

# **FIPS 201 Evaluation Program - Template Matcher Approval Procedure**

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## Document History

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## 1 Introduction

### 1.1 Overview

The FIPS 201 Evaluation Program (EP) is a U.S. Government entity administered by the Office of Government-wide Policy (OGP), within the General Services Administration (GSA) agency. The goal of the FIPS 201 Evaluation Program (EP) is to evaluate products and services against the requirements outlined in FIPS 201 and its supporting documents. In addition to derived test requirements developed to test conformance to the National Institute of Standards and Technology (NIST) Standard, GSA has also established interoperability and performance metrics to further determine product suitability. A set of approval and test procedures have been developed which outline the evaluation criteria, approval mechanisms and test process employed by the Laboratory during their evaluation of a Supplier's product or service against the requirements for that category.

A Supplier desiring to submit a Template Matcher (hereafter referred to as the Product) for evaluation must follow the Suppliers Policies and Procedures Handbook. In addition to this handbook, Supplier also need to refer to this Approval Procedure which provides the necessary category-specific details in order to have a Supplier's Product evaluated by the EP and placed on the Approved Products List (APL).

### 1.2 Category Description

The *Template Matcher* is software component that compares two SP 800-76 compliant fingerprint templates and determines whether they match.

### 1.3 Purpose

The purpose of this document is to provide the following information:

- (i) Provide a list of the artifacts and/or documentation that needs to be submitted to the Evaluation Lab as part of the application package submission.
- (ii) Document the list of the requirements that apply to this category
- (iii) Specify the evaluation criteria along with their approval mechanisms that will be used by Evaluation Labs to verify compliance of the Product against the requirements that apply to this category.

## 2 Application Package Contents

The Application Package Contents include the artifacts, documentation and in some cases the product itself that needs to be submitted to the Evaluation Lab so that evaluation can be performed. The Application Package Contents for this category include the following:

- Completed Application Form, provided on the Evaluation Program website. (This form will be available through the web interface once users have been assigned a login credential);
- Completed and signed Attestation Form (found in the application submission package ZIP file). The Attestation Form should be completed and scanned into a document to be uploaded to Evaluation Program website;
- Completed and signed Non-Disclosure Agreement (found in the application submission package ZIP file). The Non-Disclosure Agreement should be completed and scanned into a document to be uploaded to Evaluation Program website;

*Note: This NDA can be substituted with a Supplier-provided document; however, this will slow the evaluation process as the NDA submitted will need to be reviewed by the Lab.*

- Official Certification documentation from the appropriate entity (e.g., NIST) showing conformance of the Product to the tested requirements of FIPS 201. Specific reference to the exact type of certification necessary can be found in Section 4.3.

### 3 Evaluation Procedure for Template Matcher

#### 3.1 Requirements

In order to approve the Product as conformant to the requirements of PIV, it at a minimum, must comply with all the requirements listed below. The approval mechanism column describes the technique utilized by the Lab to evaluate compliance to that particular requirement.

Identifier #	Requirement Description	Source	Reqt. #	Approval Mechanism
T-MCH.1	A template matcher shall be certified as a software library.	SP 800-76, Section 7.3.2	2-66	Certification
T-MCH.2	For PIV a matcher is a software function that compares enrollment templates with authentication templates to produce a similarity score. The similarity score must be an integer or real value quantity.	SP 800-76, Section 7.3.2	2-66	Certification
T-MCH.3	A supplier's template matcher implementation, submitted for certification, shall satisfy the API specification published by the test organizer. The API specification will support at a minimum the logical operations of Table 13.	SP 800-76, Section 7.3.2	2-68	Certification
T-MCH.4	A template matcher shall be certified on the basis of its speed of computation and on the error rates observed when it matches templates.	Derived	N/A	Certification
T-MCH.5	A template matcher shall be certified if: 1. it converts all input Table 11 [MINUSTD] templates to scalar scores, and 2. it executes 90% of the Section 7.4 template matches in fewer than 0.1 seconds each, and 3. it matches templates from all certified template generators, and the template generator accompanying the matcher, with FRR less than or equal to 1% at a FAR of 1%.	SP 800-76, Section 8.10	2-92	Certification

Table 1 - Applicable Requirements

### 3.2 Approval Mechanism Matrix

The table below provides an indication of the total number of requirements applicable for the Product and provides a breakup of how the evaluation will be conducted based on the different approval mechanisms available to the Lab.

Total Requirements	Approval Mechanisms					
	SV	VTDR	LDTR	VDR	C	A
5	N/A	N/A	N/A	N/A	5	1
<b>Legend:</b> SV – Site Visit; VTDR – Vendor Test Data Report; LTDR – Lab Test Data Report; VDR – Vendor Doc. Review; C – Certification; A – Attestation						

**Table 2 - Approval Mechanism Matrix**

### 3.3 Evaluation Criteria

This section provides details on the process employed by the Lab for evaluating the Product against the requirements enumerated above.

#### 3.3.1 Certification

<b>Reference(s):</b>	T-MCH.1 to T-MCH.5
<b>Evaluation Procedure:</b>	<ol style="list-style-type: none"> <li>The Lab will update the status in the Web-Enabled Tool to “C Begun” as instructed in the Web-enabled Tool Laboratory User Guide.</li> <li>The Lab will perform the following activities for the Template Matcher in order to determine certification status of the Product with SP 800-76 requirements: <ul style="list-style-type: none"> <li>Examine the certification statement to see if it provided by NIST and that it is still current i.e. valid;</li> <li>Verify the authenticity of this NIST certification provided by the MINEX program, as compliant to FIPS 201 and supporting documentation; and</li> <li>Review the list of Template Matchers to determine inclusion of the Product. The list is available on the website located at: <a href="http://fingerprint.nist.gov/MINEX/QPL.html">http://fingerprint.nist.gov/MINEX/QPL.html</a>.</li> </ul> </li> <li>The Lab will update the status to “C Complete” as instructed in the Web-enabled Tool Laboratory User Guide.</li> </ol>
<b>Expected Results:</b>	<ol style="list-style-type: none"> <li>The Product has been certified by NIST under the MINEX program as conforming to the certification criteria for Template Matchers as specified in SP 800-76.</li> </ol>

### 3.3.2 Attestation

<b>Reference(s):</b>	N/A
<b>Evaluation Procedure:</b>	<ol style="list-style-type: none"><li>1. The Lab will update the status in the Web-Enabled Tool to “A Begun” as instructed in the Web-enabled Tool Laboratory User Guide.</li><li>2. Review the Attestation Form provided by the Supplier, confirming that the Product to the best of their knowledge, conforms to all the necessary requirements of the category under which the Product applies. Verify that person signing this Attestation Form has the authority to do so (a minimum “C” level [e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner]).</li><li>3. The Lab will update the status in the Web-Enabled Tool to “A Complete” as instructed in the Web-enabled Tool Laboratory User Guide.</li></ol>
<b>Expected Results:</b>	<ol style="list-style-type: none"><li>1. The Attestation Form has been signed by an authorized individual (e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner).</li></ol>