CIPURSE™ V2 Certification Program
Card Certification Process – Rev 1.3

Legal

This document is copyright© 2020 by the OSPT Alliance.

1. You may, without charge, copy (for internal purposes only) and share this document with your members, employees, and consultants (as appropriate). You may not modify or create derivative works of this document for external distribution.

2. The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, OSPT Alliance hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

3. CIPURSE™, OSPT™ and the OSPT logo are registered trademarks of the OSPT Alliance in Germany and other territories.

OSPT Alliance

Fürstenrieder Str. 279a

81377 Munich

Germany

Revision History

Version	Date	Major changes since previous revision
1.0	14 Feb. 2014	Initial Revision.
1.1	12 Jan. 2017	Chapter 2.3: Supported interfaces list for Conformance Testing update Chapter 2.4: Prerequisites for Testing adaptation Chapter 3.1: Verifications for Configuration Assessment added Chapter 4.3: CIPURSE™ Certificate Duration Validity precisions Chapter 5.2: ICS contents adaptation
1.2	19 Nov. 2019	Chapter 3: Process flow enhanced with payment details.
1.3	31 Aug. 2020	Chapter 1.3: Addition of the terminologies of the Test System components and adding of a figure clarifying the architecture of the CIPURSE Test System. Chapter 2 : Clarification of the certification entry conditions according to the process steps. Reworked order of chapters to conform the process sequence. Certified product definition. Chapter 3.4 : Precisions of the conditions of application of the CIPURSE Certificate, that is applicable to the DUT. Chapter 5 : New chapter for maintenance of certificates and list of certified products after certification.

Table of Contents

List of Figures

1 Introduction

1.1 Purpose

This document describes the processes defined by the OSPT Alliance to control product compliance with the CIPURSE™ V2 card specifications. Additionally, it defines the requirements and certification rules applicable to obtain a CIPURSE™ Certificate and maintain a product as a CIPURSE™-Certified product.

Specifically, this document describes the following topics:

- Prerequisites
- Laboratory organization
- Conformance Testing
- Registration forms
- Implementation Conformance Statement

Further, this document also describes the relationship between the participants (i.e., Test Laboratory / Certification Authority / CIPURSE™ product vendor) during the certification process.

1.2 Audience

This document is intended for:

- OSPT Alliance members who want to obtain a CIPURSE™ Certificate
- Test Laboratories that are selected by the OSPT Alliance to perform conformance testing

1.3 Terminology

Certification Authority: Entity providing the CIPURSE Certificate based on the report provided by the Test Laboratory. The OSPT Alliance is the Certification Authority.

Certificate Maintenance Form: Form used by the vendor to trigger one of the defined changes on the Certified Products list.

Device Under Test: Combination of chip hardware, OS and Application implementing a CIPURSE specification. This DUT may have to be used with a Test Adapter to be able to communicate with the communication interfaces supported by the Test Environment.

OSPT Alliance Administrative Entity: OSPT Alliance designated authority for all administrative topics related to the certification process.

Sample: Combination of a DUT and a Test Adapter that may be provided by the Vendor for the Certification.

Test Adapter: Device or component that may be provided by the Vendor to be used with a DUT to allow a communication with the Test Environment.

Test Environment: Combination of the CIPURSE Test Suites and Test Readers to be used to communicate with the Sample.

Test Laboratory: OPST Alliance accredited entity to execute the CIPURSE tests suite on the Sample.

Test Reader: Reader used by Laboratory to communicate with the Sample in one given interface.

Test Suite: Set of test scripts used by the Laboratory to perform the Certification.

