FIPS 201 Evaluation Program Development - Laboratory Concept of Operations

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Document History

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1 Introduction

1.1 Identification

This Concept of Operations (ConOps) document is a high-level description of the General Services Administration's (GSA) Evaluation Program Development (EPD) Laboratory (Lab) operation to determine compliance of vendor products and services against the requirements of Federal Information Processing Standard (FIPS) 201 and its related publications.

This document establishes an overview of the evaluation process carried out by the Lab and is complemented by the GSA EPD *Test Laboratory Specification,* which provides further details and guidelines on daily operations of the Lab.

1.2 Background, Objectives and Scope

On August 27, 2004, Homeland Security Presidential Directive-12 (HSPD-12) - "*Policy for a Common Identification Standard for Federal Employees and Contractors*" was issued. HSPD-12 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 response to this directive, the National Institute of Standards and Technology (NIST) published FIPS 201 – "*Personal Identity Verification (PIV) for Federal Employees and Contractors*" on February 25, 2005. The Office of Management and Budget (OMB) has designated GSA as the Executive Agent for government-wide acquisitions for the implementation of HSPD-12. OMB has directed Federal agencies to purchase only products and services that are compliant with the Federal policy, standards and numerous supporting technical specifications.

Additionally, NIST has established the NIST Personal Identity Verification Program (NPIVP) to validate PIV components and sub-systems required by FIPS 201 that meet the NPIVP requirements. To ensure standard compliant products and services are available, NIST will issue test suites in Special Publication (SP) 800-85 - *PIV Middleware and PIV Card Application Conformance Test Guidelines.* At present, the NPIVP validation program includes FIPS 201 Interface Validation of PIV Card Applications and PIV Middleware for conformance to SP 800-73 - *Interfaces for Personal Identity Verification*. Additional NPIVP validation programs will be added as the PIV program evolves.

Critical to the success of NPIVP is the establishment of test facilities (Labs) to evaluate products and services offered for use in HSPD-12. Labs will ensure products and services are compliant with established FIPS 201 requirements. That is, if the Lab analysis or evaluation demonstrates that an applicant's product or service complies with FIPS 201 specifications, as revised from time to time, then the name and version of the applicant's product or service will be added to an Approved FIPS 201 Products and Services List.

The Lab provides an environment, by means of an evaluation bed, whereby GSA collaborates with vendor representatives to validate product or service compliance with FIPS 201 specifications, a prerequisite for availability to Agencies seeking to implement HSPD-12.

The purpose of this ConOps document is to define the roles, responsibilities, processes, and procedures necessary to operate the Lab commensurate with the aforementioned scope and objectives. In addition, the ConOps discusses the principles and practices underlying Lab operations such as privacy, confidentiality, security, and scheduling.

Strict adherence to the ConOps will result in a consistent evaluation of products and services, and unbiased results. In addition, it will facilitate efficient, low risk capability to handle high volumes of approvals of conformant products and services. As such, the ConOps addresses overall Lab usability in context of meeting timeliness demands of Federal and vendor communities.

1.3 System Overview of Laboratory Services and Functions

The core function of the Lab is to analyze and evaluate vendor products and services for compliance with FIPS 201 specifications. Based on Lab evaluation results, an authorized entity external to the Lab makes the final determination as to whether the product or service should be approved, and therefore added to the Approved List.

The GSA Office of Government-wide Policy (OGP) authorizes the functioning of the Lab for evaluating products and services to be complaint with FIPS 201. The Lab includes a facility, testers, software, operating systems, networks, and overall approval procedures that include test cases and test procedures. All of these, working within government policies, guidelines and procedures, form the basis of the Lab concept of operations. Change requests undergo a formal change control process in accordance with the EPD *Test Laboratory Specification* in order to ensure discipline and risk management.

Table 1 summarizes the various basic services and functions performed by the Lab.

Services and Functions	Description
Application Processing	Review of vendor application and determination of acceptance. Initiate scheduling and evaluation preparation as appropriate upon acceptance. (See Section 4.2.1.1 for details)
Evaluation Preparation	Prepare evaluation environment. Install and configure product or service. Speak with vendor before evaluation, if necessary, to resolve issues and questions, to optimize and expedite actual evaluation. (See Section 4.2.1.3 for details)
Evaluate Vendor Products & Services	Conduct consistent, formal evaluations of vendor products and services to verify compliance with applicable FIPS 201 specifications, following defined approval processes and test suites to ensure consistency and neutrality. As deemed

Services and Functions	Description
	appropriate by the Lab, coordinate with vendor during evaluation to resolve question or obstacle encountered during the evaluation process. (See Section 4.2.2.2 for details)
Evaluation Report Preparation	Formally document evaluation results and provide to Approval Authority for final determination. (See Section 4.2.2.3 for details)
Relationship Management	Facilitate and assist with the vendor application and deliverables process to ensure efficient, optimal task progression and evaluation correctness. Address questions from applicants and stakeholders. Address disputes, concerns and provide status information to applicants, Approval Authority, and other stakeholders as requested.
Update Approved FIPS 201 Products & Services List	Facilitate updates to the Approved FIPS 201 Products and Services List, per Approval Authority decisions. (See Section 4.2.5 for details)
Change Management	Ensuring disciplined, risk managed change to roles, responsibilities, processes, procedures, strategies as may be required from time to time. Collaborating with EPD PMO and other stakeholders regarding change requests. Change management for the Lab is described in further detail in the *Configuration Management Plan.*

