer’s facility up to the point of key-insertion or inspection.</li><li>◦ Confirm that the documented procedures require use of one or more of the defined methods (Requirement 5B-3.1.4).</li></ul></li></ul>		✓			
<b>5B-3.1.4.b</b> Interview responsible personnel to verify that one or more of the defined methods are in place to provide physical device protection for devices, from the manufacturer’s facility up to the point of key-insertion.	<ul style="list-style-type: none"><li>• For all HSMs identified in Table 5.1, identify the responsible personnel interviewed who confirm that one or more of the defined methods are in place to provide physical-device protection for devices, from the manufacturer’s facility up to the point of key-insertion.</li></ul>			✓		
<b>5B-3.1.5</b> Inspect and test all SCDs prior to installation to verify devices have not been tampered with or compromised. Processes must include:						
<b>5B-3.1.5.a</b> Examine documented procedures to verify they require inspection and testing of devices prior to installation to verify integrity of device.	<ul style="list-style-type: none"><li>• For all HSMs identified in Table 5.1, identify the document that defines procedures for inspection and testing of devices prior to installation to verify integrity of device.</li></ul>		✓			



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.5.b</b> Verify documented procedures include 5B-3.1.5.1 through 5B-3.1.5.4, below.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, confirm that the documented procedures for inspection and testing of devices (identified in 5B-3.1.5.a) include: <ul style="list-style-type: none"> <li>Running self-tests to ensure the correct operation of the device</li> <li>Installing (or re-installing) devices only after confirming that the device has not been tampered with or compromised</li> <li>Physical and/or functional tests and visual inspection to confirm that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> <li>Maintaining records of the tests and inspections, and retaining records for at least one year.</li> </ul> </li> </ul>		✓			
<b>5B-3.1.5.1</b> Running self-tests to ensure the correct operation of the device						
<b>5B-3.1.5.1</b> Examine records of device inspections and tests, and observe tests in progress to verify that self-tests are run on devices to ensure the correct operation of the device.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the records of device inspections and tests examined.</li> <li>Describe the observed tests in progress</li> <li>Describe how observation of documented records and tests in progress verified that self-tests are run on devices to ensure the correct operation of the device.</li> </ul> </li> </ul>		✓		✓	
<b>5B-3.1.5.2</b> Installing (or re-installing) devices only after confirming that the device has not been tampered with or compromised						
<b>5B-3.1.5.2</b> Observe inspection processes and interview responsible personnel to verify that devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.</li> <li>Describe how observation of the inspection processes verified that devices are installed, or reinstalled, only after confirming that the device has not been tampered with or compromised.</li> </ul>			✓	✓	
<b>5B-3.1.5.3</b> Physical and/or functional tests and visual inspection to confirm that physical and logical controls and anti-tamper mechanisms are not modified or removed						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-3.1.5.3</b> Observe inspection processes and interview responsible personnel to confirm processes include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm inspection processes include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed.</li> <li>Describe how the inspection processes were observed to include physical and/or functional tests and visual inspection to verify that physical and logical controls and anti-tamper mechanisms are not modified or removed</li> </ul>			✓	✓	
<b>5B-3.1.5.4</b> Maintaining records of the tests and inspections, and retaining records for at least one year						
<b>5B-3.1.5.4.a</b> Examine records of inspections and interview responsible personnel to verify records of the tests and inspections are maintained.	<ul style="list-style-type: none"> <li>Identify the records of inspections examined.</li> <li>Identify the responsible personnel interviewed who confirm that records of the tests and inspections are maintained.</li> </ul>		✓	✓		
<b>5B-3.1.5.4.b</b> Examine records of inspections to verify records are retained for at least one year.	<ul style="list-style-type: none"> <li>Describe how examination of inspection records verified that records are retained for at least one year.</li> </ul>		✓			
<b>5B-3.1.6</b> Maintain device in original, tamper-evident packaging until ready for installation.						
<b>5B-3.1.6.a</b> Examine documented procedures to verify they require devices be maintained in original, tamper-evident packaging until ready for installation.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring devices be maintained in original, tamper-evident packaging until ready for installation.</li> </ul>		✓			
<b>5B-3.1.6.b</b> Observe a sample of received devices to verify they are maintained in original, tamper-evident packaging until ready for installation.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how observation of devices verified that they are maintained in original, tamper-evident packaging until ready for installation.</li> </ul>				✓	✓
<b>5B-4</b> Physically secure decryption devices to prevent unauthorized access, modification, or substitution of deployed devices.						
<b>5B-4.1</b> Physically secure deployed devices to prevent unauthorized removal or substitution.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-4.1.a</b> Examine physical security policy and procedures to verify devices must be physically secured to prevent unauthorized removal or substitution.	<ul style="list-style-type: none"> <li>Identify the document that defines physical security policy and procedures.</li> <li>Confirm that the documented policies/procedures require that devices be physically secured to prevent unauthorized removal or substitution.</li> </ul>		✓			
<b>5B-4.1.b</b> Inspect the secure location in which the decryption devices are deployed and verify that these devices are physically secured to prevent unauthorized removal or substitution.	<ul style="list-style-type: none"> <li>Identify the secure location in which the decryption devices are deployed.</li> <li>Describe how inspection of the secure location verified that the devices are physically secured to prevent unauthorized removal or substitution.</li> </ul>				✓	
<b>5B-4.2</b> Implement dual-control mechanisms to help prevent substitution of devices, both in service and spare or backup devices.						
<b>5B-4.2.a</b> Examine documented procedures to verify that dual-control mechanisms are defined to prevent substitution of devices, both in-service and spare or backup devices.	<ul style="list-style-type: none"> <li>Identify the document that defines dual-control mechanisms to prevent substitution of devices, both in-service and spare or backup devices.</li> </ul>		✓			
<b>5B-4.2.b</b> Examine dual-control mechanisms in use, for both in-service and spare or backup devices, to verify that the mechanisms prevent substitution of devices.	<ul style="list-style-type: none"> <li>Describe how observation of the implemented dual-control mechanisms verified that the mechanisms prevent substitution of devices, for both in-service and spare or backup devices.</li> </ul>	✓				
<b>5B-5</b> Prevent unauthorized physical access to decryption devices in use.						
<b>5B-5.1</b> Restrict physical access to decryption devices to minimum required personnel.						
<b>5B-5.1.a</b> Examine documented access privileges and procedures to verify that physical access to devices is restricted to minimum required personnel.	<ul style="list-style-type: none"> <li>Identify the document that defines access privileges and procedures.</li> <li>Confirm that the documented access privileges and procedures restrict access to devices to minimum required personnel.</li> </ul>		✓			
<b>5B-5.1.b</b> Observe access controls and processes and interview personnel to verify that physical access to devices is restricted to the minimum required personnel.	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that physical access to devices is restricted to the minimum required personnel.</li> <li>Describe how observation of access controls and processes verified that physical access to devices is restricted to the minimum required personnel.</li> </ul>	✓		✓	✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-5.2</b> Implement procedures to control and document all physical access to decryption devices in use. Procedures to include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices;</li> <li>Restricting access to authorized personnel;</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out. Retain access log for at least one year.</li> </ul>						
<b>5B-5.2.a</b> Examine documented access procedures and verify they require controlling and documenting all physical access to devices, and include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> <li>Retaining access logs for at least one year</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for controlling and documenting all physical access to devices.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> <li>Retaining access logs for at least one year</li> </ul> </li> </ul>		✓			
<b>5B-5.2.b</b> Observe physical access controls to verify they include controlling and documenting all physical access to devices, and include: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including personnel name, company, reason for access, time in and out</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of physical access controls verified that all physical access to devices, is controlled and documented, and includes: <ul style="list-style-type: none"> <li>Identifying personnel authorized to access devices</li> <li>Restricting access to authorized personnel</li> <li>Maintaining a log of all access including: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> </ul> </li> </ul>				✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-5.2.c</b> Examine the access logs/records to verify it is retained for at least one year and contains, at a minimum, the following details: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul>	<ul style="list-style-type: none"> <li>Identify access logs/records examined.</li> <li>Confirm the access logs/records contain, at a minimum, the following: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> <li>Describe how examination of the access logs/records verified they are retained for at least one year</li> </ul>		✓			
<b>5B-5.3</b> Implement procedures for identification and authorization of third-party personnel (including repair /maintenance personnel) prior to granting access. Procedures must include the following:						
<b>5B-5.3.a</b> Examine documented procedures to verify they include identification and authorization of third-party personnel prior to granting access.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for identification and authorization of third-party personnel prior to granting access to devices.</li> </ul>		✓			
<b>5B-5.3.b</b> Verify documented procedures include 5B-5.3.1 through 5B-5.3.4 below.	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 5B-5.3.a) include the following: <ul style="list-style-type: none"> <li>Procedures to verify the identity and authorization of third-party personnel prior to granting access to devices.</li> <li>Unexpected personnel must be denied access unless fully validated and authorized.</li> <li>Once authorized, third-party personnel must be escorted and monitored at all times.</li> <li>A log of all third party personnel access is maintained for at least one year and includes: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and Out</li> </ul> </li> </ul> </li> </ul>		✓			
<b>5B-5.3.1</b> Procedures to verify the identity and authorization of third-party personnel prior to granting access to devices.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5B-5.3.1</b> Interview personnel and observe processes to confirm that the identity and authorization of third-party personnel is verified prior to granting access to devices.	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that the identity and authorization of third-party personnel is verified prior to granting access to devices.</li> <li>Describe how observation of processes verified that the identity and authorization of third-party personnel is verified prior to granting access to devices.</li> </ul>			✓	✓	
<b>5B-5.3.2</b> Unexpected personnel must be denied access unless fully validated and authorized.						
<b>5B-5.3.2</b> Interview responsible personnel and observe processes to verify that unexpected personnel are denied access until fully validated and authorized.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that unexpected personnel are denied access until fully validated and authorized.</li> <li>Describe how observation of processes verified that unexpected personnel are denied access until fully validated and authorized.</li> </ul>			✓	✓	
<b>5B-5.3.3</b> Once authorized, third-party personnel must be escorted and monitored at all times.						
<b>5B-5.3.3</b> Interview responsible personnel and observe processes to verify that, once authorized, third-party personnel are escorted and monitored at all times.	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that, once authorized, third-party personnel are escorted and monitored at all times.</li> <li>Describe how observation of processes verified that, once authorized, third-party personnel are escorted and monitored at all times.</li> </ul>			✓	✓	
<b>5B-5.3.4</b> A log of all third-party personnel access is maintained in accordance with 5B-5.2.						
<b>5B-5.3.4</b> Examine access logs/records to verify that a log of all third-party personnel access is maintained in accordance with logging requirements defined in 5B-5.2.	<ul style="list-style-type: none"> <li>Identify the access logs/records examined.</li> <li>Confirm the access logs/records contain, at a minimum, the following: <ul style="list-style-type: none"> <li>Personnel name</li> <li>Company</li> <li>Reason for access</li> <li>Time in and out</li> </ul> </li> <li>Describe how examination of the access logs/records verified they are retained for at least one year</li> </ul>		✓			
<b>5B-6</b> Maintain secure updates for decryption devices						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
5B-6.1 Implement secure update processes for all firmware and software updates, to include: <ul style="list-style-type: none"><li>Integrity check of update</li><li>Authentication of origin of the update</li></ul>						
5B-6.1.a Examine documented procedures to verify secure update processes are defined for all firmware and software updates, and include: <ul style="list-style-type: none"><li>Integrity checks of update</li><li>Authentication of origin of the update</li></ul>	<ul style="list-style-type: none"><li>For all HSMs identified in Table 5.1, identify the document that defines procedures for secure updates for all firmware and software updates</li><li>Confirm that the procedures include:<ul style="list-style-type: none"><li>Integrity checks of update.</li><li>Authentication of origin of the update.</li></ul></li></ul>		✓			
5B-6.1b Observe a sample of firmware and software updates, and interview personnel to verify: <ul style="list-style-type: none"><li>The integrity of the update is checked</li><li>The origin of the update is authenticated</li></ul>	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm that:<ul style="list-style-type: none"><li>The integrity of firmware and software updates is checked</li><li>The origin of firmware and software updates is authenticated</li></ul></li><li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li><li>For each device in the sample, identify the firmware and software updates that were observed</li><li>Describe how observation of the firmware and software updates verified that:<ul style="list-style-type: none"><li>The integrity of the update is checked</li><li>The origin of the update is authenticated</li></ul></li></ul>			✓	✓	✓
5C-1 Securely maintain devices.						
5C-1.1 Document operational security procedures for physical security controls and operational activities throughout device lifecycle, including but not limited to: <ul style="list-style-type: none"><li>Installation procedures</li><li>Maintenance and repair procedures</li><li>Production procedures</li><li>Replacement procedures</li><li>Destruction procedures</li></ul>						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-1.1</b> Verify operational security procedures are documented for physical security controls and operational activities throughout device lifecycle, including but not limited to: <ul style="list-style-type: none"> <li>• Installation procedures</li> <li>• Maintenance and repair procedures</li> <li>• Production procedures</li> <li>• Replacement procedures</li> <li>• Destruction procedures</li> </ul>	<ul style="list-style-type: none"> <li>• For all HSMs identified in Table 5.1, identify the document that defines operational security procedures for physical security controls and operational activities throughout device lifecycle.</li> <li>• Confirm that the documented procedures include but are not limited to: <ul style="list-style-type: none"> <li>○ Installation procedures</li> <li>○ Maintenance and repair procedures</li> <li>○ Production procedures</li> <li>○ Replacement procedures</li> <li>○ Destruction procedures</li> </ul> </li> </ul>		✓			
<b>5C-1.2</b> Procedures must be in place and implemented to protect decryption devices and ensure the destruction of any cryptographic keys or key material within such devices when removed from service, retired at the end of the deployment lifecycle, or returned for repair.						
<b>5C-1.2.1</b> Procedures are in place to ensure that any devices to be removed from service, retired, or returned for repair are not intercepted or used in an unauthorized manner, as follows:						
<b>5C-1.2.1.a</b> Examine documented procedures to verify that procedures are defined for any devices to be removed from service, retired, or returned for repair.	<ul style="list-style-type: none"> <li>• Identify the document that defines procedures for any devices to be removed from service, retired, or returned for repair.</li> </ul>		✓			
<b>5C-1.2.1.b</b> Verify documented procedures include 5B-1.2.1.1 through 5B-1.2.1.5 below.	<ul style="list-style-type: none"> <li>• Confirm that the documented procedures (identified in 5C-1.2.1.a) include the following: <ul style="list-style-type: none"> <li>○ Affected entities are notified before devices are returned.</li> <li>○ Devices are transported via trusted carrier service - for example, bonded carrier.</li> <li>○ Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> <li>○ Devices are tracked during the return process.</li> <li>○ Once received, devices remain in their packaging until ready for repair or destruction.</li> </ul> </li> </ul>		✓			
<b>5C-1.2.1.1</b> Affected entities are notified before devices are returned.						



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-1.2.1.1</b> Interview responsible personnel and examine device-return records to verify that affected entities are notified before devices are returned.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that affected entities are notified before devices are returned.</li> <li>Describe how examination of device-return records verified that affected entities are notified before devices are returned.</li> </ul>		✓	✓		
<b>5C-1.2.1.2</b> Devices are transported via trusted carrier service—for example, bonded carrier.						
<b>5C-1.2.1.2</b> Interview responsible personnel and examine device-return records to verify that devices are transported via trusted carrier service—for example, bonded carrier.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are transported via trusted carrier service.</li> <li>Describe how examination of device-return records verified that devices are transported via trusted carrier service.</li> </ul>		✓	✓		
<b>5C-1.2.1.3</b> Devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.						
<b>5C-1.2.1.3</b> Interview responsible personnel and observe device-return processes and packaging to verify that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> <li>Describe how observation of device-return processes and packaging verified that devices are shipped in serialized, counterfeit-resistant, and tamper-evident packaging.</li> </ul>			✓	✓	
<b>5C-1.2.1.4</b> Devices are tracked during the return process.						
<b>5C-1.2.1.4</b> Interview responsible personnel and examine device-return records to verify that devices are tracked during the return process.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that devices are tracked during the return process</li> <li>Describe how examination of the device-return records verified that devices are tracked during the return process.</li> </ul>		✓	✓		
<b>5C-1.2.1.5</b> Once received, devices remain in their packaging (as defined in 5C-1.2.1.3) until ready for repair or destruction.						
<b>5C-1.2.1.5</b> Interview responsible personnel and observe device-return processes to verify that once received, devices remain in their packaging (defined in 5C-1.2.1.3) until ready for destruction.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that once received, devices remain in their packaging (as defined in 5C-1.2.1.3) until ready for destruction.</li> <li>Describe how observation of device-return processes verified that received devices remain in their packaging until ready for destruction.</li> </ul>			✓	✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
5C-1.2.2 When decryption devices are removed from service permanently or for repair, all keys and key material, and all account data stored within the device must be rendered irrecoverable. Processes must include the following:						
5C-1.2.2 Verify that documented procedures for removing devices from service include the following: <ul style="list-style-type: none"><li>Procedures require that all keys and key material, and all account data stored within the device be securely destroyed.</li><li>Procedures cover all devices removed from service permanently or for repair.</li><li>Procedures include 5C-1.2.2.1 through 5C-1.2.2.4 below.</li></ul>	<ul style="list-style-type: none"><li>Identify the document that defines procedures for removing devices from service.</li><li>Confirm that documented procedures:<ul style="list-style-type: none"><li>Require that all keys and key material, and all account data stored within the device, be securely destroyed</li><li>Cover all devices removed from service permanently or for repair</li></ul></li><li>Confirm that documented procedures include:<ul style="list-style-type: none"><li>Dual control is implemented for all critical decommissioning processes</li><li>Keys and data storage (including account data) are rendered irrecoverable or devices physically destroyed to prevent the disclosure of any sensitive data or keys</li><li>Devices being decommissioned are tested and inspected to ensure keys and account data have been rendered irrecoverable</li><li>Records of the tests and inspections are maintained for at least one year</li></ul></li></ul>		✓			
5C-1.2.2.1 Dual control is implemented for all critical decommissioning processes.						
5C-1.2.2.1 Interview personnel and observe processes for removing devices from service to verify dual control is implemented for all critical decommissioning processes.	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm that dual control is implemented for all critical decommissioning processes.</li><li>Describe how observation of processes for removing devices from service verified that dual control is implemented for all critical decommissioning processes.</li></ul>			✓	✓	
5C-1.2.2.2 Key and data storage (including account data) are rendered irrecoverable (for example, zeroized). If data cannot be rendered irrecoverable, the device must be physically destroyed to prevent the disclosure of any sensitive data or keys.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-1.2.2.2</b> Interview personnel and observe processes for removing devices from service to verify that all key and data storage (including account data) is rendered irrecoverable (for example, zeroized), or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that all key and data storage (including account data) is rendered irrecoverable, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> <li>Describe how observation of processes for removing devices from service verified that all key and data storage (including account data) is rendered irrecoverable, or that devices are physically destroyed to prevent the disclosure of any sensitive data or keys.</li> </ul>			✓	✓	
<b>5C-1.2.2.3</b> Devices being decommissioned are tested and inspected to ensure keys and account data have been rendered irrecoverable.						
<b>5C-1.2.2.3</b> Interview personnel and observe processes for removing devices from service to verify that tests and inspections of decryption devices are performed to confirm that keys and account data have been rendered irrecoverable.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that tests and inspections of decryption devices are performed to confirm that keys and account data have been rendered irrecoverable.</li> <li>Describe how observation of processes for removing devices from service verified that tests and inspections of decryption devices are performed to confirm that keys and account data have been rendered irrecoverable.</li> </ul>			✓	✓	
<b>5C-1.2.2.4</b> Records of the tests and inspections are maintained for at least one year.						
<b>5C-1.2.2.4</b> Interview personnel and examine records to verify that records of the tests and inspections (as required in 5C-1.2.2.3) are maintained for at least one year.	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that records of tests and inspections are maintained for at least for one year.</li> <li>Describe how examination of documented records verified that records of the tests and inspections are maintained for at least one year</li> </ul>		✓	✓		
<b>5C-1.2.3</b> Document and log the removal process for the repair or decommissioning of decryption devices.						
<b>5C-1.2.3</b> For a sample of decryption devices removed for repair or decommissioning, examine records of device removal to verify that the process is documented and logged.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how examination of device-removal records verified that the process for removing devices for repair or decommissioning is documented and logged.</li> </ul>		✓			✓
<b>5C-1.2.4</b> Implement procedures for secure disposal of decryption devices, including return of devices to an authorized party for destruction.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-1.2.4.a</b> Examine documented procedures to verify they include the secure disposal of decryption devices, including return of devices to an authorized party for destruction.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for the secure disposal of decryption devices.</li> <li>Confirm that the documented procedures include return of devices to an authorized party for destruction.</li> </ul>		✓			
<b>5C-1.2.4.b</b> For a sample of decryption devices removed for disposal, examine records of device removal to verify that devices are returned to an authorized party for destruction.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how examination of device-return records verified that devices are returned to an authorized party for destruction</li> </ul>		✓			✓
<b>5C-2</b> Implement administration procedures for logically securing decryption equipment.						
<b>5C-2.1</b> Implement procedures to provide secure administration of decryption devices including but not limited to: <ul style="list-style-type: none"> <li>Management of user interface</li> <li>Password/smart card management</li> <li>Console and non-console administration</li> <li>Access to physical keys</li> <li>Use of HSM commands</li> </ul>						
<b>5C-2.1.a</b> Examine documented procedures to verify secure administration procedures are defined for decryption devices including: <ul style="list-style-type: none"> <li>Management of user interface</li> <li>Password/smart card management</li> <li>Console/remote administration</li> <li>Access to physical keys</li> <li>Use of HSM commands</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines secure administration procedures for decryption devices.</li> <li>Confirm that the documented procedures define secure administration procedures for the following:               <ul style="list-style-type: none"> <li>Management of user interface</li> <li>Password/smart card management</li> <li>Console/remote administration</li> <li>Access to physical keys</li> <li>Use of HSM commands</li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-2.1.b</b> Observe authorized personnel performing device-administration operations to verify secure administration procedures are implemented for the following: <ul style="list-style-type: none"> <li>Management of user interface</li> <li>Password/smart card management</li> <li>Console/remote administration</li> <li>Access to physical keys</li> <li>Use of HSM commands</li> </ul>	<ul style="list-style-type: none"> <li>Identify the authorized personnel observed performing device-administration operations</li> <li>Describe how observation of the device-administration operations verified that secure administration procedures are implemented for the following: <ul style="list-style-type: none"> <li>Management of user interface</li> <li>Password/smart card management</li> <li>Console/remote administration</li> <li>Access to physical keys</li> <li>Use of HSM commands</li> </ul> </li> </ul>			✓	✓	
<b>5C-2.2</b> Implement a process/mechanism to protect the HSM's Application Program Interfaces (APIs) from misuse. For example, require authentication between the API and the HSM and secure all authentication credentials from unauthorized access. Where an HSM is unable to authenticate access to the API, the process should limit the exposure of the HSM to a host via connection by a dedicated physical link that authorizes access on behalf of the HSM over the trusted channel (for example, high speed serial or dedicated Ethernet).						
<b>5C-2.2.a</b> Examine documented procedures and processes to verify that a process/mechanism is defined to protect the HSM's Application Program Interfaces (APIs) from misuse.	<ul style="list-style-type: none"> <li>Identify the document that defines a process/mechanism to protect the HSM's Application Program Interfaces (APIs) from misuse.</li> </ul>		✓			
<b>5C-2.2.b</b> Interview responsible personnel and observe HSM system configurations and processes to verify that the defined process/mechanism is implemented and protects the HSM's Application Program Interfaces (APIs) from misuse.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that the defined process/mechanism is implemented and that it protects the HSM's Application Program Interfaces (APIs) from misuse.</li> <li>Describe how observation of the HSM's system configurations verified that the process/mechanism is implemented.</li> <li>Describe how the implemented process/mechanism was observed to protect the HSM's Application Program Interfaces (APIs) from misuse.</li> </ul>	✓		✓	✓	
<b>5C-3</b> Restrict logical access to decryption devices to authorized personnel.						
<b>5C-3.1</b> Logical access controls must be implemented to ensure only authorized personnel have access to decryption devices.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-3.1.a</b> Examine documentation to verify that a list of personnel authorized to access decryption devices is defined.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, identify the document that defines the list of personnel authorized to access decryption devices.</li> </ul>		✓			
<b>5C-3.1.b</b> For a sample of decryption devices, observe access controls and privilege assignments on decryption devices to verify only authorized personnel (as defined in 5B-3.1.a) have access to the device.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample, describe how observation of access controls and privilege assignments on decryption devices verified that only authorized personnel (as defined in 5B-3.1.a) have access to the device.</li> </ul>	✓				✓
<b>5C-3.2</b> Access and permissions must be granted based on least privilege and need to know.						
<b>5C-3.2.a</b> Examine documented access-control policies and procedures to verify that access and permissions must be assigned according to least privilege and need to know.	<ul style="list-style-type: none"> <li>Identify the document that defines access-control policies and procedures.</li> <li>Confirm that the documented policies and procedures require access and permissions to be assigned according to least privilege and need to know.</li> </ul>		✓			
<b>5C-3.2.b</b> For a sample of decryption devices and personnel, observe configured accounts and permissions, and interview responsible personnel to verify that the level of access and permission granted are according to least privilege and need to know.	<ul style="list-style-type: none"> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample: <ul style="list-style-type: none"> <li>Identify the sample of personnel whose access was reviewed for this testing procedure.</li> <li>Identify the responsible personnel interviewed who confirm the level of access and permission for each sampled account.</li> <li>Describe how observation of the configured accounts and permissions and interviews with the responsible personnel verified that the level of access and permission granted are according to least privilege and need to know.</li> </ul> </li> </ul>	✓		✓		✓
<b>5C-4</b> Provide a mechanism for POI device authentication.						
<b>5C-4.1</b> POI devices are authenticated upon connection to the decryption environment and upon request by the solution provider. <b>Note:</b> This authentication can occur via use of cryptographic keys or certificates, uniquely associated with each POI device and decryption system.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-4.1.a</b> Examine documented policies and procedures to verify they require POI devices be authenticated upon connection to the decryption environment and upon request by the solution provider.	<ul style="list-style-type: none"> <li>Identify the document that defines policies and procedures requiring POI devices to be authenticated: <ul style="list-style-type: none"> <li>Upon connection to the decryption environment</li> <li>Upon request by the solution provider</li> </ul> </li> </ul>		✓			
<b>5C-4.1.b</b> Verify documented procedures are defined for the following: <ul style="list-style-type: none"> <li>Procedures and/or mechanisms for authenticating POI devices upon connection to the decryption environment</li> <li>Procedures and/or mechanisms for authenticating POI devices upon request by the solution provider</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that documented procedures are defined for the following: <ul style="list-style-type: none"> <li>Procedures and/or mechanisms for authenticating POI devices upon connection to the decryption environment</li> <li>Procedures and/or mechanisms for authenticating POI devices upon request by the solution provider</li> </ul> </li> </ul>		✓			
<b>5C-4.1.c</b> Interview responsible personnel and observe a sample of device authentications to verify the following: <ul style="list-style-type: none"> <li>POI devices are authenticated upon connection to the decryption environment.</li> <li>POI devices are authenticated upon request by the solution provider.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirmed that: <ul style="list-style-type: none"> <li>POI devices are authenticated upon connection to the decryption environment.</li> <li>POI devices are authenticated upon request by the solution provider.</li> </ul> </li> <li>Identify the sample set number from Table 5.2 that describes the sample of devices assessed for this testing procedure</li> <li>For each device in the sample: <ul style="list-style-type: none"> <li>Identify the device authentications observed</li> <li>Describe how observation of device authentications verified that: <ul style="list-style-type: none"> <li>POI devices are authenticated upon connection to the decryption environment.</li> <li>POI devices are authenticated upon request by the solution provider.</li> </ul> </li> </ul> </li> </ul>			✓	✓	✓
<b>5C-5</b> Implement tamper-detection mechanisms.						



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-5.1</b> Perform periodic physical inspections of decryption devices at least monthly to detect tampering or modification of devices. Inspections to include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul>						
<b>5C-5.1.a</b> Examine documented procedure to verify that periodic inspection of devices is required at least monthly to detect signs of tampering or modification, and that inspection procedures include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, identify the document that defines procedures for periodic physical inspections of decryption devices.</li> <li>Confirm the documented procedures include: <ul style="list-style-type: none"> <li>Periodic inspection of devices is required at least monthly to detect signs of tampering or modification</li> <li>Inspection procedures include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul> </li> </ul> </li> </ul>		✓			
<b>5C-5.1.b</b> Interview personnel performing inspections and observe inspection processes to verify that inspections include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, identify the personnel interviewed who confirm they perform inspections and that the inspections include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul> </li> <li>Describe how observation of the inspection processes verified that the inspections include: <ul style="list-style-type: none"> <li>The device itself</li> <li>Cabling/connection points</li> <li>Physically connected devices</li> </ul> </li> </ul>			✓	✓	
<b>5C-5.1.c</b> Interview personnel performing inspections and review supporting documentation to verify that physical inspections are performed at least monthly.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that they perform inspections at least monthly.</li> <li>Describe how examination of supporting documentation verified that physical inspections are performed at least monthly.</li> </ul>		✓	✓		



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-6</b> Documented procedures exist and are demonstrably in use to ensure the security and integrity of decryption devices placed into service, initialized, deployed, used, and decommissioned.						
<b>5C-6.1</b> All affected parties are aware of required processes and provided suitable guidance on the secure procedures for decryption devices placed into service, initialized, deployed, used, and decommissioned.						
<b>5C-6.1</b> Examine documented procedures and processes and interview responsible personnel to verify that all affected parties are aware of required processes and are provided suitable guidance on procedures for devices placed into service, initialized, deployed, used, and decommissioned	<ul style="list-style-type: none"> <li>Identify the document that defines secure procedures for decryption devices placed into service, initialized, deployed, used, and decommissioned.</li> <li>Identify responsible personnel interviewed</li> <li>Describe how examination of documented procedures and interviews with the responsible personnel verified that all affected parties are: <ul style="list-style-type: none"> <li>Aware of required processes</li> <li>Provided suitable guidance on procedures for devices placed into service, initialized, deployed, used, and decommissioned.</li> </ul> </li> </ul>		✓	✓		
<b>5C-6.2</b> Procedures that govern access to decryption devices (HSMs) must be documented, implemented, and known to data-center personnel and any others involved with the physical security of such devices. HSM protections must include at least the following:						
<b>5C-6.2.a</b> Examine documented procedures to verify that procedures are defined to govern access to all HSMs, and include Requirements 5C-6.2.1– 5C-6.2.4 below.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, identify the document that defines procedures to govern access to all HSMs</li> <li>Confirm that procedures are defined to ensure that: <ul style="list-style-type: none"> <li>Any physical keys needed to activate the HSM are stored securely.</li> <li>If multiple physical keys are needed to activate the HSM: <ul style="list-style-type: none"> <li>They are assigned to separate designated custodians; and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul> </li> <li>Anti-tamper sensors are enabled as required by the security policy of the HSM.</li> <li>When HSMs are connected to online systems, they are not enabled in a sensitive state.</li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5C-6.2.b</b> Interview data-center personnel and others responsible for the physical security of the devices to verify that the documented procedures are known.	<ul style="list-style-type: none"> <li>Identify data-center personnel and others responsible for the physical security of the devices interviewed, who confirm that the documented procedures are known.</li> </ul>			✓		
<b>5C-6.2.1</b> Any physical keys needed to activate the HSM are stored securely.						
<b>5C-6.2.1</b> Interview responsible personnel and observe key-storage locations and security controls to verify that any physical keys needed to activate the HSM are stored securely.	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that any physical keys needed to activate the HSM are stored securely.</li> <li>Describe how observation of key-storage locations and security controls verified that any physical keys needed to activate the HSM are stored securely.</li> </ul> </li> </ul>			✓	✓	
<b>5C-6.2.2</b> If multiple physical keys are needed to activate the HSM: <ul style="list-style-type: none"> <li>They are assigned to separate designated custodians; and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul>						
<b>5C-6.2.2</b> If multiple physical keys are needed to activate the HSM, interview responsible personnel and observe key operations to verify that: <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians; and</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1, identify whether multiple physical keys are needed to activate the HSM.</li> <li>If multiple physical keys are used: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul> </li> <li>Describe how observation of key operations verified that: <ul style="list-style-type: none"> <li>Keys are assigned to separate designated custodians</li> <li>Copies of individual keys are separated and stored such that two authorized individuals are required to gain access to these keys.</li> </ul> </li> </ul> </li> </ul>			✓	✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
5C-6.2.3 Anti-tamper sensors are enabled as required by the security policy of the HSM.						
5C-6.2.3 Examine HSM security policy and HSM anti-tamper controls to verify that anti-tamper sensors are enabled as required by the security policy of the HSM.	<ul style="list-style-type: none"><li>For all HSMs identified in Table 5.1:<ul style="list-style-type: none"><li>Identify the HSM security policy that defines HSM anti-tamper sensor requirements.</li><li>Describe how examination of the HSM security policy and observation of the HSM anti-tamper controls verified that the anti-tamper sensors are enabled as required by the HSM security policy.</li></ul></li></ul>	✓	✓			
5C-6.2.4 When HSMs are connected to online systems, they are not enabled in a sensitive state. <b>Note:</b> A “sensitive state” allows an HSM to perform privileged or sensitive functions that are not available during routine HSM operations. Examples of sensitive functions include but are not limited to: loading of key components, outputting clear-text key components, and altering HSM configuration.						
5C-6.2.4 Examine HSM configurations and observe processes to verify that HSMs are not enabled in a sensitive state when connected to online systems	<ul style="list-style-type: none"><li>For all HSMs identified in Table 5.1:<ul style="list-style-type: none"><li>Describe how observation of HSM configurations verified that HSMs are not enabled in a sensitive state when connected to online systems.</li><li>Describe how observation of processes verified that HSMs are not enabled in a sensitive state when connected to online systems</li></ul></li></ul>	✓			✓	
5D-1 Perform logging and monitor decryption environment for suspicious activity.						
5D-1.1 Ensure that changes to the critical functions of the decryption devices are logged. <b>Note:</b> Critical functions include but are not limited to application and firmware updates, as well as changes to security-sensitive configurations.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-1.1</b> Examine system configurations and correlating log files to verify that any changes to the critical functions of decryption devices are logged, including: <ul style="list-style-type: none"> <li>Changes to the applications</li> <li>Changes to the firmware</li> <li>Changes to any security-sensitive configurations</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the log files that were examined.</li> <li>Describe how observation of system configurations and the correlating log files verified that any changes to the critical functions of decryption devices are logged, including: <ul style="list-style-type: none"> <li>Changes to the applications</li> <li>Changes to the firmware</li> <li>Changes to any security-sensitive configurations</li> </ul> </li> </ul> </li> </ul>	✓	✓			
<b>5D-1.2</b> Implement mechanisms to provide immediate notification of potential security breaches, including but not limited to: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations (configuration, access controls)</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul>						
<b>5D-1.2.a</b> Examine documented procedures to verify mechanisms are defined to provide immediate notification of potential security breaches, including: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations (configuration, access controls)</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the document that defines mechanisms to provide immediate notification of potential security breaches.</li> <li>Confirm that documented procedures include defined mechanisms to provide immediate notification of the following: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-1.2.b</b> Interview personnel and observe implemented mechanisms to verify they provide immediate notification of potential security breaches in the following instances: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations (configuration, access controls)</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul>	<ul style="list-style-type: none"> <li>For all HSMs identified in Table 5.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that the implemented mechanisms provide immediate notification of potential security breaches in the following instances: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul> </li> <li>Describe how observation of the implemented mechanisms verified that immediate notification of potential security breaches is provided in the following instances: <ul style="list-style-type: none"> <li>Physical breach</li> <li>Logical alterations</li> <li>Disconnect/reconnect of devices</li> <li>Failure of any device security control</li> <li>Misuse of the HSM API</li> </ul> </li> </ul> </li> </ul>	✓		✓		
<b>5D-2</b> Detect encryption failures.						
<b>5D-2.1</b> Implement controls to detect encryption failures and provide immediate notification. Controls must include at least the following: <b>Note:</b> Although Domain 5 is concerned with the decryption environment, not the encryption environment, it is the duty of the solution provider to actively monitor traffic received into the decryption environment to confirm that the POI equipment in the merchant environment is not outputting clear-text CHD through some error or misconfiguration.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-2.1</b> Examine documented procedures to verify controls are defined for the following: <ul style="list-style-type: none"> <li>Procedures are defined to detect encryption failures, and include 5D-2.1.1 through 5D-2.1.4 below.</li> <li>Procedures include immediate notification upon detection of an encryption failure, for each 5D-2.1.1 through 5D-2.1.4 below.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to detect encryption failures.</li> <li>Confirm that documented procedures are defined to detect encryption failures and include: <ul style="list-style-type: none"> <li>Checking for incoming clear-text account data</li> <li>Reviewing any decryption errors reported by the HSM, which may be caused by inputting clear-text data when only encrypted data is expected</li> <li>Reviewing any unexpected transaction data received</li> <li>Reviewing data sent by any POI devices that are causing an unusually high rate of transaction authorization rejections</li> </ul> </li> <li>Confirm that documented procedures are defined to include immediate notification upon detection of an encryption failure, for each of the following: <ul style="list-style-type: none"> <li>Checking for incoming clear-text account data</li> <li>Reviewing any decryption errors reported by the HSM, which may be caused by inputting clear-text data when only encrypted data is expected</li> <li>Reviewing any unexpected transaction data received</li> <li>Reviewing data sent by any POI devices that are causing an unusually high rate of transaction authorization rejections</li> </ul> </li> </ul>		✓			
<b>5D-2.1.1</b> Checking for incoming clear-text account data.						
<b>5D-2.1.1.a</b> Observe implemented processes to verify controls are in place to check for incoming clear-text account data.	<ul style="list-style-type: none"> <li>Describe how observation of implemented processes verified that controls are in place to check for incoming clear-text account data.</li> </ul>				✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-2.1.1.b</b> Observe implemented controls and notification mechanisms, and interview personnel to verify that personnel are immediately notified upon detection of incoming clear-text account data.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that they are immediately notified upon detection of incoming clear-text account data.</li> <li>Describe how observation of implemented controls and notification mechanisms verified that personnel are immediately notified upon detection of incoming clear-text account data.</li> </ul>			✓	✓	
<b>5D-2.1.2</b> Reviewing any decryption errors reported by the HSM, which may be caused by inputting clear-text data when only encrypted data is expected.						
<b>5D-2.1.2.a</b> Observe implemented processes to verify controls are in place to review any decryption errors reported by the HSM, which may be caused by inputting clear-text data when only encrypted data is expected.	<ul style="list-style-type: none"> <li>Describe observation of implemented processes verified that controls are in place to review any decryption errors reported by the HSM, which may be caused by inputting clear-text data when only encrypted data is expected.</li> </ul>				✓	
<b>5D-2.1.2.b</b> Observe implemented controls and notification mechanisms and interview personnel to verify that personnel are immediately notified upon detection of decryption errors reported by the HSM caused by inputting clear-text data when only encrypted data is expected.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirmed that they are immediately notified upon detection of decryption errors reported by the HSM caused by inputting clear-text data when only encrypted data is expected.</li> <li>Describe how observation of implemented controls and notification mechanisms verified that personnel are immediately notified upon detection of decryption errors reported by the HSM caused by inputting clear-text data when only encrypted data is expected.</li> </ul>			✓	✓	
<b>5D-2.1.3</b> Reviewing any unexpected transaction data received. For example, transaction data received without an expected authentication data block (such as a MAC or signature).						
<b>5D-2.1.3.a</b> Observe implemented processes to verify controls are in place to review any unexpected transaction data received.	<ul style="list-style-type: none"> <li>Describe how observation of implemented processes verified that controls are in place to review any unexpected transaction data received.</li> </ul>				✓	

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-2.1.3.b</b> Observe implemented controls and notification mechanisms and interview personnel to verify that personnel are immediately notified upon detection of encryption failures in any unexpected transaction data received.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that they are immediately notified upon detection of encryption failure in any unexpected transaction data received.</li> <li>Describe how observation of implemented controls and notification mechanisms verified that personnel are immediately notified upon detection of encryption failure in any unexpected transaction data received.</li> </ul>			✓	✓	
<b>5D-2.1.4</b> Reviewing data sent by any POI devices that are causing an unusually high rate of transaction authorization rejections.						
<b>5D-2.1.4.a</b> Observe implemented processes to verify controls are in place to review data sent by any POI devices that are causing an unusually high rate of transaction authorization rejections.	<ul style="list-style-type: none"> <li>Describe how observation of implemented processes verified that controls are in place to review data sent by any POI device that are causing unusually high rate of transaction authorization rejections.</li> </ul>				✓	
<b>5D-2.1.4.b</b> Observe implemented controls and notification mechanisms and interview personnel to verify that personnel are immediately notified upon detection of encryption failures from POI devices that are causing an unusually high rate of transaction authorization rejections.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that they are immediately notified upon detection of encryption failures from POI devices that are causing an unusually high rate of transaction authorization rejections.</li> <li>Describe how observation of implemented controls and notification mechanisms verified that personnel are immediately notified upon detection of encryption failures from POI devices that are causing an unusually high rate of transaction authorization rejections.</li> </ul>			✓	✓	
<b>5D-2.2</b> Identify source of encryption failure (device, function).						
<b>5D-2.2.a</b> Examine documented procedures to verify they include procedures for identifying the source of encryption failures.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for identifying the source of encryption failures</li> </ul>		✓			
<b>5D-2.2.b</b> Observe implemented controls and interview personnel to verify that the source of any encryption failures is identified (device, function).	<ul style="list-style-type: none"> <li>Identify personnel interviewed who confirm that the source of any encryption failure is identified.</li> <li>Describe how observation of implemented controls verified that the source of any encryption failure is identified.</li> </ul>			✓	✓	
<b>5D-3</b> Implement incident-response procedures.						
<b>5D-3.1</b> Implement procedures for responding to security incidents, including the following:						



P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
5D-3.1.1 Implement procedures for responding to tampered devices.						
5D-3.1.1.a Examine documented incident-response procedures to verify that procedures are defined for responding to tampered devices.	<ul style="list-style-type: none"><li>Identify the document that defines incident-response procedures.</li><li>Confirm that incident-response procedures are defined for responding to tampered devices.</li></ul>		✓			
5D-3.1.1.b Interview response personnel to verify that procedures for responding to tampered devices are known and implemented.	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm that procedures for responding to tampered devices are known and implemented</li></ul>			✓		
5D-3.1.2 Implement procedures for responding to missing or substituted devices.						
5D-3.1.2.a Examine documented incident-response procedures to verify that procedures are defined for responding to missing or substituted devices.	<ul style="list-style-type: none"><li>Confirm that incident-response procedures are defined for responding to missing or substituted devices.</li></ul>		✓			
5D-3.1.2.b Interview response personnel to verify that procedures for responding to missing or substituted devices are known and implemented.	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm that procedures for responding to missing or substituted devices are known and implemented.</li></ul>			✓		
5D-3.1.3 Implement procedures for responding to unauthorized key-management procedures or configuration changes.						
5D-3.1.3.a Examine documented incident-response procedures to verify that procedures are defined for responding to unauthorized key-management procedures or configuration changes.	<ul style="list-style-type: none"><li>Confirm that incident-response procedures are defined for responding to unauthorized key-management procedures or configuration changes.</li></ul>		✓			
5D-3.1.3.b Interview response personnel to verify that procedures for responding to unauthorized key-management procedures or configuration changes are known and implemented.	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm that procedures for responding to unauthorized key-management procedures or configuration changes are known and implemented.</li></ul>			✓		
5D-3.1.4 Implement procedures for responding to disconnect/reconnect of devices.						
5D-3.1.4.a Examine documented incident-response procedures to verify that procedures are defined for responding to disconnect/reconnect of devices.	<ul style="list-style-type: none"><li>Confirm that incident-response procedures are defined for responding to disconnect/reconnection of devices.</li></ul>		✓			

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
<b>5D-3.1.4.b</b> Interview response personnel to verify that procedures for responding to disconnect/reconnect of devices are known and implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures for responding to disconnect/reconnect of devices are known and implemented.</li> </ul>			✓		
<b>5D-3.1.5</b> Implement procedures for responding to failure of any device security control.						
<b>5D-3.1.5.a</b> Examine documented incident-response procedures to verify that procedures are defined for responding to failure of any device security control.	<ul style="list-style-type: none"> <li>Confirm that incident-response procedures are defined for responding to failure of any device security control.</li> </ul>		✓			
<b>5D-3.1.5.b</b> Interview response personnel to verify that procedures for responding to failure of any device security control are known and implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures for responding to failure of any device security control are known and implemented.</li> </ul>			✓		
<b>5D-3.1.6</b> Implement procedures for responding to encryption/decryption failures.						
<b>5D-3.1.6.a</b> Examine documented incident-response procedures to verify that procedures are defined for responding to encryption failure.	<ul style="list-style-type: none"> <li>Confirm that incident-response procedures are defined for responding to encryption failure.</li> </ul>		✓			
<b>5D-3.1.6.b</b> Interview response personnel to verify that procedures for responding to encryption failure are known and implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that procedures for responding to encryption failure are known and implemented.</li> </ul>			✓		
<b>5D-3.2</b> Procedures must incorporate any response procedures defined by all applicable PCI payment brands, including timeframes for reporting incidents.						
<b>5D-3.2.a</b> Examine documented incident-response procedures to verify that procedures incorporate any response procedures defined by all applicable PCI payment brands, including timeframes for reporting incidents.	<ul style="list-style-type: none"> <li>Confirm that the documented incident-response procedures incorporate any response procedures defined by all applicable PCI payment brands, including timeframes for reporting incidents.</li> </ul>		✓			
<b>5D-3.2.b</b> Interview response personnel to verify that any response procedures defined by all applicable PCI payment brands, including timeframes for reporting incidents, are known and implemented.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that any response procedures defined by all applicable PCI payment brands, including timeframes for reporting incidents, are known and implemented.</li> </ul>			✓		
<b>5D-4</b> PCI DSS compliance of decryption environment.						