Vendor: Vendor of the CIPURSE product to be certified.
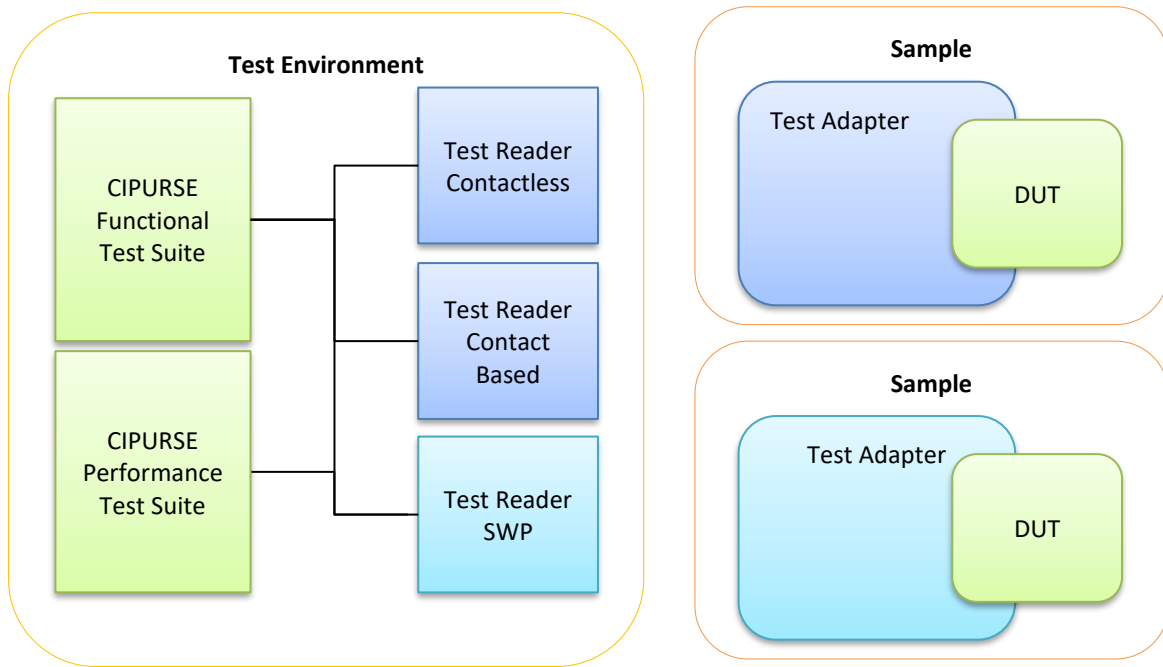
Figure 1-1: CIPURSE Card Certification Test System Architecture

1.4 Abbreviations

AAE   OSPT Alliance Administrative Entity

AID   Application Identifier

DUT   Device Under Test

IC   Integrated Circuit

ICS   Implementation Conformance Statement

JCRE   JavaCard Run-time Environment

NDA   Non-Disclosure Agreement

PICC   Proximity Integrated Circuit Card PRF Product Registration Form

PRF   Product Registration Form

PRN   Product Registration Number

SCP   Secure Channel Protocol

SWP   Single Wire Protocol

1.5 References

[1]   ISO/IEC JTC 1 / SC 17 STANDING DOCUMENT 5 – Register of IC manufacturers

2   Certification Process Description

2.1   Card Certification

The Card Certification of a CIPURSE™ V2 implementation is the core of the global Certification Program managed by the OSPT Alliance, applicable to CIPURSE™ products, i.e. products implementing one or more CIPURSE™ Specifications.

A Card Certification is processed in four parts:

Figure 2-1: CIPURSE™ V2 Certification Process Overview

- In Part A, the Vendor requests certification by completing and submitting the Product Registration Form (PRF) to the OSPT Alliance Administrative Entity (AAE) and ordering the certification based on a quotation from the AAE.
- In Part B, the Vendor prepares the samples and sends them to the laboratory for testing; the laboratory then prepares a Conformance Test Report.
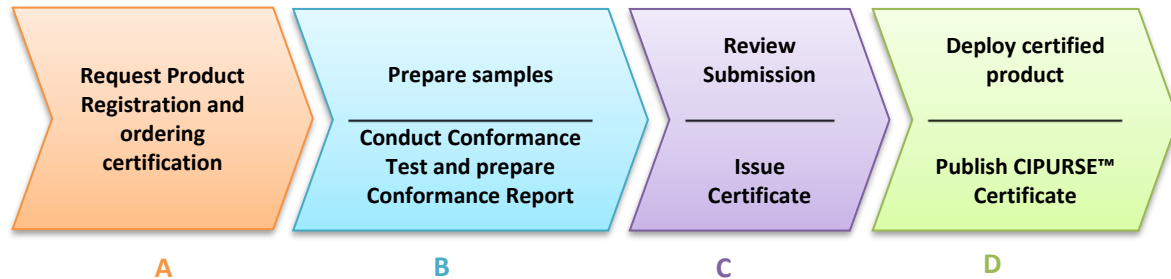- In Part C, the Conformance Test Report is validated by the Vendor and by the AAE, resulting in issuance of a CIPURSE™ certificate.
- In Part D, the OSPT Alliance publishes the certificate on the OSPT Alliance website. The Vendor guarantees that deployed products conform with the certified product.

2.2   Prerequisite for Testing

Before initiating any CIPURSE™ Certification, the Vendor must fulfil the following prerequisites:

- Register as Full OSPT Alliance Member. Details are available in the Members section of the OSPT Alliance web site (www.osptalliance.org).

- Ensure that the Device Under Test (DUT) conforms to one or more CIPURSE™ specification(s).

  The DUT implements one or several CIPURSE™ Profiles.

- Ensure that the combination of the DUT with the Test Adapter is compatible with one or more Communication Protocol(s) for use during the certification (as indicated in the ICS):
  - ISO/IEC 14443 contactless interface Type A or Type B
  - ISO/IEC 7816-3 contact interface T=0 or T=1
  - SWP interface in Type A, Type B, or Type F
- Submit the samples in a form suitable for running the conformance test (i.e., smart card, key fob, a tag or an NFC card emulation handset).

2.3   Conformance Testing

The purpose of conformance testing is to determine if the Device Under Test (DUT) conforms to the requirements of the CIPURSE™ specification.

Additionally, test scripts are issued on the DUT to provide indications related to the performance of combination of the DUT with the Test Adapter. Currently, OSPT Alliance does not define minimum performance requirement, therefore, the results of the performance tests are provided for information only.

2.4   Definition of a CIPURSE™-Certified Product

A product is CIPURSE™-Certified when the criteria described in this section are met.

The Certification Authority (OSPT Alliance):

- Has received a Conformance Test Report from the Test Laboratory, based on the test plan for CIPURSE™ specification(s) that the product is conforming to,

- Has determined that the Conformance Test Report received is complete, correct, and free from failing tests,

- Has provided a CIPURSE™ Certificate based on the Conformance Test Report to the vendor, and

- Has published the CIPURSE™ Certificate on the OSPT Alliance web site.

3 Details of Card Certification Process

The flowchart in the Figure 3-1 illustrates the interactions between the Vendor, the Test Laboratory and the Certification Authority (OSPT Alliance) during the certification process.