Table 1 - Laboratory Services and Functions

1.4 Constraints

The Lab ConOps is governed by the following constraints:

- Products and Services accepted by the Lab will be evaluated on a first-come first-serve basis. In this respect, there will be no prioritization between different product or service categories. Therefore, after a product or service is accepted by the Lab, it awaits its turn for evaluation until all other products and services that have been received prior to it have been completed.
- The Lab is responsible for evaluating the conformance of products and services offered by vendors to FIPS 201 requirements. Such evaluation services offered by the Lab are limited to technical, functional and interoperability requirements described in FIPS 201 and supporting documentation.

1.5 Document Organization

The layout of the ConOps is largely based on the IEEE Standard 1362-1998 and describes a support process and not a system. *Nothing in this document is confidential or business proprietary.* The remaining document is organized in the following sections:

- Section 2 – lists all documents that have been referenced in this document;

- Section 3 – describes the roles and responsibilities for the staff and organizations involved in product and service evaluation;
- Section 4 – outlines the process through which vendor products and services undergo as a prerequisite to placement on the GSA Approval List for products and services, which indicates compliance with FIPS 201 requirements;
- Section 5 – describes the Applicant's view of the process that their product or service undergo prior to being placed on the Approval List;
- Section 6 – describes the principles and practices that guide Lab operation;
- Appendix A – provides a list of documents and forms used by the Lab, during its operation;
- Appendix B – identifies the various stages at which the web-enabled evaluation tool gets updated as a product or service goes through the evaluation process.; and
- Appendix C – lists the various acronyms and abbreviations used throughout this document.

2 Referenced Documents

The following are a list of references which have been used to develop this document.

HSPD 12*, Policy for a Common Identification Standard for Federal Employees and Contractors,* August 27, 2004.
(Available at http://www.whitehouse.gov/news/releases/2004/08/20040827-8.html.)

NIST FIPS 201, *Personal Identity Verification (PIV) of Federal Employees and Contractors,* NIST, February 25, 2005
(Available at http://csrc.nist.gov/publications/fips/fips201/FIPS-201-022505.pdf.)

NIST Special Publication 800-73, *Interfaces for Personal Identity Verification*, NIST, April 2005.
(Available at http://csrc.nist.gov/publications/nistpubs/800-73/SP800-73-Final.pdf.)

NIST Special Publication 800-76, *Biometric Data Specification for Personal Identity Verification*, NIST, February 2005.
(Available at http://csrc.nist.gov/publications/nistpubs/800-76/sp800-76.pdf.)

NIST Special Publication 800-78, *Cryptographic Algorithms and Key Sizes for Personal Identity Verification*, NIST, April 2005.
(Available at http://csrc.nist.gov/publications/nistpubs/800-78/sp800-78-final.pdf.)

NIST Special Publication 800-79, *Guidelines for the Certification and Accreditation of PIV Card Issuing Organizations*, NIST, July 2005.
(Available at http://csrc.nist.gov/publications/nistpubs/800-79/sp800-79.pdf.)

3 Roles and Responsibilities

The roles and responsibilities of various Lab personnel and other organizations are described in further detail below.

3.1 Lab Director

The Lab Director is responsible for the overall operation of the Lab, which includes oversight of evaluation and quality assurance. The Lab Director is responsible for:

- Setting the daily goals for the Lab;
- Ensuring all Lab operations adhere to the security and confidentiality requirements;
- Making efficient, effective use of the Lab's staff and other resources;
- Ensuring all evaluation activities are performed consistent with this ConOps and *Test Laboratory Specification*;
- Appointing roles and delegating responsibilities;
- Briefing the EPD PMO and Approval Authority on evaluation status;
- Maintaining updates to the Lab policies and procedures;
- Ensuring that appropriate mechanisms are in place to protect the interests of all parties;
- Authorizing submission of the Evaluation Report to the Approval Authority;
- Authorizing submission of the failure notice to the Applicant; and
- Resolving disputes and/or disagreements submitted by vendors.

3.2 Relationship Manager

For the evaluation of products and services, the Relationship Manager has the following responsibilities:

- Receiving, reviewing and approving the application package;
- Primary point of contact for Applicant interaction and evaluation;
- Assisting Applicants with the application process;
- Facilitating Applicant delivery of compliance evidence and deliverables necessary for evaluation (i.e. the Application package);
- Responsible for updating the Applicant's evaluation status on the web-enabled evaluation tool;
- Briefing the Applicant on evaluation status of their product or service;
- Transmitting the approval letter or the failure notice to the Applicant; and
- Facilitating updates of the Approved List, per Approval Authority decisions.