P2PE Domain 5 Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review documentation	Interview personnel	Observe processes, state	Identify sample
5D-4.1 Decryption environment must be secured according PCI DSS						
5D-4.1.a Review the “Scope of Work” section of the solution provider’s current PCI DSS Report on Compliance (ROC) to verify the PCI DSS assessment scope fully covers the P2PE decryption environment.	<ul style="list-style-type: none"><li>Identify the solution provider’s current PCI DSS Report on Compliance (ROC).</li><li>Confirm that the “Scope of Work” section of the solution provider’s current PCI DSS Report on Compliance (ROC) verifies that the scope of the PCI DSS assessment fully covers the P2PE decryption environment.</li></ul>		✓			
5D-4.1.b Review PCI DSS ROC and/or Attestation of Compliance (AOC) to verify that all applicable PCI DSS requirements are “in place” for the P2PE decryption environment.	<ul style="list-style-type: none"><li>Identify the solution provider’s current PCI DSS ROC and/or Attestation of Compliance (AOC) reviewed.</li><li>Confirm that the PCI DSS ROC and/or Attestation of Compliance (AOC) verifies that all applicable PCI DSS requirements are “in place” for the P2PE decryption environment.</li></ul>		✓			
5D-4.1.c Review PCI DSS ROC and/or Attestation of Compliance (AOC) to verify that the PCI DSS assessment of the P2PE decryption environment was performed by a QSA.	<ul style="list-style-type: none"><li>Confirm that the PCI DSS ROC and/or Attestation of Compliance (AOC) verify that the PCI DSS assessment of the P2PE decryption environment was performed by a QSA.</li></ul>		✓			
5D-4.1.d Review PCI DSS ROC and/or Attestation of Compliance (AOC) to verify that the P2PE solution provider’s decryption environment was assessed as meeting PCI DSS requirements within the previous 12 months.	<ul style="list-style-type: none"><li>Confirm that the PCI DSS ROC and/or Attestation of Compliance (AOC) verify that the P2PE solution provider’s decryption environment was assessed as meeting PCI DSS requirements within the previous 12 months.</li></ul>		✓			

## Domain 6: P2PE Cryptographic Key Operations

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 6.1 – Key Matrix. List of All Cryptographic Keys (by type) used in the P2PE solution</b></p> <ul style="list-style-type: none"> <li>• Key type / description</li> <li>• Description of level in the key hierarchy</li> <li>• Purpose/ function of the key (including types of devices using key)</li> <li>• Key creation method</li> <li>• How is key distributed – e.g. manually via courier, and/or via remote key distribution (Annex A) and/ or via KIF (Annex B)?</li> <li>• Types of media used for key storage</li> <li>• Method of key destruction</li> </ul> <p><b>Note:</b> Keys distributed by remote key distribution must be included in Annex A; keys distributed via injection must be included in Annex B</p>	<p>Complete Table 6.1 for all Cryptographic Keys used in the P2PE solution.</p> <ul style="list-style-type: none"> <li>• Key type / description</li> <li>• Description of level in the key hierarchy</li> <li>• Describe the purpose/ function of the key, including the types of devices that use the key</li> <li>• Describe the key-creation method</li> <li>• Identify how key type is distributed, including whether keys are distributed via remote key distribution and/or via KIF (<i>Note: This must be consistent with key types identified in Annex A and Annex B.</i>)</li> <li>• Describe the types of media used for key storage.</li> <li>• Describe the method used for key destruction.</li> </ul>
<p><b>Table 6.2 – List of devices used to generate keys or key components</b></p> <ul style="list-style-type: none"> <li>• Device name/ identifier</li> <li>• Device Manufacturer/ Model</li> <li>• Type of key(s) generated (per Table 6.1)</li> <li>• Device location</li> <li>• Approved key-generation function (PTS, FIPS, or other approved per NIST SP800-22)</li> <li>• PTS approval number, FIPS approval number, or other certification details</li> <li>• Approved Hardware version #</li> <li>• Approved Firmware version #</li> </ul> <p><b>Note:</b> All key types identified in Table 6.1 must be included in Table 6.2.</p>	<p>Complete Table 6.2 for all devices used to generate keys or key components. Provide the following information:</p> <ul style="list-style-type: none"> <li>• Provide device name/ identifier</li> <li>• Provide device Manufacturer/ Model</li> <li>• Identify the type of key(s) generated by the device (<i>Note: All key types identified in Table 6.1 must be included in Table 6.2.</i>)</li> </ul> <p>Device location</p> <ul style="list-style-type: none"> <li>• Approved key-generation function (PTS, FIPS, or other approved per NIST SP800-22)</li> <li>• PTS approval number, FIPS approval number, or other certification details</li> <li>• Approved Hardware version number for PTS, FIPS or other certification, as applicable</li> <li>• Approved Firmware version number for PTS, FIPS or other certification, as applicable</li> </ul>

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6A-1</b> Key management, cryptographic algorithms and cryptographic-key lengths must be consistent with international and/or regional standards.						
<b>6A-1.1</b> Cryptographic keys must be managed in accordance with internationally recognized key-management standards (for example, ISO 11568 (all parts) or ANSI X9.24 (all parts) or equivalent).						
<b>6A-1.1</b> Interview responsible personnel and examine technical documentation to verify that all keys are managed in accordance with internationally recognized key-management standards—for example, ISO 11568 (all parts) or ANSI X9.24 (all parts) or equivalent.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the technical document that defines processes for keys to be managed in accordance with internationally recognized key-management standards.</li> <li>Identify the internationally recognized key-management standards used by the solution provider.</li> <li>Identify the responsible personnel interviewed who confirm that all keys are managed in accordance with the internationally recognized key-management standards.</li> </ul> </li> </ul>		✓	✓		
<b>6A-1.1.1</b> Account data, cryptographic keys, and components must be encrypted using only approved encryption algorithms and modes of operation, as listed in Appendix A: Minimum Key Sizes and Equivalent Key Strengths.						
<b>6A-1.1.1.a</b> Examine documented key-management policies and procedures to verify that all cryptographic keys use algorithms, modes of operation, and key lengths that are in accordance with Appendix A: Minimum Key Sizes and Equivalent Key Strengths.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines key-management policies and procedures</li> <li>Confirm that documented key-management policies and procedures include that all cryptographic keys use algorithms, modes of operation, and key lengths that are in accordance with <i>Appendix A: Minimum Key Sizes and Equivalent Key Strengths</i>.</li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6A-1.1.1.b</b> Observe key-management operations and devices to verify the following: All cryptographic algorithms, modes of operation, and key lengths are in accordance with Appendix A: Minimum Key Sizes and Equivalent Key Strengths.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm all cryptographic algorithms and key lengths are in accordance with <i>Appendix A: Minimum Key Sizes and Equivalent Key Strengths</i></li> <li>Describe the key-management operations and devices observed</li> <li>Describe how observation of the key-management operations and devices verified that all cryptographic algorithms, modes of operation, and key lengths are in accordance with <i>Appendix A: Minimum Key Sizes and Equivalent Key Strengths</i>.</li> </ul> </li> </ul>	✓			✓	
<b>6A-1.1.2</b> Cryptographic-key changes must be implemented for keys that have reached the end of their crypto-period (for example, after a defined period of time and/or after a certain amount of cipher-text has been produced by a given key), as defined by the associated application vendor or key owner, and based on industry best practices and guidelines (for example, <i>NIST Special Publication 800-57</i> ). <i>See Appendix A: Minimum Key Sizes and Equivalent Key Strengths for minimum required key lengths for commonly used algorithms.</i>						
<b>6A-1.1.2.a</b> Examine documented key-management procedures to verify: <ul style="list-style-type: none"> <li>Crypto-periods are defined for every type of key in use.</li> <li>Crypto-periods are based on industry best practices and guidelines (for example, <i>NIST Special Publication 800-57</i>).</li> <li>A process/methodology is in place to determine when the crypto-period is reached for each cryptographic key.</li> <li>Cryptographic key changes are implemented whenever a key reaches the end of its defined crypto-period.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-management procedures.</li> <li>Confirm that the documented key-management procedures include: <ul style="list-style-type: none"> <li>Defined crypto-periods for every type of key in use.</li> <li>Crypto-periods are based on industry best practices and guidelines</li> <li>A process/methodology is in place to determine when the crypto-period is reached for each cryptographic key.</li> <li>Cryptographic key changes are implemented whenever a key reaches the end of its defined crypto-period.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6A-1.1.2.b</b> Through observation of key-management operations and inspection of SCDs, verify that crypto-periods are defined for every type of key in use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the key-management operations and SCDs observed.</li> <li>Describe how observation of the key-management operations and SCDs verified that crypto-periods are implemented for every type of key in use.</li> </ul> </li> </ul>	✓			✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6A-1.1.3</b> Ensure that any key-management requirements of the mode of operation used for encryption of account data are enforced. <i>For example, if a stream-cipher mode of operation is used, ensure that the same key stream cannot be re-used for different sets of data.</i>						
<b>6A-1.1.3.a</b> For each mode of operation in use, review the applicable ISO or ANSI standard to identify any key-management requirements for that mode.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the applicable ISO or ANSI standard for each mode of operation in use.</li> </ul>		✓			
<b>6A-1.1.3.b</b> Verify that all such requirements are enforced for each mode of operation	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>For each mode of operation in use, describe how all applicable ISO or ANSI requirements were observed to be enforced.</li> </ul> </li> </ul>	✓	✓		✓	
<b>6A-1.1.4</b> Documentation describing the architecture (including all participating devices and cryptographic protocols), set-up and operation of the key-management solution must exist and must be demonstrably in use for all key-management processes.						
<b>6A-1.1.4.a</b> Verify documentation exists describing the architecture (including all participating devices and cryptographic protocols), set-up and operation of the key-management solution.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that describes the key-management architecture.</li> <li>Confirm the documentation includes: <ul style="list-style-type: none"> <li>All participating devices and cryptographic protocols</li> <li>Set-up of the key-management solution</li> <li>Operation of the key-management solution</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6A-1.1.4.b</b> Observe architecture and key-management operations to verify that the documentation reviewed in 6A-1.1.4.a is demonstrably in use for all key-management processes.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the key-management architecture and operations observed</li> <li>Describe how observation of the key-management architecture and operations verified that the documented architecture (reviewed in 6A-1.1.4.a) is demonstrably in use for all key-management processes.</li> </ul> </li> </ul>	✓			✓	



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-1</b> All keys and key components are generated using an approved random (or pseudo-random) process to ensure the integrity and security of cryptographic systems.						
<b>6B-1.1</b> Keys must be generated so that it is not feasible to determine that certain keys are more probable than other keys from the set of all possible keys. Cryptographic keys or key components must be generated by one of the following: <ul style="list-style-type: none"> <li>An approved key-generation function of a PCI-approved HSM</li> <li>An approved key-generation function of a FIPS 140-2 Level 3 (or higher) HSM</li> <li>An approved random number generator that has been certified by an independent laboratory to comply with <i>NIST SP800-22</i></li> </ul> <i>Random number generation is critical to the security and integrity of all cryptographic systems. All cryptographic key-generation relies upon good quality, randomly generated values.</i>						
<b>6B-1.1.a</b> Examine key-management policy document and to verify that it requires that all devices used to generate cryptographic keys meet one of the following <ul style="list-style-type: none"> <li>An approved key-generation function of a PCI-approved HSM</li> <li>An approved key-generation function of a FIPS 140-2 Level 3 (or higher) HSM</li> <li>An approved random that has been certified by an independent qualified laboratory according to <i>NIST SP 800-22</i>.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines the key-management policy.</li> <li>Confirm that the documented policy requires that all devices used to generate cryptographic keys meet one of the following: <ul style="list-style-type: none"> <li>An approved key-generation function of a PCI-approved HSM</li> <li>An approved key-generation function of a FIPS 140-2 Level 3 (or higher) HSM</li> <li>An approved random number generator that has been certified by an independent qualified laboratory according to NIST SP 800-22.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6B-1.1.b</b> Examine certification letters or technical documentation to verify that all devices used to generate cryptographic keys or key components meet one of the following <ul style="list-style-type: none"> <li>An approved key-generation function of a PCI-approved HSM</li> <li>An approved key-generation function of a FIPS 140-2 Level 3 (or higher) HSM</li> <li>An approved random that has been certified by an independent qualified laboratory according to <i>NIST SP 800-22</i></li> </ul>	<ul style="list-style-type: none"> <li>For all devices used to generate cryptographic keys or key components, as identified in Table 6.2: <ul style="list-style-type: none"> <li>Identify the certification letters or technical documentation examined.</li> <li>Confirm that the certification letters/technical documentation verify that all devices used to generate cryptographic keys or key components meet one of the following: <ul style="list-style-type: none"> <li>An approved key-generation function of a PCI-approved HSM</li> <li>An approved key-generation function of a FIPS 140-2 Level 3 (or higher) HSM</li> <li>An approved random that has been certified by an independent qualified laboratory according to NIST SP 800-22</li> </ul> </li> </ul> </li> </ul>		✓			



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-1.1.c</b> Observe device performing key-generation functions to verify that all cryptographic keys or key components are generated using the method that is approved/certified.	<ul style="list-style-type: none"> <li>For all devices used to generate cryptographic keys or key components, as identified in Table 6.2: <ul style="list-style-type: none"> <li>Describe how observation of the device performing key-generation functions verified that all cryptographic keys or key components are generated using the method that is approved/certified.</li> </ul> </li> </ul>	✓				
<b>6B-2</b> Compromise of the key-generation process must not be possible without collusion between at least two trusted individuals.						
<b>6B-2.1</b> Implement security controls, including dual control and tamper protection to prevent the unauthorized disclosure of keys/key components.						
<b>6B-2.1</b> Perform the following:						
<b>6B-2.1.1</b> Any clear-text output of the key-generation process must be overseen by at least two authorized individuals who ensure there is no unauthorized mechanism that might disclose a clear-text key or key component as it is transferred between the key-generation SCD and the device or medium receiving the key or key component.						
<b>6B-2.1.1.a</b> Examine documented procedures to verify the following. <ul style="list-style-type: none"> <li>Any clear-text output of the key-generation process is overseen by at least two authorized individuals.</li> <li>There is no unauthorized mechanism that might disclose a clear-text key or key component between the key-generation device and the device or medium receiving the key or key component.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation procedures.</li> <li>Confirm the documented procedure include the following: <ul style="list-style-type: none"> <li>Any clear-text output of the key-generation process is overseen by at least two authorized individuals.</li> <li>There is no unauthorized mechanism that might disclose a clear-text key or key component between the key-generation device and the device or medium receiving the key or key component.</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.1.1.b</b> Observe key-generation processes and interview responsible personnel to verify: <ul style="list-style-type: none"> <li>Any clear-text output of the key-generation process is overseen by at least two authorized individuals.</li> <li>There is no unauthorized mechanism that might disclose a clear-text key or key component between the key-generation device and the device or medium receiving the key or key component.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Any clear-text output of the key-generation process is overseen by at least two authorized individuals.</li> <li>There is no unauthorized mechanism that might disclose a clear-text key or key component between the key-generation device and the device or medium receiving the key or key component.</li> </ul> </li> <li>Describe how observation of key-generation processes verified that: <ul style="list-style-type: none"> <li>Any clear-text output of the key-generation process is overseen by at least two authorized individuals.</li> <li>There is no unauthorized mechanism that might disclose a clear-text key or key component between the key-generation device and the device or medium receiving the key or key component.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6B-2.1.2</b> There must be no point in the process where a single individual has the ability to determine, obtain, or ascertain any part of a clear-text key or all the components for a key.						
<b>6B-2.1.2.a</b> Observe the process from end-to-end to verify there is no point in the process where a single person has the ability to determine, obtain, or ascertain any part of a clear-text key or all the components for a key.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how the key-generation process was observed from end-to-end.</li> <li>Describe how observation of the end-to-end key-generation process verified there is no point in the process where a single person has the ability to determine, obtain, or ascertain any part of a clear-text key or all the components for a key.</li> </ul> </li> </ul>				✓	
<b>6B-2.1.2.b</b> Examine key-generation logs to verify that at least two individuals monitor the key-generation processes.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the key-generation logs examined.</li> <li>Describe how observation of the key-generation logs verified that at least two individuals monitor the key-generation processes.</li> </ul> </li> </ul>		✓			
<b>6B-2.1.3</b> Key-generation devices must be logged off when not in use.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.1.3.a</b> Examine documented procedures for all key-generation methods. Verify procedures require that key-generation devices are logged off when not in use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation methods and procedures.</li> <li>Confirm that the documented procedures require that key-generation devices must be logged off when not in use.</li> </ul> </li> </ul>		✓			
<b>6B-2.1.3.b</b> Observe key-generation processes and devices to verify that key-generation devices are logged off when not in use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe key-generation processes and devices observed</li> <li>Describe how observation of key-generation processes and device configurations verified that key-generation devices are logged off when not in use.</li> </ul> </li> </ul>	✓			✓	
<b>6B-2.1.4</b> Key-generation equipment must not show any signs of tampering (for example, unnecessary cables).						
<b>6B-2.1.4.a</b> Review documented procedures for all key-generation methods to verify they include inspections of the key-generation equipment for evidence of tampering, prior to use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation methods and procedures.</li> <li>Confirm that the documented procedures include inspections of the key-generation equipment for evidence of tampering, prior to use.</li> </ul> </li> </ul>		✓			
<b>6B-2.1.4.b</b> Observe key-generation processes for all key types to verify that key-generation equipment is inspected prior to use, to ensure equipment does not show any signs of tampering.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of key-generation processes verified that key-generation equipment is inspected prior to use, to ensure equipment does not show any signs of tampering.</li> </ul> </li> </ul>				✓	
<b>6B-2.1.5</b> Physical security controls must be used to prevent unauthorized personnel from accessing the key-generation area and observing the key-component/key-generation process.						
<b>6B-2.1.5.a</b> Examine documentation to verify that physical security controls are defined to ensure the key component/key-generation process cannot be observed or accessed by unauthorized personnel.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines physical security controls for key-generation areas.</li> <li>Confirm that the documented procedures include ensuring the key component/key-generation process cannot be observed or accessed by unauthorized personnel.</li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.1.5.b</b> Observe the physical security controls to verify that key-component/key-generation process cannot be observed or accessed by unauthorized personnel.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of the physical security controls for key-generation areas verified that the key component/key-generation process cannot be observed or accessed by unauthorized personnel.</li> </ul> </li> </ul>				✓	
<b>6B-2.2</b> Multi-use/purpose computing systems shall not be used for key generation where any clear-text secret key or private key, or key component thereof, appears in unprotected memory. <i>For example, it is not permitted for the cryptographic key to be passed through the memory of a computer that has not been specifically tasked for the sole purpose of key loading. Computers that have been specifically purposed for key loading and are not used for any other purpose are permitted for use if all other requirements can be met. Additionally, this requirement is not intended to include in its scope computers used only for administration of SCDs, or key-generation devices where they have no ability to access clear-text cryptographic keys or components.</i>						
<b>6B-2.2.a</b> Examine documented procedures to verify that multi-purpose computing systems are not used for key generation where any clear-text secret or private key or component thereof appears in unprotected memory.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation methods and procedures.</li> <li>Confirm that the documented procedures include that multi-purpose computing systems must not be used for key generation where any clear-text secret or private key or component thereof appears in unprotected memory</li> </ul> </li> </ul>		✓			
<b>6B-2.2.b</b> Observe generation process for each type of key to verify that multi-purpose computing systems are not used for key generation where any clear-text secret or private key or component thereof appears in unprotected memory.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of key-generation processes verified that multi-purpose computing systems are not used for key generation where any clear-text secret or private key or component thereof appears in unprotected memory.</li> </ul> </li> </ul>				✓	
<b>6B-2.3</b> Printed key components must be printed within blind mailers or sealed immediately after printing to ensure that: <ul style="list-style-type: none"> <li>Only approved key custodians can observe their own key component.</li> <li>Tampering can be detected.</li> </ul>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.3.a</b> Examine documented procedures for printed key components and verify that they require printed key components to be printed within blind mailers or sealed immediately after printing such that: <ul style="list-style-type: none"> <li>Only approved key custodians can observe their own key component.</li> <li>Tampering can be detected.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for printed key components.</li> <li>Confirm that the documented procedures require printed key components to be printed within blind mailers or sealed immediately after printing such that: <ul style="list-style-type: none"> <li>Only approved key custodians can observe their own key component.</li> <li>Tampering can be detected.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6B-2.3.b</b> Observe processes for printing key components to verify that key components are printed within blind mailers or sealed immediately after printing, such that no one but the authorized custodian ever has physical access to the output.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of processes for printing key components verified that key components are printed within blind mailers or sealed immediately after printing, such that no one but the authorized custodian ever has physical access to the output.</li> </ul> </li> </ul>				✓	
<b>6B-2.3.c</b> Observe blind mailers or other sealed containers used for key components to verify that tampering can be detected.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the blind mailers or other sealed containers observed</li> <li>Describe how observation of blind mailers or other sealed containers verified that tampering can be detected.</li> </ul> </li> </ul>				✓	
<b>6B-2.4</b> Any residue that may contain clear-text keys or components must be destroyed immediately after generation of that key to prevent disclosure of a key or key component. <i>Examples of where such key residue may exist include (but are not limited to):</i> <ul style="list-style-type: none"> <li>Printing material, including ribbons and paper waste</li> <li>Memory storage of a key-loading device, after loading the key to a different device or system</li> <li>Other types of displaying or recording</li> </ul>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.4.a</b> Examine documented procedures to identify all locations where key residue may exist. Verify procedures are implemented to ensure the following: <ul style="list-style-type: none"> <li>Any residue that may contain clear-text keys or components is destroyed immediately after generation.</li> <li>If a key is generated in a separate device before being exported into the end-use device, confirm that the key and all related critical security parameters (e.g., secret seeds) are deleted (zeroized) from the generation and/or injection device immediately after the transfer to the device that will use the key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the documented procedures that identify all locations where key residue may exist.</li> <li>Confirm that documented procedures include ensuring that: <ul style="list-style-type: none"> <li>Any residue that may contain clear-text keys or components is destroyed immediately after generation.</li> <li>If a key is generated in a separate device before being exported into the end-use device, the key and all related critical security parameters (e.g., secret seeds) are deleted (zeroized) from the generation and/or injection device immediately after the transfer to the device that will use the key.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6B-2.4.b</b> Observe the destruction process of the identified key residue and verify the following: <ul style="list-style-type: none"> <li>Any residue that may contain clear-text keys or components is destroyed immediately after generation.</li> <li>If a key is generated in a separate device before being exported into the end-use device, confirm that the key and all related critical security parameters (e.g., secret seeds) are deleted (zeroized) from the generation and/or injection device immediately after the transfer to the device that will use the key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the destruction process observed for the identified key residue</li> <li>Describe how observation of the destruction process of the identified key residue verified that: <ul style="list-style-type: none"> <li>Any residue that may contain clear-text keys or components is destroyed immediately after generation.</li> <li>If a key is generated in a separate device before being exported into the end-use device, the key and all related critical security parameters (e.g., secret seeds) are deleted (zeroized) from the generation and/or injection device immediately after the transfer to the device that will use the key.</li> </ul> </li> </ul> </li> </ul>				✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.5</b> Policy and procedures must ensure the following is not performed: <ul style="list-style-type: none"> <li>Dictate keys or components</li> <li>Record key or component values on voicemail</li> <li>Fax, e-mail, or otherwise convey clear-text keys or components</li> <li>Write key or component values into startup instructions</li> <li>Tape key or component values to or inside devices</li> <li>Write key or component values in procedure manuals</li> </ul>						
<b>6B-2.5.a</b> Examine documented policy and procedures to verify that key components are prohibited from being transmitted across insecure channels, including but not limited to: <ul style="list-style-type: none"> <li>Dictating keys or components</li> <li>Recording key or component values on voicemail</li> <li>Faxing, e-mailing, or otherwise conveying clear-text keys or components</li> <li>Writing key or component values into startup instructions</li> <li>Taping key or component values to or inside devices</li> <li>Writing key or component values in procedure manual</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines policy and procedures for management of key-components.</li> <li>Confirm that documented policy and procedures prohibit transmission of key components across insecure channels, including but not limited to: <ul style="list-style-type: none"> <li>Dictating keys or components</li> <li>Recording key or component values on voicemail</li> <li>Faxing, e-mailing, or otherwise conveying clear-text keys or components</li> <li>Writing key or component values into startup instructions</li> <li>Taping key or component values to or inside devices</li> <li>Writing key or component values in procedure manual</li> </ul> </li> </ul> </li> </ul>		✓			



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-2.5.b</b> From observation of key-management processes verify that key components are not transmitted across insecure channels, including but not limited to: <ul style="list-style-type: none"> <li>Dictating keys or components</li> <li>Recording key or component values on voicemail</li> <li>Faxing, e-mailing, or otherwise conveying clear-text keys or components</li> <li>Writing key or component values into startup instructions</li> <li>Taping key or component values to or inside devices</li> <li>Writing key or component values in procedure manual</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of key-management processes verified that key components are not transmitted across insecure channels, including but not limited to: <ul style="list-style-type: none"> <li>Dictating keys or components</li> <li>Recording key or component values on voicemail</li> <li>Faxing, e-mailing, or otherwise conveying clear-text keys or components</li> <li>Writing key or component values into startup instructions</li> <li>Taping key or component values to or inside devices</li> <li>Writing key or component values in procedure manual</li> </ul> </li> </ul> </li> </ul>				✓	
<b>6B-3</b> Documented procedures must exist and must be demonstrably in use for all key-generation processing.						
<b>6B-3.1</b> Written key-generation procedures must exist and be known by all affected parties (key custodians, supervisory staff, technical management, etc.).						
<b>6B-3.1.a</b> Examine documented key-generation procedures to confirm that they include all aspects of key-generation operations.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation procedures.</li> <li>Confirm that the documented procedures include all aspects of key-generation operations.</li> </ul> </li> </ul>		✓			
<b>6B-3.1.b</b> Interview those responsible for the key-generation processes (including key custodians, supervisory staff, technical management, etc.) to verify that the documented procedures are known and understood by all affected parties.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the personnel responsible for the key-generation processes (including key custodians, supervisory staff, technical management, etc.) who were interviewed.</li> <li>Describe how interviews with the responsible personnel confirmed that the documented procedures are known and understood.</li> </ul> </li> </ul>			✓		



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6B-3.1.c</b> Observe key-generation ceremonies and verify that the documented procedures are demonstrably in use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the key-generation ceremonies observed</li> <li>Describe how observation of the key-generation ceremonies verified that the documented procedures are demonstrably in use.</li> </ul> </li> </ul>				✓	
<b>6B-3.2</b> All key-generation events must be logged. <i>Keys that are generated on the POI device do not need to generate an audit-log entry, but the creation of any keys to decrypt data sent from such a POI must be logged at the solution provider.</i>						
<b>6B-3.2.a</b> Examine documented key-generation procedures to verify that all key-generation events must be logged.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation procedures.</li> <li>Confirm that the documented procedures include that all key-generation events must be logged.</li> </ul> </li> </ul>		✓			
<b>6B-3.2.b</b> Observe demonstrations for all types of key-generation events to verify that all key-generation events are logged.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe the demonstrations observed for all types key-generation events.</li> <li>Describe how the demonstrations of all types of key-generation events verified that all key-generation events are logged.</li> </ul> </li> </ul>				✓	
<b>6B-3.2.c</b> Examine logs of key generation to verify that all events have been recorded.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the logs of key generation examined.</li> <li>Describe how observation of the key generation logs verified that all events are recorded.</li> </ul> </li> </ul>		✓			
<b>6C-1</b> Cryptographic keys must be conveyed or transmitted securely.						
<b>6C-1.1</b> No single person can ever have access to more than one component of a particular cryptographic key. A person with access to one component/share of a key, or to the media conveying this component/share, must not have access to any other component/share of this key or to any other medium conveying any other component of this key.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<p><b>6C-1.1.a</b> Examine documented procedures to verify they include controls to ensure that no single person can ever have access to more than one component of a particular cryptographic key. Verify procedures include:</p> <ul style="list-style-type: none"> <li>Any person with access to one component/share of a key must not have access to any other component/share of this key, or to any other medium conveying any other component of this key.</li> <li>Any person with access to the media conveying a component/share of a key must not have access to any other component/share of this key, or to any other medium conveying any other component of this key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that no single person can ever have access to more than one component of a particular cryptographic key.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>Any person with access to one component/share of a key must not have access to any other component/share of this key, or to any other medium conveying any other component of this key.</li> <li>Any person with access to the media conveying a component/share of a key must not have access to any other component/share of this key, or to any other medium conveying any other component of this key.</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<p><b>6C-1.1.b</b> Observe key-transfer processes and interview personnel to verify that controls are implemented to ensure that no single person can ever have access to more than one component of a particular cryptographic key. Verify the implemented controls ensure the following:</p> <ul style="list-style-type: none"> <li>An individual with access to a key component or key share does not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> <li>Any person with access to the media conveying a key component or key share must not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that controls are implemented to ensure that no single person can ever have access to more than one component of a particular cryptographic key.</li> <li>Identify the personnel interviewed who confirm that controls are implemented to ensure the following: <ul style="list-style-type: none"> <li>An individual with access to a key component or key share does not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> <li>Any person with access to the media conveying a key component or key share must not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> </ul> </li> <li>Describe the key-transfer processes observed</li> <li>Describe how observation of the key-transfer processes verified that no single person can ever have access to more than one component of a particular cryptographic key.</li> <li>Verify how the implemented controls were observed to ensure that: <ul style="list-style-type: none"> <li>An individual with access to a key component or key share does not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> <li>Any person with access to the media conveying a key component or key share must not have access to any other component/share of this key or to any other medium conveying any other component of this key.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<p><b>6C-1.2</b> Components of cryptographic keys must be transferred using different communication channels, such as different courier services.</p> <p><b>Note:</b> It is not sufficient to send key components for a specific key on different days using the same communication channel.</p>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-1.2.a</b> Examine documented procedures to verify that cryptographic-key components are transferred using different communications channels.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for cryptographic-key components to be transferred using different communications channels.</li> </ul>		✓			
<b>6C-1.2.b</b> Examine records of key transfers and interview responsible personnel to verify that cryptographic key components are transferred using different communications channels.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the records of key transfers examined.</li> <li>Identify the responsible personnel interviewed who confirm that cryptographic key components are transferred using different communications channels.</li> <li>Describe how examination of the key transfer records and interviews with personnel verified that cryptographic key components are transferred using different communications channels.</li> </ul> </li> </ul>		✓	✓		
<b>6C-1.3</b> Ensure that the method used does not allow any personnel to have access to all components—for example, key custodians, mail room and courier staff.						
<b>6C-1.3.a</b> Examine documented procedures and interview responsible personnel to verify that the method used does not allow for any personnel to have access to all components.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for transferring key components.</li> <li>Confirm the documented procedure does not allow for any personnel to have access to all components.</li> <li>Identify the responsible personnel interviewed who confirm that the method used for transferring key components does not allow for any personnel to have access to all components.</li> </ul> </li> </ul>		✓	✓		
<b>6C-1.3.b</b> Observe the method used to transport key components to verify that the method does not allow for any personnel to have access to all components.	<ul style="list-style-type: none"> <li>Describe how the methods for transporting key components were observed to ensure that no personnel have access to all components.</li> </ul>				✓	
<b>6C-1.4</b> Where key components are transmitted in clear-text using tamper-evident mailers, ensure that details of the serial number of the package are transmitted separately from the package itself.						
<b>6C-1.4</b> If key components are ever transmitted in clear-text using tamper-evident mailers, perform the following:	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify whether key components are ever transmitted in clear-text using tamper-evident mailers.</li> </ul>				✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-1.4.a</b> Examine documented procedures to verify they define how details of the serial number are transmitted separately from the package itself.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys transmitted in clear-text using tamper-evident mailers, identify the document that defines procedures for details of the serial number to be transmitted separately from the package itself.</li> </ul>		✓			
<b>6C-1.4.b</b> Observe the method used to transport clear-text key components using tamper-evident mailers and interview responsible personnel to verify that details of the serial number of the package are transmitted separately from the package itself.	<ul style="list-style-type: none"> <li>Describe how observation of the methods used to transport clear-text key components using tamper-evident mailers verified that details of the serial number of the package are transmitted separately from the package itself.</li> <li>Identify the responsible personnel interviewed who confirm that details of the serial number of the package are transmitted separately from the package itself.</li> </ul>			✓	✓	
<b>6C-1.5</b> Public keys must be conveyed in a manner that protects their integrity and authenticity. Examples of acceptable methods include: <ul style="list-style-type: none"> <li>Use of a key check value that can be verified using a separate channel</li> <li>Use of public-key certificates created by a trusted CA</li> <li>A hash of the public key sent by a separate channel (for example, mail or phone)</li> <li>A new public-key certificate signed by an existing authenticated key</li> </ul> <i>Note: Self-signed certificates must not be used as the sole method of authentication.</i>						
<b>6C-1.5</b> For all methods used to convey public keys, perform the following:						
<b>6C-1.5.a</b> Examine documented procedures for conveying public keys to verify that methods are defined to convey public keys in a manner that protects their integrity and authenticity.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for conveying public keys.</li> <li>Confirm that documented procedures define methods for conveying public keys in a manner that protects their integrity and authenticity.</li> </ul>		✓			
<b>6C-1.5.b</b> Observe the process for conveying public keys and interview responsible personnel to verify that the implemented method ensures public keys are conveyed in a manner that protects their integrity and authenticity.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how the process for conveying public keys was observed to ensure that public keys are conveyed in a manner that protects their integrity and authenticity.</li> <li>Identify the responsible personnel interviewed who confirm that public keys are conveyed in a manner that protects their integrity and authenticity.</li> </ul> </li> </ul>			✓	✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-1.5.c</b> Verify that the mechanism used to validate the integrity and authenticity of the public key is independent of the conveyance method.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1, describe how the mechanism used to validate the integrity and authenticity of the public key was observed to be independent of the conveyance method.</li> </ul>				✓	
<b>6C-2</b> Key components must be protected at all times during transmission, conveyance, or movement between locations.						
<b>6C-2.1</b> Any single clear-text key component must at all times be either: <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1.</li> </ul>						
<b>6C-2.1.a</b> Examine documented procedures for transmission, conveyance, or movement of keys between any two locations to verify that any single clear-text key component must at all times be either: <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for transmission, conveyance, or movement of keys between any two locations.</li> <li>Confirm that the documented procedures include that any single clear-text key component must at all times be either:                   <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6C-2.1.b</b> Observe key-management processes and interview responsible personnel to verify processes are implemented to ensure that any single clear-text key component is at all times either: <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Describe how key-management processes were observed to ensure that any single clear-text key component is at all times either:                   <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1</li> </ul> </li> <li>Identify the responsible personnel interviewed who confirm that processes are implemented to ensure than any single clear-text key component is at all times either:                   <ul style="list-style-type: none"> <li>Under the continuous supervision of a person with authorized access to this component, or</li> <li>In one of the approved forms listed in 6F-1.1</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6C-2.2</b> Packaging or mailers containing clear-text key components are examined for evidence of tampering before being used.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-2.2.a</b> Verify documented procedures include requirements for all packaging or mailers containing clear-text key components to be examined for evidence of tampering before being used.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines requirements for all packaging or mailers containing clear-text key components to be examined for evidence of tampering before being used.</li> </ul>		✓			
<b>6C-2.2.b</b> Interview responsible personnel and observe process to verify that all packaging or mailers containing clear-text key components are examined for evidence of tampering before being used.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that all packaging or mailers containing clear-text components are examined for evidence of tampering before being used.</li> <li>Describe how observation of processes verified that all packaging or mailers containing clear-text key components are examined for evidence of tampering before being used.</li> </ul> </li> </ul>			✓	✓	
<b>6C-2.2.1</b> Any sign of package tampering must result in the destruction and replacement of: <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul>						
<b>6C-2.2.1.a</b> Verify documented procedures require that any sign of package tampering results in the destruction and replacement of both: <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures requiring that any sign of package tampering results in the destruction and replacement of both:               <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul> </li> </ul>		✓			