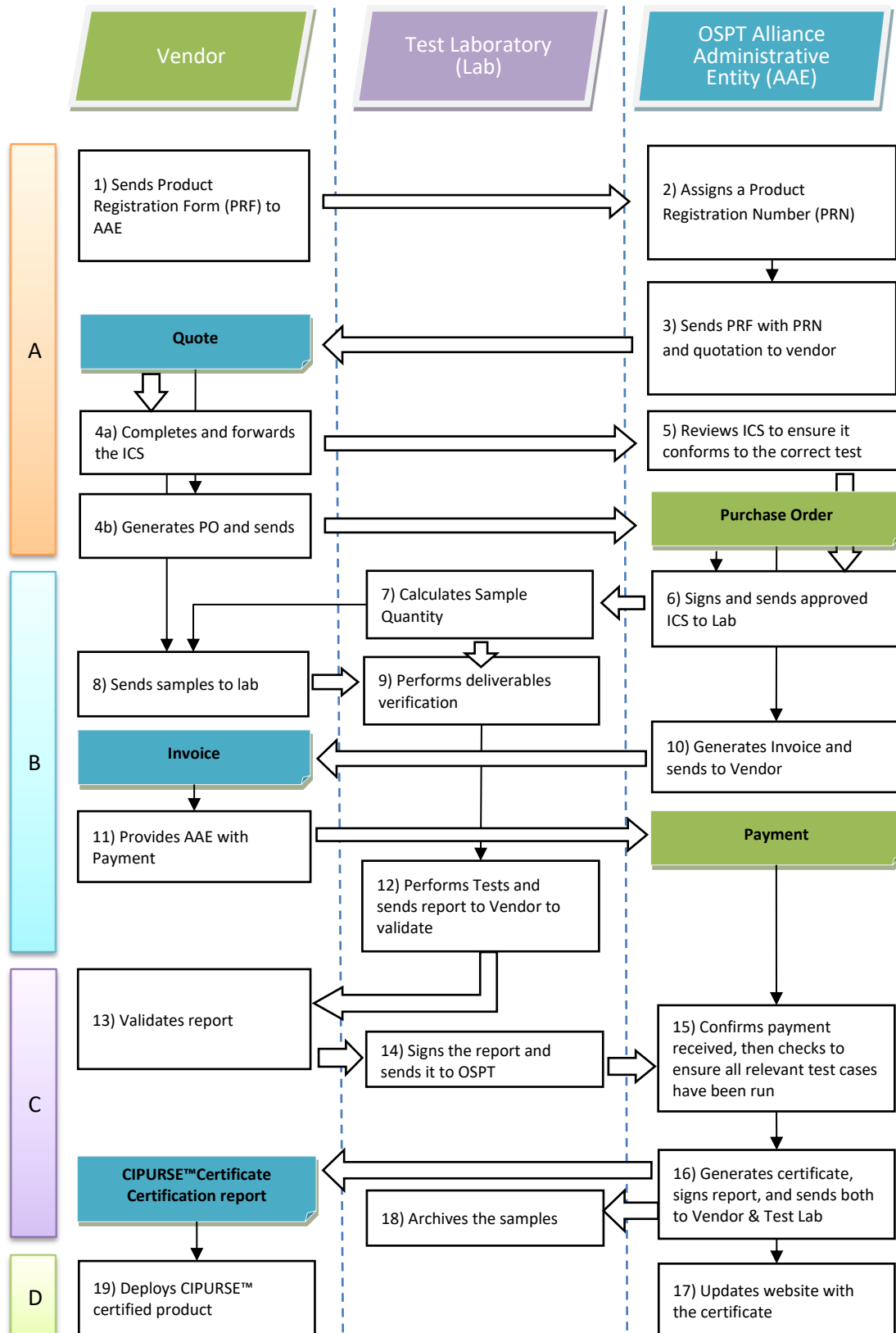| Vendor	Test Laboratory (Lab)	OSPT Alliance Administrative Entity (AAE)
A 1) Sends Product Registration Form (PRF) to AAE		2) Assigns a Product Registration Number (PRN)
Quote		3) Sends PRF with PRN and quotation to vendor
4a) Completes and forwards the ICS		5) Reviews ICS to ensure it conforms to the correct test
4b) Generates PO and sends		Purchase Order
B 8) Sends samples to lab	7) Calculates Sample Quantity	6) Signs and sends approved ICS to Lab
	9) Performs deliverables verification	10) Generates Invoice and sends to Vendor
Invoice		
11) Provides AAE with Payment	12) Performs Tests and sends report to Vendor to validate	Payment
C 13) Validates report	14) Signs the report and sends it to OSPT	15) Confirms payment received, then checks to ensure all relevant test cases have been run
CIPURSE™Certificate Certification report	18) Archives the samples	16) Generates certificate, signs report, and sends both to Vendor & Test Lab
D 19) Deploys CIPURSE™ certified product		17) Updates website with the certificate

Figure 3-1: CIPURSE™ V2 Product Certification Process

3.1 Part A: Registration and Configuration Assessment

The Product Registration Form (PRF) is the entry point to the CIPURSE™ certification. The PRF can be retrieved from the OSPT Alliance website https://www.osptalliance.org/certification/.