3.3 Lab Team Lead

A Lab Team Lead is responsible for the evaluation of products and service in one or more category(s). The Lab Team Lead has the following responsibilities:

- Prioritizing evaluation and other day-to-day Lab tasks;
- Assigning resources for evaluating products and services;
- Overseeing and facilitating successful conclusion of day-to-day tasks in accordance with project plans, budgets, and Lab objectives;
- Determining the composition of the Technical Evaluation Team;
- Communicating with the vendors in the event issues arise during the evaluation of a product or service;
- Assisting in reviewing and resolving disputes and complaints submitted by vendors, along with the Lab Director where appropriate; and
- Providing evaluation reports to the Lab Director for final approval.

3.4 Lab Engineer

Lab Engineers execute the day-to-day tasks of the Lab. Lab Engineer responsibilities include:

- Managing internal network and systems;
- Preparing the environment for evaluation - including establishing baselines for systems and the network environment;
- Installing, configuring, troubleshooting, and evaluating products and services. This may be done on an individual basis or as part of a team, as determined on a case by case basis by the Lab Team Lead;
- Determining whether contact should be made with the vendor when questions or obstacles arise during the evaluation process;
- Documenting evaluation results, including details of non-conformance whenever identified;
- Providing technical expertise to Relationship Managers and to others (e.g., Applicant) as appropriate; and
- Participating as part of the Technical Evaluation Team.

3.5 Applicant

Two types of Applicants may request evaluation by the Lab:

- Individual or organization who requests approval of a product; or
- Individual or organization who requests approval of a service.

The Applicant has the following responsibilities:

- Accurately completing the application;

- Providing evidence and deliverables necessary for the Lab to determine compliance with applicable approval criteria;
- Providing documentation as requested by the Lab to install, configure, and evaluate the product or service correctly; and
- Providing technical staff either onsite or via telephone, during the evaluation of the Applicant's product or service, for assisting the Technical Evaluation Team.

3.6 Approval Authority

The Approval Authority is appointed by the OGP and has the following responsibilities:

- Reviewing evaluation reports prepared by the Lab Team Lead and signed by the Lab Director;
- Exercises the authority to approve a product or service based on the recommendation provided in the evaluation report by the Lab; and
- Providing Applicant approval letters and communicating approval decisions to Relationship Manager.

4 Laboratory Evaluation Process

This section outlines the process through which products and services are evaluated prior to being placed on the GSA Approval List for products and services..

4.1 Concept Overview

The evaluation of products and services under the EPD is carried out using a GSA provided website. Applicants who desire to have their product or service evaluated for FIPS 201 compliance go to the EPD PMO website, register and obtain information regarding the evaluation process. Applicants can gather relevant information (i.e. application forms, product and service categories, approval procedures etc.) regarding the evaluation program, its goal and what is expected from them if they were to submit their product and/or service for evaluation against the requirements of FIPS 201 and its related publications.

Once a product or service is submitted, the Lab schedules the evaluation based on a First-In-First-Out (FIFO) scheme. The evaluation process for a particular product or service is envisioned to be completed as quickly as possible by the Lab in order to maximize the number approved products. Approved products will be posted to the EPD PMO website, so that Agencies can procure FIPS 201 requirement bound products and services. Product or services that do not meet the requirement of FIPS 201 will have to be resubmitted once all deficiencies have been rectified. In such cases, Applicants need to resubmit the entire application package to the Lab and await their turn once again in the evaluation queue.

Figure 1 depicts the overall concept of operations for evaluating products and services by the Lab.