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-2.2.1.b</b> Interview responsible personnel and observe process to verify that, if a package shows signs of tampering, processes are implemented that result in the destruction and replacement of both: <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that if a package shows signs of tampering, processes are implemented that result in the destruction and replacement of both: <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul> </li> <li>Describe how observation of processes verified that if a package shows signs of tampering, processes are implemented that result in the destruction and replacement of both: <ul style="list-style-type: none"> <li>The set of components</li> <li>Any keys encrypted under this (combined) key</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6C-2.3</b> No one but the authorized key custodian (and designated backup(s)) shall have physical access to a key component prior to transmittal or upon receipt of a component.						
<b>6C-2.3.a</b> Verify that a list(s) of key custodians (and designated backup(s)) that are authorized to have physical access to key components prior to transmittal or upon receipt of a component is defined and documented.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines a list(s) of key custodians and designated backups that are authorized to have physical access to key components prior to transmittal or upon receipt of a component</li> </ul>		✓			
<b>6C-2.3.b</b> Observe implemented access controls and processes to verify that only those authorized key custodians (and designated backup(s)) have physical access to key components prior to transmittal or upon receipt.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of implemented access controls and processes verified that only those authorized key custodians (and designated backup(s)) have physical access to key components prior to transmittal or upon receipt.</li> </ul>				✓	
<b>6C-2.3.c</b> Examine physical access logs (e.g., to security containers for key components) to verify that only the authorized individual(s) have access to each component.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the physical access logs that were examined.</li> <li>Describe how examination of physical access logs verified that only the authorized individual(s) have access to each component.</li> </ul> </li> </ul>		✓			



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-2.4</b> Mechanisms must exist to ensure that only authorized custodians: <ul style="list-style-type: none"><li>Place key components into tamper-evident packaging for transmittal.</li><li>Open tamper-evident packaging containing key components upon receipt.</li><li>Check the serial number of the tamper-evident packing upon receipt of a component package.</li></ul>						
<b>6C-2.4.a</b> Verify that a list(s) of key custodians authorized to perform the following activities is defined and documented: <ul style="list-style-type: none"><li>Place the key component into tamper-evident packaging for transmittal.</li><li>Open tamper-evident packaging containing the key component upon receipt.</li><li>Check the serial number of the tamper-evident packing upon receipt of a component package.</li></ul>	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, identify the documented list(s) of key custodians authorized to perform the following activities:<ul style="list-style-type: none"><li>Place the key component into tamper-evident packaging for transmittal.</li><li>Open tamper-evident packaging containing the key component upon receipt.</li><li>Check the serial number of the tamper-evident packing upon receipt of a component package.</li></ul></li></ul>		✓			
<b>6C-2.4.b</b> Observe implemented mechanisms and processes to verify that only the authorized key custodians can perform the following: <ul style="list-style-type: none"><li>Place the key component into tamper-evident packaging for transmittal.</li><li>Open tamper-evident packaging containing the key component upon receipt.</li><li>Check the serial number of the tamper-evident packing upon receipt of a component package.</li></ul>	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, describe how observation of implemented mechanisms and processes verified that only the authorized key custodians can perform the following:<ul style="list-style-type: none"><li>Place the key component into tamper-evident packaging for transmittal.</li><li>Open tamper-evident packaging containing the key component upon receipt.</li><li>Check the serial number of the tamper-evident packing upon receipt of a component package.</li></ul></li></ul>				✓	
<b>6C-3</b> Documented procedures must exist and must be demonstrably in use for all key transmission and conveyance processing.						
<b>6C-3.1</b> Written procedures must exist and be known to all affected parties.						
<b>6C-3.1.a</b> Verify documented procedures exist for all key transmission and conveyance processing.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for key transmission and conveyance processing.</li></ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6C-3.1.b</b> Interview responsible personnel to verify that the documented procedures are known and understood by all affected parties for key transmission and conveyance processing.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that the documented procedures are known and understood by all affected parties for key transmission and conveyance processing.</li> <li>Describe how interviews with the responsible personnel confirmed that the documented procedures are known and understood.</li> </ul> </li> </ul>			✓		
<b>6C-3.2</b> Methods used for the conveyance or receipt of keys must be documented.						
<b>6C-3.2</b> Verify documented procedures include all methods used for the conveyance or receipt of keys.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, confirm the documented procedures for key transmission and conveyance (identified in 6C-3.1.a) include all methods used for the conveyance or receipt of keys.</li> </ul>		✓			
<b>6D-1</b> Unencrypted secret or private keys must be entered into cryptographic devices using the principles of dual control and split knowledge.						
<b>6D-1.1</b> The loading of clear-text cryptographic keys, including public keys, requires dual control to authorize any key-loading session. <i>For example: Dual control can be implemented using two or more passwords of five characters or more, multiple cryptographic tokens (such as smartcards), or physical keys.</i>						
<b>6D-1.1.a</b> Examine documented procedures for loading of clear-text cryptographic keys, including public keys, to verify they require dual control to authorize any key-loading session.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for loading of clear-text keys, including public keys.</li> <li>Confirm that the documented procedures require dual control to authorize any key-loading session.</li> </ul> </li> </ul>		✓			
<b>6D-1.1.b</b> For all types of SCDs, observe processes for loading clear-text cryptographic keys, including public keys, to verify that dual control is required to authorize any key-loading session.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how processes for loading clear-text cryptographic keys were observed for all types of SCDs</li> <li>For all types of SCDs, describe how observation of key-loading processes verified that dual control is required to authorize any key-loading session.</li> </ul> </li> </ul>				✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-1.1.c</b> Examine documented records of key-loading processes to verify the presence of two authorized persons during each type of key-loading activity.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the records of key-loading processes examined.</li> <li>Describe how examination of documented records verified that two authorized persons must be present during each type key-loading activity.</li> </ul> </li> </ul>		✓			
<b>6D-1.1.d</b> Ensure that any default dual-control mechanisms (e.g., default passwords—usually printed in the vendor's manual—in a key-loading device) have been disabled or changed.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Describe how default dual-control mechanisms were identified (e.g. identify the vendor's manual(s) examined).</li> <li>Describe how observation of dual-control mechanisms verified that any default dual-control mechanisms have been disabled or changed.</li> </ul> </li> </ul>	✓	✓			
<b>6D-1.2</b> For loading of secret or private cryptographic keys, split knowledge is enforced by either: <ul style="list-style-type: none"> <li>Manual entry of the key as multiple key-components, using a different custodian for each component</li> <li>The use of a key-loading device managed under dual control</li> </ul> <p><b>Note:</b> Manual key loading may involve the use of media such as paper, magnetic stripe or smart cards, or other physical tokens.</p>						
<b>6D-1.2.a</b> Examine documented procedures loading of secret and private cryptographic keys to verify they require split knowledge be enforced through: <ul style="list-style-type: none"> <li>Manual entry of the key as multiple-key components, using a different custodian for each component</li> <li>The use of a key-loading device managed under dual control</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for loading of secret and private cryptographic keys.</li> <li>Confirm that the documented procedures require that split knowledge be enforced through:                   <ul style="list-style-type: none"> <li>Manual entry of the key as multiple-key components, using a different custodian for each component</li> <li>The use of a key-loading device managed under dual control</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-1.2.b</b> For all types of SCDs, observe processes for loading secret and private cryptographic keys to verify that split knowledge is enforced through: <ul style="list-style-type: none"> <li>Manual entry of the key as multiple-key components, using a different custodian for each component</li> <li>The use of a key-loading device managed under dual control</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how processes for loading secret and private cryptographic keys were observed for all types of SCDs</li> <li>For all types of SCDs, describe how processes for loading secret and private cryptographic keys were observed to enforce split knowledge through: <ul style="list-style-type: none"> <li>Manual entry of the key as multiple-key components, using a different custodian for each component</li> <li>The use of a key-loading device managed under dual control</li> </ul> </li> </ul> </li> </ul>				✓	
<b>6D-1.3</b> For any given set of key components, each device shall compose the same final key from the reverse of the process used to create the components.						
<b>6D-1.3</b> Through examination of documented procedures, interviews, and observation confirm that any devices that are loaded with the same key components use the same mathematical process to derive the final key, and that this is the reverse of the process used to create the key components.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure: <ul style="list-style-type: none"> <li>Devices loaded with the same key components use the same mathematical process to derive the final key</li> <li>That this this is the reverse of the process used to create the key components.</li> </ul> </li> <li>Identify the personnel interviewed who confirm: <ul style="list-style-type: none"> <li>Devices loaded with the same key components use the same mathematical process to derive the final key</li> <li>That this this is the reverse of the process used to create the key components.</li> </ul> </li> <li>Describe how observation of processes verified: <ul style="list-style-type: none"> <li>Devices loaded with the same key components use the same mathematical process to derive the final key</li> <li>That this this is the reverse of the process used to create the key components.</li> </ul> </li> </ul> </li> </ul>		✓	✓	✓	
<b>6D-1.4</b> If key-establishment protocols using public-key cryptography are used to distribute secret keys, these must meet the requirements detailed in Annex A of this document.						

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-1.4</b> If key-establishment protocols using public-key cryptography are used to distribute secret keys, verify that the requirements detailed in Annex A of this document are met.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify whether key-establishment protocols using public-key cryptography are used to distribute secret keys.</li> <li>If key-establishment protocols using public-key cryptography are used to distribute secret keys, confirm that Annex A requirements are met.</li> </ul> </li> </ul>				✓	
<b>6D-1.5</b> If keys are injected into a POI either by the solution provider or a third-party key-injection facility (KIF), these must also meet the additional requirements set out in Annex B of this document.						
<b>6D-1.5</b> If POI keys are injected in a key-injection facility (KIF), verify that the KIF also meets the additional requirements set out in Annex B of this document.	<ul style="list-style-type: none"> <li>For all cryptographic keys used on POI devices: <ul style="list-style-type: none"> <li>Identify whether POI keys are injected in a key-injection facility (KIF).</li> <li>If POI keys are injected at a key-injection facility (KIF), confirm that Annex B requirements are met.</li> </ul> </li> </ul>				✓	
<b>6D-2</b> The mechanisms used to load secret and private keys—such as terminals, external PIN pads, key guns, or similar devices and methods—must be protected to prevent any type of monitoring that could result in the unauthorized disclosure of any component.						
<b>6D-2.1</b> Clear-text secret and private keys and key components must be transferred into a cryptographic device only when it can be ensured that: <ul style="list-style-type: none"> <li>Any cameras in the environment are positioned to ensure they cannot monitor the entering of clear-text key components.</li> <li>There is no unauthorized mechanism at the interface between the conveyance medium and the cryptographic device that might disclose the transferred keys.</li> <li>The device has not been subject to any prior tampering that could lead to the disclosure of keys or account data.</li> </ul>						
<b>6D-2.1</b> Observe key-loading environments, processes, and mechanisms (for example, terminals, PIN pads, key guns, etc.) used to transfer keys and key components. Perform the following:	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify key-loading environments, processes and mechanisms observed.</li> </ul>				✓	
<b>6D-2.1.a</b> Ensure cameras are positioned to ensure they cannot monitor the entering of clear-text key components.	<ul style="list-style-type: none"> <li>For all types of key-loading environments, processes and mechanisms observed, describe how observation of camera positions verified that they cannot monitor the entering of clear-text key components.</li> </ul>				✓	

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-2.1.b</b> Verify that keys and components are transferred into a cryptographic device only after an inspection of the devices and mechanism ensures: <ul style="list-style-type: none"> <li>There is no unauthorized mechanism at the interface between the conveyance medium and the cryptographic device that might disclose the transferred keys.</li> <li>The device has not been subject to any prior tampering that could lead to the disclosure of keys or account data.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of key-loading environments, processes and mechanisms observed, describe how observation of processes verified that keys and components are transferred into a cryptographic device only after an inspection of the devices and mechanism ensures: <ul style="list-style-type: none"> <li>There is no unauthorized mechanism at the interface between the conveyance medium and the cryptographic device that might disclose the transferred keys.</li> <li>The device has not been subject to any prior tampering that could lead to the disclosure of keys or account data.</li> </ul> </li> </ul>				✓	
<b>6D-2.2</b> The injection of secret or private key components from electronic medium to a cryptographic device (and verification of the correct receipt of the component, if applicable) results in either of the following: <ul style="list-style-type: none"> <li>The medium is placed into secure storage and managed under dual control (only if there is a possibility it will be required for future re-insertion of the component into the cryptographic device); or</li> <li>All traces of the component are erased or otherwise destroyed from the electronic medium.</li> </ul>						
<b>6D-2.2.a</b> Examine documented procedures for the injection of secret or private key components from electronic medium to a cryptographic device. Verify procedures define specific instructions to be followed as a result of key injection, including: <ul style="list-style-type: none"> <li>Instructions for the medium to be placed into secure storage and managed under dual control (only if there is a possibility it will be required for future re-insertion of the component into the cryptographic device); or</li> <li>Instructions to erase or otherwise destroy all traces of the component from the electronic medium.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for the injection of secret or private key components from electronic medium to a cryptographic device.</li> <li>Confirm that the documented procedures include specific instructions to be followed as a result of key injection, including: <ul style="list-style-type: none"> <li>Instructions for the medium to be placed into secure storage and managed under dual control (only if there is a possibility it will be required for future re-insertion of the component into the cryptographic device); or</li> <li>Instructions to erase or otherwise destroy all traces of the component from the electronic medium.</li> </ul> </li> </ul> </li> </ul>		✓			

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-2.2.b</b> Observe key-injection processes to verify that the injection process results in one of the following: <ul style="list-style-type: none"> <li>The medium used for key injection is placed into secure storage and managed under dual control (only if there is a possibility it will be required for future re-insertion of the component into the cryptographic device); or</li> <li>All traces of the component are erased or otherwise destroyed from the electronic medium.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how key-injection processes were observed to ensure that the injection process results in one of the following: <ul style="list-style-type: none"> <li>The medium used for key injection is placed into secure storage and managed under dual control (only if there is a possibility it will be required for future re-insertion of the component into the cryptographic device); or</li> <li>All traces of the component are erased or otherwise destroyed from the electronic medium.</li> </ul> </li> </ul> </li> </ul>				✓	
<b>6D-2.3</b> For electronic key-loading devices used to inject keys into POIs, the following must be in place:						
<b>6D-2.3</b> Review documented procedures and observe processes for the use of key-loading devices. Perform the following:	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for the use of key-loading devices.</li> <li>Describe the processes observed for the use of key-loading devices</li> </ul> </li> </ul>		✓		✓	
<b>6D-2.3.1</b> The key-loading device is a physically secure SCD, designed and implemented in such a way that any unauthorized disclosure of the key is prevented or detected.						
<b>6D-2.3.1</b> Verify the key-loading device is a physically secure SCD, designed and implemented in such a way that any unauthorized disclosure of the key is prevented or detected.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6D-2.3) require use of a physically secure SCD, designed and implemented in such a way that any unauthorized disclosure of the key is prevented or detected.</li> <li>Describe how observation of the key-loading device verified the device is a physically secure SCD, designed and implemented in such a way that any unauthorized disclosure of the key is prevented or detected.</li> </ul> </li> </ul>	✓	✓			
<b>6D-2.3.2</b> The key-loading device is under the supervision of a person authorized by management, or stored in a secure container such that no unauthorized person can have access to it.						



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<b>6D-2.3.2</b> Verify the key-loading device is under the supervision of a person authorized by management, or stored in a secure container such that no unauthorized person can have access to it.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6D-2.3) include that the key-loading device must be under the supervision of a person authorized by management, or stored in a secure container such that no unauthorized person can have access to it.</li> <li>Describe how observation of the key-loading device and processes verified the device is under the supervision of a person authorized by management, or stored in a secure container such that no unauthorized person can have access to it.</li> </ul> </li> </ul>		✓		✓	
<b>6D-2.3.3</b> The key-loading device is designed or controlled so that only authorized personnel under dual control can use and enable it to output a key into another SCD. Such personnel must ensure that a key-recording device is not inserted between the SCDs.						
<b>6D-2.3.3.a</b> Verify the key-loading device is designed or controlled so that only authorized personnel under dual control can use and enable it to output a key into another SCD.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6D-2.3) include that the device is designed or controlled so that only authorized personnel under dual control can use and enable it to output a key into another SCD.</li> <li>Describe how observation of the key-loading device and processes verified the device is designed or controlled so that only authorized personnel under dual control can use and enable it to output a key into another SCD.</li> </ul> </li> </ul>		✓		✓	
<b>6D-2.3.3.b</b> Verify that authorized personnel inspect the key-loading device, prior to use to ensure that a key-recording device has not been inserted between the SCDs.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6D-2.3) include authorized personnel inspecting the key-loading device prior to use, to ensure that a key-recording device has not been inserted between the SCDs.</li> <li>Describe how authorized personnel were observed to inspect the key-loading device prior to use, to ensure that a key-recording device has not been inserted between the SCDs.</li> </ul> </li> </ul>		✓		✓	
<b>6D-2.3.4</b> The key-loading device does not retain any information that might disclose the key or a key that it has successfully transferred.						



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<b>6D-2.3.4</b> Verify the key-loading device does not retain any information that might disclose the key or a key that it has successfully transferred.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6D-2.3) include ensuring that the key-loading device does not retain any information that might disclose the key or a key that it has successfully transferred.</li> <li>Describe how observation of the key-loading device verified that the key-loading device does not retain any information that might disclose the key or a key that it has successfully transferred.</li> </ul> </li> </ul>	✓	✓			
<b>6D-2.4</b> Any media (electronic or otherwise) containing secret or private key components used for loading cryptographic keys must be maintained in a secure location and accessible only to authorized custodian(s).						
<b>6D-2.4.a</b> Inspect all media (electronic or otherwise) containing key components used in the loading of cryptographic keys to verify that any such media is maintained in a secure location.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the media (electronic or otherwise) containing key components used in the loading of cryptographic keys that were observed.</li> <li>Describe how the media was observed to be maintained in a secure location.</li> </ul> </li> </ul>				✓	
<b>6D-2.4.b</b> Interview personnel and observe media locations to verify that the media is accessible only to custodian(s) authorized to access the key components.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that media containing key components (as identified in 6D-2.4.a) is accessible only to custodian(s) authorized to access the key components.</li> <li>Describe how observation of media locations verified that the media is accessible only to custodian(s) authorized to access the key components.</li> </ul>			✓	✓	
<b>6D-2.5</b> When removed from secure storage, media or devices containing key components or used for the injection of clear-text cryptographic keys must be in the physical possession of only the designated component holder(s), and only for the minimum practical time necessary to complete the key-loading process.  Key components that can be read/displayed (for example, those printed on paper or stored on magnetic cards, PROMs, or smartcards) must be managed so they are visible only at one point in time to only one designated key custodian,						

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<b>6D-2.5.a</b> Examine documented procedures for removing media or devices containing key components, or that are otherwise used for the injection of cryptographic keys, from secure storage. Verify procedures include the following: <ul style="list-style-type: none"> <li>Requirement that media / devices be in the physical possession of only the designated component holder(s).</li> <li>The media/ devices are removed from secure storage only for the minimum practical time necessary to complete the key-loading process.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for removing media or devices containing key components, or that are otherwise used for the injection of cryptographic keys, from secure storage.</li> <li>Confirm the documented procedures include: <ul style="list-style-type: none"> <li>Requirement that media / devices be in the physical possession of only the designated component holder(s).</li> <li>The media/ devices are removed from secure storage only for the minimum practical time necessary to complete the key-loading process.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6D-2.5.b</b> Interview designated component holder(s) and examine key-management logs to verify that media or devices removed from secure storage are in the physical possession of only the designated component holder.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the personnel designated as component holders who were interviewed.</li> <li>Identify key-management logs examined</li> <li>Describe how examination of the key-management logs and interviews with designated component holders verified that media or devices removed from secure storage are in the physical possession of only the designated component holder.</li> </ul> </li> </ul>	✓		✓	✓	
<b>6D-2.5.c</b> Interview key-injection personnel and examine logs for the removal of media/devices from secure storage to verify they are removed only for the minimum practical time necessary to complete the key-loading process.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the key-injection personnel interviewed who confirmed the time needed to complete the key-loading process.</li> <li>Identify the logs of media/device removals from secure storage that were examined.</li> <li>Describe how examination of the key-management logs and interviews with key-injection personnel verified that media/devices are removed from secure storage only for the minimum practical time necessary to complete the key-loading process.</li> </ul> </li> </ul>		✓	✓		
<b>6D-2.6</b> Written or printed key component must not be opened until immediately prior to use.						

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<b>6D-2.6.a</b> Review documented procedures and confirm that printed/written key components are not opened until immediately prior to use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures to ensure printed/written key components are not opened until immediately prior to use.</li> </ul>		✓			
<b>6D-2.6.b</b> Observe key-loading processes and verify that printed/written key components are not opened until immediately prior to use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading processes verified that printed/written key components are not opened until immediately prior to use.</li> </ul>				✓	
<b>6D-3</b> All hardware and access/authentication mechanisms used for key loading or the signing of authenticated applications (for example, for “whitelists”) must be managed under dual control.						
<b>6D-3.1</b> Any hardware and passwords used in the key-loading function or for the signing of authenticated applications must be controlled and maintained in a secure environment under dual control. <i>Note: Where key-loading is performed for POIs, the secure environment is defined in Annex B.</i>						
<b>6D-3.1.a</b> Examine documented procedures to verify they require the following: <ul style="list-style-type: none"> <li>Any hardware used in the key-loading function or for the signing of authenticated applications must be controlled and maintained in a secure environment under dual control.</li> <li>Any passwords used in the key-loading function or for the signing of authenticated applications must be controlled and maintained in a secure environment under dual control.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for: <ul style="list-style-type: none"> <li>Any hardware used in the key-loading function or for the signing of authenticated applications must be controlled and maintained in a secure environment under dual control.</li> <li>Any passwords used in the key-loading function or for the signing of authenticated applications must be controlled and maintained in a secure environment under dual control.</li> </ul> </li> </ul>		✓			
<b>6D-3.1.b</b> Observe key-loading environments and controls to verify the following: <ul style="list-style-type: none"> <li>All hardware used in the key-loading function or for the signing of authenticated applications is controlled and maintained in a secure environment under dual control.</li> <li>All passwords used for key-loading functions and for the signing of authenticated applications are controlled and maintained in a secure environment under dual control.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading environments and controls verified that: <ul style="list-style-type: none"> <li>All hardware used in the key-loading function or for the signing of authenticated applications is controlled and maintained in a secure environment under dual control.</li> <li>All passwords used for key-loading functions and for the signing of authenticated applications are controlled and maintained in a secure environment under dual control.</li> </ul> </li> </ul>				✓	

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<b>6D-3.1.1</b> Dual-control practices must be specified in emergency procedures and in place during emergency situations. <i>Note: Emergency procedures may include but are not limited to incident-response and disaster-recovery procedures.</i>						
<b>6D-3.1.1.a</b> Examine documented emergency procedures to verify dual-control practices are specified in emergency procedures.	<ul style="list-style-type: none"><li>Identify the document that defines emergency procedures.</li><li>Confirm that the documented procedures specify dual-control practices in emergency procedures, for all types of cryptographic keys identified in Table 6.1.</li></ul>		✓			
<b>6D-3.1.1.b</b> Interview responsible personnel to verify that dual-control practices are maintained during emergency situations.	<ul style="list-style-type: none"><li>Identify the responsible personnel interviewed who confirm that dual-control practices are maintained during emergency situations for all types of cryptographic keys identified in Table 6.1.</li></ul>			✓		
<b>6D-3.1.2</b> Default dual-control mechanisms must be changed.						
<b>6D-3.1.2.a</b> Verify that documented procedures require default dual-control mechanisms be changed.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures requiring default dual-control mechanisms be changed.</li></ul>		✓			
<b>6D-3.1.2.b</b> Interview personnel and observe dual-control mechanisms for key-loading functions to verify there are no default dual-control mechanisms (for example, default passwords) used for key loading or the signing of authenticated applications.	<ul style="list-style-type: none"><li>Identify the personnel interviewed who confirm there are no default dual-control mechanisms used for key loading or for the signing of authenticated applications.</li><li>Describe how observation of dual-control mechanisms for key-loading functions verified there are no default dual-control mechanisms used for key loading or for the signing of authenticated applications.</li></ul>	✓		✓		
<b>6D-3.2</b> All cable attachments must be examined before each key-loading or signing operation to ensure they have not been tampered with or compromised.						
<b>6D-3.2.a</b> Review documented procedures to ensure they require that cable attachments be examined prior to key-loading function or signing operation.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures requiring that cable attachments be examined prior to all key-loading functions or signing operations.</li></ul>		✓			
<b>6D-3.2.b</b> Observe key-loading processes to verify that all cable attachments are properly examined prior to a key-loading function or signing operation.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading processes verified that all cable attachments are properly examined prior to a key-loading function or signing operation.</li></ul>				✓	

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<b>6D-3.3</b> Any physical tokens used to enable key loading or the signing of authenticated applications—for example, physical (brass) keys, or smartcards—must not be in the control or possession of any one individual who could use those tokens to load secret cryptographic keys or sign applications under single control.						
<b>6D-3.3.a</b> Examine documented procedures for the use of physical tokens to enable key loading or the signing of authenticated applications. Verify procedures require that physical tokens must not be in the control or possession of any one individual.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for the use of physical tokens to enable key loading or the signing of authenticated applications.</li> <li>Confirm that the documented procedures require that physical tokens must not be in the control or possession of any one individual.</li> </ul> </li> </ul>		✓			
<b>6D-3.3.b</b> Inspect locations and controls for physical tokens to verify that tokens used to enable key loading or the signing of authenticated applications are not in the control or possession of any one individual.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Describe how inspected locations were observed to ensure that tokens used to enable key loading or the signing of authenticated applications are not in the control or possession of any one individual.</li> <li>Describe how inspected controls were observed to ensure that tokens used to enable key loading or the signing of authenticated applications are not in the control or possession of any one individual.</li> </ul> </li> </ul>		✓		✓	
<b>6D-3.4</b> Use of the equipment must be monitored and a log of all key-loading and application-signing activities maintained for audit purposes.						
<b>6D-3.4.a</b> Observe key-loading and application-signing activities to verify that use of the equipment is monitored.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading and application-signing activities verified that use of the equipment is monitored.</li> </ul>				✓	
<b>6D-3.4.b</b> Verify logs of all key-loading and application-signing activities are maintained.	<ul style="list-style-type: none"> <li>Describe how logs of all key-loading and applications-signing activities were observed to be maintained.</li> </ul>				✓	
<b>6D-4</b> The loading of keys or key components must incorporate a validation mechanism such that the authenticity of the keys is ensured and it can be ascertained that they have not been tampered with, substituted, or compromised.						
<b>6D-4.1</b> A cryptographic-based validation mechanism is in place to ensure the authenticity and integrity of keys and components (for example, testing key check values, hashes, or other similar unique values that are based upon the keys or key components being loaded).						

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<b>6D-4.1.a</b> Examine documented procedures to verify a cryptographic-based validation mechanism is in place to ensure the authenticity and integrity of keys and components.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines a cryptographic-based validation mechanism to ensure the authenticity and integrity of keys and components.</li> </ul>		✓			
<b>6D-4.1.b</b> Observe the key-loading processes to verify that the defined cryptographic-based validation mechanism used to ensure the authenticity and integrity of keys and components is being used.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading processes verified that the defined cryptographic-based validation mechanism is being used to ensure the authenticity and integrity of keys and components.</li> </ul>				✓	
<b>6D-4.1.1</b> Methods used for key validation are consistent with ISO 11568 and prevent exposure of the actual key values.						
<b>6D-4.1.1.a</b> Verify that the methods used for key validation are consistent with ISO 11568 (for example, if check values are used, they should return a value of no more than 4-6 hexadecimal characters).	<ul style="list-style-type: none"> <li>Identify the document that defines methods used for key validation.</li> <li>Describe how observation of key validation processes verified that the key validation methods used are consistent with ISO 11568.</li> </ul>		✓		✓	
<b>6D-4.1.1.b</b> Verify that the implemented methods prevent exposure of the actual key values.	<ul style="list-style-type: none"> <li>Describe how the implemented methods were observed to prevent exposure of the actual key values.</li> </ul>				✓	
<b>6D-4.2</b> Public keys must only be stored in the following approved forms: <ul style="list-style-type: none"> <li>Within a certificate,</li> <li>Within a secure cryptographic device,</li> <li>Encrypted using strong cryptography, or</li> <li>Authenticated with strong cryptography using one of the following methods:               <ul style="list-style-type: none"> <li>ISO16608-2004 compliant MAC</li> <li>NIST SP800-38B CMAC</li> <li>PKCS #7 compliant public-key signature</li> </ul> </li> </ul>						
<b>6D-4.2.a</b> Interview personnel and review documented procedures to verify that all public keys exist only in an approved form.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for all public keys to exist only in an approved form.</li> <li>Identify the personnel interviewed who confirm that the public keys exist only in an approved form.</li> </ul> </li> </ul>		✓	✓		



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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6D-4.2.b</b> Observe public-key stores and mechanisms to verify that public keys exist only in an approved form.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1, describe how observation of public-key stores and mechanisms verified that public keys exist only in an approved form.</li> </ul>				✓	
<b>6D-4.2.1</b> Procedures exist to ensure the integrity and authenticity of public keys prior to storage (for example, during transmission as part of a certificate request operation).						
<b>6D-4.2.1.a</b> Interview personnel and review documentation to verify that procedures exist to ensure the integrity and authenticity of public keys prior to storage.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure the integrity and authenticity of public keys prior to storage.</li> <li>Identify the personnel interviewed who confirm that procedures exist to ensure the integrity and authenticity of public keys prior to storage.</li> </ul> </li> </ul>		✓	✓		
<b>6D-4.2.1.b</b> Observe public-key transmissions and processes to verify the implemented procedures ensure the integrity and authenticity of public keys prior to storage.	<ul style="list-style-type: none"> <li>For all types of public keys identified in Table 6.1, describe how observation of public-key transmissions and processes verified that the implemented procedures ensure the integrity and authenticity of public keys prior to storage.</li> </ul>				✓	
<b>6D-5</b> Documented procedures must exist and be demonstrably in use (including audit trails) for all key-loading activities.						
<b>6D-5.1</b> Procedures must be documented for all key-loading operations, be known to all affected parties and demonstrably be in use.						
<b>6D-5.1.a</b> Verify documented procedures exist for all key-loading operations.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for all key-loading operations.</li> </ul>		✓			
<b>6D-5.1.b</b> Interview responsible personnel to verify that the documented procedures are known and understood by all affected parties for all key-loading operations.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that documented procedures are known and understood by all affected parties for all key-loading operations.</li> <li>Describe how interviews with the responsible personnel confirmed that the documented procedures are known and understood.</li> </ul> </li> </ul>			✓		
<b>6D-5.1.c</b> Observe key-loading process and verify that the documented procedures are demonstrably in use.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-loading processes verified that the documented procedures are demonstrably in use.</li> </ul>				✓	

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
6D-5.2 Audit trails must be in place for all key-loading events.						
6D-5.2 Examine log files and observe logging processes to verify that audit trails are in place for all key-loading events.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1:<ul style="list-style-type: none"><li>Identify log files examined.</li><li>Describe how examination of log files observation of logging processes verified that audit trails are in place for all key-loading events.</li></ul></li></ul>	✓			✓	
6E-1 Unique secret cryptographic keys must be in use for each identifiable link between encryption and decryption points.						
6E-1.1 Where two organizations share a key for securing account data (including a key-encryption key used to encrypt a data-encryption key), that key must meet the following: <ul style="list-style-type: none"><li>Be unique to those two entities and</li><li>Not be given to, or used by, any other entity.</li></ul>						
6E-1.1.a Examine the documented key matrix and operational procedures and interview personnel to determine whether any keys are shared between organizations.  For all keys shared between two organizations (including data-encryption keys for account data, and key-encryption keys used to encrypt a data-encryption key) perform the following:	<ul style="list-style-type: none"><li>Describe how it was determined whether keys are shared between organizations:<ul style="list-style-type: none"><li>Identify the operational procedures examined.</li><li>Identify the documented key matrix examined.</li><li>Identify personnel interviewed.</li></ul></li><li>Identify all types of keys shared between organizations.</li></ul>		✓	✓		
6E-1.1.b Obtain key check values for any master file keys to verify key uniqueness between the two organizations.  If a remote key-establishment and distribution scheme is implemented between networks, examine public keys and/or hash values and/or fingerprints of the keys to verify key uniqueness of the asymmetric-key pairs.	<ul style="list-style-type: none"><li>Describe how observation of key check values for master file keys verified key uniqueness between the two organizations.</li><li>Identify whether a key-establishment and distribution scheme is implemented between networks.</li><li>If a remote key-establishment and distribution scheme is implemented between networks, describe how public keys and/or hash values and/or fingerprints of the keys were observed to ensure key uniqueness of the asymmetric-key pairs.</li></ul>	✓				



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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-1.1.c</b> For internally developed systems, review system-design documentation or source code for uniqueness of cryptograms and/or hash values/fingerprints and/or public keys.	<ul style="list-style-type: none"> <li>For internally developed systems:</li> <li>Identify the system-design documentation or source code reviewed.</li> <li>Describe how observation of system design documentation or source code verified uniqueness of cryptograms and/or hash values/fingerprints and/or public keys.</li> </ul>	✓	✓			
<b>6E-1.1.d</b> For application packages, examine parameter files where the cryptograms of keys shared with other network nodes are specified.  If a remote key-establishment and distribution scheme is implemented between networks, examine the parameter files where the public keys of keys shared with other network nodes are specified and ensure the correct number of public keys exist (a unique one for each network link implemented).	<ul style="list-style-type: none"> <li>For application packages, describe how parameter files were examined.</li> <li>If a remote key-establishment and distribution scheme is implemented between networks, describe how observation of parameter files verified that the correct number of public keys exist (a unique one for each network link implemented).</li> </ul>	✓				
<b>6E-1.1.e</b> Compare key check values against those for known or default keys to verify that known or default key values are not used.	<ul style="list-style-type: none"> <li>Describe how known or default keys were identified.</li> <li>Describe how a comparison of key check values against those for known or default keys verified that known or default key values are not used.</li> </ul>	✓				
<b>6E-1.2</b> Key-generation keys (such as a base derivation key) that are used to derive multiple keys for different devices must never be output from a secure cryptographic device in clear text.						
<b>6E-1.2.a</b> Examine documented procedures to confirm that key-generation keys (such as a base derivation key), that are used to derive multiple keys for different devices, are never output from a secure cryptographic device in clear text.	<ul style="list-style-type: none"> <li>For all types of key-generation keys in use, identify the document that defines procedures to ensure that key-generation keys used to derive multiple keys for different devices are never output from a secure cryptographic device in clear text.</li> </ul>		✓			
<b>6E-1.2.b</b> Observe the process for managing key-generation keys (such as a base derivation key), that are used to derive multiple keys for different devices, to ensure they are never output from a secure cryptographic device in clear text.	<ul style="list-style-type: none"> <li>For all types of key-generation keys in use, describe how observation of the process for managing key-generation keys verified that they are never output from a secure cryptographic device in clear text.</li> </ul>				✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
6E-2 Procedures must exist to prevent bg 5rt34or detect the unauthorized substitution (unauthorized key replacement and key misuse) of one key for another key or the operation of any cryptographic device without legitimate keys.						
6E-2.1 The unauthorized replacement or substitution of one stored key for another or the replacement or substitution of any portion of a key, whether encrypted or unencrypted, must be prevented or detected.						
6E-2.1 Examine documented procedures and technical documentation to confirm that procedures exist to prevent or detect <ul style="list-style-type: none"><li>The unauthorized replacement or substitution of any stored key for another</li><li>The replacement or substitution of any portion of a key, whether encrypted or unencrypted</li></ul>	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures to:<ul style="list-style-type: none"><li>Prevent or detect the unauthorized replacement or substitution of any stored key for another</li><li>Prevent or detect the replacement or substitution of any portion of a key, whether encrypted or unencrypted</li></ul></li></ul>		✓			
6E-2.1.1 TDEA cryptographic keys must be managed as key bundles (for example, using ANSI TR-31) at all times when external to an SCD. Management of key bundles and the individual keys must include: <ul style="list-style-type: none"><li>Assurance of key integrity</li><li>Appropriate usage as specified by the particular mode</li><li>Preventing manipulation of individual keys</li><li>Keys cannot be unbundled for any purpose</li></ul>						
6E-2.1.1.a Examine documented procedures and observe key operations to verify that secret cryptographic keys are managed as key bundles at all times.	<ul style="list-style-type: none"><li>For all TDEA cryptographic keys identified in Table 6.1:<ul style="list-style-type: none"><li>Identify the document that defines procedures for secret cryptographic keys to be managed as key bundles at all times.</li><li>Describe how observation of key operations verified that secret cryptographic keys are managed as key bundles at all times.</li></ul></li></ul>		✓		✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-2.1.1.b</b> Verify that key bundles and the individual keys are managed as follows: <ul style="list-style-type: none"> <li>Key integrity ensures that each key in the bundle has not been altered in an unauthorized manner since the time it was generated, transmitted, or stored by an authorized source.</li> <li>Keys are used in the appropriate order as specified by the particular mode.</li> <li>Key bundles are a “fixed quantity,” such that an individual key cannot be manipulated while leaving the other two keys unchanged; and</li> <li>Key bundles cannot be unbundled for any purpose.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm that the documented procedures (identified in 6E-2.1.1.a) include procedures for key bundles and the individual keys to be managed as follows: <ul style="list-style-type: none"> <li>Key integrity ensures that each key in the bundle has not been altered in an unauthorized manner since the time it was generated, transmitted, or stored by an authorized source.</li> <li>Keys are used in the appropriate order as specified by the particular mode.</li> <li>Key bundles are a “fixed quantity,” such that an individual key cannot be manipulated while leaving the other two keys unchanged; and</li> <li>Key bundles cannot be unbundled for any purpose.</li> </ul> </li> <li>Describe how observation of key operations verified that key bundles and the individual keys are managed as follows: <ul style="list-style-type: none"> <li>Key integrity ensures that each key in the bundle has not been altered in an unauthorized manner since the time it was generated, transmitted, or stored by an authorized source.</li> <li>Keys are used in the appropriate order as specified by the particular mode.</li> <li>Key bundles are a “fixed quantity,” such that an individual key cannot be manipulated while leaving the other two keys unchanged; and</li> <li>Key bundles cannot be unbundled for any purpose.</li> </ul> </li> </ul>		✓		✓	
<b>6E-2.2</b> Documented procedures must exist and be demonstrably in use describing how the replacement and/or substitution of one key for another is prevented.  These procedures must specifically include the following:						