The Vendor must (1) complete the PRF and provide the completed form to the OSPT Alliance Administrative Entity (AAE) at certification@osptalliance.org.

The AAE analyzes the PRF, (2) assigns a Product Registration Number (PRN), which uniquely identifies the certification session for the Vendor's CIPURSE™ product, and (3) provides the Vendor with:

- The Product Registration Number (PRN)
- A quotation for the product certification
- An optional NDA if requested by the Vendor

The Vendor must (4a) provide the completed Implementation Conformance Statement (ICS) and (4b) submit a formal Purchase Order (PO) to the AAE. The ICS can be retrieved from the OSPT Alliance website https://www.osptalliance.org/certification/ .

The AAE will (5) verify the certification request against the product capabilities described in the ICS:

- All profiles indicated in the fourth byte of EF.ID_INFO (Profile_Support) shall be certified.
- The value in the ninth byte of EF.ID_INFO (IC_MAN) shall correspond to an Identifier present in [1]. The Vendor shall be the Company associated to the Identifier.
- If the Vendor is not the associated company, then the Vendor shall declare that they have been granted permission by the associated Company to use this Identifier.

If the product capabilities and certification request match and a valid PO has arrived, then phase B can begin.

If one or more conditions are false, then the certification cannot be executed as requested. In this case, the ICS (and possibly the PRN) must be adapted until the criteria for certification are met.

3.2 Part B: Conformance Test Session

At the start of Part B, the AAE will (6) sign the ICS and forward it to the applicable Test Laboratory.

The AAE will (10) prepare an invoice and send it to the Vendor.

The Vendor (11) releases payment to the AAE.

The Test Laboratory will (7) calculate the number of samples required for test execution and inform the Vendor of the number of sample cards to be provided.

The vendor prepares and (8) sends the requested number of sample cards to the Test Laboratory.

The Laboratory will (9) verify if the information provided in the ICS complies with the configuration of the provided Sample cards according to the rules define by the OPST Alliance:

- All provided samples deliver a profile indicator (fourth byte of EF.ID_INFO) value as described by the ICS (Profile_Support).
- All provided samples have the same product identification and version (the last 6 bytes of EF.ID_INFO) as described by the ICS.
- All provided samples have the same IC Manufacturer identifier (byte 9 of EF.ID_INFO) as described by the ICS.
- Each provided sample has unique chip identification data (bytes 10 to 24 of EF.ID_INFO), i.e. these data are unique across all sample provided with this IC Manufacturer identifier.

- For each sample, all ADFs that can be created in parallel or subsequently return the same 40 bytes EF.ID_INFO, irrespective of the requested ADF types (L, S or T application).

If the samples are configured as described in the ICS, the CIPURSET™ V2 Conformance Test Session is (12) is performed in a single automated test run, which means that the samples are clearly identified and the tests are performed only once. The Vendor does not participate in the test session.

If the verification of the samples fails, the lab will notify the Vendor on the steps required to fix the samples and restart the Certification Test Session.

The Certification Test Session (12) proceeds as follows:

- The Test Laboratory configures the Test Suite according to the data provided by the Implementation Conformance Statement.
- The Test Laboratory executes the test cases in accordance with its ISO/IEC 17025 management system.
- After test completion, the Test Laboratory prepares the Conformance Test Reports and delivers it to the Vendor.

3.3   Part C: Conformance Test Report Validation and CIPURSE™ Certificate

The Conformance Test Report is validated in two steps:

- The Vendor (13) confirms correctness of the Vendor and sample data in the test report and determines based on the test results if the test report shall be forwarded to the AAE.
- If the test report was forwarded, the AAE (15) verifies payment was received, confirms the executed test set was appropriate and checks that no issue is reported by the test report.