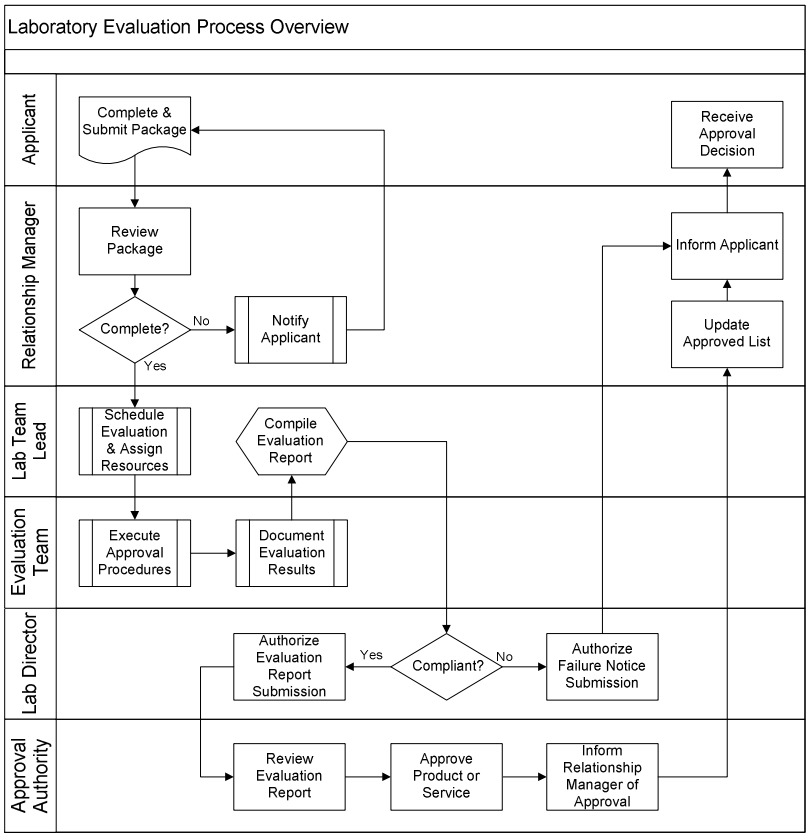

Figure 1 - Laboratory Evaluation Process Overview

4.2 Process Description

4.2.1 Application Process

Once an Applicant submits their Application package, the Lab reviews it for completeness. In the event that the application is considered to be incomplete, the Applicant is notified of any deficiencies. If the package is deemed to be completed, it is placed in the Lab evaluation queue where it waits its turn to be evaluated. Figure 2 provides an illustration of the Application process.

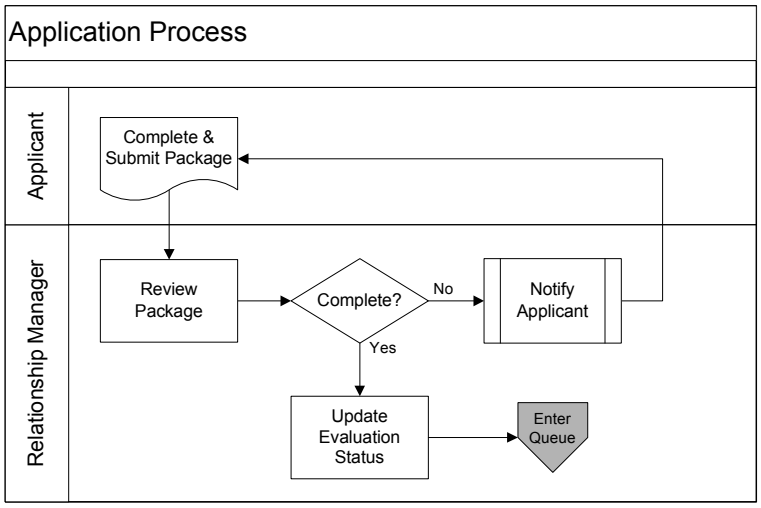

Figure 2 - Application Process

Details corresponding to the Application process are described in the sections below.

4.2.1.1 Application Package Submission

In order to proceed with the product or service evaluation, the Applicant submits their completed application package to the Relationship Manager. Details of the contents of the application package may vary based on the product or service category and are available to Applicants from the GSA EPD website. Additionally, the Relationship Manager can provide this to the Applicant as well.

Once an application package is received by the Lab, it undergoes a preliminary review for completeness. The application package contains the following:

- Evaluation Application Form;
- Evaluation Fees;
- Lab Service Agreement;
- Product (Hardware and/or Software) intended for evaluation;
- Complete documentation (User Manuals, Installation Guides etc.);
- Other necessary hardware or software to enable use of the product; and
- Required approval mechanism data (i.e. certifications, attestations, vendor test data, etc).

4.2.1.2 Application Package Review

The next step in the process is for the Relationship Manager to review the submitted package and either accept it as complete or notify the Applicant of any deficiency. Acceptance or denial of each package will be decided upon using the following evaluation criteria:

- Applicant has successfully completed the *Application Form* (all required information is provided and complete);
- Applicant has completed and signed the *Lab Service Agreement*;

- Evaluation fees have been paid in full;
- If the intended submission contains a product, then it is a released version; and
- All necessary documentation has been provided.

If the application package is deemed to be incomplete, the Applicant will be notified and provided information on next steps. The Lab will retain a copy of the application package. An incomplete application package will be held on file for thirty (30) days, and destroyed after sixty (60) days if deficiencies are not addressed. If an application package is destroyed, the Applicant must resubmit their application package.

If the application package is complete, the Relationship Manager updates the evaluation status for the Applicant's product or service in the web-enabled evaluation tool to reflect a status of "*Application package received/In Queue*". In addition, a case file is created for the Applicant's product or service in order to manage all Applicant submissions to the Lab.

The Applicant's submission is placed in the Lab evaluation queue whereby it will wait its turn to undergo evaluation for compliance against the mandatory requirements of the applicable category.

4.2.1.3 Schedule Evaluation

All products and services under evaluation are managed by the Lab Team Lead. The Lab Team Lead assigns resources and determines the evaluation schedule based on the current workload of the Lab. The Lab Team Lead will identify project constraints specifying time, equipment, and personnel.

The Lab Team Lead forwards the appropriate components of the submitted application package to the Technical Evaluation Team assigned to conduct the evaluation. If needed, the Lab Team Lead coordinates with the Relationship Manager, Lab Engineers, and the Applicant's technical representative if the need so arises.

Once the Applicant's product or service reaches the front of the Lab evaluation queue, the Lab Team Lead updates the evaluation status for the Applicant's product or service to reflect a status of "*Evaluation under progress*" in the web-enabled evaluation tool and then schedules the Applicant's product or service for evaluation.