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<b>6E-2.2</b> Verify documented procedures exist defining how the replacement and/or substitution of one key for another is prevented, including 6E-2.2.1 through 6E-2.2.4, below. Perform the following:	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for preventing the replacement and/or substitution of one key for another.</li> <li>Confirm the documented procedures include:                   <ul style="list-style-type: none"> <li>HSMs (including CA's HSMs) must not remain in a "sensitive" state when connected to online production systems.</li> <li>Keys no longer needed are destroyed.</li> <li>Procedures for monitoring and alerting to the presence of multiple cryptographic synchronization errors, including:                       <ul style="list-style-type: none"> <li>Specific actions that determine whether the legitimate value of the cryptographic key has changed.</li> <li>Proactive safeguards that shut down the source of any synchronization errors and start an investigative process to determine the true cause of the event.</li> </ul> </li> <li>Physical and logical controls exist over the access to and use of SCDs used to create cryptograms to prevent misuse</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6E-2.2.1</b> HSMs (including CA's HSMs) must not remain in a "sensitive" state when connected to online production systems. <b>Note:</b> A "sensitive state" allows an HSM to perform privileged or sensitive functions that are not available during routine HSM operations. Examples of sensitive functions include but are not limited to: loading of key components, outputting clear-text key components, and altering HSM configuration.						
<b>6E-2.2.1.a</b> Examine HSMs to ensure they do not remain in a "sensitive" state when connected to online production systems.	<ul style="list-style-type: none"> <li>Describe how observation of HSM configurations and processes verified that HSMs do not remain in a "sensitive" state when connected to online production systems.</li> </ul>	✓			✓	
<b>6E-2.2.1.b</b> If a CA is used, examine the CA's HSMs and observe CA process to ensure that HSMs do not remain in the "sensitive" state when connected to online production systems.	<ul style="list-style-type: none"> <li>Identify whether a Certification Authority (CA) is used.</li> <li>If a Certification Authority (CA) is used:               <ul style="list-style-type: none"> <li>Describe how observation of the CA's HSMs and processes verified that HSMs do not remain in the "sensitive" state when connected to online production systems.</li> </ul> </li> </ul>	✓			✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-2.2.2</b> Keys no longer needed are destroyed.						
<b>6E-2.2.2</b> Verify that keys no longer needed are destroyed.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of processes verified that keys no longer needed are destroyed.</li> </ul>				✓	
<b>6E-2.2.3</b> Procedures for monitoring and alerting to the presence of multiple cryptographic synchronization errors, including the following: Specific actions that determine whether the legitimate value of the cryptographic key has changed. (For example, encryption of a known value to determine whether the resulting cryptogram matches the expected result.) Proactive safeguards that shut down the source of any synchronization errors and start an investigative process to determine the true cause of the event.						
<b>6E-2.2.3.a</b> Verify procedures have been implemented for monitoring and alerting to the presence of multiple cryptographic synchronization errors.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how procedures were observed to be implemented for monitoring and alerting to the presence of multiple cryptographic synchronization errors.</li> </ul>				✓	
<b>6E-2.2.3.b</b> Verify that implemented procedures include: <ul style="list-style-type: none"> <li>Specific actions that determine whether the legitimate value of the cryptographic key has changed. (For example, encryption of a known value to determine whether the resulting cryptogram matches the expected result.)</li> <li>Proactive safeguards that shut down the source of any synchronization errors and start an investigative process to determine the true cause of the event.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how implemented processes were observed to include:               <ul style="list-style-type: none"> <li>Specific actions that determine whether the legitimate value of the cryptographic key has changed.</li> <li>Proactive safeguards that shut down the source of any synchronization errors and start an investigative process to determine the true cause of the event.</li> </ul> </li> </ul>				✓	
<b>6E-2.2.4</b> Physical and logical controls exist over the access to and use of SCDs used to create cryptograms to prevent misuse						
<b>6E-2.2.4.a</b> Verify physical controls exist over the access to and use of devices used to create cryptograms.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of devices used to create cryptograms verified that:               <ul style="list-style-type: none"> <li>Physical controls exist over the access to devices.</li> <li>Physical controls exist over the use of devices.</li> </ul> </li> </ul>				✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-2.2.4.b</b> Verify logical controls exist over the access to and use of devices used to create cryptograms.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of devices used to create cryptograms verified that: <ul style="list-style-type: none"> <li>Logical controls exist over the access to devices.</li> <li>Logical controls exist over the use of devices.</li> </ul> </li> </ul>				✓	
<b>6E-2.3</b> Key-component documents and their packaging that show signs of tampering must result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.						
<b>6E-2.3.a</b> Verify procedures are documented for the following: <ul style="list-style-type: none"> <li>Key-component documents showing signs of tampering must result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> <li>Key-component packaging showing signs of tampering must result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines the procedures for the following: <ul style="list-style-type: none"> <li>Key-component documents showing signs of tampering must result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> <li>Key-component packaging showing signs of tampering must result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-2.3.b</b> Interview personnel and observe processes to verify procedures are implemented as follows: <ul style="list-style-type: none"> <li>Key-component documents showing signs of tampering result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> <li>Key-component packaging showing signs of tampering results in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Key-component documents showing signs of tampering result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> <li>Key-component packaging showing signs of tampering results in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> </ul> </li> <li>Describe how observation of processes verified that: <ul style="list-style-type: none"> <li>Key-component documents showing signs of tampering result in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> <li>Key-component packaging showing signs of tampering results in the destruction and invalidation of all associated key components and the resultant cryptographic key(s) at all locations where they exist.</li> </ul> </li> </ul>			✓	✓	
<b>6E-3</b> Cryptographic keys must be used only for their sole intended purpose and must never be shared between production and test systems.						
<b>6E-3.1</b> To limit the magnitude of exposure should any key(s) be compromised, and to significantly strengthen the security of the underlying system, the device must enforce the following practices:						
<b>6E-3.1.1</b> Cryptographic keys must only be used for the purpose they were intended—for example, key-encryption keys must not be used as data-encryption keys, PIN keys must not be used for account-data encryption, and these keys must not be used to encrypt any arbitrary data (data that is not account data).						
<b>6E-3.1.1.a</b> Examine key-management documentation and interview key custodians to verify that cryptographic keys are defined for a specific purpose.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines the specific purpose for cryptographic keys.</li> <li>Identify the key custodians interviewed who confirm that cryptographic keys are defined for a specific purpose.</li> </ul> </li> </ul>		✓	✓		
<b>6E-3.1.1.b</b> Observe cryptographic devices and key-management processes to verify that cryptographic keys are used only for the defined purpose for which they were intended.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of cryptographic devices and key-management processes verified that cryptographic keys are used only for the defined purpose for which they were intended.</li> </ul>	✓			✓	



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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-3.1.2</b> Master keys (and any variants or keys derived from master keys) used by host processing systems for encipherment of keys for local storage are not used for other purposes—for example, key conveyance between platforms that are not part of the same logical configuration.						
<b>6E-3.1.2</b> Observe cryptographic devices and key-management processes to verify that master keys—and any variants or keys derived from master keys—used for encipherment of keys for local storage are not used for other purposes.	<ul style="list-style-type: none"> <li>Describe how observation of cryptographic devices and key-management processes verified that master keys, and any variants or keys derived from master keys, used for encipherment of keys for local storage are not used for other purposes.</li> </ul>	✓			✓	
<b>6E-3.1.3</b> Account data keys, key-encipherment keys, and PIN-encryption keys have different values. <i>Ensuring key purpose is an essential part of key management, and compromise of key purpose can render even strong cryptography invalid. Review of HSM commands used to access keys for decryption of data will often show if keys are being misused; for example, where a key that is designed for account-data encryption is used to decrypt other data as well.</i>						
<b>6E-3.1.3.a</b> Examine key-management documentation and interview key custodians to verify that account data keys, key-encipherment keys, and PIN-encryption keys must have different values.	<ul style="list-style-type: none"> <li>Identify the document that requires account data keys, key-encipherment keys, and PIN-encryption keys to have different values</li> <li>Identify the key custodians interviewed who confirm that account data keys, key-encipherment keys, and PIN-encryption keys have different values.</li> </ul>		✓	✓		
<b>6E-3.1.3.b</b> Observe key-generation processes and a sample of key check values to verify that account data keys, key-encipherment keys, and PIN-encryption keys must have different values.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the sample of key check values observed.</li> <li>Identify the key-generation processes observed</li> <li>Describe how observation of key-generation processes and the sample of key check values verified that account data keys, key-encipherment keys, and PIN-encryption keys have different values.</li> </ul> </li> </ul>	✓			✓	✓
<b>6E-3.2</b> To limit the magnitude of exposure should any key(s) be compromised and to significantly strengthen the security of the underlying system, the following practices must be enforced for private/public keys:						
<b>6E-3.2.1</b> Private keys must only be used as follows: <ul style="list-style-type: none"> <li>To create digital signatures or to perform decryption operations.</li> <li>For a single purpose—a private key must only be used for either decryption or for creating digital signatures, but not both (except for transaction-originating SCDs).</li> </ul>						



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-3.2.1</b> Examine key-management documentation and interview key custodians to verify that private keys are only used: <ul style="list-style-type: none"> <li>To create digital signatures or to perform decryption operations.</li> <li>For a single purpose—a private key must only be used for either decryption or for creating digital signatures, but not both.</li> </ul>	<ul style="list-style-type: none"> <li>For all private keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure private keys are only used: <ul style="list-style-type: none"> <li>To create digital signatures or to perform decryption operations.</li> <li>For a single purpose—a private key must only be used for either decryption or for creating digital signatures, but not both.</li> </ul> </li> <li>Identify the key custodians interviewed who confirm that private keys are only used: <ul style="list-style-type: none"> <li>To create digital signatures or to perform decryption operations.</li> <li>For a single purpose—a private key must only be used for either decryption or for creating digital signatures, but not both.</li> </ul> </li> </ul> </li> </ul>		✓	✓		
<b>6E-3.2.2</b> Public keys must only be used as follows: <ul style="list-style-type: none"> <li>To perform encryption operations or to verify digital signatures.</li> <li>For a single purpose—a public key must only be used for either encryption or for verifying digital signatures, but not both (except for transaction-originating devices).</li> </ul>						
<b>6E-3.2.2</b> Examine key-management documentation and interview key custodians to verify that public keys are only used: <ul style="list-style-type: none"> <li>To perform encryption operations or to verify digital signatures.</li> <li>For a single purpose—a public key must only be used for either encryption or for verifying digital signatures, but not both.</li> </ul>	<ul style="list-style-type: none"> <li>For all public keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure public keys are only used: <ul style="list-style-type: none"> <li>To perform encryption operations or to verify digital signatures.</li> <li>For a single purpose—a public key must only be used for either encryption or for verifying digital signatures, but not both.</li> </ul> </li> <li>Identify the key custodians interviewed who confirm that public keys are only used: <ul style="list-style-type: none"> <li>To perform encryption operations or to verify digital signatures.</li> <li>For a single purpose—a public key must only be used for either encryption or for verifying digital signatures, but not both.</li> </ul> </li> </ul> </li> </ul>		✓	✓		

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-3.3</b> Keys must never be shared or substituted between production and test systems. <ul style="list-style-type: none"><li>Production keys must never be present or used in a test system, and</li><li>Test keys must never be present or used in a production system.</li></ul>						
<b>6E-3.3.a</b> Examine key-management documentation and interview key custodians to verify that cryptographic keys are never shared or substituted between production and development systems.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1:<ul style="list-style-type: none"><li>Identify the document that defines procedures to ensure cryptographic keys are never shared or substituted between production and development systems.</li><li>Identify the key custodians interviewed who confirm that cryptographic keys are never shared or substituted between production and development systems.</li></ul></li></ul>		✓	✓		
<b>6E-3.3.b</b> Observe processes for generating and loading keys into in production systems to ensure that they are in no way associated with test or development keys.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, describe how observation of processes for generating and loading keys into production systems verified that the keys are in no way associated with test or development keys.</li></ul>				✓	
<b>6E-3.3.c</b> Observe processes for generating and loading keys into in test systems to ensure that they are in no way associated with production keys.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, describe how observation of processes for generating and loading keys into test systems verified that the keys are in no way associated with production keys.</li></ul>				✓	
<b>6E-3.3.d</b> Compare check, hash, cryptogram, or fingerprint values for production and development keys to verify that development and test keys have different key values.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1, describe how comparison of check, hash, cryptogram, or fingerprint values for production and development keys verified that development and test keys have different key values.</li></ul>	✓				
<b>6E-4</b> All secret and private keys must be unique (except by chance) to that device.						

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<p><b>6E-4.1</b> All cryptographic keys that have ever been used in a transaction-originating POI device to encrypt account data or to protect account-data keys through encryption, must be:</p> <ul style="list-style-type: none"><li>Known only to a single POI device, and</li><li>Known only to HSMs in the solution provider’s decryption environment for that POI device, at the minimum number of facilities consistent with effective system operations.</li></ul> <p><i>Disclosure of the key in one such device must not provide any information that could be feasibly used to determine the key in any other such device.</i></p> <p><i>The requirement for unique private and secret keys includes all keys that are used to secure account data or to provide security to account-data keys. This includes not only the account-data keys themselves, but also any KEKs, master keys, or any secret and private keys used to sign firmware updates or for other device-management operations.</i></p>						
<p><b>6E-4.1.a</b> Examine documented procedures for the generation, loading, and usage of all keys used in transaction-originating POI devices. Verify the procedures ensure that all keys used in transaction-originating POI devices are:</p> <ul style="list-style-type: none"><li>Known only to a single POI device, and</li><li>Known only to one or more HSMs in the solution provider’s decryption environment for that POI device, at the minimum number of facilities consistent with effective system operations.</li></ul>	<ul style="list-style-type: none"><li>Identify the document that defines procedures for the generation, loading, and usage of all keys used in transaction-originating POI devices.</li><li>Confirm that the documented procedures ensure that all keys used in transaction-originating POI devices are:<ul style="list-style-type: none"><li>Known only to a single POI device, and</li><li>Known only to one or more HSMs in the solution provider’s decryption environment for that POI device, at the minimum number of facilities consistent with effective system operations.</li></ul></li></ul>		✓			
<p><b>6E-4.1.b</b> Observe HSM functions and procedures for generating and loading keys for use in transaction-originating POIs to verify that unique keys are generated and used for each POI device.</p>	<ul style="list-style-type: none"><li>Describe how observation of HSM functions and procedures for generating and loading keys for use in transaction-originating POIs verified that unique keys are generated and used for each POI device.</li></ul>	✓			✓	
<p><b>6E-4.1.c</b> Examine check, hash, or fingerprint values for a sample of cryptographic keys from different POI devices to verify keys are unique for each POI device.</p>	<ul style="list-style-type: none"><li>Identify the sample of cryptographic keys from different POI devices.</li><li>Describe how observation of the check, hash or fingerprint values for the sample of keys verified that keys are unique for each POI device in the sample.</li></ul>	✓				✓

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-4.1.d</b> Compare all POI public keys, if used, across all decryption points as well as for every POI connection, to ensure there are no duplicates across POI devices.	<ul style="list-style-type: none"> <li>If POI public keys are used, describe how comparison of all POI public keys across all decryption points and POI connections verified there are no duplicates across POI devices.</li> </ul>	✓				
<b>6E-4.1.e</b> Compare the number of POI devices in use to the number of cryptographic keys in use to verify that an individual key is defined for each device. (Having fewer keys than devices would indicate that the same key is being used for several devices.)	<ul style="list-style-type: none"> <li>Describe how comparison of the number of POI devices in use compared with the number of cryptographic keys in use verified that an individual key is defined for each device.</li> </ul>	✓			✓	
<b>6E-4.1.f</b> Examine cryptograms of keys used between the POI and its decryption point and compare to cryptograms used in other decryption points to verify that the key exists at the minimum number of facilities consistent with effective system operations.	<ul style="list-style-type: none"> <li>Describe how comparison of cryptograms of keys used between the POI and its decryption point with cryptograms used in other decryption points verified that the key exists at the minimum number of facilities consistent with effective system operations.</li> </ul>	✓				
<b>6E-4.2</b> These unique keys, or set of keys, must be totally independent and produced using a reversible process, such as that used to produce "key variants."						
<b>6E-4.2.a</b> Examine documented procedures for generating all types of keys and verify the procedures ensure: <ul style="list-style-type: none"> <li>That unique keys, or sets of keys, must be totally independent.</li> <li>That unique keys, or sets of keys, are produced using a reversible process.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for generating keys.</li> <li>Confirm that the documented procedures ensure:                   <ul style="list-style-type: none"> <li>That unique keys, or sets of keys, must be totally independent.</li> <li>That unique keys, or sets of keys, are produced using a reversible process.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>6E-4.2.b</b> Interview personnel and observe key-generation processes to verify that keys are generated independently of other keys of the same type.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that keys are generated independently of other keys of the same type.</li> <li>Describe how key-generation processes were observed to ensure that keys are generated independently of other keys of the same type.</li> </ul> </li> </ul>			✓	✓	

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6E-4.2.c</b> Interview personnel and observe key-generation processes to verify that variants of one key are not used across multiple POI devices, or multiple decryption end points.	<ul style="list-style-type: none"> <li>Identify the personnel interviewed who confirm that variants of one key are not used across multiple POI devices, or multiple decryption end points.</li> <li>Describe how key-generation processes were observed to ensure that variants of one key are not used across multiple POI devices, or multiple decryption end points.</li> </ul>			✓	✓	
<b>6E-4.3</b> Emergency procedures must support requirements for unique device keys and not circumvent uniqueness controls.						
<b>6E-4.3.a</b> Examine documented emergency procedures and verify they: <ul style="list-style-type: none"> <li>Support requirements for unique device keys.</li> <li>Do not circumvent uniqueness controls.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines emergency procedures.</li> <li>Confirm that the documented procedures:               <ul style="list-style-type: none"> <li>Support requirements for unique device keys.</li> <li>Do not circumvent uniqueness controls.</li> </ul> </li> </ul>		✓			
<b>6E-4.3.b</b> Interview responsible personnel to verify: <ul style="list-style-type: none"> <li>Requirements for unique device keys are maintained during emergency situations.</li> <li>Uniqueness controls are not circumvented during emergency situations.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that:               <ul style="list-style-type: none"> <li>Requirements for unique device keys are maintained during emergency situations.</li> <li>Uniqueness controls are not circumvented during emergency</li> </ul> </li> </ul>			✓		
<b>6E-4.4</b> Where master keys are generated by a derivation process and derived from the same base derivation key, ensure the following: <ul style="list-style-type: none"> <li>Unique data must be used for the derivation process such that all transaction-originating SCDs receive unique secret keys.</li> <li>Key derivation must be performed prior to a key being loaded/sent to the recipient transaction-originating POI.</li> </ul> <p><i>This requirement refers to the use of a single “base” key to derive master keys for many different POI devices, using a key-derivation process as described above. This requirement does not preclude multiple unique keys being loaded on a single device, or for the device to use a unique key for derivation of other keys, once loaded.</i></p>						

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<b>6E-4.4.a</b> Examine documented procedures and observe processes for generating master keys. Verify the following is implemented where master keys are generated by a derivation process and derived from the same base derivation key: <ul style="list-style-type: none"> <li>Unique data is used for the derivation process such that all transaction-originating SCDs receive unique secret keys.</li> <li>Key derivation is performed prior to a key being loaded/sent to the recipient transaction-originating POI.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for generating master keys.</li> <li>Confirm the documented procedures require the following where master keys are generated by a derivation process and derived from the same base derivation key: <ul style="list-style-type: none"> <li>Unique data is used for the derivation process such that all transaction-originating SCDs receive unique secret keys.</li> <li>Key derivation is performed prior to a key being loaded/sent to the recipient transaction-originating POI.</li> </ul> </li> <li>Describe how processes for generating master keys was observed to ensure that where master keys are generated by a derivation process and derived from the same base derivation key: <ul style="list-style-type: none"> <li>Unique data is used for the derivation process such that all transaction-originating SCDs receive unique secret keys.</li> <li>Key derivation is performed prior to a key being loaded/sent to the recipient transaction-originating POI.</li> </ul> </li> </ul>		✓		✓	
<b>6E-4.4.b</b> Verify that derivation keys used to generate keys for multiple devices are never loaded into a POI device.	<ul style="list-style-type: none"> <li>Confirm the documented procedures (identified in 6E-4.4.a) include that derivation keys used to generate keys for multiple devices are never loaded into a POI device.</li> <li>Describe how observation of processes verified that derivation keys used to generate keys for multiple devices are never loaded into a POI device.</li> </ul>		✓		✓	
<b>6F-1</b> Secret keys used for encrypting account-data-encryption keys or for account-data encryption, or private keys used in connection with remote key-distribution implementations, must never exist outside of a secure cryptographic device, except when encrypted or managed using the principles of dual control and split knowledge.						
<b>6F-1.1</b> Secret or private keys must only exist in one or more of the following forms at all times—including during generation, transmission, storage, and use: <ul style="list-style-type: none"> <li>At least two separate key shares or full-length components</li> <li>Encrypted with a key of equal or greater strength</li> <li>Contained within a secure cryptographic device</li> </ul>						

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<b>6F-1.1.a</b> Examine documented key-generation procedures and observe key-generation processes to verify that secret or private keys only exist in one or more approved forms at all times during key generation.	<ul style="list-style-type: none"> <li>For all types of secret or private keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines key-generation procedures.</li> <li>Confirm the documented procedures ensure that secret or private keys only exist in one or more approved forms at all times during key generation.</li> <li>Describe how key-generation processes were observed to ensure that secret or private keys only exist in one or more approved forms at all times during key generation.</li> </ul> </li> </ul>		✓		✓	
<b>6F-1.1.b</b> Examine documented procedures for transmission of keys and observe key-transmission processes to verify that secret or private keys only exist in one or more approved forms at all times during transmission.	<ul style="list-style-type: none"> <li>For all types of secret or private keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines the procedures for the transmission of keys.</li> <li>Confirm the documented procedures ensure that secret or private keys only exist in one or more approved forms at all times during transmission.</li> <li>Describe how key-transmission processes were observed to ensure that secret or private keys only exist in one or more approved forms at all times during transmission.</li> </ul> </li> </ul>		✓		✓	
<b>6F-1.1.c</b> Examine documented procedures for key storage and observe key stores to verify that secret or private keys only exist in one or more approved forms at all times when stored.	<ul style="list-style-type: none"> <li>For all types of secret or private keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for key storage.</li> <li>Confirm the documented procedures ensure that secret or private keys only exist in one or more approved forms at all times when stored.</li> <li>Describe how observation of key stores verified that secret or private keys only exist in one or more approved forms at all times when stored.</li> </ul> </li> </ul>		✓		✓	



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<b>6F-1.1.d</b> Examine documented key-usage procedures and observe operational processes to verify that secret or private keys only exist in one or more approved forms at all times during use.	<ul style="list-style-type: none"> <li>For all types of secret or private keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for key-usage.</li> <li>Confirm the documented procedures ensure that secret or private keys only exist in one or more approved forms at all times during use.</li> <li>Describe how operational processes were observed to ensure that secret or private keys only exist in one or more approved forms at all times during use.</li> </ul> </li> </ul>		✓		✓	
<b>6F-1.2</b> Wherever key components are used, they have the following properties:						
<b>6F-1.2</b> Examine documented procedures and interview responsible personnel to determine all instances where key components are used. Perform the following wherever key components are used:	<ul style="list-style-type: none"> <li>Identify the document reviewed to determine all instances where key components are used.</li> <li>Identify the personnel interviewed to determine all instances where key components are used.</li> </ul>		✓	✓		
<b>6F-1.2.1</b> Knowledge of any one key component does not convey any knowledge of any part of the actual cryptographic key.						
<b>6F-1.2.1</b> Review processes for creating key components and examine key components to verify that knowledge of any one key component does not convey any knowledge of any part of the actual cryptographic key.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Describe how observation of processes for creating key components and examination of the key components verified that knowledge of any one key component does not convey any knowledge of any part of the actual cryptographic key.</li> </ul> </li> </ul>	✓			✓	
<b>6F-1.2.2</b> Construction of the cryptographic key requires the use of at least two key components.						
<b>6F-1.2.2</b> Observe processes for constructing cryptographic keys to verify that at least two key components are required for each key construction.	<ul style="list-style-type: none"> <li>For all instances where key components are used, describe how the processes for constructing cryptographic keys were observed to ensure that at least two key components are required for each key construction.</li> </ul>				✓	
<b>6F-1.2.3</b> Each key component has one or more specified custodians.						



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<b>6F-1.2.3.a</b> Examine documented procedures for the use of key components and interview key custodians to verify that each key component is assigned to a specific individual, or set of individuals, who are designated as key custodians for that component.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for the use of key components.</li> <li>Confirm that the documented procedures require that each key component is assigned to a specific individual, or set of individuals, who are designated as key custodians for that component.</li> <li>Identify the key custodians interviewed who confirm that each key component is assigned to a specific individual, or set of individuals, who are designated as key custodians for that component.</li> </ul> </li> </ul>		✓	✓		
<b>6F-1.2.3.b</b> Observe key-component access controls and key-custodian authorizations/assignments to verify that all individuals with access to key components are designated as key custodians for that component.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Identify the document that defines key-custodian authorizations/assignments.</li> <li>Describe how observation of the key-component access controls verified that all individuals with access to key components are designated as key custodians for that component.</li> </ul> </li> </ul>	✓	✓			
<b>6F-1.2.4</b> Procedures exist to ensure any custodian never has access to sufficient key components to reconstruct a cryptographic key. <i>For example, in an m-of-n scheme, where only two of any three components are required to reconstruct the cryptographic key, a custodian cannot have current or prior knowledge of more than one component. If a custodian was previously assigned component A, which was then reassigned, the custodian cannot then be assigned component B or C, as this would give them knowledge of two components, which gives them ability to recreate the key.</i> <i>In an m-of-n scheme where all three components are required to reconstruct the cryptographic key, a single custodian may be permitted to have access to two of the key components (for example, component A and component B), as a second custodian (with, in this example, component C) would be required to reconstruct the final key, ensuring that dual control is maintained.</i>						
<b>6F-1.2.4.a</b> Examine documented procedures for the use of key components to verify that procedures ensure that any custodian never has access to sufficient key components to reconstruct a cryptographic key.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for the use of key components.</li> <li>Confirm the documented procedure ensure that any custodian never has access to sufficient key components to reconstruct a cryptographic key.</li> </ul> </li> </ul>		✓			

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<b>6F-1.2.4.b</b> Examine key-component access controls and access logs to verify that authorized custodians cannot access sufficient key components to reconstruct a cryptographic key.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Identify the access logs examined.</li> <li>Describe how observation of key-component access controls and examination of access logs verified that authorized custodians cannot access sufficient key components to reconstruct a cryptographic key.</li> </ul> </li> </ul>	✓			✓	
<b>6F-1.2.5</b> Key components must be combined using a process such that no active bit of the key can be determined without knowledge of the remaining components. (For example, via XOR'ing.) <i>Note that concatenation of key components together to form the key is unacceptable; e.g., concatenating two eight-hexadecimal character halves to form a sixteen-hexadecimal secret key.</i> The resulting key must only exist within the SCD.						
<b>6F-1.2.5.a</b> Examine documented procedures for combining key components and observe processes to verify that key components are combined using a process such that no active bit of the key can be determined without knowledge of the remaining components.	<ul style="list-style-type: none"> <li>For all instances where key components are used: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for combining key components.</li> <li>Confirm the documented procedures ensure key components are combined such that no active bit of the key can be determined without knowledge of the remaining components.</li> <li>Describe how observation of processes verified that key components are combined such that no active bit of the key can be determined without knowledge of the remaining components.</li> </ul> </li> </ul>		✓		✓	
<b>6F-1.2.5.b</b> Examine key-component lengths for a key generated with those components to verify that key components are not concatenated to form the key.	<ul style="list-style-type: none"> <li>For all instances where key components are used, describe how observation of key-component lengths for a key generated with those components verified that key components are not concatenated to form the key.</li> </ul>				✓	
<b>6F-1.3</b> Key components must be stored as follows:						

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<p><b>6F-1.3</b> Examine documented procedures, interview responsible personnel and inspect key-component storage locations to verify that key components are stored as follows:</p>	<ul style="list-style-type: none"> <li>For all instances where key components are used:               <ul style="list-style-type: none"> <li>Identify the document that defines procedures for key component storage.</li> <li>Confirm the documented procedures include:                   <ul style="list-style-type: none"> <li>Key components that exist in clear text outside of an SCD must be sealed in opaque, tamper-evident packaging that prevents the determination of the key component without noticeable damage to the packaging.</li> <li>Key components for each specific custodian must be stored in a separate secure container that is accessible only by the custodian and/or designated backup(s).</li> <li>If a key is stored on a token, and a PIN or similar mechanism is used to access the token, only that token's owner (or designated backup(s)) must have possession of both the token and its corresponding PIN.</li> </ul> </li> <li>Identify the responsible personnel interviewed who confirm key components are stored as follows:                   <ul style="list-style-type: none"> <li>Key components that exist in clear text outside of an SCD must be sealed in opaque, tamper-evident packaging that prevents the determination of the key component without noticeable damage to the packaging.</li> <li>Key components for each specific custodian must be stored in a separate secure container that is accessible only by the custodian and/or designated backup(s).</li> <li>If a key is stored on a token, and a PIN or similar mechanism is used to access the token, only that token's owner (or designated backup(s)) must have possession of both the token and its corresponding PIN.</li> </ul> </li> </ul> </li> </ul>		✓	✓		

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-1.3.1</b> Key components that exist in clear text outside of an SCD must be sealed in opaque, tamper-evident packaging that prevents the determination of the key component without noticeable damage to the packaging.  <i><b>Note:</b> Tamper-evident packaging used to secure key components must ensure that the key component cannot be determined. For components written on paper, opacity may be sufficient, but consideration must be given to any embossing or other possible methods to “read” the component without opening of the packaging. Similarly, if the component is stored on a magnetic card, contactless card, or other media that can be read without direct physical contact, the packaging should be designed to prevent such access to the key component.</i>						
<b>6F-1.3.1.a</b> Examine key components and storage locations to verify that components are stored in opaque, tamper-evident packaging that prevents the determination of the key component without noticeable damage to the packaging.	<ul style="list-style-type: none"><li>For all instances where key components are used, describe how observation of key components and storage locations verified that components are stored in opaque, tamper-evident packaging that prevents the determination of the key component without noticeable damage to the packaging.</li></ul>				✓	
<b>6F-1.3.1.b</b> Inspect any tamper-evident packaging used to secure key components and ensure that it prevents the determination of the key component without visible damage to the packaging.	<ul style="list-style-type: none"><li>For all instances where key components are used, describe how inspection of tamper-evident packaging used to secure key components verified that it prevents the determination of the key component without visible damage to the packaging.</li></ul>				✓	
<b>6F-1.3.1.c</b> Ensure clear-text key components do not exist in any other locations, including in non-secure containers, in databases, on floppy disks, or in software programs.	<ul style="list-style-type: none"><li>Describe how observation of key-component processes verified that clear-text key components do not exist in any other locations, including in non-secure containers, in databases, on floppy disks, or in software programs.</li></ul>				✓	
<b>6F-1.3.1.d</b> Confirm that start-up instructions and other notes used by service technicians do not contain initialization-key values written in the clear (e.g., at the point in the checklist where the keys are entered).	<ul style="list-style-type: none"><li>For all instances where key components are used, identify the start-up instructions and other notes used by service technicians reviewed.</li><li>Confirm that the start-up instructions and other noted used by service technicians do not contain initialization-key values written in the clear.</li></ul>		✓			
<b>6F-1.3.2</b> Key components for each specific custodian must be stored in a separate secure container that is accessible only by the custodian and/or designated backup(s).  <i><b>Note:</b> Furniture-based locks or containers with a limited set of unique keys are not sufficient to meet this requirement (for example, desk drawers). Components for a specific key that are stored in separate envelopes, but within the same secure container, place reliance upon procedural controls and do not meet the requirement for physical barriers.</i>						

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<b>6F-1.3.2</b> Inspect each key component storage container and verify the following: <ul style="list-style-type: none"> <li>Key components for different custodians are stored in separate secure containers.</li> <li>Each secure container is accessible only by the custodian and/or designated backup(s).</li> </ul>	<ul style="list-style-type: none"> <li>For all instances where key components are used, describe how observation of all key component storage containers verified that: <ul style="list-style-type: none"> <li>Key components for different custodians are stored in separate secure containers.</li> <li>Each secure container is accessible only by the designated custodian and/or designated backup(s).</li> </ul> </li> </ul>				✓	
<b>6F-1.3.3</b> If a key is stored on a token, and a PIN or similar mechanism is used to access the token, only that token's owner (or designated backup(s)) must have possession of both the token and its corresponding PIN.						
<b>6F-1.3.3</b> If a key is stored on a token, and a PIN or similar mechanism is used to access the token, only that token's owner—or designated backup(s)—has possession of both the token and its corresponding PIN.	<ul style="list-style-type: none"> <li>Identify whether any keys are stored on tokens, and if a PIN or similar mechanism is used to access the token.</li> <li>If any keys are stored on tokens, and if a PIN or similar mechanism is used to access the token, describe how observation of key-management processes verified that only that token's owner—or designated backup(s)—has possession of both the token and its corresponding PIN.</li> </ul>				✓	
<b>6F-2</b> Procedures must exist and must be demonstrably in use to replace any known or suspected compromised key, its subsidiary keys (those keys encrypted with the compromised key), and keys derived from the compromised key, to a value not feasibly related to the original key.						
<b>6F-2.1</b> Procedures for known or suspected compromised keys must include the following:						

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<p><b>6F-2.1</b> Verify documented procedures exist for replacing known or suspected compromised keys, and include 6F-2.1.1 through 6F-2.1.9 below.</p>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for replacing known or suspected compromised keys.</li> <li>Confirm documented procedures include: <ul style="list-style-type: none"> <li>Key components are never reloaded when there is any suspicion that either the originally loaded key or the SCD has been compromised.</li> <li>If unauthorized alteration is suspected, new keys are not installed until the SCD has been inspected and assurance reached that the equipment has not been subject to any form of unauthorized modification.</li> <li>If compromise of the cryptographic key is suspected, processing with that key is halted, and the key is replaced with a new unique key. This process includes any systems, devices, or processing that involves subordinate keys that have been calculated, derived, or otherwise generated, loaded, or protected using the compromised key. The replacement key must not be a variant of the original key, or an irreversible transformation of the original key.</li> <li>For each key in the solution provider's key suite, including any subordinate keys that are generated, protected, or transported under other keys, the purpose of that key is listed.</li> <li>The names and/or functions of each staff member assigned to the recovery effort, as well as phone numbers and the place where the team is to assemble, are defined.</li> <li>A documented escalation process and notification to organizations that currently share or have previously shared the key(s), including a damage assessment and specific actions to be taken with system software and hardware, encryption keys, encrypted data, etc.</li> <li>Identification of specific events that would indicate a compromise may have occurred.</li> <li>Indications of physical or logical access attempts to the processing system by unauthorized individuals or entities.</li> <li>If attempts to load a secret key or key component into an SCD fail, the same key or component must not be loaded into a replacement device unless it can be ensured that all residue of the key or component has been erased from or otherwise destroyed in the original SCD.</li> </ul> </li> </ul>		✓			

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-2.1.1</b> Key components are never reloaded when there is any suspicion that either the originally loaded key or the SCD has been compromised.						
<b>6F-2.1.1</b> Interview responsible personnel and observe implemented processes to verify key components are never reloaded when there is any suspicion that either the originally loaded key or the SCD has been compromised.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:</li> <li>Identify the responsible personnel interviewed who confirm that key components are never reloaded when there is any suspicion that either the originally loaded key or the SCD has been compromised.</li> <li>Describe how observation of implemented processes verified that key components are never reloaded when there is any suspicion that either the originally loaded key or the SCD has been compromised.</li> </ul>			✓	✓	
<b>6F-2.1.2</b> If unauthorized alteration is suspected, new keys are not installed until the SCD has been inspected and assurance reached that the equipment has not been subject to any form of unauthorized modification.						
<b>6F-2.1.2</b> Interview responsible personnel and observe implemented processes to verify that if unauthorized alteration is suspected, new keys are not installed until the SCD has been inspected and assurance reached that the equipment has not been subject to any form of unauthorized modification.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:</li> <li>Identify the responsible personnel interviewed who confirm that if unauthorized alteration is suspected, new keys are not installed until the SCD has been inspected and assurance reached that the equipment has not been subject to any form of unauthorized modification.</li> <li>Describe how observation of implemented processes verified that if unauthorized alteration is suspected, new keys are not installed until the SCD has been inspected and assurance reached that the equipment has not been subject to any form of unauthorized modification.</li> </ul>			✓	✓	
<b>6F-2.1.3</b> If compromise of the cryptographic key is suspected, processing with that key is halted, and the key is replaced with a new unique key. This process includes any systems, devices, or processing that involves subordinate keys that have been calculated, derived, or otherwise generated, loaded, or protected using the compromised key. The replacement key must not be a variant of the original key, or an irreversible transformation of the original key.						



