

# **FIPS 201 Evaluation Program - Electronic Personalization Test Procedure**

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## Document History

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# 1 Overview

Homeland Security Presidential Directive-12 (HSPD-12) - "*Policy for a Common Identification Standard for Federal Employees and Contractors*" directed the promulgation of a new Federal standard for a secure and reliable form of identification issued by all Federal Agencies to their employees and contractors.

In addition to derived test requirements developed to test conformance to the NIST standard, GSA has established interoperability and performance metrics to further determine product suitability. Vendors whose products and services are deemed to be conformant with NIST standards and the GSA interoperability and performance criteria will be eligible to sell their products and services to the Federal Government.

## 1.1 Identification

This document provides the detailed test procedure that needs to be executed by the Lab in order to evaluate the Electronic Personalization Product or Service against the subset of applicable requirements that need to be electronically tested for this category.

## 2 Testing Process

As previously mentioned, this document prescribes detailed test steps that need to be executed in order to test the requirements applicable for this category. Please note that conformance to the tests specified in this document will not result in the Product or Service being compliant to the applicable requirements of FIPS 201. The Product or Service must undergo an evaluation using all the evaluation criteria listed for that category prior to being deemed as compliant. Only products and services that have successfully completed the entire Approval Process will be designated as conformant to the Standard. To this effect, this document only provides details for the evaluation using the Lab Test Data Report approval mechanism.

A Lab Engineer follows the steps outlined below in order to test those requirements that have been identified to be electronically tested. The end result is a compilation of the observed behavior of the submitted PIV Card in the Lab Test Data Report.

Section 3 provides the test procedures that need to be executed for evaluating the Product or Service as conformant to the requirements of FIPS 201.

### 3 Test Procedure for Electronic Personalization

#### 3.1 Requirements

The following table provides a reference to the requirements that need to be electronically tested within the Lab as outlined in the Approval Procedures document for the Product and Service. The test cases that are used to check compliance to the requirements are cross-referenced in the table below.

Identifier #	Requirement Description	Source	Test Case #
EP.12	The personalized card shall be tested to the SP 800-85B test tool for data format compliance.	Derived	EP-TP.1

Table 1 - Applicable Requirements

#### 3.2 Test Components

Table 2 provides the details of all the components required by the Lab to execute this test procedure. Based on the different test cases, different components may be required to execute different cases.

#	Component	Component Details	Identifier
1	Host System	Includes a Workstation with the SP 800-85B data conformance tool installed and operational	HOST
2	PIV Card Reader (contact)	Gemalto GemPC Twin USB HW111459A	CREADER
3	The electronically personalized PIV Card under test	-	PROD

Table 2 - Test Procedure: Components

### 3.3 Test Cases

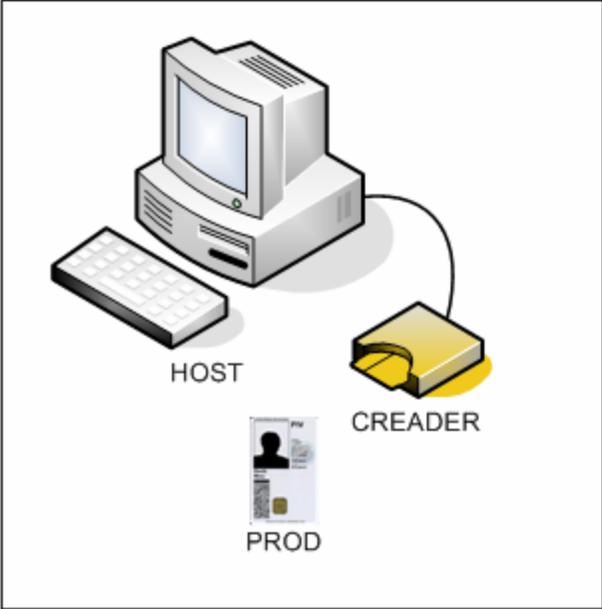
This section discusses the various test cases that are needed to test the populated PIV Card against the requirements mentioned above.

#### 3.3.1 Test Case EP-TP.1

##### 3.3.1.1 Purpose

The purpose of this test is to verify whether the PIV Card submitted successfully completes the SP 800-85B conformance testing.

##### 3.3.1.2 Test Setup

<p><b>Equipment:</b></p>	<p>The following components are necessary for executing this test case:</p> <ul style="list-style-type: none"> <li>▪ HOST</li> <li>▪ CREADER</li> <li>▪ PROD</li> </ul>
<p><b>Configuration Diagram:</b></p>	<div style="text-align: center;">  <p>The diagram shows a desktop computer labeled 'HOST' connected by a cable to a yellow PIV card reader labeled 'CREADER'. Below the reader is a PIV card labeled 'PROD'.</p> </div> <p style="text-align: center;"><b>Figure 1 - Configuration Diagram for Test Case EP-TP.2</b></p>
<p><b>Preparation:</b></p>	<ul style="list-style-type: none"> <li>▪ Connect the CREADER into the appropriate port on the HOST.</li> <li>▪ Verify that the CREADER is correctly installed by reviewing its presence in list of hardware using the device manager of the host system.</li> <li>▪ Start up the SP 800-85B data conformance tool             <ol style="list-style-type: none"> <li>I. Click the Configuration Tab                 <ol style="list-style-type: none"> <li>a. Click Report Settings.                     <ol style="list-style-type: none"> <li>i. In Implementation Under Test, the value should reflect the Case # and Product Name</li> </ol> </li> </ol> </li> </ol> </li> </ul>

	<ul style="list-style-type: none"> <li>ii. In IUI Date, the value should reflect the current date</li> <li>b. Click Test Settings             <ul style="list-style-type: none"> <li>i. If the data under evaluation resides on a PIV Card, the GET_CONTAINERS_FROM_CARD value must be 1, otherwise enter 0.</li> <li>ii. The Optional Test Filter value should reflect all known optional containers on the PIV Card.</li> <li>iii. The PIN_VALID value should reflect the PIV Application PIN.</li> </ul> </li> <li>c. Expand the Test Settings hive. Click Output Locations.             <ul style="list-style-type: none"> <li>i. For the sake of orderliness, modify the Configuration Main Path value to append the Case number of the product under evaluation to the .\apdu_tests_data_model\ directory.</li> </ul> </li> <li>d. Click Connectivity             <ul style="list-style-type: none"> <li>i. The Reader Name value should reflect the exact name of the attached CREADER.</li> <li>ii. The Smart Card Protocol should reflect SCARD_PROTOCOL_T0 for T=0 smart cards and SCARD_PROTOCOL_T1 for T=1 smart cards.</li> </ul> </li> </ul>
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3.3.1.3 Test Process

<b>Test Steps:</b>	<ol style="list-style-type: none"> <li>1. Insert the PROD into the CREADER</li> <li>2. Click the Test Manager tab.</li> <li>3. Execute the required tests by first clicking on the group of tests to perform, and then clicking the Run Selected button.</li> <li>4. Verify that the test has completed by viewing the result on the screen.</li> <li>5. Retain a PDF copy of the report for PROD.</li> </ol>
<b>Expected Result(s):</b>	The test completes successfully with all results showing a “PASS” indicating that the objects on the PIV Card are conformant to the PIV data model.