

Peppol

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Peppol Testbed

eDelivery test suite user guide

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1 Introduction

This document provides information related to the eDelivery testing. Its purpose is to demonstrate and to provide a guide on how to use the Testbed User Interface. It describes the prerequisites as well as the key steps in carrying out the various test cases. The target audience for this document is Service Providers (SPs) that are interested in implementing Peppol and wish to test their implementations by using the Testbed environment.

1.1 Glossary

Abbreviations used in this document:

Abbreviation	Meaning
SP	Service Provider
AP	Access Point
SMP	Service Metadata Publisher
UI	User Interface

Table 1 glossary

1.2 Process Overview

To execute a Peppol BIS Process within the Peppol network, there are several capabilities that the SPs must have. OpenPeppol makes it easier to verify these capabilities through a structured predefined testing process.

To achieve this, a test suite for eDelivery testing is offered by Peppol, which requires the completion of six test cases that verify the SP's eDelivery deployment, configuration, and compliance to Peppol specifications of Access Point (AP).

2 Prerequisites and preparation

2.1 Prerequisites

SPs must meet the following requirements before doing any testing.

2.1.1 Peppol PKI Test Certificate

SPs are authenticated to the Testbed using PKI client authentication. As a result, the SP must have obtained a Peppol PKI test certificate and have it imported in their browser's keystore.

2.1.2 Access Point deployment

SPs must have an AP deployed, as a result they need the following:

- AS4 URL available – must refer to HTTPS
- AP must be accessible over the internet
- AP must implement HTTPS with certificate chains to Certificate Authorities (CAs) which are trusted by Peppol.
- AP must have installed the same Peppol PKI AP test certificate used for the authentication to the Testbed

2.2 Supported browsers

We can only guarantee that the Testbed website behaves in the correct manner if you are using any of the below web browsers:

- Google Chrome, version 100.0 and above
- Firefox, version 99.01 and above
- Microsoft Edge, version 101.0 and above

2.3 Preparation

A Peppol PKI AP or SMP Test Certificate must be installed (depending on what test you're running) in your browser before visiting the Testbed for the first time.

Client certificate authentication must be setup in your browser according to the following instructions:

[Windows Google Chrome](#)

[Windows Mozilla Firefox](#)

[OS-X Generic](#)

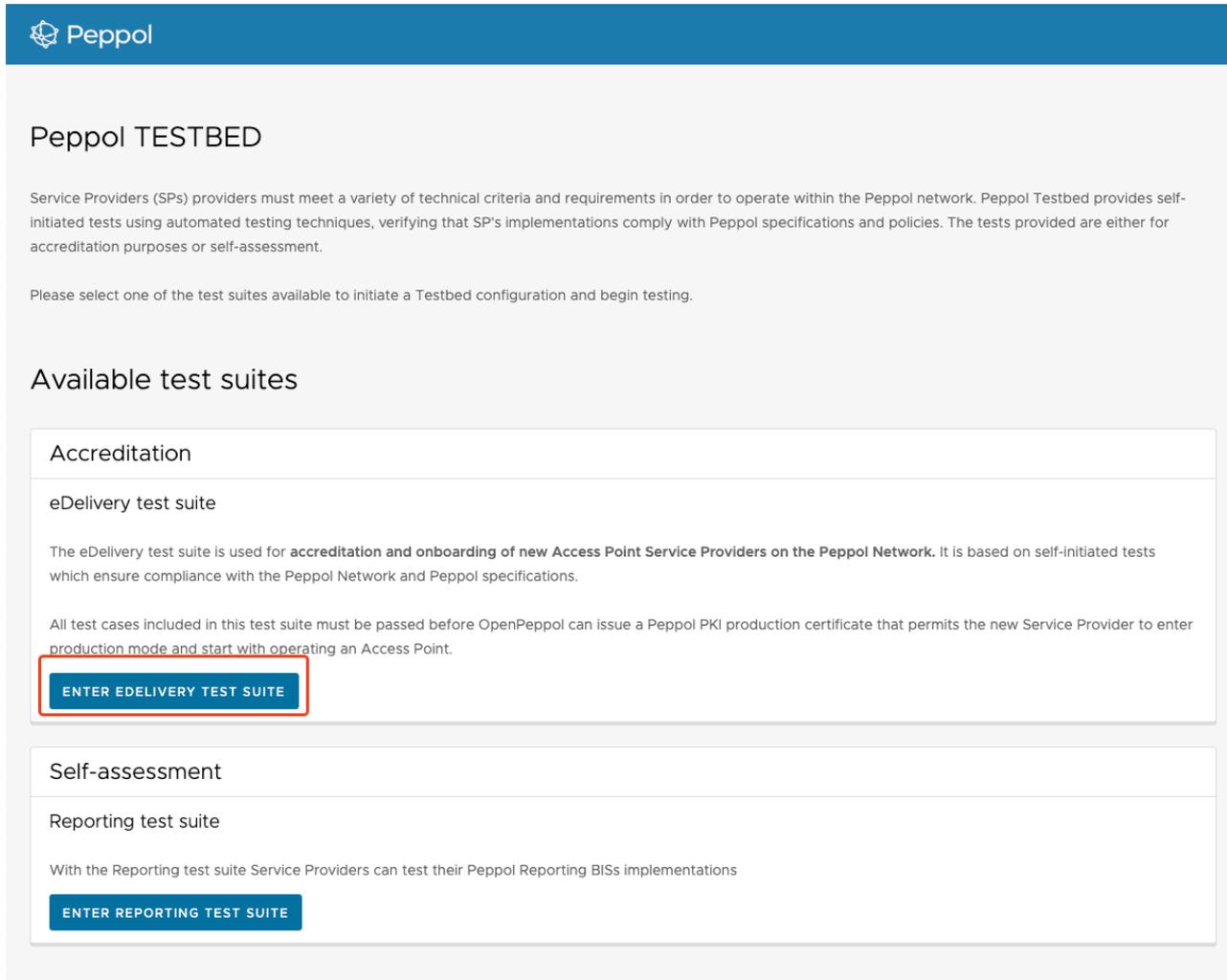
After installing the PKI certificates, go to <https://www.testbed.peppol.org>, which is the URL of the Testbed environment.