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
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<b>6F-2.1.3</b> Interview responsible personnel and observe implemented processes to verify that if compromise of the cryptographic key is suspected, all the following are performed: <ul style="list-style-type: none"> <li>Processing with that key is halted, and the key is replaced with a new unique key.</li> <li>Any systems, devices, or processing involving subordinate keys that have been calculated, derived, or otherwise generated, loaded, or protected using the compromised key are included in the key-replacement process.</li> <li>The replacement key must not be a variant of the original key, or an irreversible transformation of the original key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that if compromise of the cryptographic key is suspected, all the following are performed: <ul style="list-style-type: none"> <li>Processing with that key is halted, and the key is replaced with a new unique key.</li> <li>Any systems, devices, or processing involving subordinate keys that have been calculated, derived, or otherwise generated, loaded, or protected using the compromised key are included in the key-replacement process.</li> <li>The replacement key must not be a variant of the original key, or an irreversible transformation of the original key.</li> </ul> </li> <li>Describe how observation of implemented processes verified that if compromise of the cryptographic key is suspected, all the following are performed: <ul style="list-style-type: none"> <li>Processing with that key is halted, and the key is replaced with a new unique key.</li> <li>Any systems, devices, or processing involving subordinate keys that have been calculated, derived, or otherwise generated, loaded, or protected using the compromised key are included in the key-replacement process.</li> <li>The replacement key must not be a variant of the original key, or an irreversible transformation of the original key.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6F-2.1.4</b> For each key in the solution provider's key suite, including any subordinate keys that are generated, protected, or transported under other keys, the purpose of that key is listed.						
<b>6F-2.1.4</b> Interview responsible personnel and observe documented key lists to verify the purpose of each key is listed, for all keys used by the solution provider.	<ul style="list-style-type: none"> <li>Identify the document that contains the documented key lists, including the purpose of each key, for all keys used by the solution provider.</li> <li>Identify the responsible personnel interviewed who confirm that the purpose of each key is listed, for all keys used by the solution provider.</li> </ul>		✓	✓		



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
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<b>6F-2.1.5</b> The names and/or functions of each staff member assigned to the recovery effort, as well as phone numbers and the place where the team is to assemble, are defined.						
<b>6F-2.1.5</b> Interview responsible personnel and observe documentation to verify the following are defined: <ul style="list-style-type: none"> <li>The names and/or functions of each staff member assigned to the recovery effort</li> <li>Contact phone numbers for staff members assigned to the recovery effort</li> <li>A designated place where the recovery team is to assemble</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines the following: <ul style="list-style-type: none"> <li>The names and/or functions of each staff member assigned to the recovery effort</li> <li>Contact phone numbers for staff members assigned to the recovery effort</li> <li>A designated place where the recovery team is to assemble</li> </ul> </li> <li>Identify the responsible personnel interviewed who confirm the following: <ul style="list-style-type: none"> <li>The names and/or functions of each staff member assigned to the recovery effort</li> <li>Contact phone numbers for staff members assigned to the recovery effort</li> <li>A designated place where the recovery team is to assemble</li> </ul> </li> </ul> </li> </ul>		✓	✓		
<b>6F-2.1.6</b> A documented escalation process and notification to organizations that currently share or have previously shared the key(s), including: <ul style="list-style-type: none"> <li>A damage assessment</li> <li>Specific actions to be taken with system software and hardware, encryption keys, encrypted data, etc.</li> </ul>						
<b>6F-2.1.6.a</b> Interview responsible personnel and observe implemented processes to verify the escalation process includes notification to organizations that currently share or have previously shared the key(s).	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that escalation processes are implemented to ensure notification to organizations that currently share or have previously shared the key(s).</li> <li>Describe how implemented processes were observed to ensure the escalation process includes notification to organizations that currently share or have previously shared the key(s).</li> </ul> </li> </ul>			✓	✓	

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-2.1.6.b</b> Verify notifications include the following: <ul style="list-style-type: none"> <li>A damage assessment</li> <li>Details of specific actions to be taken with system software and hardware, encryption keys, encrypted data, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that notifications include: <ul style="list-style-type: none"> <li>A damage assessment</li> <li>Details of specific actions to be taken with system software and hardware, encryption keys, encrypted data, etc.</li> </ul> </li> <li>Describe how observation of the notification processes verified that notifications include: <ul style="list-style-type: none"> <li>A damage assessment</li> <li>Details of specific actions to be taken with system software and hardware, encryption keys, encrypted data, etc.</li> </ul> </li> </ul>			✓	✓	
<b>6F-2.1.7</b> Identification of specific events that would indicate a compromise may have occurred. Such events must include but are not limited to: <ul style="list-style-type: none"> <li>Missing SCDs</li> <li>Tamper-evident seals or package numbers or dates and times not agreeing with log entries</li> <li>Tamper-evident seals or packages that have been opened without authorization or show signs of attempts to open or penetrate</li> </ul>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-2.1.7</b> Interview responsible personnel and observe implemented processes to verify that specific events that may indicate a compromise are identified. This must include, as a minimum, the following events: <ul style="list-style-type: none"> <li>Missing SCDs</li> <li>Tamper-evident seals or package numbers or dates and times not agreeing with log entries</li> <li>Tamper-evident seals or packages that have been opened without authorization or show signs of attempts to open or penetrate</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that specific events that may indicate a compromise are identified and include at least: <ul style="list-style-type: none"> <li>Missing SCDs</li> <li>Tamper-evident seals or package numbers or dates and times not agreeing with log entries</li> <li>Tamper-evident seals or packages that have been opened without authorization or show signs of attempts to open or penetrate</li> </ul> </li> <li>Describe how observation of the implemented processes verified that specific events that may indicate a compromise are identified and include at least: <ul style="list-style-type: none"> <li>Missing SCDs</li> <li>Tamper-evident seals or package numbers or dates and times not agreeing with log entries</li> <li>Tamper-evident seals or packages that have been opened without authorization or show signs of attempts to open or penetrate</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6F-2.1.8</b> Indications of physical or logical access attempts to the processing system by unauthorized individuals or entities.						
<b>6F-2.1.8</b> Interview responsible personnel and observe implemented processes to verify procedures address indications of physical or logical access attempts to the processing system by unauthorized individuals or entities.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that procedures are in place to address indications of physical or logical access attempts to the processing system by unauthorized individuals or entities.</li> <li>Describe how observation of the implemented processes verified that procedures are in place to address indications of physical or logical access attempts to the processing system by unauthorized individuals or entities.</li> </ul>			✓	✓	
<b>6F-2.1.9</b> If attempts to load a secret key or key component into an SCD fail, the same key or component must not be loaded into a replacement device unless it can be ensured that all residue of the key or component has been erased from or otherwise destroyed in the original SCD.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-2.1.9</b> Interview responsible personnel and observe implemented processes to verify that if attempts to load a secret key or key component into an SCD fail, the same key or component is not loaded into a replacement device unless it can be ensured that all residue of the key or component has been erased from or otherwise destroyed in the original SCD.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that if attempts to load a secret key or key component into an SCD fail, the same key or component is not loaded into a replacement device unless it can be ensured that all residue of the key or component has been erased from or otherwise destroyed in the original SCD.</li> <li>Describe how observation of the implemented processes verified that if attempts to load a secret key or key component into an SCD fail, the same key or component is not loaded into a replacement device unless it can be ensured that all residue of the key or component has been erased from or otherwise destroyed in the original SCD.</li> </ul> </li> </ul>			✓	✓	
<b>6F-3</b> Keys generated using reversible key-calculation methods, such as key variants, must only be used in devices that possess the original key. Keys generated using reversible key-calculation methods must not be used at different levels of the key hierarchy. For example, a variant of a key-encryption key used for key exchange cannot be used as a working key or as a master file key for local storage. <i>Key generation that uses a non-reversible process, such as key derivation with a base key using an encipherment process, is not subject to these requirements.</i>						
<b>6F-3.1</b> Any key generated with a reversible process (such as a variant of a key) of another key must be protected in the same manner as the original key—that is, under the principles of dual control and split knowledge. <i>Exposure of keys that are created using reversible transforms of another (key-generation) key can result in the exposure of all keys that have been generated under that key-generation key. To limit this risk posed by reversible key calculation, such as key variants, the reversible transforms of a key must be secured in the same way as the original key-generation key.</i>						
<b>6F-3.1.a</b> Examine documented procedures and interview responsible personnel to determine whether keys are generated using reversible key-calculation methods.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the documented procedures reviewed to determine whether keys are generated using reversible key-calculation methods.</li> <li>Identify the responsible personnel interviewed to determine whether keys are generated using reversible key-calculation methods.</li> </ul> </li> <li>Identify all types of cryptographic keys that are generated using reversible key-calculation methods</li> </ul>		✓	✓		

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-3.1.b</b> Observe processes to verify that any key generated using a reversible process of another key is protected under the principles of dual control and split knowledge.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys generated using reversible key-calculation methods, describe how observation of the implemented processes verified that any key generated using a reversible process of another key is protected under the principles of:               <ul style="list-style-type: none"> <li>Dual control and</li> <li>Split knowledge</li> </ul> </li> </ul>				✓	
<b>6F-3.1.1</b> Reversible transformations of a key must not be exposed outside of the secure cryptographic device that generated those transforms.						
<b>6F-3.1.1</b> Verify that reversible transformations of keys are not exposed outside of the secure cryptographic device that generated those transforms.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys generated using reversible key-calculation methods:               <ul style="list-style-type: none"> <li>Identify the document that defines procedure to ensure that reversible transformations of keys are not exposed outside of the secure cryptographic device that generated those transforms.</li> <li>Describe how observation of the implemented processes and secure cryptographic devices verified that reversible transformations of keys are not exposed outside of the secure cryptographic device that generated those transforms.</li> </ul> </li> </ul>		✓		✓	
<b>6F-3.2</b> Reversible key transformations are not used across different levels of the key hierarchy. For example, reversible transformations must not generate data-encryption keys from master keys, or from key-encrypting keys. Such transformations are only used to generate different types of key-encrypting keys from an initial key-encrypting key, or different data-encryption keys from an initial data-encryption key. <i>Using transforms of keys across different levels of a key hierarchy—for example, generating an account-data key from a key-encrypting key—increases the risk of exposure of each of those keys.</i> <i>It is acceptable to use one “working” key to generate multiple reversible transforms to be used for different working keys, such as a PIN key, MAC key(s), and data key(s) (where a different reversible transform is used to generate each different working key). Similarly, it is acceptable to generate multiple key-encrypting keys from a single key-encrypting key. However, it is not acceptable to generate working keys from key-encrypting keys.</i>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-3.2</b> Examine documented key-transformation procedures and observe implemented processes to verify that reversible key transformations are not used across different levels of the key hierarchy, as follows: <ul style="list-style-type: none"> <li>Master keys must only be generated from or be used to generate other master keys.</li> <li>Key-encrypting keys must only be generated from or be used to generate other key-encrypting keys.</li> <li>Data-encryption keys must only be generated from or be used to generate other data-encryption keys.</li> <li>Any other type of key must only be generated from or be used to generate other keys of the same type.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys generated using reversible key-calculation methods: <ul style="list-style-type: none"> <li>Identify the document that defines key-transformation procedures.</li> <li>Confirm the documented procedures ensure reversible key transformations are not used across different levels of the key hierarchy, as follows: <ul style="list-style-type: none"> <li>Master keys must only be generated from or be used to generate other master keys.</li> <li>Key-encrypting keys must only be generated from or be used to generate other key-encrypting keys.</li> <li>Data-encryption keys must only be generated from or be used to generate other data-encryption keys.</li> <li>Any other type of key must only be generated from or be used to generate other keys of the same type.</li> </ul> </li> <li>Describe how observation of the implemented processes verified that reversible key transformations are not used across different levels of the key hierarchy, as follows: <ul style="list-style-type: none"> <li>Master keys must only be generated from or be used to generate other master keys.</li> <li>Key-encrypting keys must only be generated from or be used to generate other key-encrypting keys.</li> <li>Data-encryption keys must only be generated from or be used to generate other data-encryption keys.</li> <li>Any other type of key must only be generated from or be used to generate other keys of the same type.</li> </ul> </li> </ul> </li> </ul>		✓		✓	
<b>6F-4</b> Secret keys and key components that are no longer used or have been replaced must be securely destroyed.						
<b>6F-4.1</b> Instances of secret or private keys, or key components, that are no longer used or that have been replaced by a new key must be destroyed.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-4.1.a</b> Verify documented procedures are in place for destroying secret or private keys, or key components that are no longer used or that have been replaced by a new key.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for destroying secret or private keys, or key components, that are no longer used or that have been replaced by a new key.</li> </ul> </li> </ul>		✓			
<b>6F-4.1.b</b> Identify a sample of keys and key components that are no longer used or have been replaced. For each item in the sample, interview responsible personnel and examine key-history logs and key-destruction logs to verify that all keys have been destroyed.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1 <ul style="list-style-type: none"> <li>Identify a sample of keys and key components that are no longer used or have been replaced.</li> <li>For each item in the sample, <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that all keys have been destroyed.</li> <li>Identify key-history logs and key-destruction logs examined.</li> <li>Describe how examination of the key-history logs and key-destruction logs verified that all keys have been destroyed.</li> </ul> </li> </ul> </li> </ul>		✓	✓		✓
<b>6F-4.2</b> The procedures for destroying keys or key components that are no longer used or that have been replaced by a new key must be documented and sufficient to ensure that no part of the key or component can be recovered.						
<b>6F-4.2.a</b> Examine documented procedures for destroying keys and confirm they are sufficient to ensure that no part of the key or component can be recovered.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for destroying keys.</li> <li>Confirm the documented procedures ensure that no part of the key or component can be recovered.</li> </ul> </li> </ul>		✓			
<b>6F-4.2.b</b> Observe key-destruction processes to verify that no part of the key or component can be recovered.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-destruction processes verified that no part of the key or component can be recovered.</li> </ul>				✓	
<b>6F-4.2.1</b> Keys (including components or shares) maintained on paper must be burned, pulped, or shredded in a crosscut shredder.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-4.2.1.a</b> Examine documented procedures for destroying keys and confirm that any keys (including components or shares) maintained on paper must be burned, pulped, or shredded in a crosscut shredder.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify types of keys (including components or shares) maintained on paper.</li> <li>Identify the document that defines procedures for destroying keys.</li> <li>Confirm the documented procedure require that any keys (including components or shares) maintained on paper must be burned, pulped, or shredded in a crosscut shredder.</li> </ul> </li> </ul>		✓			
<b>6F-4.2.1.b</b> Observe key-destruction processes to verify that any keys (including components or shares) maintained on paper is burned, pulped, or shredded in a crosscut shredder.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys (including components or shares) maintained on paper:</li> <li>Describe how observation of the key-destruction processes verified that any keys (including components or shares) maintained on paper is burned, pulped, or shredded in a crosscut shredder</li> </ul>				✓	
<b>6F-4.2.2</b> Keys on all other storage media types in all permissible forms (physically secured, enciphered, or components) must be destroyed following the procedures outlined in ISO-9564 or ISO-11568.						
<b>6F-4.2.2.a</b> Examine documented procedures for destroying keys and confirm that keys on all other storage media types in all permissible forms (physically secured, enciphered, or components) must be destroyed following the procedures outlined in ISO-9564 or ISO-11568.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for destroying keys.</li> <li>Confirm the documented procedures ensure that keys on all other storage media types in all permissible forms (physically secured, enciphered, or components) must be destroyed following the procedures outlined in ISO-9564 or ISO-11568.</li> </ul> </li> </ul>		✓			
<b>6F-4.2.2.b</b> Observe key-destruction processes to verify that keys on all other storage media types in all permissible forms (physically secured, enciphered, or components) are destroyed following the procedures outlined in ISO-9564 or ISO-11568.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Describe how observation of the key-destruction processes verified that keys on all other storage media types in all permissible forms (physically secured, enciphered, or components) are destroyed following the procedures outlined in ISO-9564 or ISO-11568.</li> </ul> </li> </ul>				✓	
<b>6F-4.2.3</b> The key-destruction process must be observed by a third party other than the custodian.						



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-4.2.3</b> Observe key-destruction process and verify that it is witnessed by a third party other than a key custodian.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of the key-destruction processes verified that key-destruction requires a witness by a third party other than a key custodian.</li> </ul>				✓	
<b>6F-4.2.4</b> The third-party witness must sign an affidavit of destruction. <b>Note:</b> For keys on paper, consider having the affidavit of destruction as a part of the same piece of paper that contains the key-component value itself. To destroy the key, tear off the section of the sheet that contains the value, destroy it, sign and witness the affidavit and log it. Affidavits of destruction can also be digitally signed if considered legally acceptable in the locale.						
<b>6F-4.2.4</b> Inspect key-destruction logs and verify that a third-party, non-key-custodian witness signs an affidavit as a witness to the key destruction process.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1:               <ul style="list-style-type: none"> <li>Identify key-destruction logs inspected.</li> <li>Describe how examination of the key-destruction logs and affidavits verified that a third-party, non-key-custodian witness signs an affidavit as a witness to the key destruction process.</li> </ul> </li> </ul>		✓			
<b>6F-4.3</b> Any residues of key-encryption keys used for the conveyance of working keys (such as components used to create the key) must be destroyed after successful loading and validation as being operational.						
<b>6F-4.3.a</b> Verify documented procedures exist for destroying any residues of key-encryption keys used for the conveyance of working keys, once the working keys are successfully loaded and validated as operational.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the document that defines procedures for destroying any residues of key-encryption keys used for the conveyance of working keys, once the working keys are successfully loaded and validated as operational.</li> </ul>		✓			
<b>6F-4.3.b</b> Observe key-conveyance/loading processes to verify that any residues of key-encryption keys used for the conveyance of working keys are destroyed, once the working keys are successfully loaded and validated as operational.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, describe how observation of key-conveyance/loading processes verified that any residues of key-encryption keys used for the conveyance of working keys are destroyed, once the working keys are successfully loaded and validated as operational.</li> </ul>				✓	
<b>6F-5</b> Access to material which can be used to construct secret and private keys (such as key components) must be: <ul style="list-style-type: none"> <li>a) Limited on to a need-to-know basis so that the fewest number of key custodians are necessary to enable their effective use; and</li> <li>b) Protected such that no other person (not similarly entrusted with that component) can observe or otherwise obtain the component.</li> </ul>						
<b>6F-5.1</b> To reduce the opportunity for key compromise, limit the number of key custodians to a minimum as follows:						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-5.1</b> Interview key custodians and observe implemented processes to verify the following:						
<b>6F-5.1.1</b> Designate a primary and a backup key custodian for each component, such that the fewest number of key custodians are assigned as necessary to enable effective key management.						
<b>6F-5.1.1</b> Review key-custodian assignments for each component to verify that: <ul style="list-style-type: none"> <li>A primary and a backup key custodian are designated for each component.</li> <li>The fewest number of key custodians is assigned as necessary to enable effective key management.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify key custodians interviewed.</li> <li>Identify the key-custodian assignments examined for each component.</li> <li>Describe how interviews with key custodians and observation of the key-custodian assignments verified that: <ul style="list-style-type: none"> <li>A primary and a backup key custodian are designated for each component.</li> <li>The fewest number of key custodians is assigned as necessary to enable effective key management.</li> </ul> </li> </ul> </li> </ul>		✓	✓		
<b>6F-5.1.2</b> Document this designation by having each custodian and backup custodian sign a key-custodian form in some legally binding way.						
<b>6F-5.1.2.a</b> Examine completed key-custodian forms to verify that key custodians sign the form in some legally binding way.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify key custodians interviewed.</li> <li>Identify the key-custodian forms examined</li> <li>Describe how interviews with key custodians and examination of the completed key-custodian forms verified that key custodians sign the form in some legally binding way.</li> </ul> </li> </ul>		✓	✓		
<b>6F-5.1.2.b</b> Examine completed key-custodian forms to verify that backup custodians sign the form in some legally binding way.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify key custodians interviewed.</li> <li>Identify the key-custodian forms examined</li> <li>Describe how interviews with key custodians and examination of the completed key-custodian forms verified that backup custodians sign the form in some legally binding way.</li> </ul> </li> </ul>		✓	✓		

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-5.1.3</b> Each key-custodian form provides the following: <ul style="list-style-type: none"> <li>Specific authorization for the custodian</li> <li>Identification of the custodian's responsibilities for safeguarding key components or other keying material entrusted to them</li> <li>An effective date and time for the custodian's access</li> <li>Signature of management authorizing the access</li> </ul>						
<b>6F-5.1.3</b> Examine all key-custodian forms to verify that they include the following: <ul style="list-style-type: none"> <li>Specific authorization for the custodian</li> <li>Identification of the custodian's responsibilities for safeguarding key components or other keying material entrusted to them</li> <li>An effective date and time for the custodian's access</li> <li>Signature of management authorizing the access.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the key-custodian forms examined.</li> <li>Confirm that key-custodian forms include: <ul style="list-style-type: none"> <li>Specific authorization for the custodian</li> <li>Identification of the custodian's responsibilities for safeguarding key components or other keying material entrusted to them</li> <li>An effective date and time for the custodian's access</li> <li>Signature of management authorizing the access.</li> </ul> </li> <li>Identify key custodians interviewed who confirm the information on the key-custodian forms.</li> </ul> </li> </ul>		✓	✓		
<b>6F-5.1.4</b> Key custodians sufficient to form the necessary threshold to create a key must not directly report to the same individual. For example, for a key managed as three components, at least two custodians report to different individuals. In an <i>m-of-n</i> scheme, such as <i>three of five</i> key shares, no more than two key custodians can report to the same individual. In all cases, neither the direct reports nor the direct reports in combination with their immediate supervisor (if they are a key custodian) shall possess the necessary threshold of key components sufficient to form any given key.						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-5.1.4</b> Examine key-custodian assignments and organization charts to confirm the following: <ul style="list-style-type: none"> <li>Key custodians that form the necessary threshold to create a key do not directly report to the same individual.</li> <li>Neither direct reports nor the direct reports in combination with their immediate supervisor possess the necessary threshold of key components sufficient to form any given key.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify key custodians interviewed.</li> <li>Identify the key-custodian assignments and organization charts examined.</li> <li>Describe how interviews with key custodians and examination of key-custodian assignments and organization charts verified the following: <ul style="list-style-type: none"> <li>Key custodians that form the necessary threshold to create a key do not directly report to the same individual.</li> <li>Neither direct reports nor the direct reports in combination with their immediate supervisor possess the necessary threshold of key components sufficient to form any given key.</li> </ul> </li> </ul> </li> </ul>		✓	✓		
<b>6F-6</b> Logs are kept for any time that keys, key components, or related materials are removed from secure storage or loaded to an SCD.						
<b>6F-6.1</b> Logs must be kept whenever keys, key components, or related materials are removed from secure storage or loaded to an SCD.						
<b>6F-6.1</b> Review log files and audit log settings to verify that logs are kept for any time that keys, key components, or related materials are: <ul style="list-style-type: none"> <li>Removed from secure storage</li> <li>Loaded to an SCD</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the log files examined.</li> <li>Describe how examination of log files and audit log settings verified that logs are kept for any time that keys, key components, or related materials are: <ul style="list-style-type: none"> <li>Removed from secure storage</li> <li>Loaded to an SCD</li> </ul> </li> </ul> </li> </ul>	✓	✓			
<b>6F-6.2</b> At a minimum, logs must include the following: <ul style="list-style-type: none"> <li>Date and time in/out</li> <li>Key component identifier</li> <li>Purpose of access</li> <li>Name and signature of custodian accessing the component</li> <li>Tamper-evident package number (if applicable)</li> </ul>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-6.2</b> Review log files and audit log settings to verify that logs include the following: <ul style="list-style-type: none"> <li>Date and time in/out</li> <li>Key component identifier</li> <li>Purpose of access</li> <li>Name and signature of custodian accessing the component</li> <li>Tamper-evident package number (if applicable)</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the log files examined.</li> <li>Describe how examination of log files and audit log settings verified that logs include: <ul style="list-style-type: none"> <li>Date and time in/out</li> <li>Key component identifier</li> <li>Purpose of access</li> <li>Name and signature of custodian accessing the component</li> <li>Tamper-evident package number (if applicable)</li> </ul> </li> </ul> </li> </ul>	✓	✓			
<b>6F-7</b> Backup copies of secret and private keys must exist only for the purpose of reinstating keys that are accidentally destroyed or are otherwise inaccessible. The backups must exist only in one of the allowed storage forms for that key.						
<b>6F-7.1</b> The backup copies must be securely stored with proper access controls, under at least dual control, and subject to at least the same level of security control as operational keys in line with all requirements specified in this document.						
<b>6F-7.1</b> Interview responsible personnel and examine documented procedures and backup records to determine whether any backup copies of keys or their components exist. Perform the following:	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed to determine whether any backup copies of keys or their components exist.</li> <li>Identify the documented procedures reviewed to determine whether any backup copies of keys or their components exist.</li> <li>Identify backup records that were examined to determine whether any backup copies of keys or their components exist.</li> </ul> </li> <li>Identify all types of cryptographic keys that have backup copies of keys or their components.</li> </ul>		✓	✓		

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-7.1.a</b> Verify that any backup copies of secret and private keys exist only for the purpose of reinstating keys that are accidentally destroyed or are otherwise inaccessible.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys that have backup copies of keys or their components: <ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that any backup copies of secret and private keys exist only for the purpose of reinstating keys that are accidentally destroyed or are otherwise inaccessible</li> <li>Identify personnel interviewed who confirm that any backup copies of secret and private keys exist only for the purpose of reinstating keys that are accidentally destroyed or are otherwise inaccessible.</li> <li>Describe how examination of backup configurations verified that any backup copies of secret and private keys exist only for the purpose of reinstating keys that are accidentally destroyed or are otherwise inaccessible.</li> </ul> </li> </ul>	✓	✓	✓		
<b>6F-7.1.b</b> Inspect backup storage locations and access controls to verify that backups are maintained as follows: <ul style="list-style-type: none"> <li>Securely stored with proper access controls</li> <li>Under at least dual control</li> <li>Subject to at least the same level of security control as operational keys as specified in this document</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys that have backup copies of keys or their components: <ul style="list-style-type: none"> <li>Describe how observation of backup storage locations and access controls verified that all backups of cryptographic keys or their components are maintained as follows: <ul style="list-style-type: none"> <li>Securely stored with proper access controls</li> <li>Under at least dual control</li> <li>Subject to at least the same level of security control as operational keys as specified in this document</li> </ul> </li> </ul> </li> </ul>	✓			✓	
<b>6F-7.2</b> If backup copies are created, the following must be in place: <ul style="list-style-type: none"> <li>Creation (including cloning) must require a minimum of two authorized individuals to enable the process.</li> <li>All requirements applicable for the original keys also apply to any backup copies of keys and their components.</li> </ul> <i>It is not a requirement to have backup copies of key components or keys, but it is acceptable to maintain such backup copies for the purposes of business continuity if they are secured and maintained in approved forms.</i>						

P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-7.2</b> Interview responsible personnel and observe backup processes to verify the following: <ul style="list-style-type: none"> <li>The creation of any backup copies requires at least two authorized individuals to enable the process</li> <li>All requirements applicable for the original keys also apply to any backup copies of keys and their components.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys that have backup copies of keys or their components: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>The creation of any backup copies requires at least two authorized individuals to enable the process</li> <li>All requirements applicable for the original keys also apply to any backup copies of keys and their components.</li> </ul> </li> <li>Describe how observation of backup processes verified that: <ul style="list-style-type: none"> <li>The creation of any backup copies requires at least two authorized individuals to enable the process</li> <li>All requirements applicable for the original keys also apply to any backup copies of keys and their components.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>6F-7.3</b> If backup copies of secret and/or private keys exist, confirm that they are maintained in one of the approved forms noted in Requirement 6F-1.1 and are managed under dual control and split knowledge.						
<b>6F-7.3</b> Interview responsible personnel and observe backup processes to verify the following <ul style="list-style-type: none"> <li>Backup copies of secret and/or private keys are maintained in one of the approved forms identified Requirement 6F-1.1</li> <li>Backup copies of secret and/or private keys are managed under dual control and split knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>For all types of cryptographic keys that have backup copies of keys or their components: <ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Backup copies of secret and/or private keys are maintained in one of the approved forms identified Requirement 6F-1.1</li> <li>Backup copies of secret and/or private keys are managed under dual control and split knowledge.</li> </ul> </li> <li>Describe how observation of backup processes verified that: <ul style="list-style-type: none"> <li>Backup copies of secret and/or private keys are maintained in one of the approved forms identified Requirement 6F-1.1</li> <li>Backup copies of secret and/or private keys are managed under dual control and split knowledge.</li> </ul> </li> </ul> </li> </ul>			✓	✓	



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
6F-8 Documented procedures must exist and must be demonstrably in use for all key-administration operations.						
6F-8.1 Written procedures must be in place and all affected parties must be aware of those procedures, as follows: <ul style="list-style-type: none"><li>All aspects of and activities related to key administration must be documented, including:<ul style="list-style-type: none"><li>A defined cryptographic-key change policy for each key layer defined in the key hierarchy (this applies to both symmetric and asymmetric-key types)</li><li>Security-awareness training</li><li>Role definition—nominated individual with overall responsibility</li><li>Background checks for personnel</li><li>Management of personnel changes, including revocation of access control and other privileges when personnel move</li></ul></li></ul>						
6F-8.1.a Examine documented procedures for key-administration operations to verify they include: <ul style="list-style-type: none"><li>A defined cryptographic-key change policy for each key layer defined in the key hierarchy</li><li>Security-awareness training</li><li>Role definition—nominated individual with overall responsibility</li><li>Background checks for personnel</li><li>Management of personnel changes, including revocation of access control and other privileges when personnel move</li></ul>	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1:<ul style="list-style-type: none"><li>Identify the document that defines procedures for key-administration operations.</li><li>Confirm the documented procedures include:<ul style="list-style-type: none"><li>A defined cryptographic-key change policy for each key layer defined in the key hierarchy</li><li>Security-awareness training</li><li>Role definition—nominated individual with overall responsibility</li><li>Background checks for personnel</li><li>Management of personnel changes, including revocation of access control and other privileges when personnel move</li></ul></li></ul></li></ul>		✓			
6F-8.1.b Interview personnel responsible for key-administration operations to verify that the documented procedures are known and understood.	<ul style="list-style-type: none"><li>For all types of cryptographic keys identified in Table 6.1:<ul style="list-style-type: none"><li>Identify the personnel responsible for key-administration operations interviewed who confirm that the documented procedures are known and understood.</li><li>Describe how interviews with the responsible personnel confirmed that the documented procedures are known and understood.</li></ul></li></ul>			✓		



P2PE Domain 6 Requirements and Testing Procedures	Reporting Instructions	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>6F-8.1.c</b> Interview personnel to verify that security-awareness training is provided for the appropriate personnel.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the personnel interviewed who confirm that security-awareness training is provided for the appropriate personnel.</li> </ul>			✓		
<b>6F-8.1.d</b> Interview personnel to verify background checks are performed.	<ul style="list-style-type: none"> <li>For all types of cryptographic keys identified in Table 6.1, identify the personnel interviewed who confirm that processes are implemented to ensure that background checks are performed.</li> </ul>			✓		

## Domain 6 – Annex A: Symmetric-Key Distribution using Asymmetric Techniques

Solution P-ROV Section (P2PE Template)	Reporting Details
<b>Table 6A.1 – List of symmetric keys (by type) distributed using asymmetric techniques</b> <ul style="list-style-type: none"> <li>Key type / description</li> <li>Purpose/ function of the key (including types of devices using key)</li> <li>Description / identifier of asymmetric techniques use for key distribution</li> <li>Entity performing remote key distribution</li> </ul> <p><i>* Note: Must include all keys from Table 6.1 identified as being distributed via remote key distribution techniques.</i></p>	<p>Complete Table 6A.1 for all symmetric key types distributed using asymmetric techniques.</p> <ul style="list-style-type: none"> <li>Description / type of key being distributed</li> <li>Describe the purpose/ function of the key being distributed, including identification of the device types using key</li> <li>A brief description or other means to identify the different asymmetric techniques use for key distribution</li> <li>Identify the entity performing remote key distribution for this key type</li> </ul> <p><i>* Note: All entities performing remote key distribution must be included in section 2.2 of the Executive Summary.</i></p> <p><i>POI device types must be identified using the name/identifier used in Table 1.1 (Domain 1).</i></p>

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-1</b> Compromise of the key-generation process must not be possible without collusion between at least two trusted individuals. (Reference 6B-2)						
<b>RD-1.1</b> Asymmetric-key pairs must either be: <ul style="list-style-type: none"> <li>Generated by the device that will use the key pair;</li> <li>If generated externally, the key pair and all related critical security parameters (for example, secret seeds) must be deleted (zeroized) immediately after the transfer to the device that will use the key pair.</li> </ul>						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-1.1.a</b> Examine documented procedures for asymmetric-key generation to verify that procedures are defined to ensure that asymmetric-key pairs are either: <ul style="list-style-type: none"> <li>Generated by the device that will use the key pair, or</li> <li>If generated externally, the key pair and all related critical security parameters must be deleted (zeroized) immediately after the transfer to the device that will use the key pair</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify the document that defines procedures for asymmetric-key generation.</li> <li>Confirm the documented procedures ensure that asymmetric-key pairs are either: <ul style="list-style-type: none"> <li>Generated by the device that will use the key pair, or</li> <li>If generated externally, the key pair and all related critical security parameters must be deleted (zeroized) immediately after the transfer to the device that will use the key pair</li> </ul> </li> </ul> </li> </ul>		✓			
<b>RD-1.1.b</b> Observe key-generation processes to verify that asymmetric-key pairs are either: <ul style="list-style-type: none"> <li>Generated by the device that will use the key pair, or</li> <li>If generated externally, the key pair and all related critical security parameters are deleted (for example, zeroized) immediately after the transfer to the device that will use the key pair.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, describe how observation of key-generation process verified that asymmetric-key pairs are either: <ul style="list-style-type: none"> <li>Generated by the device that will use the key pair, or</li> <li>If generated externally, the key pair and all related critical security parameters are deleted (for example, zeroized) immediately after the transfer to the device that will use the key pair.</li> </ul> </li> </ul>				✓	
<b>RD-2</b> Cryptographic keys must be conveyed or transmitted securely. (Reference 6C-1)						
<b>RD-2.1</b> All key-encryption keys used to transmit or convey other cryptographic keys must be (at least) as strong as any key transmitted or conveyed						
<b>RD-2.1.a</b> Examine documented procedures to verify that all asymmetric keys used to transmit or convey other cryptographic keys must be (at least) as strong as any key transmitted or conveyed.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, identify the document that defines procedures for all asymmetric keys used to transmit or convey other cryptographic keys to be (at least) as strong as any key transmitted or conveyed.</li> </ul>		✓			
<b>RD-2.1.b</b> Observe key generation processes to verify that all asymmetric keys used to transmit or convey other cryptographic keys are at least as strong as any key transmitted or conveyed.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, describe how observation of key-generation process verified that all asymmetric keys used to transmit or convey other cryptographic keys are at least as strong as any key transmitted or conveyed</li> </ul>				✓	