In step 1, the Vendor then decides on one of the following options and informs the Test Laboratory:

1. Submission of the Conformance Test Report to the AAE. In this case, the Test Laboratory (14) signs the Conformance Test Report and sends it to the AAE for approval.
2. Restarting the certification with appropriate corrections. This requires a new PRN for new DUTs and a new ICS document, i.e., the current certification is stopped and a new one started.
3. Stop the certification. In this case, the Test Laboratory does not provide the Conformance Test Report to the AAE, but instead, notifies AAE on the aborted certification.

In step 2, once the AAE receives the Conformance Test Report (option 1):

1. The AAE reviews the Conformance Test Report.
2. If the Conformance Test Report does not show any issue, the AAE (16) signs the report, issues the signed CIPURSE™ Certificate and signed Conformance Test Report to the Vendor and the Test Laboratory.
3. Otherwise, the AAE reviews the Conformance Test Report in details and decides of any further steps.

3.4   Part D: Deployment

After issuing the signed CIPURSE™ Certificate and signed Conformance Test Report to the Vendor, the OSPT Alliance (17) publishes the information about the CIPURSE™-Certified product and the CIPURSE™ Certificate on its website at https://www.osptalliance.org/certification/.

The Vendor is now entitled to (19) deploy the CIPURSE™-certified product and can apply the CIPURSE™-Certified logo to their product and/or use the CIPURSE™-Certified logo in their commercial documentation mentioning the product. The Vendor shall use the referenced CIPURSE™- Certified logo as defined in Appendix 6.1.

CIPURSE™ Certificate is applicable to all CIPURSE™ products of the Vendor built with the same DUT as the one provided for the Certification.

4 Certification Conditions

4.1 Test Laboratory and Location

The list of the Test Laboratories selected by the OSPT Alliance and the corresponding contact details are available on the OSPT Alliance website (www.osptalliance.org).

4.2 Pricing and Support

Pricing and conditions are fixed by the OSPT Alliance and are available on the OSPT Alliance website (www.osptalliance.org).

The Test Laboratory may offer additional services (i.e., debugging test session or software licenses for Test Suite) that can help the vendor before starting the certification process.

4.3 CIPURSE™ Certificate Duration Validity

A CIPURSE™ Certificate does not expire.

Vendors can request that the OSPT Alliance delist their certified product(s) from the OSPT Alliance official CIPURSE™-Certified Product(s) list, see chapter 5.4.

When a full member resigns from the OSPT Alliance, all certified product(s) from the respective member will be delisted.

4.4 CIPURSE™ Specification Change Management

The OSPT Alliance reserves the right to update the CIPURSE™ specification and the related test plan at any time. A CIPURSE™ Certificate always includes references which allow the identification of the CIPURSE™ specifications and related Test Plan the certificate is based on.

5 Certificate Maintenance

Vendors can request the changes listed below on the certified products listed under https://www.osptalliance.org/certification/ by sending a Certificate Maintenance Form by email to the AAE at certification@osptalliance.org.

- Change of the Commercial Product Name
- Register a Variant of a certified product
- Change of Vendor Name
- Delist one or several Commercial Product Names

The form can be downloaded from the OSPT Alliance web page https://www.osptalliance.org/certification/.

Note: These services can be used only by active members of OSPT Alliance.

5.1 Change of Commercial Product Name

The vendor can apply for a change of the Commercial Product Name of an already certified product.

5.1.1 Objectives

This request will result in the following changes:

1. Issuance of a new certificate where:
   a. Commercial Product Name gets replaced by the new Commercial Product Name, and
   b. A note at the end of the certificate indicates the original name used for certification and listed in the test report.
2. Updating the list of certified products under the OSPT Alliance Certified Product Page:
   a. In column "Commercial Product Name", the new Commercial Product Name replaces the original name.
   b. In column "CIPURSE Certificate" a reference to the newly issued certificate.