4.2.2 Evaluation Process

Figure 3 provides an illustration of the Evaluation process. Once the Applicant's product or service exits the Lab evaluation queue, the Lab Team Lead schedules the evaluation and assigns the necessary resources. The Technical Evaluation Team then documents the results as they execute the approval procedures checking compliance to the specifications for that category. The Lab Team Lead then compiles the evaluation report and submits it to the Lab Director. Based on whether the product is compliant or not, the Lab Director either authorizes submission of the evaluation report to the Approval Authority or a failure notice to the Applicant.

In the event that a failure notice is sent to the Applicant, the Applicant has the option to request a non-conformance review. Details on the non-conformance review process are described in Section 4.2.6.

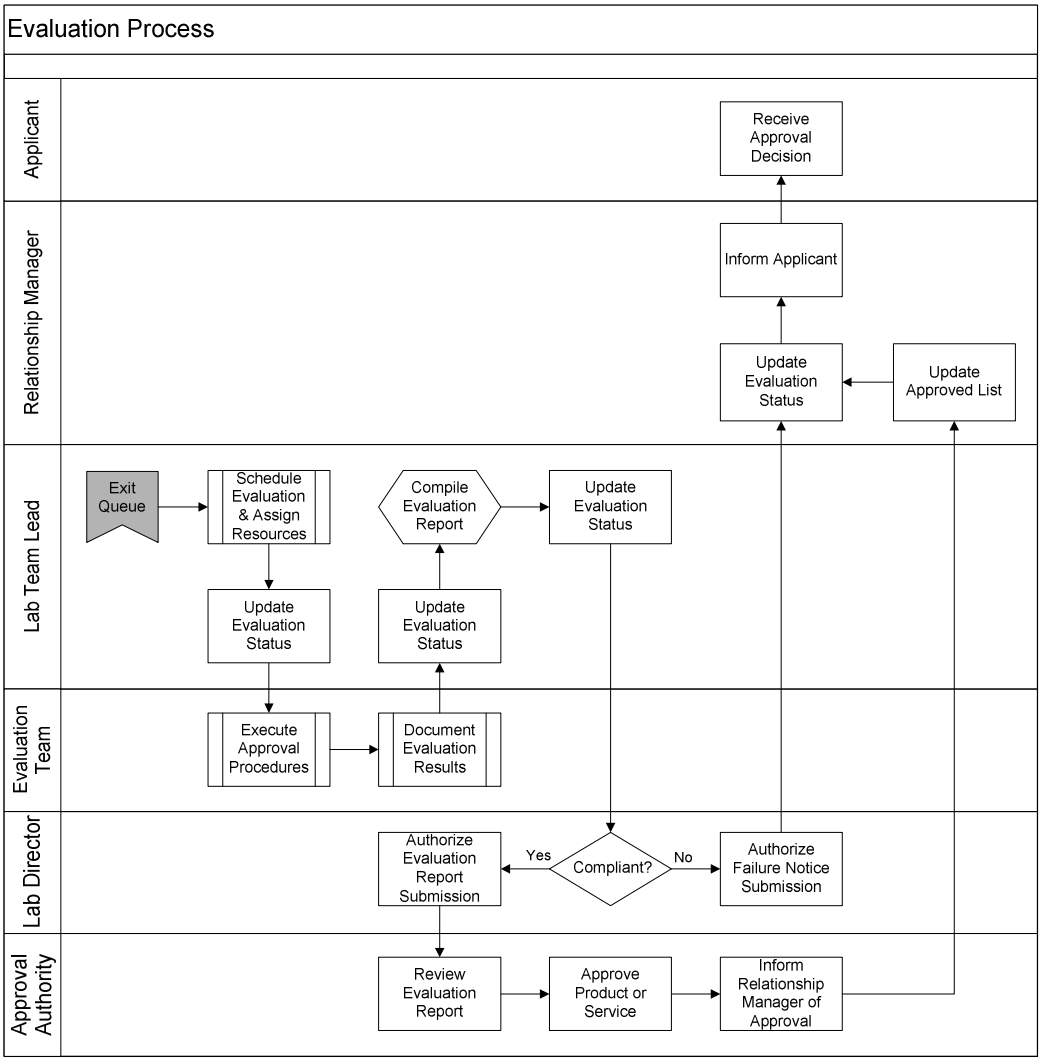

Figure 3 - Evaluation Process

Details corresponding to the Evaluation process are described in the sections below.

4.2.2.1 Installation and Setup

In the case where the Applicant submits a product to the Lab for evaluation, the Lab Engineers will begin their evaluation by reading the installation procedures and installing any associated product software and/or hardware device drivers.

If the Lab Engineers are experiencing difficulty with a product and the Applicant's representative is not available on-site at the Lab, the Applicant will be contacted no later than one (1) business day to resolve the issue. Such examples include the following:

- Missing user documentation;
- Corrupted software module;
- Incorrect version; or
- Damaged component.

If the Applicant's technical representative is unable to resolve installation or configuration issues, the evaluation process will be suspended until all issues have been rectified by the Applicant.