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-3</b> The loading of keys or key components must incorporate a validation mechanism such that the authenticity of the keys is ensured and it can be ascertained that they have not been tampered with, substituted, or compromised. <i>(Reference 6D)</i>						
<b>RD-3.1</b> POIs and key-distribution hosts (KDHs) using public-key schemes must validate authentication credentials of other such devices involved in the communication immediately prior to any key transport, exchange, or establishment. Mutual authentication of the sending and receiving devices must be performed. <i><b>Note:</b> Examples of this kind of validation include checking current certificate revocation lists or embedding valid authorized KDH certificates in devices and disallowing communication with unauthorized KDHs.</i>						
<b>RD-3.1.a</b> Examine documented procedures to confirm they define procedures for mutual authentication of the sending and receiving devices, as follows: <ul style="list-style-type: none"><li>SCDs must validate authentication credentials of KDHs prior to any key transport, exchange, or establishment with that device.</li><li>KDHs must validate authentication credentials of POIs prior to any key transport, exchange, or establishment with that device.</li></ul>	<ul style="list-style-type: none"><li>For all asymmetric techniques identified in Table A1.1:<ul style="list-style-type: none"><li>Identify the document that defines procedures for mutual authentication of the sending and receiving devices.</li><li>Confirm the documented procedures include the following:<ul style="list-style-type: none"><li>SCDs must validate authentication credentials of KDHs prior to any key transport, exchange, or establishment with that device.</li><li>KDHs must validate authentication credentials of POIs prior to any key transport, exchange, or establishment with that device.</li></ul></li></ul></li></ul>		✓			
<b>RD-3.1.b</b> Observe key-loading processes to verify that mutual authentication of the sending and receiving devices is performed, as follows: <ul style="list-style-type: none"><li>SCDs validate authentication credentials of KDHs immediately prior to any key transport, exchange, or establishment with that device.</li><li>KDHs validate authentication credentials of POIs immediately prior to any key transport, exchange, or establishment with that device.</li></ul>	<ul style="list-style-type: none"><li>For all asymmetric techniques identified in Table A1.1:<ul style="list-style-type: none"><li>Describe how observation of key-generation process verified that mutual authentication of the sending and receiving of devices is performed as follows:<ul style="list-style-type: none"><li>SCDs validate authentication credentials of KDHs immediately prior to any key transport, exchange, or establishment with that device.</li><li>KDHs validate authentication credentials of POIs immediately prior to any key transport, exchange, or establishment with that device.</li></ul></li></ul></li></ul>				✓	
<b>RD-3.2</b> Mechanisms must exist to prevent a non-authorized KDH from performing key transport, key exchange or key establishment with POIs. <i><b>Note:</b> An example of this kind of mechanism is through limiting communication between the transaction-originating POI and KDH to only those KDHs contained in a list of valid KDHs managed by the POI.</i>						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-3.2.a</b> Examine documented procedures to confirm they define mechanisms to prevent an unauthorized KDH from performing key transport, key exchange, or key establishment with POIs.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, identify the document that defines mechanisms to prevent an unauthorized KDH from performing key transport, key exchange, or key establishment with POIs.</li> </ul>		✓			
<b>RD-3.2.b</b> Observe mechanisms in use to verify they prevent an unauthorized KDH from performing key transport, key exchange, or key establishment with POIs.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, describe how observation of the implemented mechanisms verified that they prevent an unauthorized KDH from performing key transport, key exchange, or key establishment with POIs.</li> </ul>	✓				
<b>RD-3.3</b> Key establishment and distribution procedures must be designed such that: <ul style="list-style-type: none"> <li>Within an implementation design, there shall be no means available for “man in middle” attacks.</li> <li>System implementations must be designed and implemented to prevent replay attacks.</li> </ul>						
<b>RD-3.3.a</b> Examine system and process documentation to verify that key establishment and distribution procedures are designed such that: <ul style="list-style-type: none"> <li>There are no means available in the implementation design for “man in middle” attacks.</li> <li>System implementations are designed to prevent replay attacks.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1:               <ul style="list-style-type: none"> <li>Identify the system and process documentation examined</li> <li>Confirm that the documented key establishment and distribution procedures are designed such that:                   <ul style="list-style-type: none"> <li>There are no means available in the implementation design for “man in middle” attacks.</li> <li>System implementations are designed to prevent replay attacks.</li> </ul> </li> </ul> </li> </ul>		✓			
<b>RD-3.3.b</b> Observe key-exchange and establishment operations to verify that system implementations are implemented such that: <ul style="list-style-type: none"> <li>There are no means available for “man in middle” attacks.</li> <li>System implementations prevent replay attacks.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, describe how observation of key-exchange and establishment operations verified the system implementations are implemented such that:               <ul style="list-style-type: none"> <li>There are no means available for “man in middle” attacks.</li> <li>System implementations prevent replay attacks.</li> </ul> </li> </ul>				✓	
<b>RD-3.4</b> Key pairs generated external to the device that uses the key pair must be securely transferred and loaded into the device: that is, the secrecy of private keys and the integrity of public keys must be ensured.						
<b>RD-3.4</b> If key pairs are generated external to the device that uses the key pair, perform the following:						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-3.4.a</b> Examine documented procedures to verify that controls are defined to ensure the secrecy of private keys and the integrity of public keys during key transfer and loading.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, determine whether key pairs are generated external to the device that uses the key pair.</li> <li>For all instances where key pairs are generated external to the device that uses the key pair, identify the document that defines procedures to ensure: <ul style="list-style-type: none"> <li>The secrecy of private keys during key transfer and loading.</li> <li>The integrity of public keys during key transfer and loading.</li> </ul> </li> </ul>		✓			
<b>RD-3.4.b</b> Observe key transfer and loading operations to verify that the secrecy of private keys and the integrity of the public keys are ensured.	<ul style="list-style-type: none"> <li>For all instances where key pairs are generated external to the device that uses the key pair, describe how key-transfer and key-loading operations were observed to ensure: <ul style="list-style-type: none"> <li>The secrecy of private keys.</li> <li>The integrity of the public keys.</li> </ul> </li> </ul>				✓	
<b>RD-3.5</b> Once asymmetric keys are loaded for a specific P2PE solution provider, changing of those keys must not be permitted without the authorization of that solution provider.						
<b>RD-3.5.a</b> Examine documentation to verify that procedures are defined to ensure that, once asymmetric keys are loaded, changing of those keys is not permitted without authorization of that P2PE solution provider.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, identify the document that defines procedures to ensure that, once asymmetric keys are loaded, changing of those keys is not permitted without authorization of that P2PE solution provider.</li> </ul>		✓			
<b>RD-3.5.b</b> Interview responsible personnel and observe records of the authorization process to verify that once asymmetric keys have been loaded, authorization from the P2PE solution provider is obtained before those keys are changed.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that once asymmetric keys have been loaded, authorization from the P2PE solution provider is obtained before those keys are changed.</li> <li>Identify the authorization records examined.</li> <li>Describe how the examination of authorization records verified that once asymmetric keys have been loaded, authorization from the P2PE solution provider is obtained before those keys are changed.</li> </ul> </li> </ul>		✓	✓		
<b>RD-4</b> Procedures must exist to prevent or detect the unauthorized substitution (unauthorized key replacement and key misuse) of one key for another or the operation of any encryption device without legitimate keys. (Reference 6E-2)						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
RD-4.1 POIs shall only communicate with a Certification Authority (CA) for the purpose of certificate signing (or for key injection where the certificate-issuing authority generates the key pair on behalf of the POI); and with KDHS for key management, normal transaction processing, and certificate (entity) status checking.						
RD-4.1.a Examine documented procedures to verify that: <ul style="list-style-type: none"><li>POIs are only required to communicate with CAs for the purpose of certificate signing, or for key injection where the certificate-issuing authority generates the key pair on behalf of the device;</li><li>POIs are only required to communicate with KDHS for key management, normal transaction processing, and certificate (entity) status checking.</li></ul>	<ul style="list-style-type: none"><li>For all asymmetric techniques identified in Table A1.1, identify the document that defines the procedures for POI communications.</li><li>Confirm the documented procedures include:<ul style="list-style-type: none"><li>POIs are only required to communicate with CAs for the purpose of certificate signing, or for key injection where the certificate-issuing authority generates the key pair on behalf of the device;</li><li>POIs are only required to communicate with KDHS for key management normal transaction processing, and certificate (entity) status checking.</li></ul></li></ul>		✓			
RD-4.1.b Interview responsible personnel and observe POI configurations to verify that: <ul style="list-style-type: none"><li>POIs only communicate with CAs for the purpose of certificate signing, or for key-injection where the certificate issuing authority generates the key pair on behalf of the device;</li><li>POIs only communicate with KDHS for key management, normal transaction processing, and certificate (entity) status checking.</li></ul>	<ul style="list-style-type: none"><li>For all asymmetric techniques identified in Table A1.1:<ul style="list-style-type: none"><li>Identify responsible personnel interviewed who confirm that:<ul style="list-style-type: none"><li>POIs only communicate with CAs for the purpose of certificate signing, or for key-injection where the certificate issuing authority generates the key pair on behalf of the device;</li><li>POIs only communicate with KDHS for key management, normal transaction processing, and certificate (entity) status checking.</li></ul></li><li>Describe how observation of POI configurations verified that:<ul style="list-style-type: none"><li>POIs only communicate with CAs for the purpose of certificate signing, or for key-injection where the certificate issuing authority generates the key pair on behalf of the device;</li><li>POIs only communicate with KDHS for key management, normal transaction processing, and certificate (entity) status checking.</li></ul></li></ul></li></ul>	✓		✓		
RD-4.2 KDHS shall only communicate with POIs for the purpose of key management and normal transaction processing, and with CAs for the purpose of certificate signing and certificate (entity) status checking.						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-4.2.a</b> Examine documented procedures to verify that: <ul style="list-style-type: none"> <li>KDHs are only required to communicate with POIs for the purpose of key management and normal transaction processing;</li> <li>KDHs are only required to communicate with CAs for the purpose of certificate signing and certificate (entity) status checking.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, identify the document that defines procedures for KDH communications.</li> <li>Confirm that the documented procedures include: <ul style="list-style-type: none"> <li>KDHs are only required to communicate with POIs for the purpose of key management and normal transaction processing;</li> <li>KDHs are only required to communicate with CAs for the purpose of certificate signing and certificate (entity) status checking.</li> </ul> </li> </ul>		✓			
<b>RD-4.2.b</b> Interview responsible personnel and observe KDH configurations to verify that: <ul style="list-style-type: none"> <li>KDHs only communicate with POIs for the purpose of key management and normal transaction processing;</li> <li>KDHs only communicate with CAs for the purpose of certificate signing and certificate (entity) status checking.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>KDHs only communicate with POIs for the purpose of key management and normal transaction processing;</li> <li>KDHs only communicate with CAs for the purpose of certificate signing and certificate (entity) status checking.</li> </ul> </li> <li>Describe how observation of KDH configurations verified that: <ul style="list-style-type: none"> <li>KDHs only communicate with POIs for the purpose of key management and normal transaction processing;</li> <li>KDHs only communicate with CAs for the purpose of certificate signing and certificate (entity) status checking.</li> </ul> </li> </ul> </li> </ul>	✓		✓		
<b>RD-5</b> Cryptographic keys must only be used for their sole intended purpose and must never be shared between production and test systems. (Reference 6E-3)						
<b>RD-5.1.</b> Only one certificate shall be issued per key pair. Key pairs shall not be reused for certificate renewal or replacement.						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-5.1.a</b> Examine documented procedures for requesting certificate issue, renewal, and replacement to verify procedures include generation of a unique key pair for each: <ul style="list-style-type: none"> <li>New certificate issue request</li> <li>Certificate renewal request</li> <li>Certificate replacement request</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, identify the document that defines procedures for requesting certificate issue, renewal, and replacement.</li> <li>Confirm the documented procedures include generation of a unique key pair for each: <ul style="list-style-type: none"> <li>New certificate issue request</li> <li>Certificate renewal request</li> <li>Certificate replacement request</li> </ul> </li> </ul>		✓			
<b>RD-5.1.b</b> Interview responsible personnel and observe certificate issuing, renewal, and replacement processes to verify that: <ul style="list-style-type: none"> <li>Only one certificate is requested for each key pair generated.</li> <li>Expired certificates are renewed by generating a new key pair and requesting a new certificate.</li> <li>Certificates are replaced by generating a new key pair and requesting a new certificate.</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Only one certificate is requested for each key pair generated.</li> <li>Expired certificates are renewed by generating a new key pair and requesting a new certificate.</li> <li>Certificates are replaced by generating a new key pair and requesting a new certificate.</li> </ul> </li> <li>Describe how certificate issuing, renewal and replacement processes were observed to ensure that: <ul style="list-style-type: none"> <li>Only one certificate is requested for each key pair generated.</li> <li>Expired certificates are renewed by generating a new key pair and requesting a new certificate.</li> <li>Certificates are replaced by generating a new key pair and requesting a new certificate.</li> </ul> </li> </ul> </li> </ul>			✓	✓	
<b>RD-5.2</b> Mechanisms must be utilized to preclude the use of a key for other than its designated and intended purpose—that is, keys must be used in accordance with their certificate policy (as required in Requirement RD-9.3). See <i>RFC 3647- Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework</i> for an example of content.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-5.2.a</b> Examine certificate policy and key-usage procedures and verify that documented key-usage procedures are defined in accordance with the certificate policy.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify the document that defines the certificate policy.</li> <li>Identify the document that defines key-usage procedures.</li> <li>Confirm the documented key usage procedures are defined in accordance with the certificate policy.</li> </ul> </li> </ul>		✓			
<b>RD-5.2.b</b> Verify that mechanisms are defined that preclude the use of a key for other than its designated and intended purpose.	<ul style="list-style-type: none"> <li>Confirm the documented certificate policy and key-usage procedures (identified in RD-5.2.a) define mechanisms to preclude the use of a key for other than its designated and intended purpose.</li> </ul>		✓			
<b>RD-5.2.c</b> Observe key-usage processes to verify that mechanisms are in use that preclude the use of a key for other than its designated and intended purpose.	<ul style="list-style-type: none"> <li>Describe how observation of key-usage processes verified that mechanisms are in use that preclude the use of a key for other than its designated and intended purpose.</li> </ul>				✓	
<b>RD-5.2.1 CA/RA:</b> CA certificate signature keys, certificate (entity) status checking (for example, Certificate Revocation Lists) signature keys, or signature keys for updating valid/authorized host lists in encryption devices cannot be used for any purpose other than subordinate entity certificate requests, certificate status checking, and self-signed root certificates. <b>Note:</b> The keys used for certificate signing and certificate (entity) status checking (and if applicable, self-signed roots) may be for combined usage or may exist as separate keys dedicated to either certificate-signing or certificate (entity) status checking.						
<b>RD-5.2.1.a</b> Examine certificate policy and documented procedures to verify that: <ul style="list-style-type: none"> <li>Certificate signature keys,</li> <li>Certificate status checking (for example, Certificate Revocation Lists) signature keys, or</li> <li>Signature keys for updating valid/authorized host lists in POIs</li> </ul> Must not be used for any purpose other than: <ul style="list-style-type: none"> <li>Subordinate entity certificate requests,</li> <li>Certificate status checking, and/or</li> <li>Self-signed root certificates</li> </ul>	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1: <ul style="list-style-type: none"> <li>Identify the document that defines the certificate policy.</li> <li>Identify the document that defines key-usage procedures.</li> <li>Confirm the documented certificate policy and procedures require that: <ul style="list-style-type: none"> <li>Certificate signature keys,</li> <li>Certificate status checking (for example, Certificate Revocation Lists) signature keys, or</li> <li>Signature keys for updating valid/authorized host lists in POIs</li> </ul> </li> </ul> </li> </ul> Must not be used for any purpose other than: <ul style="list-style-type: none"> <li>Subordinate entity certificate requests,</li> <li>Certificate status checking, and/or</li> <li>Self-signed root certificates</li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-5.2.1.b</b> Interview responsible personnel and observe key-usage processes to verify that: <ul style="list-style-type: none"> <li>• Certificate signature keys,</li> <li>• Status checking (for example, Certificate Revocation Lists) signature keys, or</li> <li>• Signature keys for updating valid/authorized host lists in POIs</li> </ul> Are not used for any purpose other than: <ul style="list-style-type: none"> <li>• Subordinate entity certificate requests,</li> <li>• Certificate status checking, and/or</li> <li>• Self-signed root certificates</li> </ul>	<ul style="list-style-type: none"> <li>• Identify responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>○ Certificate signature keys,</li> <li>○ Status checking (for example, Certificate Revocation Lists) signature keys, or</li> <li>○ Signature keys for updating valid/authorized host lists in POIs</li> </ul> Are not used for any purpose other than: <ul style="list-style-type: none"> <li>○ Subordinate entity certificate requests,</li> <li>○ Certificate status checking, and/or</li> <li>○ Self-signed root certificates</li> </ul> </li> <li>• Describe how observation of key-usage processes verified that <ul style="list-style-type: none"> <li>○ Certificate signature keys,</li> <li>○ Status checking (for example, Certificate Revocation Lists) signature keys, or</li> <li>○ Signature keys for updating valid/authorized host lists in POIs</li> </ul> Are not used for any purpose other than: <ul style="list-style-type: none"> <li>○ Subordinate entity certificate requests,</li> <li>○ Certificate status checking, and/or</li> <li>○ Self-signed root certificates</li> </ul> </li> </ul>			✓	✓	
<b>RD-5.2.2</b> CAs that issue certificates to other CAs cannot be used to issue certificates to POIs.						
<b>RD-5.2.2</b> if a CA issues certificates to POIs, examine CA certificate policy and documented procedures to verify that the CA does not issue certificates to other CAs.	<ul style="list-style-type: none"> <li>• For all CAs that issue certificates to POIs, identify the document that ensures that the CA does not issue certificates to other CAs.</li> </ul>		✓			
<b>RD-5.3</b> Public-key-based implementations must provide mechanisms for restricting and controlling the use of public and private keys. For example, this can be accomplished through the use of X.509-compliant certificate extensions.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-5.3.a</b> Examine documented procedures to verify that mechanisms are defined for restricting and controlling the use of public and private keys such that they can only be used for their intended purpose.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, Identify the document that defines mechanisms for restricting and controlling the use of public and private keys such that they can only be used for their intended purpose.</li> </ul>		✓			
<b>RD-5.3.b</b> Observe the mechanisms in use to verify that they restrict and control the use of public and private keys.	<ul style="list-style-type: none"> <li>For all asymmetric techniques identified in Table A1.1, describe how mechanisms in use were observed to restrict and control the use of public and private keys.</li> </ul>				✓	
<b>RD-5.4 CA/RA:</b> CA private keys cannot be shared between devices except for load balancing and disaster recovery.						
<b>RD-5.4.a</b> Examine CA's documented processes to verify that CA private keys are not permitted to be shared between devices, except for load balancing and disaster recovery.	<ul style="list-style-type: none"> <li>Identify the document that defines processes to ensure CA private keys are not to be shared between devices, except for load balancing and disaster recovery.</li> </ul>		✓		✓	
<b>RD-5.4.b</b> Examine cryptograms of the private keys on CA systems and/or observe records of key-management operations to verify that CA private keys are not shared between devices, except for load balancing and disaster recovery	<ul style="list-style-type: none"> <li>Identify cryptograms of private keys on CA systems and/or the records of key-management operations examined.</li> <li>Describe how examination of cryptograms of private keys on CA systems and/or the records of key-management operations verified that CA private keys are not shared between devices, except for load balancing and disaster recovery.</li> </ul>	✓	✓			
<b>RD-5.5</b> KDH private keys cannot be shared between devices except for load balancing and disaster recovery.						
<b>RD-5.5.a</b> Examine documented processes to verify that KDH private keys are not permitted to be shared between devices, except for load balancing and disaster recovery.	<ul style="list-style-type: none"> <li>Identify the document that defines processes to ensure that KDH private keys are not to be shared between devices, except for load balancing and disaster recovery.</li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-5.5.b</b> Examine cryptograms of the private keys and/or observe records of key-management operations to verify that KDH private keys are not shared between devices, except for load balancing and disaster recovery.	<ul style="list-style-type: none"> <li>Identify cryptograms of private keys on CA systems and/or the records of key-management operations examined.</li> <li>Describe how examination of cryptograms of the private keys and/or the records of key-management operations verified that KDH private keys are not shared between devices, except for load balancing and disaster recovery.</li> </ul>	✓	✓			
<b>RD-5.6</b> POI private keys cannot be shared.						
<b>RD-5.6.a</b> Examine documented processes to verify that POI private keys are not permitted to be shared between devices.	<ul style="list-style-type: none"> <li>Identify the document that defines processes to ensure that POI private keys are not to be shared between devices.</li> </ul>		✓			
<b>RD-5.6.b</b> Inspect public key certificates on the host processing system to confirm that a unique certificate exists for each connected POI.	<ul style="list-style-type: none"> <li>Describe how observation of public key certificates on the host processing system verified that a unique certificate exists for each connected POI.</li> </ul>	✓				
<b>RD-6</b> All secret and private keys must be unique (except by chance) to a POI device. <i>(Reference 6E-4)</i>						
<b>RD-6.1</b> Keys in all hosts and POIs must be uniquely identifiable via cryptographically verifiable means (for example, through the use of digital signatures, “fingerprints,” or key check values). The method used must not expose any part of the actual key value.						
<b>RD-6.1.a</b> Examine documented procedures to verify that a cryptographic method is defined which: <ul style="list-style-type: none"> <li>Uniquely identifies private keys stored within all hosts and POIs.</li> <li>Does not expose any part of the actual key value.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines a cryptographic method which: <ul style="list-style-type: none"> <li>Uniquely identifies private keys stored within all hosts and POIs.</li> <li>Does not expose any part of the actual key value</li> </ul> </li> </ul>		✓			
<b>RD-6.1.b</b> Examine a sample of hosts and POIs to verify the method used: <ul style="list-style-type: none"> <li>Uniquely identifies the private keys stored within all hosts and POIs.</li> <li>Does not expose any part of the actual key value.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample of hosts assessed for this testing procedure.</li> <li>Identify the sample of POIs assessed for this testing procedure.</li> <li>For all items in the sample, describe how observation of the devices verified that the method used: <ul style="list-style-type: none"> <li>Uniquely identifies the private keys stored within all hosts and POIs.</li> <li>Does not expose any part of the actual key value.</li> </ul> </li> </ul>	✓				✓

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-6.2</b> Private keys used to sign certificates, certificate-status lists, or messages must exist only in one of the following forms: <ul style="list-style-type: none"><li>At least two separate key shares or full-length components;</li><li>Encrypted using an algorithm and key size of equivalent or greater strength; or</li><li>Within an SCD (for example, an HSM or POI) approved to FIPS140-2 Level 3, PCI HSM, or PCI PTS.</li></ul>						
<b>RD-6.2.a</b> Examine documented key-management procedures to verify that private keys used to sign certificates, certificate-status lists, or messages must exist only in one of the approved forms at all times.	<ul style="list-style-type: none"><li>Identify the document that defines procedures to ensure that private keys used to sign certificates, certificate-status lists, or messages must exist only in one of the approved forms at all times.</li></ul>		✓			
<b>RD-6.2.b</b> Observe key-management operations and interview key custodians to verify that private keys used to sign certificates, certificate-status lists, or messages must exist only in one of the approved forms at all times.	<ul style="list-style-type: none"><li>Identify key custodians interviewed who confirm that private keys used to sign certificates, certificate-status lists, or messages exist only in one of the approved forms at all times.</li><li>Describe how observation of key-management operations verified that private keys used to sign certificates, certificate-status lists, or messages exist only in one of the approved forms at all times.</li></ul>			✓	✓	
<b>RD-7</b> Procedures must exist and must be demonstrably in use to replace any known or suspected compromised key and its subsidiary keys (those keys encrypted with the compromised key) with a value not feasibly related to the original key. <i>(Reference 6F-2)</i>						
<b>RD-7.1</b> Solution provider must provide for continuity of service in the event of the loss of a root key (for example, through compromise or expiration). <i>For example, a key-distribution management system and the associated end entities (KDHS, encryption devices) could provide support for more than one root.</i>						
<b>RD-7.1.a</b> Examine documented key-management procedures to verify the solution provider provides for continuity of service in the event of the loss of a root key.	<ul style="list-style-type: none"><li>Identify the document that defines solution provider procedures for continuity of service in the event of the loss of a root key.</li></ul>		✓			
<b>RD-7.1.b</b> Observe key-management operations and interview key custodians to verify the solution provider provides for continuity of service in the event of the loss of a root key	<ul style="list-style-type: none"><li>Identify key custodians interviewed who confirm that the solution provider provides for continuity of service in the event of the loss of a root key</li><li>Describe how observation of key-management operations verified that the solution provider provides for continuity of service in the event of the loss of a root key.</li></ul>			✓	✓	
<b>RD-7.2 CA/RA:</b> Root CAs must provide for segmentation of risk to address key compromise. An example of this would be the deployment of subordinate CAs.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-7.2</b> Through the examination of documented procedures, interviews and observation verify that Root CAs provide for segmentation of risk to address key compromise.	<ul style="list-style-type: none"> <li>Identify the documented that defines Root CAs procedures for segmentation of risk to address key compromise</li> <li>Identify individuals interviewed who confirm that the Root CAs provides for segmentation of risk to address key compromise</li> <li>Describe how observation of processes verified that the Root CA provides for segmentation of risk to address key compromise</li> </ul>		✓	✓	✓	
<b>RD-7.3 CA/RA:</b> Mechanisms must be in place to address compromise of a CA due to, for example, key compromise or mismanagement. This must include procedures to revoke subordinate certificates and notify affected entities.						
<b>RD-7.3.a</b> Examine documented procedures to verify that mechanisms are defined to address compromise of a CA. Verify the mechanisms include procedures to: <ul style="list-style-type: none"> <li>Revoke subordinate certificates, and</li> <li>Notify affected entities.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines mechanisms to address compromise of a CA.</li> <li>Confirm the documented mechanisms include procedures to:               <ul style="list-style-type: none"> <li>Revoke subordinate certificates, and</li> <li>Notify affected entities.</li> </ul> </li> </ul>		✓			
<b>RD-7.3.b</b> Interview responsible personnel to verify that the defined mechanisms to address compromise of a CA are in place and include: <ul style="list-style-type: none"> <li>Revoking subordinate certificates, and</li> <li>Notifying affected entities.</li> </ul>	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that the defined mechanisms to address compromise of a CA are in place and include:               <ul style="list-style-type: none"> <li>Revoking subordinate certificates, and</li> <li>Notifying affected entities.</li> </ul> </li> </ul>			✓		
<b>RD-7.3.1 CA/RA:</b> If a compromise is known or suspected, the CA must cease issuance of certificates and perform a damage assessment, including a documented analysis of how and why the event occurred. <ul style="list-style-type: none"> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul>						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-7.3.1.a</b> Examine documented procedures to verify that the following are required in the event a compromise is known or suspected: <ul style="list-style-type: none"> <li>The CA will cease issuance of certificates.</li> <li>The CA will perform a damage assessment, including a documented analysis of how and why the event occurred.</li> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for responding to a known or suspected compromise.</li> <li>Confirm the procedures include: <ul style="list-style-type: none"> <li>The CA will cease issuance of certificates.</li> <li>The CA will perform a damage assessment, including a documented analysis of how and why the event occurred.</li> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul> </li> </ul>		✓		✓	



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-7.3.1.b</b> Interview responsible personnel and observe process to verify that in the event a compromise is known or suspected: <ul style="list-style-type: none"> <li>The CA ceases issuance of certificates.</li> <li>The CA performs a damage assessment, including a documented analysis of how and why the event occurred.</li> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul>	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that in the event a compromise is known or suspected: <ul style="list-style-type: none"> <li>The CA ceases issuance of certificates.</li> <li>The CA performs a damage assessment, including a documented analysis of how and why the event occurred.</li> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul> </li> <li>Describe how observation of process was verified that in the event a compromise is known or suspected: <ul style="list-style-type: none"> <li>The CA ceases issuance of certificates.</li> <li>The CA performs a damage assessment, including a documented analysis of how and why the event occurred.</li> <li>The damage assessment should assume that a compromise has occurred unless and until it is unequivocally proven to be a false alarm.</li> <li>The damage assessment includes determining whether the known or suspected compromise has or could result in the issuance of fraudulent certificates.</li> </ul> </li> </ul>			✓	✓	
<b>RD-7.3.2</b> In the event of the issuance of fraudulent certificates with the compromised key, the CA should determine whether to recall and reissue all signed certificates with a newly generated signing key.						
<b>RD-7.3.2.a</b> Examine documented procedures to verify that in the event of the issuance of fraudulent certificates with the compromised key, procedures are defined for the CA to determine whether to recall and reissue all signed certificates with a newly generated signing key.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for responding to the issuance of fraudulent certificates with the compromised key.</li> <li>Confirm the procedures are defined for the CA to determine whether to recall and reissue all signed certificates with a newly generated signing key.</li> </ul>		✓			

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-7.3.2.b</b> Interview responsible personnel to verify procedures are followed for the CA to determine whether to recall and reissue all signed certificates with a newly generated signing key.	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that procedures are followed for the CA to determine whether to recall and reissue all signed certificates with a newly generated signing key. key.</li> </ul>			✓		
<b>RD-7.3.3</b> Mechanisms (for example, time stamping) must exist to ensure that fraudulent certificates cannot be successfully used.						
<b>RD-7.3.3.a</b> Examine documented procedures to verify that mechanisms are defined to ensure that fraudulent certificates cannot be successfully used.	<ul style="list-style-type: none"> <li>Identify the document that defines mechanisms to ensure that fraudulent certificates cannot be successfully used.</li> </ul>		✓			
<b>RD-7.3.3.b</b> Interview responsible personnel and observe implemented mechanisms to verify that fraudulent certificates cannot be successfully used.	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that mechanisms are implemented to ensure fraudulent certificates cannot be successfully used.</li> <li>Describe how the implemented mechanisms were observed to ensure that fraudulent certificates cannot be successfully used.</li> </ul>			✓	✓	
<b>RD-7.4 CA/RA:</b> The compromised CA must notify any superior or subordinate CAs of the compromise. The compromised CA must re-issue and distribute certificates or notify affected parties to apply for new certificates. <b>Note:</b> Affected parties may include subordinate CAs or solution providers (KDHs and POIs), depending upon the function of the compromised CA.						
<b>RD-7.4.a</b> Examine documented procedures to verify that the following procedures are required in the event of a compromise: <ul style="list-style-type: none"> <li>The CA will notify any superior CAs.</li> <li>The CA will notify any subordinate CAs.</li> <li>The CA will either:               <ul style="list-style-type: none"> <li>Reissue and distribute certificates to affected parties, or</li> <li>Notify the affected parties to apply for new certificates.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that in the event of a compromise:               <ul style="list-style-type: none"> <li>The CA will notify any superior CAs.</li> <li>The CA will notify any subordinate CAs.</li> <li>The CA will either:                   <ul style="list-style-type: none"> <li>Reissue and distribute certificates to affected parties, or</li> <li>Notify the affected parties to apply for new certificates.</li> </ul> </li> </ul> </li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-7.4.b</b> Interview responsible personnel to verify that the following procedures are performed in the event a compromise: <ul style="list-style-type: none"> <li>The CA notifies any superior CAs.</li> <li>The CA will notify any subordinate CAs.</li> <li>The CA either: <ul style="list-style-type: none"> <li>Reissues and distributes certificates to affected parties, or</li> <li>Notifies the affected parties to apply for new certificates.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that in the event of a compromise: <ul style="list-style-type: none"> <li>The CA will notify any superior CAs.</li> <li>The CA will notify any subordinate CAs.</li> <li>The CA will either: <ul style="list-style-type: none"> <li>Reissue and distribute certificates to affected parties, or</li> <li>Notify the affected parties to apply for new certificates.</li> </ul> </li> </ul> </li> </ul>			✓		
<b>RD-8</b> Access to material that can be used to construct secret and private keys (such as key components) must be: <ul style="list-style-type: none"> <li>Limited on to a need-to-know basis so that the fewest number of key custodians are necessary to enable their effective use, and</li> <li>Protected such that no other person (not similarly entrusted with that component) can observe or otherwise obtain the component.</li> </ul> <i>(Reference 6F-5)</i>						
<b>RD-8.1 CA/RA:</b> All user access to material that can be used to construct secret and private keys (such as key components) must be directly attributable to an individual user (for example, through the use of unique IDs).						
<b>RD-8.1.a</b> Examine documented procedures to confirm that access to material that can be used to construct secret and private keys is directly attributable to an individual user.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that access to material that can be used to construct secret and private keys is directly attributable to an individual user.</li> </ul>		✓			
<b>RD-8.1.b</b> Observe the access-control mechanisms in place to verify that access to material that can be used to construct secret and private keys is directly attributable to an individual user.	<ul style="list-style-type: none"> <li>Describe how the observation of the access-control mechanisms in place verified that access to material that can be used to construct secret and private keys is directly attributable to an individual user.</li> </ul>	✓				
<b>RD-8.1.1 CA/RA:</b> All user access must be restricted to actions authorized for that role <b>Note:</b> Examples of how access can be restricted include the use of CA software, operating-system, and procedural controls.						
<b>RD-8.1.1.a</b> Examine documented procedures to confirm that access to material that can be used to construct secret and private keys must be restricted to actions authorized for that role.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that access to material that can be used to construct secret and private keys must be restricted to actions authorized for that role.</li> </ul>		✓			

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.1.1.b</b> Observe user role assignments and access-control mechanisms to verify that access to material that can be used to construct secret and private keys is restricted to actions authorized for that role.	<ul style="list-style-type: none"> <li>Describe how observation of user role assignments and access-control mechanisms verified that access to material that can be used to construct secret and private keys is restricted to actions authorized for that role.</li> </ul>	✓			✓	
<b>RD-8.2 CA/RA:</b> The system enforces an explicit and well-defined certificate security policy and certification practice statement (as required in RD-9.2 and RD-9.3). This must include the following:						
<b>RD-8.2.1</b> CA systems that issue certificates to other CAs and KDHS must be operated offline using a dedicated closed network (not a network segment). The network must only be used for certificate issuance and/or revocation. Outside network access shall exist only for the purposes of “pushing” certificate-status information to relying parties (for example, KDHS). <i>Note: Requirements for CA systems that issue certificates to POIs are covered at RD-8.6.</i>						
<b>RD-8.2.1</b> Examine network diagrams and observe network and system configurations to verify: <ul style="list-style-type: none"> <li>CA systems that issue certificates to other CAs and KDHS are operated offline using a dedicated closed network (not a network segment).</li> <li>The network is only used for certificate issuance and/or revocation, or both certificate issuance and revocation.</li> <li>Outside network access shall exist only for the purposes of “pushing” certificate-status information to relying parties (for example, KDHS).</li> </ul>	<ul style="list-style-type: none"> <li>Identify network diagrams examined</li> <li>Describe how examination of network diagrams and observation of system configurations verified that:               <ul style="list-style-type: none"> <li>CA systems that issue certificates to other CAs and KDHS are operated offline using a dedicated closed network (not a network segment).</li> <li>The network is only used for certificate issuance and/or revocation, or both certificate issuance and revocation.</li> <li>Outside network access shall exist only for the purposes of “pushing” certificate-status information to relying parties (for example, KDHS).</li> </ul> </li> </ul>	✓	✓			
<b>RD-8.2.2</b> No CA or Registration Authority (RA) software updates are done over the network (local console access must be used for CA or RA software updates).						
<b>RD-8.2.2</b> Examine software update processes to verify that local console access is used for all CA or RA software updates.	<ul style="list-style-type: none"> <li>Describe how observation of software update processes verified that local console access is used for all CA or RA software updates.</li> </ul>				✓	
<b>RD-8.2.3</b> Non-console access requires two-factor authentication. This also applies to the use of remote console access.						

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.2.3</b> Examine remote access mechanisms and system configurations to verify that all non-console access, including remote access, requires two-factor authentication.	<ul style="list-style-type: none"> <li>Describe how examination of remote access mechanisms and system configurations verified that all non-console access, including remote access, requires two-factor authentication.</li> </ul>	✓			✓	
<b>RD-8.2.4</b> Non-console user access to the CA or RA system environments shall be protected by authenticated encrypted sessions. No other remote access is permitted to the host platform(s) for system or application administration. <i>Note: Access for monitoring only (no create, update, delete capability) of online systems may occur without restriction.</i>						
<b>RD-8.2.4.a</b> Examine non-console access mechanisms and system configurations to verify that all non-console user access is protected by authenticated encrypted sessions.	<ul style="list-style-type: none"> <li>Describe how examination of remote access mechanisms and system configurations verified that all non-console user access is protected by authenticated encrypted sessions.</li> </ul>	✓			✓	
<b>RD-8.2.4.b</b> Observe an authorized CA personnel attempt non-console access to the host platform without the authenticated encrypted session to verify that non-console access is not permitted.	<ul style="list-style-type: none"> <li>Describe how observation of authorized CA personnel attempting non-console access to the host platform without the authenticated encrypted session verified that without the authenticated encrypted session, non-console access is not permitted.</li> </ul>				✓	
<b>RD-8.2.5</b> CA certificate (for SCD/KDH authentication and validity status checking) signing keys must only be enabled under at least dual control. <i>Note: Certificate requests may be vetted (approved) using single user logical access to the RA application.</i>						
<b>RD-8.2.5.a</b> Examine certificate security policy and certification practice statement to verify that CA certificate-signing keys must only be enabled under at least dual control.	<ul style="list-style-type: none"> <li>Identify the document that defines certificate security policy.</li> <li>Identify the document that defines the certification practice statement.</li> <li>Confirm the certificate policy and certification practice statement requires that CA certificate-signing keys must only be enabled under at least dual control.</li> </ul>		✓			
<b>RD-8.2.5.b</b> Observe certificate-signing processes to verify that signing keys are enabled only under at least dual control.	<ul style="list-style-type: none"> <li>Describe how the observation of certificate-signing processes verified that signing keys are enabled only under at least dual control.</li> </ul>				✓	
<b>RD-8.3 CA/RA:</b> The CA shall require a separation of duties for critical CA functions to prevent one person from maliciously using a CA system without detection, the practice referred to as “dual control.” At a minimum, there shall be multi-person control for operational procedures such that no one person can gain control over the CA signing key(s).						

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<b>RD-8.3.a</b> Examine documented procedures to verify they include following: <ul style="list-style-type: none"> <li>Critical functions of the CA are defined.</li> <li>Separation of duties is required to prevent one person from maliciously using a CA system without detection.</li> <li>At a minimum, multi-person control is required for operational procedures such that no one person can gain control over the CA signing key(s).</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines the following <ul style="list-style-type: none"> <li>Critical functions of the CA are defined.</li> <li>Separation of duties is required to prevent one person from maliciously using a CA system without detection.</li> <li>At a minimum, multi-person control is required for operational procedures such that no one person can gain control over the CA signing key(s).</li> </ul> </li> </ul>		✓			
<b>RD-8.3.b</b> Observe CA operations and interview responsible personnel to verify: <ul style="list-style-type: none"> <li>Critical functions of the CA are identified.</li> <li>Separation of duties is required to prevent one person from maliciously using a CA system without detection.</li> <li>At a minimum, multi-person control is required for operational procedures such that no one person can gain control over the CA signing key(s).</li> </ul>	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Critical functions of the CA are identified.</li> <li>Separation of duties is required to prevent one person from maliciously using a CA system without detection.</li> <li>At a minimum, multi-person control is required for operational procedures such that no one person can gain control over the CA signing key(s).</li> </ul> </li> <li>Describe how observation of CA operations verified that: <ul style="list-style-type: none"> <li>Critical functions of the CA are identified.</li> <li>Separation of duties is required to prevent one person from maliciously using a CA system without detection.</li> <li>At a minimum, multi-person control is required for operational procedures such that no one person can gain control over the CA signing key(s)</li> </ul> </li> </ul>			✓	✓	
<b>RD-8.4 CA/RA:</b> CA systems must be hardened to include: <ul style="list-style-type: none"> <li>Services that are not necessary or that allow non-secure access (for example, rlogin, rshell, telnet, ftp, etc.) must be removed or disabled.</li> <li>Unnecessary ports must also be disabled.</li> <li>Documentation must exist to support the enablement of all active services and ports.</li> </ul>						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.4.a</b> Examine system documentation to verify the following is required: <ul style="list-style-type: none"> <li>Services that are not necessary or that allow non-secure access (for example, rlogin, rshell, etc., commands in Unix) must be removed or disabled.</li> <li>Unnecessary ports must also be disabled.</li> <li>Documentation must exist to support the enablement of all active services and ports.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines CA system hardening procedures.</li> <li>Confirm the system hardening procedures require: <ul style="list-style-type: none"> <li>Services that are not necessary or that allow non-secure access must be removed or disabled.</li> <li>Unnecessary ports must also be disabled.</li> <li>Documentation must exist to support the enablement of all active services and ports.</li> </ul> </li> </ul>		✓			
<b>RD-8.4.b</b> For a sample of systems, examine documentation supporting the enablement of active services and ports, and observe system configurations to verify: <ul style="list-style-type: none"> <li>Services that are not necessary or that allow non-secure access (for example, rlogin, rshell, etc., commands in Unix) are removed or disabled.</li> <li>Unnecessary ports are disabled.</li> <li>There is documentation to support all active services and ports.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a sample of CA systems examined.</li> <li>For all systems in the sample, describe how examination of documentation supporting the enablement of active services and ports, and observation of system configurations verified that: <ul style="list-style-type: none"> <li>Services that are not necessary or that allow non-secure access (for example, rlogin, rshell, etc., commands in Unix) are removed or disabled.</li> <li>Unnecessary ports are disabled.</li> <li>There is documentation to support all active services and ports.</li> </ul> </li> </ul>	✓	✓			✓
<b>RD-8.4.1 CA/RA:</b> Vendor-default IDs that are required only as owners of objects or processes, or for installation of patches and upgrades, must be disabled from login except as necessary for a documented and specific business reason.						
<b>RD-8.4.1.a</b> Examine documented procedures to verify that vendor-default IDs required as owners of objects or processes, or for installation of patches and upgrades, must be disabled from login except as necessary for a documented and specific business reason.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring vendor-default IDs required as owners of objects or processes, or for installation of patches and upgrades, must be disabled from login except as necessary for a documented and specific business reason.</li> </ul>		✓			



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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.4.1.b</b> Examine system configurations and interview responsible personnel to verify that vendor-default IDs required as owners of objects or processes, or for installation of patches and upgrades, are disabled from login except as necessary for a documented and specific business reason.	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that vendor-default IDs required as owners of objects or processes, or for installation of patches and upgrades, are disabled from login except as necessary for a documented and specific business reason.</li> <li>Describe how observation of system configurations verified that vendor-default IDs required as owners of objects or processes, or for installation of patches and upgrades, are disabled from login except as necessary for a documented and specific business reason.</li> </ul>	✓		✓		
<b>RD-8.4.2</b> Vendor defaults (for example, passwords, SNMP strings, and IDs such as “Guest”) must be changed, removed, or disabled before installing a system on the network.						
<b>RD-8.4.2.a</b> Examine documented procedures to verify that vendor defaults (for example, passwords, SNMP strings, and IDs such as “Guest”) must be changed, removed, or disabled before installing a system on the network.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for vendor defaults to be changed, removed, or disabled before installing a system on the network.</li> </ul>		✓			
<b>RD-8.4.2.b</b> Examine system configurations and interview responsible personnel to verify that vendor defaults (for example, passwords, SNMP strings, and IDs such as “Guest”) are changed, removed, or disabled before installing a system on the network.	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that vendor defaults are changed, removed, or disabled before installing a system on the network.</li> <li>Describe how observation of system configurations verified that vendor defaults are changed, removed, or disabled before installing a system on the network.</li> </ul>	✓		✓		
<b>RD-8.5 CA/RA:</b> Audit trails must include but not be limited to the following: <ul style="list-style-type: none"> <li>All key-management operations, such as key generation, loading, transmission, backup, recovery, compromise, and destruction and certificate generation or revocation</li> <li>The identity of the person authorizing the operation</li> <li>The identities of all persons handling any key material (such as key components or keys stored in portable devices or media)</li> </ul>						
<b>RD-8.5.a</b> Examine system configurations and audit trails to verify that all key-management operations are logged.	<ul style="list-style-type: none"> <li>Identify the audit trails examined</li> <li>Describe how observation of system configurations and audit trails verified that all key-management operations are logged.</li> </ul>	✓	✓			



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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.5.b</b> For a sample of key-management operations, examine audit trails to verify they include: <ul style="list-style-type: none"> <li>The identity of the person authorizing the operation</li> <li>The identities of all persons handling any key material</li> </ul>	<ul style="list-style-type: none"> <li>Identify the audit trails examined</li> <li>Identify the sample of key-management operations observed.</li> <li>For each key-management operation observed, describe how examination of audit trails verified they include: <ul style="list-style-type: none"> <li>The identity of the person authorizing the operation</li> <li>The identities of all persons handling any key material</li> </ul> </li> </ul>		✓			✓
<b>RD-8.5.1</b> Audit logs must be archived for a minimum of two years.						
<b>RD-8.5.1</b> Examine audit trail files to verify that audit trails are archived for a minimum of two years.	<ul style="list-style-type: none"> <li>Identify the audit trails examined</li> <li>Describe how examination of audit trail files verified that audit trails are archived for a minimum of two years.</li> </ul>		✓			
<b>RD-8.5.2</b> Records pertaining to certificate issuance and revocation must at a minimum be retained for the life of the associated certificate.						
<b>RD-8.5.2.a</b> For a sample of certificate issuances, examine audit records to verify that the records are retained for at least the life of the associated certificate.	<ul style="list-style-type: none"> <li>Identify a sample of certificate issuances.</li> <li>Identify the audit trails examined for each certificate issuance.</li> <li>For each certificate issuance observed, describe how examination of audit records verified that the records are retained for at least the life of the associated certificate.</li> </ul>		✓			✓
<b>RD-8.5.2.b</b> For a sample of certificate revocations, examine audit records to verify that the records are retained for at least the life of the associated certificate.	<ul style="list-style-type: none"> <li>Identify a sample of certificate revocations.</li> <li>Identify the audit trails examined for each certificate revocation</li> <li>For each certificate revocation observed, describe how examination of audit records verified that that the records are retained for at least the life of the associated certificate.</li> </ul>		✓			✓
<b>RD-8.5.3</b> Logical events are divided into operating-system and CA application events. For both events the following must be recorded in the form of an audit record: <ul style="list-style-type: none"> <li>Date and time of the event,</li> <li>Identity of the entity and/or user that caused the event,</li> <li>Type of event, and</li> <li>Success or failure of the event.</li> </ul>						

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.5.3.a</b> Examine audit trails to verify that logical events are divided into operating-system and CA application events.	<ul style="list-style-type: none"> <li>Identify the audit trails examined.</li> <li>Describe how examination of audit trails verified that logical events are divided into operating-system and CA application events.</li> </ul>		✓			
<b>RD-8.5.3.b</b> Examine a sample of operating system logs to verify they contain the following information: <ul style="list-style-type: none"> <li>Date and time of the event,</li> <li>Identity of the entity and/or user that caused the event,</li> <li>Type of event, and</li> <li>Success or failure of the event.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample of operating system logs examined.</li> <li>Describe how examination of the logs verified that they contain:               <ul style="list-style-type: none"> <li>Date and time of the event,</li> <li>Identity of the entity and/or user that caused the event,</li> <li>Type of event, and</li> <li>Success or failure of the event</li> </ul> </li> </ul>		✓			✓
<b>RD-8.5.3.c</b> Examine a sample of application logs to verify they contain the following information: <ul style="list-style-type: none"> <li>Date and time of the event,</li> <li>Identity of the entity and/or user that caused the event,</li> <li>Type of event, and</li> <li>Success or failure of the event</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample of application logs examined.</li> <li>Describe how examination of the logs verified that they contain:               <ul style="list-style-type: none"> <li>Date and time of the event,</li> <li>Identity of the entity and/or user that caused the event,</li> <li>Type of event, and</li> <li>Success or failure of the event</li> </ul> </li> </ul>		✓			✓
<b>RD-8.5.4</b> Mechanisms must be in place to prevent and detect attempted tampering of CA application and operating system logs. <i>For example: A digital signature or a symmetric MAC (based on TDES) may be used to protect logs from alteration.</i>						
<b>RD-8.5.4</b> Examine log security controls to verify that mechanisms are in place to prevent and detect attempted tampering of application and operating system logs.	<ul style="list-style-type: none"> <li>Describe how examination of log security controls verified that mechanisms are in place to prevent and detect attempted tampering of application and operating system logs.</li> </ul>	✓				
<b>RD-8.6 CA/RA:</b> Certificate-processing systems may only be operated on-line for the issuance of certificates to POIs.						
<b>RD-8.6.a</b> Examine certificate security policy and certification practice statement to verify that certificate-processing systems are only operated on-line for the issuance of certificates to POIs.	<ul style="list-style-type: none"> <li>Identify the document that defines certificate security policy.</li> <li>Identify the document that defines the certification practice statement.</li> <li>Confirm the documented certificate policy and certification practice statement ensure that certificate-processing systems are only operated on-line for the issuance of certificates to POIs.</li> </ul>		✓			

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.6.b</b> Examine certificate-processing systems to verify they are only operated on-line for the issuance of certificates to POIs.	<ul style="list-style-type: none"> <li>Describe how observation of certificate-processing systems verified they are only operated on-line for the issuance of certificates to POIs.</li> </ul>	✓				
<b>RD-8.6.1</b> Online certificate-processing system components must be protected by a firewall(s) from all unauthorized access, including casual browsing and deliberate attacks. Firewalls must minimally be configured to: <ul style="list-style-type: none"> <li>Deny all services not explicitly permitted.</li> <li>Disable or remove all unnecessary services, protocols, and ports.</li> <li>Fail to a configuration that denies all services, and require a firewall administrator to re-enable services after a failure.</li> <li>Disable source routing on the firewall and external router.</li> <li>Not accept traffic on its external interfaces that appears to be coming from internal network addresses.</li> <li>Notify the firewall administrator in near real time of any item that may need immediate attention such as a break-in, little disk space available, or other related messages so that an immediate action can be taken.</li> <li>Run on a dedicated computer: All non-firewall related software, such as compilers, editors, communications software, etc., must be deleted or disabled.</li> </ul>						
<b>RD-8.6.1.a</b> Examine network and system configurations to verify that on-line certificate-processing system are protected from unauthorized access by firewall(s).	<ul style="list-style-type: none"> <li>Describe how examination of network and system configurations verified that on-line certificate-processing systems are protected from unauthorized access by firewall(s).</li> </ul>	✓				