PRF, ICS, and Test Report remain unchanged. The Product Version shall remain unchanged.

5.1.2 Steps

1. The Vendor applies for change of Commercial Product Name by sending a Certificate Maintenance Form by email to AAE.
2. AAE sends to the Vendor an email with the new Certificate generated based on the application.
3. The Vendor confirms the contents of the Certificate and sends approval to upload to the website to the AAE.
4. AAE updates the list of certified products on the OSPT Alliance website.
5. AAE notifies the Vendor about the change.

5.2 Registering a Variant of a Certified Product

The Vendor can request assignment of an additional Commercial Product Name to an existing certified product.

5.2.1 Objectives

This request will result in the following change:

1. The list of certified products under the OSPT Alliance Certified Product Page is updated to include the additional Commercial Product Name.

The Vendor name, Product Version and PRF, ICS, Certificate and Test Report remain the same.

5.2.2   Steps

1. The Vendor applies for the addition of a Commercial Product Name to an existing certified product by sending a Certificate Maintenance Form by email to AAE.
2. AAE updates the list of certified products on the OSPT Alliance website.
3. AAE notifies the vendor of the change.

5.3   Change of Vendor Name

The Company Name of a vendor may change due to merge, acquisition etc. As a consequence, the Vendor may want to update the Vendor name for all or several listed products of this Vendor.

5.3.1   Objective

This request will result in the following changes:

1. A new Certificate is issued for each affected product with identical contents with the following exceptions:
   a. Original Vendor name is replaced with the new Vendor name.
   b. A note is included at the end of the page to identify the original Vendor name used for certification and listed in the test report.
2. Updated entries of all affected products in the list of certified products on the OSPT Alliance website including:
   a. In column "Vendor Name", replacing the original Vendor name with new Vendor name
   b. In column "CIPURSE Certificate", replacing the original certificate reference to the new certificate.

5.3.2   Steps

1. The Vendor applies for change of the Vendor name for a set of certified products by sending a Certificate Maintenance Form by email to AAE.
2. AAE sends to the Vendor an email with the new Certificate(s) generated based on the application.
3. The Vendor confirms the contents of the certificate(s) and sends to the AAE the approval for update of the Certified Products web page.
4. AAE updates the list of certified products on the OSPT Certified Products web page.
5. AAE notifies the Vendor about the change.

5.4   Delisting a Commercial Product Name

The Vendor can request delisting of products that are no longer commercially available.

5.4.1   Objective

Remove one or several products from the Certified Products list on the OSPT Alliance website.

5.4.2   Steps

1. The Vendor applies for delisting of one or several products with their Commercial Product Names by sending a Certificate Maintenance Form by email to AAE.

2. AAE removes the Commercial Product Names from the list of certified products on the OSPT Certified Products web page.
3. The entire row is removed if the Commercial Product Names referenced by the certificate gets delisted.
4. AAE notifies the Vendor about the change.

Note: Once an entire row is removed, addition of new Commercial Product Name can no longer be accepted for this certified product.

6   Appendix

6.1   CIPURSE™-Certified Logo

The following logos can be used by Vendors having a CIPURSE™-Certified product referenced on www.osptalliance.org.

Figure 5-1: CIPURSE™-Certified Color Version

Figure 6-2: CIPURSE™-Certified Black&White Version

These logos can be printed on the CIPURSE™-Certified products and/or used in the Vendor documentations. For these purposes, OSPT Alliance provides the vendor with both high quality logo files with the CIPURSE™ certificate delivery email.

When printed on a product, the OSPT Alliance recommends maintaining the following minimum dimensions of the CIPURSE™-Certified logos (Figure 5-1 and Figure 5-2):

Figure 6-3: CIPURSE™-Certified Logos Minimum Dimensions

Note that the ratio between height and width shall be 1: 2.2±5%.