The communication between the Lab and the Applicant is considered necessary as it is important for the Lab to ensure that the product is installed and configured properly such that it is behaves as expected, in a consistent manner and is capable of meeting the criteria for approval.

4.2.2.2 Execute Approval Procedures

Execution of approval procedures for services commences after an on-site visit is scheduled by the Lab. For a product being evaluated, once installation and setup has been completed, the Lab Engineers commence execution of the approval procedures for that product category as directed by their respective Team Lead. These approval procedures have been documented in the *Test Laboratory Specification* and are based on the product and service categories.

As the Technical Evaluation Team progresses through the approval procedures, all information critical to the approval of the product or service, including any issues identified, are recorded and maintained by the Lab.

If an issue arises during the execution of the approval procedures, at the Lab Team Lead's discretion, the Applicant may be notified to seek a resolution. In such cases, the Applicant will be contacted no later than one (1) business day. Such examples include the following:

- Missing vendor test data reports;
- Missing certifications statements or attestations; or
- Incorrect documented configuration settings for the product/service.

In the case of more serious issues, it will be likely that the evaluation process will be stopped entirely with no chance for remediation as too much time may be necessary to resolve such issues. In this case, the Applicant will need to resubmit their Application package once the deficiencies have been rectified.

Once the approval procedures have been completed for a particular product or service category, the Lab Team Lead, updates the Applicant's evaluation status in the web-enabled evaluation tool to reflect a status of "*Evaluation Complete/Report under preparation*".

4.2.2.3 Evaluation Report Preparation

After the approval procedures for the appropriate category have been carried out by the Lab, the next step is to prepare the evaluation report for the particular product or service under evaluation.

This evaluation report is prepared by the Lab Team Lead for each product or service that is evaluated by the Lab, irrespective of whether the product or service passes or fails to comply with the requirements dictated by FIPS 201. Once prepared, the Lab Team Lead updates the evaluation status for the Applicant's product or service in the web-enabled evaluation tool to reflect a status of "*Evaluation Report Complete*".

The Laboratory will ensure that the evaluation report displays the sensitivity marking "*EPD Confidential*" on each page of the report. The Lab restricts distribution of the report only to the Approval Authority for products and services that are compliant with all FIPS 201 requirements in their respective category(ies).

The Lab Director provides the final sign-off on the evaluation report after consultation with the Lab Team Lead in charge of the product or service being evaluated. The Lab Director makes the final recommendation to the Approval Authority stating compliance of the product or service to FIPS 201 requirements.

4.2.3 Notifications

After the evaluation for a particular product or service is complete and the evaluation report is prepared, the Lab notifies either the Approval Authority or the Applicant based on the results of the evaluation. The product or service evaluation result can be either compliant or non-compliant.

4.2.3.1 Compliant

For product and services that are found to be compliant with all the requirements for that category, the Approval Authority is notified via the evaluation report created in the earlier step.

4.2.3.2 Non-Compliant

In case of a failure i.e. a product or service is found to non-compliant with all the necessary requirements, the Applicant is notified of the failure. The Lab Director

authorizes the submission of a formal failure notice, which is transmitted to the Applicant by the Relationship Manager.
Additionally, the Lab Director also informs the Relationship Manager to update the evaluation status of the Applicant's product or service in the web-enabled evaluation tool to that of "*Failure Notice Submitted*".

The Applicant has the opportunity to dispute the evaluation result with the Lab via a non-conformance review process if they so chose. Details of the non-conformance review are provided in Section 4.2.6. Applicants whose products or services have failed to comply need to re-submit their application packages after correcting the deficiencies and await their turn once again in the evaluation queue.

4.2.4 Government Review

Upon submission of the report, if the Approval Authority has any questions or concerns regarding an item in the evaluation report, the Approval Authority will contact the Lab Director for clarification. The Lab Director then approaches the Lab Team Lead for the product or service whose evaluation report is under question. The Lab Director with assistance from the Lab Team Lead then discusses the findings with the Approval Authority in order to resolve any ambiguities in the final evaluation report.

4.2.5 Government Approval

The Approval Authority is finally responsible for all products and services that are placed on the Approved List.

The final decision for a product or service to be placed on the Approved List is based on the Approval Authority's review of information gathered during the product or service evaluation by the Lab and based on the recommendation provided by the Lab whether or not all requirements for conformance to FIPS 201 have been fulfilled.

Once the evaluation report has been submitted and reviewed, the Approval Authority authorizes the Lab to place the Applicant's product or service on the Approved List. The Approval Authority also provides the Lab with a written notification for the Applicant, that their product or service meets the requirements of FIPS 201 and that it has been placed on the list of approved products and services. The Relationship Manager at the Lab then forwards this *Approval Letter* to the Applicant after keeping a copy as part of the Applicant's case file. The letter includes the following items at a minimum:

- Product or service name;
- Version number (if applicable); and
- Service packs and patches (if applicable).

The Relationship Manager finally updates the evaluation status of the Applicant's product or service in the web-enabled evaluation tool to that of "*Approval Complete*".