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.6.1.b</b> Examine firewall configurations for verify they are configured to: <ul style="list-style-type: none"> <li>Deny all services not explicitly permitted.</li> <li>Disable or remove all unnecessary services, protocols, and ports.</li> <li>Fail to a configuration that denies all services, and require a firewall administrator to re-enable services after a failure.</li> <li>Disable source routing on the firewall and external router.</li> <li>Not accept traffic on its external interfaces that appears to be coming from internal network addresses.</li> <li>Notify the firewall administrator in near real time of any item that may need immediate attention such as a break-in, little disk space available, or other related messages so that an immediate action can be taken.</li> <li>Run on a dedicated computer: All non-firewall related software, such as compilers, editors, communications software, etc., must be deleted or disabled.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how examination of firewall configurations verified they are configured to: <ul style="list-style-type: none"> <li>Deny all services not explicitly permitted.</li> <li>Disable or remove all unnecessary services, protocols, and ports.</li> <li>Fail to a configuration that denies all services, and require a firewall administrator to re-enable services after a failure.</li> <li>Disable source routing on the firewall and external router.</li> <li>Not accept traffic on its external interfaces that appears to be coming from internal network addresses.</li> <li>Notify the firewall administrator in near real time of any item that may need immediate attention such as a break-in, little disk space available, or other related messages so that an immediate action can be taken.</li> <li>Run on a dedicated computer. All non-firewall related software, such as compilers, editors, communications software, etc., must be deleted or disabled.</li> </ul> </li> </ul>	✓				
<b>RD-8.6.2</b> Online certificate-processing systems must employ individually or in combination network and host-based intrusion detection systems (IDS) to detect inappropriate access. At a minimum, database servers and the application servers for RA and web, as well as the intervening segments, must be covered.						
<b>RD-8.6.2.a</b> Observe network-based and/or host-based IDS configurations to verify that on-line certificate-processing systems are protected by IDS to detect inappropriate access.	<ul style="list-style-type: none"> <li>Describe how observation of network-based and/or host-based IDS configurations verified that on-line certificate-processing systems are protected by IDS to detect inappropriate access.</li> </ul>	✓				
<b>RD-8.6.2.b</b> Verify that IDS coverage includes all database servers, RA application servers and web servers, as well as the intervening segments.	<ul style="list-style-type: none"> <li>Describe how IDS coverage was observed to include all database servers, RA application servers and web servers, as well as the intervening segments.</li> </ul>	✓				

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
RD-8.7 CA/RA: Develop configuration standards for all system components. Assure that these standards address all known security vulnerabilities and are consistent with industry-accepted system-hardening standards.						
RD-8.7.a Examine system configuration standards for all types of system components and verify the system configuration standards are consistent with industry-accepted hardening standards.	<ul style="list-style-type: none"><li>Identify the document that defines systems configuration standards for all types of system components.</li><li>Confirm the system configuration standards are consistent with industry-accepted hardening standards.</li></ul>		✓			
RD-8.7.b Verify system configuration standards address all known security vulnerabilities.	<ul style="list-style-type: none"><li>Confirm the system configuration standards (identified in RD-8.7.a) address all known security vulnerabilities.</li></ul>	✓				
RD-8.7.c Examine a sample of system configurations to verify that system configuration standards are applied when new systems are configured.	<ul style="list-style-type: none"><li>Identify the sample of system configurations examined.</li><li>For each item in the sample, describe how examination of system configurations verified that the system configuration standards are applied when new systems are configured.</li></ul>	✓				✓
RD-8.8 CA/RA: Implement user-authentication management for all system components as follows:						
RD-8.8.1 Employ at least one of the following methods to authenticate all users: <ul style="list-style-type: none"><li>Something you know, such as a password or pass phrase</li><li>Something you have, such as a token device or smart card</li><li>Something you are, such as a biometric</li></ul>						
RD-8.8.1.a Examine documented procedures to verify that at least one of the defined authentication methods is required to authenticate all users to CA processing systems.	<ul style="list-style-type: none"><li>Identify the document that defines authentication procedures for CA processing systems.</li><li>Confirm the documented procedures require at least one of the defined authentication methods to authenticate all users to CA processing systems.</li></ul>		✓			
RD-8.8.1.b Examine system configurations and observe authorized personnel authenticate to CA processing systems to verify that at least one of the defined authentication methods is used to authenticate all users to CA processing systems.	<ul style="list-style-type: none"><li>Describe how observation of authorized personnel authenticating to CA processing systems verified that at least one of the defined authentication methods is used.</li><li>Describe how examination of system configurations verified that at least one of the defined authentication methods is used to authenticate all users to CA processing systems.</li></ul>	✓			✓	

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.8.2</b> Set passwords for first-time use and resets to a unique value for each user and change immediately after the first use.						
<b>RD-8.8.2</b> Examine password procedures and observe security personnel to verify that first-time passwords for new users, and reset passwords for existing users, are set to a unique value for each user and changed after first use.	<ul style="list-style-type: none"> <li>Describe how examination of password procedures verified that first-time passwords for new users, and reset passwords for existing users, must be set to a unique value for each user and changed after first use.</li> <li>Describe how observation of security personnel verified that first-time passwords for new users, and reset passwords for existing users, are set to a unique value for each user and changed after first use.</li> </ul>		✓	✓		
<b>RD-8.8.3</b> Do not use group, shared, or generic accounts and passwords, or other authentication methods. <b>RD-8.8.2</b> Examine password procedures and observe security personnel to verify that first-time passwords for new users, and reset passwords for existing users, are set to a unique value for each user and changed after first use.						
<b>RD-8.8.3.a</b> For a sample of system components, examine user ID lists to verify the following: <ul style="list-style-type: none"> <li>Generic user IDs and accounts are disabled or removed.</li> <li>Shared user IDs for system administration activities and other critical functions do not exist.</li> <li>Shared and generic user IDs are not used to administer any system components.</li> </ul>	<ul style="list-style-type: none"> <li>Identify a sample of system components.</li> <li>For each item in the sample, describe how examination of user ID lists verified that:               <ul style="list-style-type: none"> <li>Generic user IDs and accounts are disabled or removed.</li> <li>Shared user IDs for system administration activities and other critical functions do not exist.</li> <li>Shared and generic user IDs are not used to administer any system components.</li> </ul> </li> </ul>	✓				✓
<b>RD-8.8.3.b</b> Examine authentication policies/procedures to verify that group and shared passwords or other authentication methods are explicitly prohibited.	<ul style="list-style-type: none"> <li>Identify the document that defines authentication policies/procedures.</li> <li>Confirm the documented procedure explicitly prohibit group and shared passwords or other authentication methods.</li> </ul>		✓			
<b>RD-8.8.3.c</b> Interview system administrators to verify that group and shared passwords or other authentication methods are not distributed, even if requested.	<ul style="list-style-type: none"> <li>Identify system administrators interviewed who confirm that group and shared passwords or other authentication methods are not distributed, even if requested.</li> </ul>			✓		
<b>RD-8.8.4</b> Change user passwords at least every 30 days.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.8.4</b> For a sample of system components, obtain and inspect system configuration settings to verify that user password parameters are set to require users to change passwords at least every 30 days.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that user password parameters are set to require users to change passwords at least every 30 days.</li> </ul>	✓				✓
<b>RD-8.8.5</b> Require a minimum password length of at least eight characters.						
<b>RD-8.8.5</b> For a sample of system components, obtain and inspect system configuration settings to verify that password parameters are set to require passwords to be at least eight characters long.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that password parameters are set to require passwords to be at least eight characters long.</li> </ul>	✓				✓
<b>RD-8.8.6</b> Use passwords containing numeric, alphabetic, and special characters.						
<b>RD-8.8.6</b> For a sample of system components, obtain and inspect system configuration settings to verify that password parameters are set to require passwords to contain numeric, alphabetic, and special characters.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that password parameters are set to require passwords to contain numeric, alphabetic, and special characters.</li> </ul>	✓				✓
<b>RD-8.8.7</b> Limit repeated access attempts by locking out the user ID after not more than five attempts.						
<b>RD-8.8.7</b> For a sample of system components, obtain and inspect system configuration settings to verify that authentication parameters are set to require that a user's account be locked out after not more than five invalid logon attempts.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that authentication parameters are set to require that a user's account be locked out after not more than five invalid logon attempts.</li> </ul>	✓				✓
<b>RD-8.8.8</b> Passwords are not stored on any of the systems except in encrypted form or as part of a proprietary one-way transformation process, such as those used in UNIX systems.						
<b>RD-8.8.8</b> For a sample of system components, obtain and inspect system configuration settings to verify that passwords are not stored unless encrypted as part of a proprietary one-way hash.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that passwords are not stored unless encrypted as part of a proprietary one-way hash.</li> </ul>	✓				✓
<b>RD-8.8.9</b> The embedding of passwords in shell scripts, command files, communication scripts, etc., is strictly prohibited.						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.8.9</b> For a sample of system components, obtain and inspect system configuration settings to verify that passwords are not embedded in shell scripts, command files, or communication scripts.	<ul style="list-style-type: none"> <li>Identify the sample of system components.</li> <li>For each item in the sample, describe how examination of system configuration settings verified that passwords are not embedded in shell scripts, command files, or communication scripts.</li> </ul>	✓				✓
<b>RD-8.8.10</b> Where log-on security tokens (for example, smart cards) are used, the security tokens must have an associated usage-authentication mechanism, such as a biometric or associated PIN/pass phrase to enable their usage. The PIN/pass phrase must be at least eight decimal digits in length, or equivalent. <i>Note: Log-on security tokens (for example, smart cards) and encryption devices are not subject to the pass-phrase management requirements for password expiry as stated above.</i>						
<b>RD-8.8.10.a</b> If log-on security tokens are used, observe devices in use to verify that the security tokens have an associated usage-authentication mechanism, such as a biometric or associated PIN/pass phrase to enable their usage.	<ul style="list-style-type: none"> <li>Identify if log-on security tokens are used</li> <li>For all instances where -on security tokens are used, describe how observation of devices in use verified that the security tokens have an associated usage-authentication mechanism, such as a biometric or associated PIN/pass phrase to enable their usage.</li> </ul>	✓				
<b>RD-8.8.10.b</b> Examine token-configuration settings to verify parameters are set to require PINs/passwords be at least eight decimal digits in length, or equivalent.	<ul style="list-style-type: none"> <li>Describe how observation of token-configuration settings verified that parameters are set to require PINs/passwords be at least eight decimal digits in length, or equivalent.</li> </ul>	✓				
<b>RD-8.9 CA/RA:</b> Implement a method to synchronize all critical system clocks and times for all systems involved in key-management operations, including any physical access to the CA environment. If the synchronization process is manual, ensure that it occurs at least quarterly.						
<b>RD-8.9.a</b> Examine documented procedures and system configuration standards to verify a method is defined to synchronize all critical system clocks and times for: <ul style="list-style-type: none"> <li>All systems involved in key-management operations</li> <li>Any physical access to the CA environment</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines a method to synchronize all critical system clocks and times for:               <ul style="list-style-type: none"> <li>All systems involved in key-management operations</li> <li>Any physical access to the CA environment</li> </ul> </li> </ul>		✓			



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-8.9.b</b> For a sample of critical systems, review the time-related system parameters to verify that system clocks and times are synchronized for: <ul style="list-style-type: none"> <li>All systems involved in key-management operations</li> <li>Any physical access to the CA environment</li> </ul>	<ul style="list-style-type: none"> <li>Identify the sample of critical systems.</li> <li>For each item in the sample, describe how observation of the time-related system parameters verified that system clocks and times are synchronized for: <ul style="list-style-type: none"> <li>All systems involved in key-management operations</li> <li>Any physical access to the CA environment</li> </ul> </li> </ul>	✓				✓
<b>RD-8.9.c</b> If a manual process is defined, verify that the documented procedures require that it occurs at least quarterly.	<ul style="list-style-type: none"> <li>Identify whether a manual process is defined.</li> <li>If a manual process is defined, identify the document requiring that the manual synchronization process occurs at least quarterly.</li> </ul>		✓			
<b>RD-8.9.d</b> If a manual process is defined, examine system configurations and synchronization logs to verify that the process occurs at least quarterly.	<ul style="list-style-type: none"> <li>If a manual process is defined, describe how observation of system configurations and synchronization logs verified that the manual synchronization process occurs at least quarterly.</li> </ul>	✓	✓			
<b>RD-9</b> Documented procedures must exist and must be demonstrably in use for all key-administration operations. ( <i>Reference 6F-8</i> )						
<b>RD-9.1 CA/RA:</b> CA operations must be dedicated to certificate issuance and management. All physical and logical CA system components must be separated from key-distribution systems.						
<b>RD-9.1.a</b> Examine documented procedures to verify: <ul style="list-style-type: none"> <li>CA operations must be dedicated to certificate issuance and management.</li> <li>All physical and logical CA system components must be separated from key-distribution systems.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that: <ul style="list-style-type: none"> <li>CA operations must be dedicated to certificate issuance and management.</li> <li>All physical and logical CA system components must be separated from key-distribution systems.</li> </ul> </li> </ul>		✓			
<b>RD-9.1.b</b> Observe CA system configurations and operations to verify they are dedicated to certificate issuance and management.	<ul style="list-style-type: none"> <li>Describe how observation of CA system configurations and operations verified they are dedicated to certificate issuance and management.</li> </ul>	✓			✓	
<b>RD-9.1.c</b> Observe system and network configurations, and physical access controls to verify that all physical and logical CA system components are separated from key-distribution systems.	<ul style="list-style-type: none"> <li>Describe how observation of system and network configurations and physical access controls verified that all physical and logical CA system components are separated from key-distribution systems.</li> </ul>	✓			✓	

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-9.2 CA/RA:</b> Each CA operator must develop a certification practice statement (CPS). (See <i>RFC 3647- Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework</i> for an example of content.) The CPS must be consistent with the requirements described within this document. The CA shall operate in accordance with its CPS. <i><b>Note:</b> This may take the form of a declaration by the CA operator of the details of its trustworthy system and the practices it employs in its operations and in support of the issuance of certificates. A CPS may take the form of either a specific, single document or a collection of specific documents.</i>						
<b>RD-9.2.a</b> Examine documented certification practice statement (CPS) to verify that the CPS is consistent with the requirements described within this document.	<ul style="list-style-type: none"><li>Identify the document that defines the certification practice statement (CPS).</li><li>Confirm the certification practice statement (CPS) is consistent with the requirements described within this document.</li></ul>		✓			
<b>RD-9.2.b</b> Examine documented operating procedures to verify they are defined in accordance with the CPS.	<ul style="list-style-type: none"><li>Identify the document that defines operating procedures.</li><li>Confirm the operating procedures are defined in accordance with the CPS.</li></ul>		✓			
<b>RD-9.2.c</b> Interview personnel and observe CA processes to verify that CA operations are in accordance with its CPS.	<ul style="list-style-type: none"><li>Identify personnel interviewed who confirm that CA operations are in accordance with the CPS</li><li>Describe how observation of CA processes verified that CA operations are in accordance with its CPS.</li></ul>			✓	✓	
<b>RD-9.3 CA/RA:</b> Each CA operator must develop a certificate policy. (See <i>RFC 3647- Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework</i> for an example of content.)						
<b>RD-9.3.a</b> Examine documented certificate policy to verify that the CA has one in place.	<ul style="list-style-type: none"><li>Identify the document that defines the CA certificate policy.</li></ul>		✓			
<b>RD-9.3.b</b> Examine documented operating procedures to verify they are defined in accordance with the certificate policy.	<ul style="list-style-type: none"><li>Identify the document that defines operating procedures.</li><li>Confirm the operating procedures are defined in accordance with the certificate policy.</li></ul>		✓			
<b>RD-9.3.c</b> Interview personnel and observe CA processes to verify that CA operations are in accordance with its certificate policy.	<ul style="list-style-type: none"><li>Identify personnel interviewed who confirm that CA operations are in accordance with its certificate policy.</li><li>Describe how observation of CA processes verified that CA operations are in accordance with its certificate policy.</li></ul>			✓	✓	

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		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-9.4 CA/RA:</b> Documented procedures exist and are demonstrably in use by CAs to validate the identity of the certificate requestor and recipient before issuing a digital certificate for the recipient's associated public key.						
<b>RD-9.4.a</b> Examine documented procedures to verify they include validating the identity of the certificate requestor and recipient before issuing a digital certificate for the recipient's associated public key.	<ul style="list-style-type: none"> <li>Identify the document that defines the process to validate the identity of the certificate requestor and recipient before issuing a digital certificate for the recipient's associated public key.</li> </ul>		✓			
<b>RD-9.4.b</b> Observe certificate issuing processes to verify that the identity of the certificate requestor and recipient are validated before issuing a digital certificate for the recipient's associated public key.	<ul style="list-style-type: none"> <li>Describe how observation the certificate issuing processes verified that the identity of the certificate requestor and recipient are validated before issuing a digital certificate for the recipient's associated public key.</li> </ul>				✓	
<b>RD-9.4.1</b> For CA and KDH certificate-signing requests, including certificate or key-validity status changes (for example, revocation, suspension, replacement), verification must include validation that: <ul style="list-style-type: none"> <li>The entity submitting the request is who it claims to be.</li> <li>The entity submitting the request is authorized to submit the request on behalf of the certificate request's originating entity.</li> <li>The entity submitting the request has a valid business relationship with the issuing authority (for example, the vendor) consistent with the certificate being requested.</li> <li>The certificate-signing request has been transferred from the certificate request's originating entity to the RA in a secure manner.</li> </ul>						
<b>RD-9.4.1.a</b> Examine documented procedures to verify that certificate-signing requests, including certificate or key-validity status changes, require validation that: <ul style="list-style-type: none"> <li>The entity submitting the request is who it claims to be.</li> <li>The entity submitting the request is authorized to submit the request on behalf of the certificate request's originating entity.</li> <li>The entity submitting the request has a valid business relationship with the issuing authority (for example, the vendor) consistent with the certificate being requested.</li> <li>The certificate-signing request has been transferred from the certificate request's originating entity to the RA in a secure manner.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines certificate-signing request procedures including certificate or key-validity status changes.</li> <li>Confirm the documented procedures require validation of the following for all certificate-signing request procedures:               <ul style="list-style-type: none"> <li>The entity submitting the request is who it claims to be.</li> <li>The entity submitting the request is authorized to submit the request on behalf of the certificate request's originating entity.</li> <li>The entity submitting the request has a valid business relationship with the issuing authority (for example, the vendor) consistent with the certificate being requested.</li> <li>The certificate-signing request has been transferred from the certificate request's originating entity to the RA in a secure manner.</li> </ul> </li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-9.4.1.b</b> Observe certificate-signing requests, including certificate or key-validity status changes, to verify they include validation that: <ul style="list-style-type: none"> <li>The entity submitting the request is who it claims to be.</li> <li>The entity submitting the request is authorized to submit the request on behalf of the certificate request's originating entity.</li> <li>The entity submitting the request has a valid business relationship with the issuing authority (for example, the vendor) consistent with the certificate being requested.</li> <li>The certificate-signing request has been transferred from the certificate request's originating entity to the RA in a secure manner.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of the certificate signing requests verified that they include validation of the following for all certificate-signing request procedures: <ul style="list-style-type: none"> <li>The entity submitting the request is who it claims to be.</li> <li>The entity submitting the request is authorized to submit the request on behalf of the certificate request's originating entity.</li> <li>The entity submitting the request has a valid business relationship with the issuing authority (for example, the vendor) consistent with the certificate being requested.</li> <li>The certificate-signing request has been transferred from the certificate request's originating entity to the RA in a secure manner.</li> </ul> </li> </ul>				✓	
<b>RD-9.4.2</b> RAs must retain documentation and audit trails relating to the identification of entities for all certificates issued and certificates whose status had changed for the life of the associated certificates.						
<b>RD-9.4.2</b> Examine documentation and audit trails to verify that the identification of entities is retained for the life of the associated certificates: <ul style="list-style-type: none"> <li>For all certificates issued</li> <li>For all certificates whose status had changed</li> </ul>	<ul style="list-style-type: none"> <li>Identify the documentation and audit trails examined.</li> <li>Confirm the documentation verifies that identification of entities is retained for the life of the associated certificates: <ul style="list-style-type: none"> <li>For all certificates issued</li> <li>For all certificates whose status had changed</li> </ul> </li> </ul>		✓			
<b>RD-10</b> Certificate and Registration Authorities must implement physical security to reduce the risk of compromise of their systems. Physical security must be implemented to provide three tiers of physical security, as indicated below.						
<b>RD-10.1</b> The certificate-processing operations center must implement a three-tier physical security boundary, as follows: <ul style="list-style-type: none"> <li>Level One Barrier – Consists of the entrance to the facility.</li> <li>Level Two Barrier – Secures the entrance beyond the foyer/reception area to the CA facility.</li> <li>Level Three Barrier – Provides access to the physically secure, dedicated room housing the CA and RA database and application servers and cryptographic devices.</li> </ul>						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.1.a</b> Examine physical security policies to verify three tiers of physical security are defined as follows: <ul style="list-style-type: none"> <li>Level One Barrier – The entrance to the facility.</li> <li>Level Two Barrier – The entrance beyond the foyer/reception area to the CA facility.</li> <li>Level Three Barrier – Access to the physically secure, dedicated room housing the CA and RA database and application servers and cryptographic devices</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines physical security policies.</li> <li>Confirm that three tiers of physical security are defined as follows: <ul style="list-style-type: none"> <li>Level One Barrier – The entrance to the facility.</li> <li>Level Two Barrier – The entrance beyond the foyer/reception area to the CA facility.</li> <li>Level Three Barrier – Access to the physically secure, dedicated room housing the CA and RA database and application servers and cryptographic devices</li> </ul> </li> </ul>		✓			
<b>RD-10.1.b</b> Observe the physical facility to verify three tiers of physical security are implemented as follows: <ul style="list-style-type: none"> <li>Level One Barrier – The entrance to the facility.</li> <li>Level Two Barrier – The entrance beyond the foyer/reception area to the CA facility.</li> <li>Level Three Barrier – Access to the physically secure, dedicated room housing the CA and RA database and application servers and cryptographic devices</li> </ul>	<ul style="list-style-type: none"> <li>Describe how the observation of the physical facility verified that three tiers of physical security are implemented as follows: <ul style="list-style-type: none"> <li>Level One Barrier – The entrance to the facility.</li> <li>Level Two Barrier – The entrance beyond the foyer/reception area to the CA facility.</li> <li>Level Three Barrier – Access to the physically secure, dedicated room housing the CA and RA database and application servers and cryptographic devices</li> </ul> </li> </ul>	✓			✓	
<b>RD-10.2</b> The entrance to the CA facility/building must include the following controls:						
<b>RD-10.2.1</b> The facility entrance only allows authorized personnel to enter the facility.						
<b>RD-10.2.1.a</b> Examine physical-security procedures and policies to verify they require that the facility entrance only allows authorized personnel to enter the facility.	<ul style="list-style-type: none"> <li>Identify the document that requires the facility entrance to only allow authorized personnel to enter the facility.</li> </ul>		✓			
<b>RD-10.2.1.b</b> Observe the facility entrance and observe personnel entering the facility to verify that only authorized personnel are allowed to enter the facility.	<ul style="list-style-type: none"> <li>Describe how observation of the facility entrance and personnel entering the facility verified that only authorized personnel are allowed to enter the facility.</li> </ul>				✓	
<b>RD-10.2.2</b> The facility has a guarded entrance or a foyer with a receptionist.						
<b>RD-10.2.2.a</b> Examine physical-security procedures and policies to verify they require that the facility have a guarded entrance or a foyer with a receptionist.	<ul style="list-style-type: none"> <li>Identify the document that requires the facility have a guarded entrance or a foyer with a receptionist.</li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.2.2.b</b> Observe the facility entrance to verify it has a guarded entrance or a foyer with a receptionist.	<ul style="list-style-type: none"> <li>Describe how observation of the facility entrance verified it has a guarded entrance or a foyer with a receptionist.</li> </ul>				✓	
<b>RD-10.2.3</b> Visitors (guests) to the facility must be authorized and be registered in a logbook.						
<b>RD-10.2.3.a</b> Examine physical-security procedures and policies to verify they require visitors to the facility to be authorized and be registered in a logbook.	<ul style="list-style-type: none"> <li>Identify the document that requires visitors to the facility to be authorized and be registered in a logbook.</li> </ul>		✓			
<b>RD-10.2.3.b</b> Observe the facility entrance and observe personnel entering the facility to verify that visitors are authorized and registered in a logbook.	<ul style="list-style-type: none"> <li>Describe how observation of the facility entrance and personnel entering the facility verified that visitors are authorized and registered in a logbook.</li> </ul>				✓	
<b>RD-10.3</b> The Level 2 barrier/entrance must only allow authorized personnel beyond this entrance.						
<b>RD-10.3.a</b> Examine physical-security procedures and policies to verify that only authorized personnel are allowed beyond the level 2 barrier/entrance.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure only authorized personnel are allowed beyond the level 2 barrier/entrance.</li> </ul>		✓			
<b>RD-10.3.b</b> Observe personnel entering the Level 2 barrier/entrance to verify that only authorized personnel are allowed through.	<ul style="list-style-type: none"> <li>Describe how observation of personnel entering the Level 2 barrier/entrance and personnel verified that only authorized personnel are allowed through.</li> </ul>				✓	
<b>RD-10.3.1</b> Visitors must be authorized and escorted at all times within the Level 2 environment.						
<b>RD-10.3.1.a</b> Examine documented policies and procedures to verify that authorized visitors must be escorted at all times within the Level 2 environment.	<ul style="list-style-type: none"> <li>Identify the document that requires authorized visitors be escorted at all times within the Level 2 environment.</li> </ul>		✓			
<b>RD-10.3.1.b</b> Interview CA personnel and observe visitors entering the environment to verify that visitors are authorized and escorted at all times within the Level 2 environment.	<ul style="list-style-type: none"> <li>Identify CA personnel interviewed who confirm that visitors are authorized and escorted at all times within the Level 2 environment.</li> <li>Describe how visitors entering the environment were observed to be authorized and escorted at all times within the Level 2 environment.</li> </ul>			✓	✓	
<b>RD-10.3.2</b> Access logs must record all personnel entering the Level 2 environment. <b>Note:</b> The logs may be electronic, manual, or both.						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.3.2.a</b> Examine documented policies and procedures to verify that access logs are required to record all personnel entering the Level 2 environment.	<ul style="list-style-type: none"> <li>Identify the document that requires access logs to record all personnel entering the Level 2 environment.</li> </ul>		✓			
<b>RD-10.3.2.b</b> Observe personnel entering the Level 2 barrier and review corresponding access logs to verify that all entry through the Level 2 barrier is logged.	<ul style="list-style-type: none"> <li>Identify access logs reviewed.</li> <li>Describe how observation of personnel entering the Level 2 barrier and examination of the corresponding access logs verified that all entry through the Level 2 barrier is logged.</li> </ul>		✓		✓	
<b>RD-10.4</b> The Level 2 entrance must be monitored by a video-recording system.						
<b>RD-10.4.a</b> Observe the Level 2 entrance to verify that a video-recording system is in place.	<ul style="list-style-type: none"> <li>Describe how observation of the Level 2 entrance verified there is a video-recording system is in place.</li> </ul>				✓	
<b>RD-10.4.b</b> Review a sample of recorded footage to verify that the video-recording system captures all entry through the Level 2 entrance.	<ul style="list-style-type: none"> <li>Identify the sample of recorded footage reviewed.</li> <li>Describe how examination of the recorded footage verified that the video recording system captures all entry through the Level 2 entrance.</li> </ul>				✓	✓
<b>RD-10.5</b> The Level 3 environment must consist of a physically secure, dedicated room not used for any other business activities but certificate operations. <b>Note:</b> All certificate-processing operations must operate in the Level 3 environment.						
<b>RD-10.5.a</b> Examine documented policies and procedures to verify that all certificate-processing systems must be located within a Level 3 environment.	<ul style="list-style-type: none"> <li>Identify the document that requires all certificate-processing systems to be located within a Level 3 environment.</li> </ul>		✓			
<b>RD-10.5.b</b> Examine physical locations of certificate operations to verify that all certificate-processing systems are located within a Level 3 secure room.	<ul style="list-style-type: none"> <li>Describe how observation of physical locations of certificate operations examined verified that all certificate-processing systems are located within a Level 3 secure room.</li> </ul>	✓				
<b>RD-10.5.c</b> Observe operations and interview personnel to confirm that the Level 3 secure room is not used for any business activity other than certificate operations.	<ul style="list-style-type: none"> <li>Describe how observation of certificate-processing operations verified that the Level 3 secure room is not used for any business activity other than certificate operations.</li> <li>Identify personnel interviewed who confirmed that the Level 3 secure room is not used for any business activity other than certificate operations.</li> </ul>			✓	✓	

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.5.1</b> Doors to the Level 3 area must have locking mechanisms.						
<b>RD-10.5.1</b> Observe Level 3 environment entrances to verify that all doors to the Level 3 environment have locking mechanisms	<ul style="list-style-type: none"> <li>Describe how all Level 3 environment entrances were observed to have locking mechanisms.</li> </ul>				✓	
<b>RD-10.5.2</b> The Level 3 environment must have true floor-to-ceiling (slab-to-slab) walls, or use solid materials (such as steel mesh or bars) below floors and above ceilings to protect against intrusions. (For example, the Level 3 environment may be implemented within a “caged” environment.)						
<b>RD-10.5.2.a</b> Examine physical security documentation for the Level 3 environment to verify that true floor-to-ceiling walls, or enclosure on all sides with solid materials (such as steel mesh or bars), including below floors and above ceilings, is required.	<ul style="list-style-type: none"> <li>Identify the document that requires true floor-to-ceiling walls, or enclosure on all sides with solid materials (such as steel mesh or bars), including below floors and above ceilings, for the Level 3 environment.</li> </ul>		✓			
<b>RD-10.5.2.b</b> Examine the physical boundaries of the Level 3 environment to verify that it has true floor-to-ceiling walls, or is enclosed on all sides with solid materials (such as steel mesh or bars), including below floors and above ceilings.	<ul style="list-style-type: none"> <li>Describe how examination of the physical boundaries of the Level 3 environment verified that it has true floor-to-ceiling walls, or is enclosed on all sides with solid materials (such as steel mesh or bars), including below floors and above ceilings.</li> </ul>				✓	
<b>RD-10.6</b> Documented procedures must exist for: Granting, revocation, and review of access privileges Specific access authorizations, whether logical or physical						
<b>RD-10.6.a</b> Examine documented procedures to verify they include the following: <ul style="list-style-type: none"> <li>Granting, revocation, and review of access privileges</li> <li>Specific access authorizations, whether logical or physical</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for: <ul style="list-style-type: none"> <li>Granting, revocation, and review of access privileges</li> <li>Specific access authorizations, whether logical or physical</li> </ul> </li> </ul>		✓			
<b>RD-10.6.b</b> Interview responsible personnel to verify that the documented procedures are followed for: <ul style="list-style-type: none"> <li>Granting, revocation, and review of access privileges</li> <li>Specific access authorizations, whether logical or physical</li> </ul>	<ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm that the documented procedures are followed for: <ul style="list-style-type: none"> <li>Granting, revocation, and review of access privileges</li> <li>Specific access authorizations, whether logical or physical</li> </ul> </li> </ul>			✓		



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.6.1</b> The Level 3 entrance requires dual access, as follows: <ul style="list-style-type: none"><li>Personnel with access must be divided into an “A” group and a “B” group, such that access requires at least one member from each group.</li><li>The A and B groups must correlate to separate organizational units.</li></ul>						
<b>RD-10.6.1.a</b> Examine documented access-control procedures to verify they require dual access to the Level 3 environment, as follows: <ul style="list-style-type: none"><li>Personnel with access are divided into an “A” group and a “B” group.</li><li>Access requires at least one member from the “A” group and the “B” group.</li><li>The “A” and “B” groups must correlate to separate organizational unit.</li></ul>	<ul style="list-style-type: none"><li>Identify the document that defines access-control procedures for the Level 3 environment.</li><li>Confirm the documented procedures require dual access to the Level 3 environment, as follows:<ul style="list-style-type: none"><li>Personnel with access are divided into an “A” group and a “B” group.</li><li>Access requires at least one member from the “A” group and the “B” group.</li><li>The “A” and “B” groups must correlate to separate organizational unit.</li></ul></li></ul>		✓			
<b>RD-10.6.1.b</b> Examine Level 3 access controls to verify that: <ul style="list-style-type: none"><li>All personnel with access are included in either the “A” group or the “B” group.</li><li>Access requires at least one member from the “A” group and one from the “B” group.</li></ul>	<ul style="list-style-type: none"><li>Describe how observation of the Level 3 access controls verified that:<ul style="list-style-type: none"><li>All personnel with access are included in either the “A” group or the “B” group.</li><li>Access requires at least one member from the “A” group and one from the “B” group.</li></ul></li></ul>	✓				
<b>RD-10.6.1.c</b> Examine organizational charts and interview a sample of personnel from the “A” and “B” groups to verify that the groups correlate to separate organizational units.	<ul style="list-style-type: none"><li>Identify organizational charts examined.</li><li>Identify personnel interviewed from the “A” and “B” groups.</li><li>Describe how examination of organizational charts and interviews with personnel verified that the groups correlate to separate organizational units.</li></ul>		✓	✓		
<b>RD-10.6.2</b> All authorized personnel with access through the Level 3 barrier must: <ul style="list-style-type: none"><li>Have successfully completed a background security check.</li><li>Be assigned resources (staff, dedicated personnel) of the CA operator with defined business needs and duties.</li></ul> <b>Note:</b> This requirement applies to all personnel with pre-designated access to the Level 3 environment.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.6.2.a</b> Examine documented policies and procedures to verify they require personnel authorized as having access through the Level 3 barrier to: <ul style="list-style-type: none"> <li>Have successfully completed a background security check.</li> <li>Be assigned resources of the CA operator with defined business needs and duties.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that requires personnel authorized as having access through the Level 3 barrier to: <ul style="list-style-type: none"> <li>Have successfully completed a background security check.</li> <li>Be assigned resources of the CA operator with defined business needs and duties.</li> </ul> </li> </ul>		✓			
<b>RD-10.6.2.b</b> Interview responsible HR personnel to verify that background checks are conducted (within the constraints of local laws) on CA personnel prior such personnel being authorized for access through the Level 3 barrier.	<ul style="list-style-type: none"> <li>Identify responsible HR personnel interviewed who confirm that background checks are conducted (within the constraints of local laws) on CA personnel prior such personnel being authorized for access through the Level 3 barrier.</li> </ul>			✓		
<b>RD-10.6.2.c</b> Interview a sample of personnel authorized for access through the Level 3 barrier to verify that they are assigned resources of the CA with defined business needs and duties.	<ul style="list-style-type: none"> <li>Identify sample of personnel authorized for Level 3 interviewed.</li> <li>Describe how interviews with personnel verified that they are assigned resources of the CA with defined business needs and duties.</li> </ul>			✓		✓
<b>RD-10.6.3</b> Other personnel requiring entry to this level (who have not been authorized per RD-10.6.2 above) must be accompanied by two (2) authorized and assigned resources at all times.						
<b>RD-10.6.3.a</b> Examine documented policies and procedures to verify that personnel requiring entry to this level (who have not been authorized per RD-10.6.2 above) must be accompanied by two (2) authorized and assigned resources at all times.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure that personnel requiring entry to this level (who have not been authorized per RD-10.6.2 above) must be accompanied by two (2) authorized and assigned resources at all times.</li> </ul>		✓			
<b>RD-10.6.3.b</b> Interview a sample of responsible personnel to verify that personnel requiring entry to this level (who have not been authorized per RD-10.6.2 above) are accompanied by two (2) authorized and assigned resources at all times.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that personnel requiring entry to this level (who have not been authorized per RD-10.6.2 above) are accompanied by two (2) authorized and assigned resources at all times.</li> </ul>			✓		
<b>RD-10.7</b> The Level 3 environment must require dual-control access and dual-occupancy such that the room is never occupied by a single individual for more than thirty (30) seconds.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.7.a</b> Examine documented policies and procedures to verify that the Level 3 environment requires dual-control access and dual-occupancy such that the room is never occupied by a single individual for more than thirty (30) seconds.	<ul style="list-style-type: none"> <li>Identify the document that requires dual-control access and dual-occupancy for the Level 3 environment such that the room is never occupied by a single individual for more than thirty (30) seconds.</li> </ul>		✓			
<b>RD-10.7.b</b> Observe authorized personnel access the Level 3 environment to verify that dual-control access and dual-occupancy is enforced such that the room is never occupied by a single individual for more than thirty (30) seconds.	<ul style="list-style-type: none"> <li>Describe how observation of authorized personnel accessing the Level 3 environment verified that dual-control access and dual-occupancy is enforced such that the room is never occupied by a single individual for more than thirty (30) seconds.</li> </ul>				✓	
<b>RD-10.7.1</b> The enforcement mechanism must be automated. The mechanism for enforcing dual-control and dual-occupancy must be automated						
<b>RD-10.7.1.a</b> Examine documented policies and procedures to verify that the defined enforcement mechanism is automated.	<ul style="list-style-type: none"> <li>Identify the document that defines mechanism for enforcement of dual-control and dual-occupancy.</li> <li>Confirm the defined enforcement mechanism is automated.</li> </ul>		✓			
<b>RD-10.7.1.b</b> Observe enforcement mechanism configuration to verify it is automated.	<ul style="list-style-type: none"> <li>Describe how the enforcement mechanism was observed to be automated.</li> </ul>				✓	
<b>RD-10.7.2</b> The system must enforce anti-pass-back.						
<b>RD-10.7.2.a</b> Examine documented policies and procedures to verify that the system is required to enforce anti-pass-back.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for the system to enforce anti-pass-back.</li> </ul>		✓			
<b>RD-10.7.2.b</b> Observe mechanisms in use and authorized personnel within the environment to verify that anti-pass-back is enforced.	<ul style="list-style-type: none"> <li>Describe how observation of the implemented mechanisms and authorized personnel within the environment verified that anti-pass-back is enforced within the environment.</li> </ul>	✓			✓	
<b>RD-10.7.3</b> Dual occupancy requirements are managed using electronic (for example, badge, and/or biometric) systems.						
<b>RD-10.7.3.a</b> Examine documented policies and procedures to verify that dual occupancy requirements are defined to be managed using electronic (for example, badge and/or biometric) systems.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for dual occupancy requirements to be managed using electronic systems.</li> </ul>		✓			

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.7.3.b</b> Observe mechanisms in use and authorized personnel within the environment to verify that dual-occupancy requirements are managed using electronic systems.	<ul style="list-style-type: none"> <li>Describe how observation of the implemented mechanisms and authorized personnel within the environment verified that dual-occupancy requirements are managed using electronic systems.</li> </ul>	✓			✓	
<b>RD-10.7.4</b> Any time a single occupancy exceeds 30 seconds, the system must automatically generate an audit event that is followed up by security personnel						
<b>RD-10.7.4.a</b> Examine documented policies and procedures to verify that the system must automatically generate an audit event that is followed up by security personnel, any time a single occupancy exceeds 30 seconds.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for the system to automatically generate an audit event that is followed up by security personnel, any time a single occupancy exceeds 30 seconds.</li> </ul>		✓			
<b>RD-10.7.4.b</b> Observe mechanisms in use to verify that the system automatically generates an audit event when single occupancy exceeds 30 seconds.	<ul style="list-style-type: none"> <li>Describe how observation of the implemented mechanisms verified that the system automatically generates an audit event when single occupancy exceeds 30 seconds.</li> </ul>	✓			✓	
<b>RD-10.7.4.c</b> Examine a sample of audit events and interview security personnel to verify that the audit events are followed up by security personnel.	<ul style="list-style-type: none"> <li>Identify sample of audit events examined.</li> <li>Identify security personnel interviewed who confirm that audit events are followed up by security personnel.</li> <li>Describe how examination of the audit events and interviews with personnel verified that the audit events are followed up by security personnel.</li> </ul>		✓	✓		✓
<b>RD-10.8</b> Access to the Level 3 room must create an audit event, which must be logged.						
<b>RD-10.8</b> Observe authorized personnel enter the environment and examine correlating audit logs to verify that access to the Level 3 room creates an audit log event.	<ul style="list-style-type: none"> <li>Describe how observation of authorized personnel entering the Level 3 environment and examination of correlating audit logs verified that access to the Level 3 room creates an audit log event.</li> </ul>	✓			✓	
<b>RD-10.8.1</b> Invalid access attempts to the Level 3 room must create audit records, which must be followed up by security personnel.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.8.1</b> Observe authorized personnel perform an invalid access attempt and examine correlating audit logs to verify that invalid access attempts to the Level 3 room create an audit log event.	<ul style="list-style-type: none"> <li>Describe how observation of authorized personnel performing an invalid access attempt and examination of correlating audit logs verified that invalid access attempts to the Level 3 room create an audit log event.</li> </ul>	✓			✓	
<b>RD-10.9</b> The Level 3 environment must be monitored as follows:						
<b>RD-10.9.1</b> One or more cameras must provide continuous monitoring (for example, CCTV system) of the Level 3 environment, including the entry and exit. <i>Note: Motion-activated systems that are separate from the intrusion-detection system may be used to activate recording activity.</i>						
<b>RD-10.9.1.a</b> Observe the Level 3 physical environment to verify that cameras are in place to monitor the Level 3 environment, including the entry and exit.	<ul style="list-style-type: none"> <li>Describe how observation of the Level 3 physical environment verified that cameras are in place to monitor the Level 3 environment, including the entry and exit.</li> </ul>				✓	
<b>RD-10.9.1.b</b> Examine monitoring system configurations (e.g., CCTV systems) to verify that continuous monitoring is provided.	<ul style="list-style-type: none"> <li>Describe how examination of monitoring system configurations verified that continuous monitoring is provided.</li> </ul>	✓				
<b>RD-10.9.1.c</b> If motion-activated systems are used for monitoring, observe system configurations for the motion-activated systems to verify they are separate from the intrusion-detection system.	<ul style="list-style-type: none"> <li>Identify if motion-activated systems are used for monitoring</li> <li>If motion-activated systems are used for monitoring, describe how examination of the motion-activated system configurations verified they are separate from the intrusion-detection system.</li> </ul>	✓				
<b>RD-10.9.2</b> The cameras must record to time-lapse VCRs or similar mechanisms, with a minimum of five frames equally recorded over every three seconds.						
<b>RD-10.9.2</b> Examine monitoring system configurations to verify; <ul style="list-style-type: none"> <li>The system records to time-lapse VCRs or similar mechanisms.</li> <li>A minimum of five frames are recorded every three seconds.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how the examination of monitoring system configurations verified:               <ul style="list-style-type: none"> <li>The system records to time-lapse VCRs or similar mechanisms.</li> <li>A minimum of five frames are recorded every three seconds</li> </ul> </li> </ul>	✓				
<b>RD-10.9.3</b> Continuous, or motion-activated, appropriate lighting must be provided for the cameras. <i>Note: Visible spectrum lighting may not be necessary if the cameras do not require such lighting to capture images (for example, if intra-red cameras are used).</i>						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.9.3.a</b> Observe the Level 3 physical environment to verify that continuous or motion-activated lighting is provided for the cameras monitoring the environment.	<ul style="list-style-type: none"> <li>Describe how the Level 3 Physical environment was observed to provide continuous or motion-activated lighting for the cameras monitoring the environment.</li> </ul>				✓	
<b>RD-10.9.3.b</b> Examine a sample of captured footage from different days and times to ensure that the lighting is adequate.	<ul style="list-style-type: none"> <li>Identify a sample of captured footage examined.</li> <li>Describe how the sample of captured footage from different days and times verified that the lighting is adequate.</li> </ul>				✓	✓
<b>RD-10.9.4</b> Surveillance cameras must be configured to prevent the monitoring of computer screens, keyboards, PIN pads, or other systems which may expose sensitive data.						
<b>RD-10.9.4.a</b> Observe camera locations in the Level 3 environment to verify they are not set to monitor computer screens, keyboards, PIN pads, or other systems that may expose sensitive data.	<ul style="list-style-type: none"> <li>Describe how observation of camera locations in the Level 3 environment verified they are not set to monitor computer screens, keyboards, PIN pads, or other systems that may expose sensitive data</li> </ul>				✓	
<b>RD-10.9.4.b</b> Examine a sample of captured footage to verify it does not allow for the monitoring of computer screens, keyboards, PIN pads, or other systems that may expose sensitive data.	<ul style="list-style-type: none"> <li>Identify a sample of captured footage examined.</li> <li>Describe how examination of the sample of captured footage verified it does not allow for the monitoring of computer screens, keyboards, PIN pads, or other systems that may expose sensitive data.</li> </ul>	✓				✓
<b>RD-10.9.5</b> Personnel with access to the Level 3 environment must not have access to the media (for example, VCR tapes, digital-recording systems, etc.) with the recorded surveillance data.						
<b>RD-10.9.5.a</b> Examine documented access policies and procedures to verify that personnel with access to the Level 3 environment are not permitted to have access to the media containing recorded surveillance data for that environment.	<ul style="list-style-type: none"> <li>Identify the document that defines access policies and procedures to ensure personnel with access to the Level 3 environment are not permitted to have access to the media containing recorded surveillance data for that environment.</li> </ul>		✓			
<b>RD-10.9.5.b</b> Examine Level 3 access lists as well as access controls to the media containing surveillance data, to verify that personnel with access to the Level 3 environment do not have access to the media containing recorded surveillance data.	<ul style="list-style-type: none"> <li>Identify the Level 3 access lists reviewed.</li> <li>Describe how examination of the Level 3 access lists and observation of controls to the media containing surveillance data verified that personnel with access to the Level 3 environment do not have access to the media containing recorded surveillance data.</li> </ul>		✓		✓	



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.9.6</b> Images recorded from the CCTV system must be securely archived for a period of no less than 45 days. If digital-recording mechanisms are used, they must have sufficient storage capacity and redundancy to prevent the loss of information necessary to reconstruct events for the most recent 45-day period.						
<b>RD-10.9.6.a</b> Examine storage of captured recordings to verify that at least the most recent 45 days of images are securely archived.	<ul style="list-style-type: none"> <li>Describe how examination of storage of captured recordings verified that at least the most recent 45 days of images are securely archived.</li> </ul>				✓	
<b>RD-10.9.6.b</b> If digital-recording mechanisms are used, examine system configurations to verify that the systems have sufficient redundancy to prevent the loss of information necessary to reconstruct events for the most recent 45-day period.	<ul style="list-style-type: none"> <li>Identify if digital-recording mechanisms are used.</li> <li>If digital-recording mechanisms are used, describe how observation of system configurations verified that the systems have sufficient redundancy to prevent the loss of information necessary to reconstruct events for the most recent 45-day period.</li> </ul>	✓				
<b>RD-10.10</b> The environment must have continuous (24/7) intrusion-detection systems in place, which protect the secure area by motion detectors when unoccupied.						
<b>RD-10.10.a</b> Examine security policies and procedures to verify they require: <ul style="list-style-type: none"> <li>Continuous (24/7) intrusion-detection monitoring of the Level 3 environment</li> <li>Motion detectors must be active when the environment is unoccupied</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring: <ul style="list-style-type: none"> <li>Continuous (24/7) intrusion-detection monitoring of the Level 3 environment</li> <li>Motion detectors must be active when the environment is unoccupied</li> </ul> </li> </ul>		✓			
<b>RD-10.10.b</b> Examine intrusion-detection system configurations to verify: <ul style="list-style-type: none"> <li>Continuous (24/7) intrusion-detection monitoring of the Level 3 environment is in place</li> <li>Motion detectors are active when the environment is unoccupied</li> </ul>	<ul style="list-style-type: none"> <li>Describe how examination of intrusion-detection system configurations verified that: <ul style="list-style-type: none"> <li>Continuous (24/7) intrusion-detection monitoring of the Level 3 environment is in place</li> <li>Motion detectors are active when the environment is unoccupied</li> </ul> </li> </ul>	✓				
<b>RD-10.10.1</b> Any windows in the secure area must be locked and protected by alarmed sensors.						
<b>RD-10.10.1.a</b> Observe all windows in the secure areas to verify they are locked and protected by alarmed sensors.	<ul style="list-style-type: none"> <li>Describe how all windows in the secure areas were observed to be locked and protected by alarmed sensors.</li> </ul>				✓	

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.10.1.b</b> Examine configuration of window sensors to verify that the alarm mechanism is active.	<ul style="list-style-type: none"> <li>Describe how examination of window configuration sensors verified that the alarm mechanism is active.</li> </ul>	✓				
<b>RD-10.10.2</b> Any windows must be covered, rendered opaque, or positioned to prevent unauthorized observation of the secure area.						
<b>RD-10.10.2</b> Observe all windows in the secure areas to verify they are covered, rendered opaque, or positioned to prevent unauthorized observation of the secure area.	<ul style="list-style-type: none"> <li>Describe how the windows in the secure areas were observed to be covered, rendered opaque, or positioned to prevent unauthorized observation of the secure area.</li> </ul>				✓	
<b>RD-10.10.3</b> The intrusion-detection system(s) must be connected to the alarm system and automatically activated every time all authorized personnel have exited the secure area.						
<b>RD-10.10.3.a</b> Examine security system configurations to verify: <ul style="list-style-type: none"> <li>The intrusion-detection system(s) is connected to the alarm system.</li> <li>The intrusion-detection system(s) is automatically activated every time all authorized personnel have exited the secure area.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how examination of security system configurations verified that:               <ul style="list-style-type: none"> <li>The intrusion-detection system(s) is connected to the alarm system.</li> <li>The intrusion-detection system(s) is automatically activated every time all authorized personnel have exited the secure area.</li> </ul> </li> </ul>	✓				
<b>RD-10.10.3.b</b> Observe a system test to verify that the intrusion-detection system(s) activates the alarm if a person is detected in the Level 3 area when the system is activated.	<ul style="list-style-type: none"> <li>Describe how observation of a system test verified that the intrusion-detection system(s) activates the alarm if a person is detected in the Level 3 area when the system is activated.</li> </ul>				✓	
<b>RD-10.10.4</b> Alarm activity must include unauthorized entry attempts or any actions that disable the intrusion-detection system.						
<b>RD-10.10.4</b> Examine security-system configurations to verify that an alarm event is generated for: Unauthorized entry attempts Actions that disable the intrusion-detection system	<ul style="list-style-type: none"> <li>Describe how observation of security-system configurations verified that an alarm event is generated for:               <ul style="list-style-type: none"> <li>Unauthorized entry attempts</li> <li>Actions that disable the intrusion-detection system</li> </ul> </li> </ul>	✓				
<b>RD-10.11</b> All personnel (including CA personnel and visitors) must sign an access logbook when entering the Level 3 environment. <b>Note:</b> The logs may be electronic, manual, or both.						



P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.11.a</b> Examine security policies and procedures to verify they require all personnel (including CA personnel and visitors) to sign an access logbook when entering the Level 3 environment.	<ul style="list-style-type: none"> <li>Identify the document that requires all personnel (including CA personnel and visitors) to sign an access logbook when entering the Level 3 environment.</li> </ul>		✓			
<b>RD-10.11.b</b> For a sample of personnel authorized to access the Level 3 environment, examine the access logbook to verify that they signed in when entering the Level 3 environment.	<ul style="list-style-type: none"> <li>Identify the sample of personnel authorized to access the Level 3 environment.</li> <li>Describe how examination of the access logbook verified the authorized personnel signed in when entering the Level 3 environment.</li> </ul>		✓			✓
<b>RD-10.11.1</b> The access log must include the following details: <ul style="list-style-type: none"> <li>Name and signature of the individual</li> <li>Organization</li> <li>Date and time in and out</li> <li>Reason for access or purpose of visit</li> <li>For visitor access, the initials of the person escorting the visitor</li> </ul>						
<b>RD-10.11.1</b> Examine the access logbook to verify it contains the following information: <ul style="list-style-type: none"> <li>Name and signature of the individual</li> <li>Organization</li> <li>Date and time in and out</li> <li>Reason for access or purpose of visit</li> <li>For visitor access, the initials of the person escorting the visitor</li> </ul>	<ul style="list-style-type: none"> <li>Describe how examination of the access logbook verified it contains:               <ul style="list-style-type: none"> <li>Name and signature of the individual</li> <li>Organization</li> <li>Date and time in and out</li> <li>Reason for access or purpose of visit</li> <li>For visitor access, the initials of the person escorting the visitor</li> </ul> </li> </ul>		✓			
<b>RD-10.11.2</b> The logbook must be maintained within the Level 3 secure environment.						
<b>RD-10.11.2</b> Observe the location of the access logbook and verify that it is maintained within the Level 3 secure environment.	<ul style="list-style-type: none"> <li>Describe how observation of the location of the access logbook verified it is maintained within the Level 3 secure environment.</li> </ul>				✓	
<b>RD-10.12</b> All access-control and monitoring systems (including intrusion detection systems) are powered through an uninterruptible power source (UPS).						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.12</b> Inspect uninterruptible power source (UPS) system configurations to verify that all access-control and monitoring systems, including intrusion-detection systems, are powered through the UPS.	<ul style="list-style-type: none"> <li>Describe how examination of the UPS system configurations verified that all access-control and monitoring systems, including intrusion-detection systems, are powered through the UPS.</li> </ul>	✓				
<b>RD-10.13</b> All alarm events must be documented.						
<b>RD-10.13.a</b> Examine security policies and procedures to verify they require that all alarm events are logged.	<ul style="list-style-type: none"> <li>Identify the document that requires all alarm events to be logged.</li> </ul>		✓			
<b>RD-10.13.b</b> Examine security-system configurations and documented alarm events to verify that all alarm events are logged.	<ul style="list-style-type: none"> <li>Identify the documented alarm events examined.</li> <li>Describe how examination of security-system configurations and alarm events verified that all alarm events are logged.</li> </ul>	✓	✓			
<b>RD-10.13.1</b> Under no circumstances shall an individual sign off on an alarm event in which they were involved.						
<b>RD-10.13.1.a</b> Examine documented procedures for responding to alarm events to verify that the procedure does not permit a person who was involved in an alarm event to sign-off on that alarm event.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for responding to alarm events.</li> <li>Confirm the procedures do not to permit a person who was involved in an alarm event to sign-off on that alarm event.</li> </ul>		✓			
<b>RD-10.13.1.b</b> For a sample of documented alarm events, interview personnel who signed off on the event to verify that person was not involved in the event.	<ul style="list-style-type: none"> <li>Identify sample of documented alarm events examined.</li> <li>For each item in the sample: <ul style="list-style-type: none"> <li>Identify personnel interviewed who signed off on the alarm event.</li> <li>Describe how interviews with personnel and examination of documented alarm events verified that the person who signed-off the alarm event was not involved in the alarm event.</li> </ul> </li> </ul>		✓	✓		✓
<b>RD-10.13.2</b> The use of any emergency entry or exit mechanism must cause an alarm event.						
<b>RD-10.13.2</b> Examine security system configurations to verify that an alarm event is generated upon use of any emergency entry or exit mechanism.	<ul style="list-style-type: none"> <li>Describe how examination of security system configurations verified that an alarm event is generated upon use of any emergency entry or exit mechanism.</li> </ul>	✓				
<b>RD-10.13.3</b> All alarms for physical intrusion necessitate an active response within 30 minutes by personnel assigned security duties.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.13.3.a</b> Review documented procedures to verify they require that all alarms for physical intrusion must be responded to within 30 minutes by personnel assigned security duties.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring all alarms for physical intrusion must be responded to within 30 minutes by personnel assigned security duties.</li> </ul>		✓			
<b>RD-10.13.3.b</b> Examine a sample of alarm events and interview personnel assigned with security-response duties to verify that alarms for physical intrusion are responded to within 30 minutes.	<ul style="list-style-type: none"> <li>Identify sample of alarm events examined.</li> <li>For each item in the sample: <ul style="list-style-type: none"> <li>Identify personnel assigned with security-response duties interviewed.</li> <li>Describe how interviews with personnel and examination of alarm events verified that alarms for physical intrusion are responded to within 30 minutes.</li> </ul> </li> </ul>		✓	✓		✓
<b>RD-10.14</b> A process must be implemented for synchronizing the time and date stamps of the access, intrusion-detection, and monitoring (camera) systems to ensure accuracy of logs. <i>Note: This may be done by either automated or manual mechanisms.</i>						
<b>RD-10.14.a</b> Examine documented procedures to verify that mechanisms are defined (may be automated or manual) for synchronizing the time and date stamps of the access, intrusion-detection, and monitoring (camera) systems to ensure accuracy of logs.	<ul style="list-style-type: none"> <li>Identify the document that defines mechanisms (automated or manual) for synchronizing the time and date stamps of the access, intrusion-detection, and monitoring (camera) systems to ensure accuracy of logs.</li> </ul>		✓			
<b>RD-10.14.b</b> Examine system configurations for access, intrusion-detection, and monitoring (camera) systems to verify that time and date stamps are synchronized.	<ul style="list-style-type: none"> <li>Describe how examination of system configurations for access, intrusion-detection and monitoring (camera) systems verified that time and date stamps are synchronized.</li> </ul>	✓				
<b>RD-10.14.c</b> Examine a sample of logs from the access, intrusion-detection, and monitoring (camera) systems to verify log time and date stamps are synchronized.	<ul style="list-style-type: none"> <li>Identify the sample of logs from access, intrusion-detection and monitoring (camera) systems examined.</li> <li>Describe how the sample of logs verified that log time and date stamps are synchronized for access, intrusion-detection, and monitoring (camera) systems.</li> </ul>		✓			✓
<b>RD-10.14.1</b> If a manual synchronization process is used, synchronization must occur at least quarterly, and documentation of the synchronization must be retained for at least a one-year period.						

P2PE Domain 6 – Annex A Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>RD-10.14.1.a</b> If a manual synchronization process is implemented, interview responsible personnel and examine records of synchronization to verify the mechanism is performed at least quarterly.	<ul style="list-style-type: none"> <li>Identify if a manual synchronization process is implemented.</li> <li>If a manual synchronization process is implemented: <ul style="list-style-type: none"> <li>Identify responsible personnel interviewed who confirm the synchronization process mechanism is performed at least quarterly.</li> <li>Identify records of synchronization examined.</li> <li>Describe how examination of synchronization records verified that the synchronization is performed at least quarterly.</li> </ul> </li> </ul>		✓	✓	✓	
<b>RD-10.14.1.b</b> Examine records of the synchronization process to verify that documentation is retained for at least one year.	<ul style="list-style-type: none"> <li>If a manual synchronization process is implemented, describe how examination of synchronization records verified that documentation is retained for at least one year.</li> </ul>		✓			

## Domain 6 – Annex B: Key-Injection Facilities

Solution P-ROV Section (P2PE Template)	Reporting Details
<p><b>Table 6B.1 – List of keys (by type) loaded onto POI devices via key-injection</b></p> <ul style="list-style-type: none"> <li>Key type / description</li> <li>Purpose/ function of the key (including types of devices using key)</li> <li>Identity of KIF</li> </ul> <p><i>* Note: Must include all keys from Table 6.1 identified as being distributed via KIF.</i></p>	<p>Complete Table 6B.1 for all key types loaded <b>onto POI devices</b> via key-injection.</p> <ul style="list-style-type: none"> <li>Description / type of key being distributed</li> <li>Describe the purpose/ function of the key being distributed, including identification of the device types using key</li> <li>Identify the entity performing key injection</li> <li>Identify by name/identifier the POI device types for which keys are injected at this KIF</li> </ul> <p><i>Note: All entities performing key injection must be included in section 2.2 of the Executive Summary. POI device types must be identified using the name/identifier used in Table 1.1 (Domain 1).</i></p>

P2PE Domain 6 – Annex B Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>KF-1</b> Account data must be encrypted in equipment that is resistant to physical and logical compromise. (Reference 1A-1, 6D-2)						
<p><b>KF-1.1</b> Key-injection facilities must have processes in place to ensure:</p> <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution are injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution are not injected into any devices other than those designated by the specific P2PE solution provider.</li> </ul>						

P2PE Domain 6 – Annex B Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>KF-1.1.a</b> Examine documented procedures to verify that procedures are defined to ensure: <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution may be injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution must not be injected into any devices other than those designed by the specific P2PE solution provider.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to ensure: <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution may be injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution must not be injected into any devices other than those designed by the specific P2PE solution provider.</li> </ul> </li> </ul>		✓			
<b>KF-1.1.b</b> Interview responsible personnel and observe key-generation and loading processes to verify: <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution may be injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution must not be injected into any devices other than those designed by the specific P2PE solution provider.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that : <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution may be injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution must not be injected into any devices other than those designed by the specific P2PE solution provider.</li> </ul> </li> <li>Describe how observation of key-generation and loading processes verified that: <ul style="list-style-type: none"> <li>Only keys specifically generated for use in a particular P2PE solution are injected into that P2PE solution's POI devices.</li> <li>Keys generated for use in a particular P2PE solution are not injected into any devices other than those designed by the specific P2PE solution provider.</li> </ul> </li> </ul>			✓	✓	
<b>KF-1.2</b> Key-injection platforms and systems that include hardware devices for managing (for example, generating and storing) cryptographic keys must ensure those hardware devices conform to the requirements for SCDs. <b>Note:</b> These devices must be managed in accordance with Domain 5 of this document.						

P2PE Domain 6 – Annex B Requirements and Testing Procedures	Reporting Details	Reporting Methodology				
		Observe systems, configurations	Review Documentation	Interview Personnel	Observe Processes, state	Identify sample
<b>KF-1.2.a</b> Examine documented procedures and system documentation to verify that key-injection platforms and systems used for managing cryptographic keys are required to conform to the requirements for SCDs.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures to requiring key-injection platforms and systems used for managing cryptographic keys to conform to the requirements for SCDs.</li> <li>Describe how examination of system documentation verified that key-injection platforms and systems used for managing cryptographic keys conform to the requirements for SCDs.</li> </ul>		✓			
<b>KF-1.2.b</b> Examine key-injection platforms and systems used for managing cryptographic keys to verify they conform to the requirements for SCDs.	<ul style="list-style-type: none"> <li>Describe how examination of key-injection platforms and systems used for managing cryptographic keys verified they conform to the requirements for SCDs.</li> </ul>	✓			✓	
<b>KF-2</b> Unencrypted secret or private keys must be entered into encryption devices using the principles of dual control and split knowledge. (Reference 6D-1)						
<b>KF-2.1</b> Key-injection facilities must implement dual control and split-knowledge controls for the loading of keys into devices (for example, POIs and other SCDs). <b>Note:</b> Such controls may include but are not limited to: <ul style="list-style-type: none"> <li>Physical dual-access controls that electronically provide for restricted entry and egress from a room dedicated to key injection such that the badge-access system enforces the presence of at least two authorized individuals at all times in the room so no one person can singly access the key-loading equipment. Access is restricted to only appropriate personnel involved in the key-loading process.</li> <li>Logical dual control via multiple logins with unique user IDs to the key-injection platform application such that no one person can operate the application to singly inject cryptographic keys into devices.</li> <li>Key-injection platform applications that force the entry of multiple key components and the implementation of procedures that involve multiple key custodians who store and access key components under dual-control and split-knowledge mechanisms.</li> <li>Demonstrable procedures that prohibit key custodians from handing their components to any other individual for key entry.</li> </ul>						
<b>KF-2.1.a</b> Examine documented key-injection procedures to verify that the procedures define use of dual control and split knowledge controls for the loading of keys into devices.	<ul style="list-style-type: none"> <li>Identify the document that defines the use of dual control and split knowledge controls for the loading of keys into devices.</li> </ul>		✓			

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<b>KF-2.1.b</b> Interview responsible personnel and observe key-loading processes and controls to verify that dual control and split-knowledge controls are in place for the loading of keys into devices.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that dual control and split-knowledge controls are in place for the loading of keys into devices.</li> <li>Describe how observation of key-loading processes and controls verified that dual control and split-knowledge controls are in place for the loading of keys into devices.</li> </ul>			✓	✓	
<b>KF-2.1.c</b> Examine records of key-loading processes and controls to verify that the loading of keys does not occur without dual control and split knowledge.	<ul style="list-style-type: none"> <li>Identify the records of key-loading processes and controls examined.</li> <li>Describe how examination of records verified that the loading of keys does not occur without dual control and split knowledge.</li> </ul>		✓			
<b>KF-2.2</b> Controls must be in place to prevent and detect the loading of keys by any one single person. <b>Note:</b> Controls include physical access to the room, logical access to the key-loading application, video surveillance of activities in the key-injection room, physical access to secret or private cryptographic key components or shares, etc.						
<b>KF-2.2.a</b> Examine documented key-injection procedures to verify that controls are defined to prevent and detect the loading of keys by any one single person.	<ul style="list-style-type: none"> <li>Identify the document that defines key-injection procedures.</li> <li>Confirm that the documented procedures define controls to prevent and detect the loading of keys by any one single person.</li> </ul>		✓			
<b>KF-2.2.b</b> Interview responsible personnel and observe key-loading processes and controls to verify that controls are implemented to prevent and detect the loading of keys by any one single person.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that key-loading processes and controls are implemented to prevent and detect the loading of keys by any one single person.</li> <li>Describe how key-loading processes and controls were observed to prevent and detect the loading of keys by any one single person.</li> </ul>			✓	✓	
<b>KF-3</b> Procedures must exist to prevent or detect the unauthorized substitution (unauthorized key replacement and key misuse) of one key for another or the operation of any encryption device without legitimate keys. (Reference 6E-2)						
<b>KF-3.1</b> Key-injection facilities must implement controls to protect against unauthorized substitution of keys and to prevent the operation of devices without legitimate keys. Examples include but are not limited to: <ul style="list-style-type: none"> <li>All devices loaded with keys must be tracked at each key-loading session by serial number.</li> <li>Key-injection facilities must use something unique about the POI (for example, serial number) when deriving the key (for example, DUKPT, TMK) injected into it.</li> </ul>						



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<b>KF-3.1.a</b> Examine documented procedures to verify they include: <ul style="list-style-type: none"> <li>Controls to protect against unauthorized substitution of keys, and</li> <li>Controls to prevent the operation of devices without legitimate keys.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines: <ul style="list-style-type: none"> <li>Controls to protect against unauthorized substitution of keys, and</li> <li>Controls to prevent the operation of devices without legitimate keys.</li> </ul> </li> </ul>		✓			
<b>KF-3.1.b</b> Interview responsible personnel and observe key-loading processes and controls to verify that: <ul style="list-style-type: none"> <li>Controls are implemented that protect against unauthorized substitution of keys, and</li> <li>Controls are implemented that prevent the operation of devices without legitimate keys.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that: <ul style="list-style-type: none"> <li>Controls are implemented that protect against unauthorized substitution of keys, and</li> <li>Controls are implemented that prevent the operation of devices without legitimate keys.</li> </ul> </li> <li>Describe how observation of key-loading processes and controls verified that: <ul style="list-style-type: none"> <li>Controls are implemented that protect against unauthorized substitution of keys, and</li> <li>Controls are implemented that prevent the operation of devices without legitimate keys.</li> </ul> </li> </ul>			✓	✓	
<b>KF-4</b> All secret and private keys must be unique (except by chance) to that device. (Reference 6E-4)						
<b>KF-4.1</b> Key-injection facilities must ensure that unique keys are loaded into each device. The same key(s) must not be loaded into multiple devices.						
<b>KF-4.1.a</b> Examine documented procedures to verify they include controls to ensure that unique keys are loaded into each device, and that keys are not loaded into multiple devices.	<ul style="list-style-type: none"> <li>Identify the document that defines controls to ensure that unique keys are loaded into each device, and that keys are not loaded into multiple devices.</li> </ul>		✓			
<b>KF-4.1.b</b> Interview responsible personnel and observe key-loading processes and controls to verify controls are implemented to ensure that only unique keys can be loaded into each device, and that keys cannot be loaded into multiple devices.	<ul style="list-style-type: none"> <li>Identify the responsible personnel interviewed who confirm that only unique keys can be loaded into each device, and that keys cannot be loaded into multiple devices.</li> <li>Describe how observation of key-loading processes and controls verified that only unique keys can be loaded into each device, and that keys cannot be loaded into multiple devices.</li> </ul>			✓	✓	

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<b>KF-4.2</b> Key-injection facilities that use DUKPT or other key-derivation methodologies on behalf of multiple acquirers must use different BDKeys for each acquirer.						
<b>KF-4.2.a</b> Examine documented procedures for generation and use of BDKeys to verify they require separate BDKeys be used for different acquirers.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures for generation and use of BDKeys</li> <li>Confirm the documented procedures require separate BDKeys be used for different acquirers.</li> </ul>		✓			
<b>KF-4.2.b</b> Observe key-loading processes for a sample of POIs to verify that separate BDKeys are used for different acquirers.	<ul style="list-style-type: none"> <li>Identify the sample set of POIs.</li> <li>For all POIs in the sample, describe how observation of key-loading processes verified that separate BDKeys are used for different acquirers.</li> </ul>				✓	✓
<b>KF-4.2.1</b> Key-injection facilities that load DUKPT keys for various POI types for the same entity must use separate BDKeys per terminal type if the terminal IDs can be duplicated among the multiple types of terminals. In other words, the key-injection facility must ensure that any one given key cannot be derived for multiple devices except by chance.						
<b>KF-4.2.1.a</b> If the key-injection facility loads DUKPT keys, examine documented procedures for generation and use of BDKeys to verify they require use of separate BDKeys per terminal type.	<ul style="list-style-type: none"> <li>Identify if the key-injection facility loads DUKPT keys.</li> <li>If the key-injection facility loads DUKPT keys: <ul style="list-style-type: none"> <li>Identify the document that defines processes for generation and use of BDKeys.</li> <li>Confirm the procedures require use of separate BDKeys per terminal type.</li> </ul> </li> </ul>		✓			
<b>KF-4.2.1.b</b> Observe key-loading processes for a sample of terminal types used by a single entity, to verify that separate BDKeys are used for each terminal type	<ul style="list-style-type: none"> <li>Identify the sample set of terminal types used by a single entity.</li> <li>Describe how observation of the key-loading processes verified that separate BDKeys are used for each terminal type.</li> </ul>				✓	✓
<b>KF-4.3</b> Keys that are generated by a derivation process and derived from the same BDK must use unique data for the derivation process so that all POIs receive unique initial secret keys.						
<b>KF-4.3.a</b> Examine documented key-generation procedures to verify they require that keys derived from the same BDK must use unique data for the derivation process so that all POIs receive unique initial secret keys.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring that keys derived from the same BDK must use unique data for derivation process so that all POIs receive unique initial secret keys.</li> </ul>		✓			

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<b>KF-4.3.b</b> Observe key-loading processes to verify that keys which are derived from the same BDK use unique data for the derivation process so that all POIs receive unique initial secret keys.	<ul style="list-style-type: none"> <li>Describe how observation of the key-loading processes verified that keys derived from the same BDK use unique data for the derivation process so that all POIs receive unique initial secret keys.</li> </ul>				✓	
<b>KF-4.4</b> In a master/session key approach, the master key(s) and all session keys must be unique to each POI.						
<b>KF-4.4.a</b> Examine documented key-generation procedures to verify they require that, in a master/session key approach, the master key(s) and all session keys must be unique to each POI.	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring that, in a master/session key approach, the master key(s) and all session keys must be unique to each POI.</li> </ul>		✓			
<b>KF-4.4.b</b> Observe key-loading processes to verify that in a master/session key approach, the master key(s) and all session keys must be unique to each POI.	<ul style="list-style-type: none"> <li>Describe how observation of the key-loading processes verified that in a master/session key approach, the master key(s) and all session keys must be unique to each POI.</li> </ul>				✓	
<b>KF-4.5</b> If injecting keys onto a single POI for more than one acquirer, the POI must have a completely different and unique key, or set of keys, for each acquirer. These different keys, or set of keys, must be totally independent and not variants of one another.						
<b>KF-4.5.a</b> Examine documented key-generation and injection procedures to verify that the following is required when injecting keys onto a single POI for more than one acquirer: <ul style="list-style-type: none"> <li>The POI must have a completely different and unique key, or set of keys, for each acquirer.</li> <li>These different keys, or set of keys, must be totally independent and not variants of one another</li> </ul>	<ul style="list-style-type: none"> <li>Identify the document that defines procedures requiring the following when injecting keys onto a single POI for more than one acquirer:               <ul style="list-style-type: none"> <li>The POI must have a completely different and unique key, or set of keys, for each acquirer.</li> <li>These different keys, or set of keys, must be totally independent and not variants of one another.</li> </ul> </li> </ul>		✓			
<b>KF-4.5.b</b> Observe processes for generation and injection of keys onto a single POI for more than one acquirer, to verify: <ul style="list-style-type: none"> <li>The POI has a completely different and unique key, or set of keys, for each acquirer.</li> <li>These different keys, or set of keys, are totally independent and not variants of one another.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of processes for generation and injection of keys onto a single POI for more than one acquirer verified that:               <ul style="list-style-type: none"> <li>The POI must have a completely different and unique key, or set of keys, for each acquirer.</li> <li>These different keys, or set of keys, must be totally independent and not variants of one another.</li> </ul> </li> </ul>				✓	

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KF-5 Key-injection facilities must ensure protection against unauthorized use for SCDs (e.g., HSMs) used in the key-injection platform that are capable of encrypting a key and producing cryptograms of that key.						
KF-5.1 The KIF must implement a physically secure area (secure room) for key injection. The secure room for key injection must include the following.						
KF-5.1 Observe the physical facility to verify that a secure room is designated for key injection and that all SCDs and other devices used in the key-injection platform are physically located in this room.	<ul style="list-style-type: none"><li>Describe how observation of the physical facility verified that a secure room is designated for key injection and that all SCDs and other devices used in the key-injection platform are physically located in this room.</li></ul>				✓	
KF-5.1.1 The secure area must have extended walls from the real floor to the real ceiling using sheetrock or wire mesh.						
KF-5.1.1 Inspect the secure area designated for key injection to verify that it is constructed with extended walls from the real floor to the real ceiling using sheetrock or wire mesh.	<ul style="list-style-type: none"><li>Describe how inspection of the secure area designated for key injection verified it is constructed with extended walls from the real floor to the real ceiling using sheetrock or wire mesh.</li></ul>				✓	
KF-5.1.2 Any windows into the secure room must be locked and protected by alarmed sensors.						
KF-5.1.2.a Observe all windows in the secure room to verify they are locked and protected by alarmed sensors.	<ul style="list-style-type: none"><li>Describe how all windows in the secure area designated for key injection were observed to be locked and protected by alarmed sensors.</li></ul>				✓	
KF-5.1.2.b Examine configuration of window sensors to verify that the alarm mechanism is active.	<ul style="list-style-type: none"><li>Describe how examination of the configuration of window sensors in the secure area designated for key injection verified that the alarm mechanism is active.</li></ul>	✓				
KF-5.1.3 Any windows must be covered, rendered opaque, or positioned to prevent unauthorized observation of the secure area.						
KF-5.1.3 Observe all windows in the secure room to verify they are covered, rendered opaque, or positioned to prevent unauthorized observation of the secure room.	<ul style="list-style-type: none"><li>Describe how the windows in the secure area designated for key injection were observed to be covered, rendered opaque, or positioned to prevent unauthorized observation of the secure room.</li></ul>				✓	
KF-5.1.4 A solid-core door or a steel door must be installed to ensure that door hinges cannot be removed from outside the room.						

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<b>KF-5.1.4</b> Inspect the secure area to verify that it is only accessed through a solid-core or a steel door, with door hinges that cannot be removed from outside the room.	<ul style="list-style-type: none"> <li>Describe how examination of the secure area designated for key injection verified it is only be accessible through a solid-core or a steel door, with door hinges that cannot be removed from outside the room.</li> </ul>				✓	
<b>KF-5.1.5</b> A badge-control system must be in place that enforces: <ul style="list-style-type: none"> <li>Dual-access requirements for entry into the secure area, and</li> <li>Anti-pass-back requirements.</li> </ul>						
<b>KF-5.1.5</b> Observe authorized personnel entering the secure area to verify that a badge-control system is in place that enforces the following requirements: <ul style="list-style-type: none"> <li>Dual-access for entry to the secure area</li> <li>Anti-pass-back</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of authorized personnel entering the secure area verified that a badge-control system is in place that enforces:               <ul style="list-style-type: none"> <li>Dual-access for entry to the secure area</li> <li>Anti-pass-back</li> </ul> </li> </ul>				✓	
<b>KF-5.1.6</b> The badge-control system must support generation of an alarm when one person remains alone in the secure area for more than 30 seconds. <b>Note:</b> Examples of alarm-generation mechanisms include but are not limited to motion detectors, login/logout controls, biometrics, badge sensors, etc.						
<b>KF-5.1.6</b> Examine alarm mechanisms and interview alarm-response personnel to verify that the badge-control system supports generation of an alarm when one person remains alone in the secure area for more than 30 seconds.	<ul style="list-style-type: none"> <li>Describe how examination of alarm mechanisms for the secure area verified that the badge-control system supports generation of an alarm when one person remains alone in the secure area for more than 30 seconds.</li> <li>Identify the alarm-response personnel interviewed who confirm that the badge-control system generates an alarm when one person remains alone in the secure area for more than 30 seconds.</li> </ul>	✓		✓		
<b>KF-5.1.7</b> A CCTV system must be in place that monitors on a continuous (24/7) basis.						
<b>KF-5.1.7</b> Inspect CCTV configuration and review a sample of recordings to verify that CCTV monitoring is in place on a 24/7 basis.	<ul style="list-style-type: none"> <li>Describe how examination of CCTV configuration settings verified that CCTV monitoring is in place on a 24/7 basis.</li> <li>Identify the sample of recordings examined.</li> <li>Describe how examination of the sample of recordings verified that CCTV monitoring is in place on a 24/7 basis.</li> </ul>	✓			✓	✓

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<b>KF-5.1.8</b> Monitoring must be supported on a continuous (24/7) basis such that alarms can be resolved by authorized personnel.						
<b>KF-5.1.8</b> Inspect configuration of monitoring systems and interview monitoring personnel to verify that monitoring is supported on a continuous (24/7) basis and alarms can be resolved by authorized personnel. <ul style="list-style-type: none"> <li>Describe how examination of configuration settings for monitoring systems verified that monitoring is supported on a continuous (24/7) basis and alarms can be resolved by authorized personnel.</li> <li>Identify the monitoring personnel interviewed who confirm that monitoring is supported on a continuous (24/7) basis and alarms can be resolved by authorized personnel.</li> </ul>		✓		✓		
<b>KF-5.1.9</b> The CCTV server and digital storage must be secured in a separate secure area that is not accessible to personnel that have access to the key-injection area.						
<b>KF-5.1.9.a</b> Inspect location of the CCTV server and digital-storage area to verify that the CCTV server and digital storage are located in a secure area that is separate to the key-injection area. <ul style="list-style-type: none"> <li>Describe how the location of the CCTV server and digital-storage area were observed to be located in a secure area that is separate to the key-injection area.</li> </ul>					✓	
<b>KF-5.1.9.b</b> Inspect access-control configurations for the CCTV server/storage area and the key-injection area to identify all personnel that have access to each area. Compare access lists to verify that personnel with access to the key-injection area do not have access to the CCTV server/storage area. <ul style="list-style-type: none"> <li>Describe how examination of the access-control configurations for the CCTV server/storage area and the key-injection area identified the personnel that have access to each area.</li> <li>Describe how comparison of the access lists verified that personnel with access to the key-injection area do not have access to the CCTV server/storage area.</li> </ul>		✓				
<b>KF-5.1.10</b> The CCTV cameras must be positioned to monitor: <ul style="list-style-type: none"> <li>The entrance door,</li> <li>SCDs, both pre and post key injection,</li> <li>Any safes that are present, and</li> <li>The equipment used for key injection.</li> </ul>						

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<b>KF-5.1.10</b> Inspect CCTV positioning and review a sample of recordings to verify that CCTV cameras are positioned to monitor: <ul style="list-style-type: none"> <li>The entrance door,</li> <li>SCDs, both pre and post key injection,</li> <li>Any safes that are present, and</li> <li>The equipment used for key injection</li> </ul>	<ul style="list-style-type: none"> <li>Describe how observation of CCTV positioning verified that CCTV cameras are positioned to monitor: <ul style="list-style-type: none"> <li>The entrance door,</li> <li>SCDs, both pre and post key injection,</li> <li>Any safes that are present, and</li> <li>The equipment used for key injection.</li> </ul> </li> <li>Identify the sample of recordings examined.</li> <li>Describe how the sample of recordings verified that CCTV cameras are positioned to monitor: <ul style="list-style-type: none"> <li>The entrance door,</li> <li>SCDs, both pre and post key injection,</li> <li>Any safes that are present, and</li> <li>The equipment used for key injection.</li> </ul> </li> </ul>	✓			✓	✓
<b>KF-5.1.11</b> CCTV cameras must be positioned so they do not monitor any combination locks, PIN pads, or keyboards used to enter passwords or other authentication credentials.						
<b>KF-5.1.11</b> Inspect CCTV positioning and review a sample of recordings to verify that CCTV cameras do not monitor any combination locks, PIN pads, or keyboards used to enter passwords or other authentication credentials.	<ul style="list-style-type: none"> <li>Describe how observation of CCTV positioning was verified that CCTV cameras do not monitor any combination locks, PIN pads, or keyboards used to enter passwords or other authentication credentials.</li> <li>Identify the sample of recordings examined.</li> <li>Describe how the sample of recordings verified that CCTV cameras do not monitor any combination locks, PIN pads, or keyboards used to enter passwords or other authentication credentials.</li> </ul>	✓			✓	✓