4.2.6 Non-Conformance Review

An Applicant that has a disagreement with a Lab decision submits a *Non-conformance Review Form* along with the appropriate non-conformance review fees to the Lab. This form can be obtained from the EPD PMO website.

The form is reviewed for completeness, and incomplete submissions are returned to the Applicant who has fifteen (15) business days to re-submit their dispute.

The Lab Director reviews the submission and researches the facts of the non-conformance result. This review includes thoroughly examining all documentation in the Applicant's case file and interviewing the Lab Team Lead and the Technical Evaluation Team assigned to the Applicant.

The Lab Director then discusses the submission and findings with the Applicant. If the disagreement is resolved during this discussion, the Lab Director documents that result. The Lab Director then issues a formal letter of resolution to the Applicant and all necessary updates to the product or service evaluation status will be made at this time.

Figure 4 illustrates the non-conformance review process.

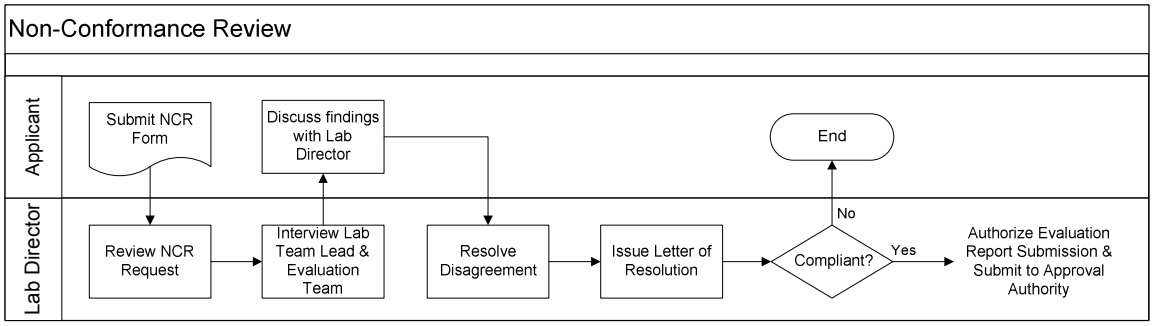

Figure 4 - Non-Conformance Review Process

5 Applicants View of the Evaluation Process

The process outlined below provides a summary of the Applicant's view of the steps that are undertaken in order to gain a product or service placement on the Approved FIPS 201 Products and Services List.

5.1 Process Description

5.1.1 Application Package Submission

In order for proceeding with the evaluation of the product or service, the Applicant needs to submit an application to the Lab and provide a completed application package. Details of the application package are described in Section 4.2.1.1.

5.1.2 Product or Service Evaluation

Once the application package is accepted, the next step is for the Lab to schedule the evaluation of the product or service. The time delay between the acceptance of a complete application package and the commencement of evaluation is based on the number of products currently in the queue for evaluation and the resources available at that time. The Lab Team Lead coordinates the evaluation effort with the Technical Evaluation Team.

5.1.3 Evaluation Report Preparation

After the approval procedures for the appropriate category have been carried out by the Lab, the next step is to prepare the evaluation report for the particular product or service under evaluation.

This evaluation report is prepared for each product or service that is evaluated by the Lab, irrespective of whether the product or service passes or fails to comply with the requirements dictated by FIPS 201. The evaluation report is authorized for submission to the Approval Authority by the Lab Director. In the event of a non-compliant product or service, the Applicant is issued a failure notice by the Lab.

5.1.4 Government Approval

After submission of the evaluation report to the Approval Authority by the Lab, the Approval Authority determines whether the product or service is fully compliant with all FIPS 201 requirements. Any clarification that is needed is sort from the Lab.

The final decision for a product or service to be placed on the Approved List is based on the review of information gathered during the evaluation by the Lab and based on the recommendation provided by the Lab whether or not all requirements for conformance to FIPS 201 have been fulfilled as part of their evaluation report.

5.2 Laboratory Interaction with Applicants

The Laboratory interacts with the Applicant in the following circumstances:

- **Application package completeness**: During submission of the Application package, if the Lab determines that the submission of the Applicant is incomplete for any reason (e.g. incomplete Application Form, the Lab Service Agreement has not been signed by the Applicant), the Lab will contact the Applicant to resolve the issue.

- **Deficiency remediation**: During the evaluation process, if the Lab identifies a minor deficiency (e.g. lack of critical documentation, corrupted software module etc.), the Lab may contact the Applicant to seek assistance.

- **Approval letter delivery**: Once the Approval Authority authorizes the placement of a vendor product or service on the Approved List and provides the Lab with the formal notification letter stating the same, the Lab forwards this approval letter to the Applicant after keeping a copy for their records.

- **Failure notice delivery**: If the product or service does not meet the requirements for compliance with FIPS 201, the Lab will notify the Applicant of the failure. The Laboratory notifies the Applicant in writing of each deficiency, and provides a detailed description of each deficiency.

- **Non-conformance review**: If the Applicant disagrees with the results of the evaluation process, the Applicant can request a non-conformance review with the Lab to discuss any deficiencies found in the product or service.

6 Laboratory Principles and Practices

This section discusses the core principles and practices that underlie Lab operations.

6.1 Privacy and Confidentiality

Operation of the Lab is predicated on privacy and confidentiality, in accordance with applicable laws, and to the extent sufficient to protect participants and stakeholders. Certain information collected and maintained by the Lab may be vendor confidential. Examples include the desire to get their products evaluated in the Lab, failure to comply, or engineering information about the vendor's product or service. Similarly, some information is Lab confidential. Examples include which vendors are in, or planned to be in, the Lab for evaluation. For all these reasons, all vendors are required to sign a *Lab Service Agreement* to prevent the disclosure of proprietary information. The *Lab Service Agreement* protects all parties by establishing the terms and conditions for engaging the Lab, including a non-disclosure agreement.

6.2 Scheduling

Lab scheduling is flexible to accommodate priorities as they may evolve over time. As staff and resources allow, evaluation may occur in parallel. This includes evaluation of products or services within a product or service category or across different categories.

The Lab typically operates on a FIFO scheme for evaluating products and services. In this regard, after an application package is considered complete and accepted by the Lab, it awaits its turn for evaluation until all other products and services that have been received prior to it have been completed. This scheme is typically followed by the Lab unless the EPD PMO directs the Lab to operate in another sequence, based on current priorities.

6.3 Security

Lab security is critically important, particularly regarding the risk of disclosing proprietary or confidential information. Accordingly, the Lab institutes appropriate management controls, operational controls, and rules of conduct that are documented in the Test Laboratory Specification.

Appendix A: Document/Form List

The following lists the various document and forms used during the daily operations of the Lab:

- **Application Form**
  The form an Applicant submits as part of the Application package in order to have their product(s) or service(s) evaluated against the requirements of FIPS 201.

- **Lab Services Agreement**
  An agreement signed by the Lab and the Applicant protected both parties by establishing the terms and conditions for engaging the Lab to evaluate the vendor's product and/or service.

- **Evaluation Report**
  A formal report prepared by the Lab stating that the product or service has met the requirements of FIPS 201, including a recommendation to be placed on the Approved List.

- **Approval Letter**
  A formal letter prepared by the Approval Authority stating the conformance of the vendor's product and/or service to the requirements of FIPS 201 and his/her formal decision to place the vendor's product or service on the Approved List.

- **Failure Notice**
  A formal letter prepared by the Lab stating that the product or service does not meet the requirements of FIPS 201 for that category and that it cannot be placed on the Approved List.

- **Non-Conformance Review Form**
  The form an Applicant submits when in disagreement of the result of an evaluation performed by the Lab.

Appendix B: Stages in the Evaluation Process

Figure 5 illustrates the various stages that an Applicant's product or service goes through during the evaluation process.

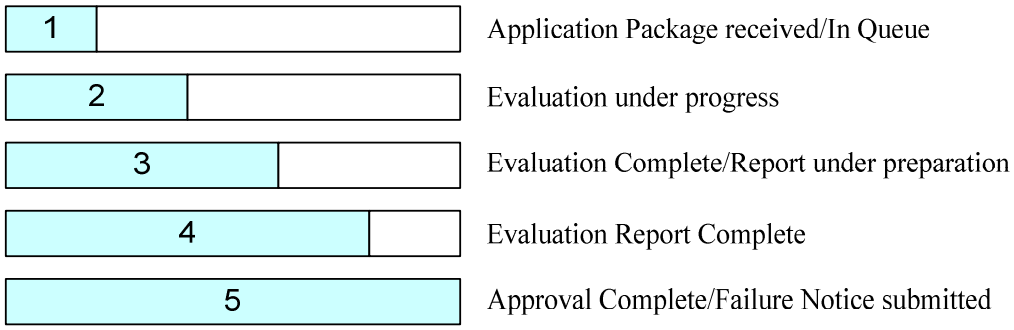

Figure 5 - Progress Bar indicating the various stages in the Evaluation Process

Table 2 describes the various stages that an Applicant's product or service goes through during the evaluation process and highlights the role responsible for updating the evaluation status.

Stage	Description	Evaluation Status updated by
1	Application package received/In Queue	Relationship Manager
2	Evaluation under progress	Lab Team Lead
3	Evaluation Complete/Report under preparation	Lab Team Lead
4	Evaluation Report Complete	Lab Team Lead
5	Approval Complete/Failure Notice submitted	Relationship Manager

Table 2 - Various stages in the Evaluation Process

Appendix C: Acronyms and Abbreviations

CONOPS	Concept of Operations
EPD	Evaluation Program Development
FIFO	First-In-First-Out
FIPS	Federal Information Processing Standard
GSA	General Services Administration
HSPD	Homeland Security Presidential Directive
IEEE	Institute of Electrical and Electronics Engineers
NIST	National Institute of Standards and Technology
NPIVP	NIST Personal Identity Verification Program
OMB	Office of Management and Budget
OGP	Office of Government-wide Policy
PIV	Personal Identity Verification
PMO	Program Management Office
SP	Special Publication