The browser will prompt you to identify yourself with a certificate; choose your Peppol PKI AP test certificate.

3 Testbed eDelivery test suite user interface

The eDelivery test suite is used to help evaluate new AP deployments and ensure compliance with the Peppol eDelivery Network specifications. It is based on self-initiated tests that an end-user of the SP system chooses to run. The SP end user enrolls in the eDelivery test suite, selects which test cases to run, and reviews the results from the user interface.

To create an eDelivery test suite configuration, a user must first select “*ENTER eDELIVERY TEST SUITE*” in the landing page, as illustrated in Figure 1.



The screenshot shows the Peppol Testbed landing page. At the top, there is a blue header with the Peppol logo. Below the header, the page title "Peppol TESTBED" is displayed. A paragraph explains that Service Providers (SPs) must meet technical criteria to operate within the Peppol network, and the Testbed provides self-initiated tests to verify compliance. A second paragraph asks users to select a test suite to begin testing. The page is divided into two main sections: "Accreditation" and "Self-assessment". Under "Accreditation", there is a sub-section for the "eDelivery test suite" with a detailed description and a red-bordered button labeled "ENTER EDELIVERY TEST SUITE". Under "Self-assessment", there is a sub-section for the "Reporting test suite" with a description and a button labeled "ENTER REPORTING TEST SUITE".

Peppol

Peppol TESTBED

Service Providers (SPs) providers must meet a variety of technical criteria and requirements in order to operate within the Peppol network. Peppol Testbed provides self-initiated tests using automated testing techniques, verifying that SP's implementations comply with Peppol specifications and policies. The tests provided are either for accreditation purposes or self-assessment.

Please select one of the test suites available to initiate a Testbed configuration and begin testing.

Available test suites

Accreditation

eDelivery test suite

The eDelivery test suite is used for **accreditation and onboarding of new Access Point Service Providers on the Peppol Network**. It is based on self-initiated tests which ensure compliance with the Peppol Network and Peppol specifications.

All test cases included in this test suite must be passed before OpenPeppol can issue a Peppol PKI production certificate that permits the new Service Provider to enter **production mode and start with operating** an Access Point.

[ENTER EDELIVERY TEST SUITE](#)

Self-assessment

Reporting test suite

With the Reporting test suite Service Providers can test their Peppol Reporting BISs implementations

[ENTER REPORTING TEST SUITE](#)

Figure 1 Testbed landing page

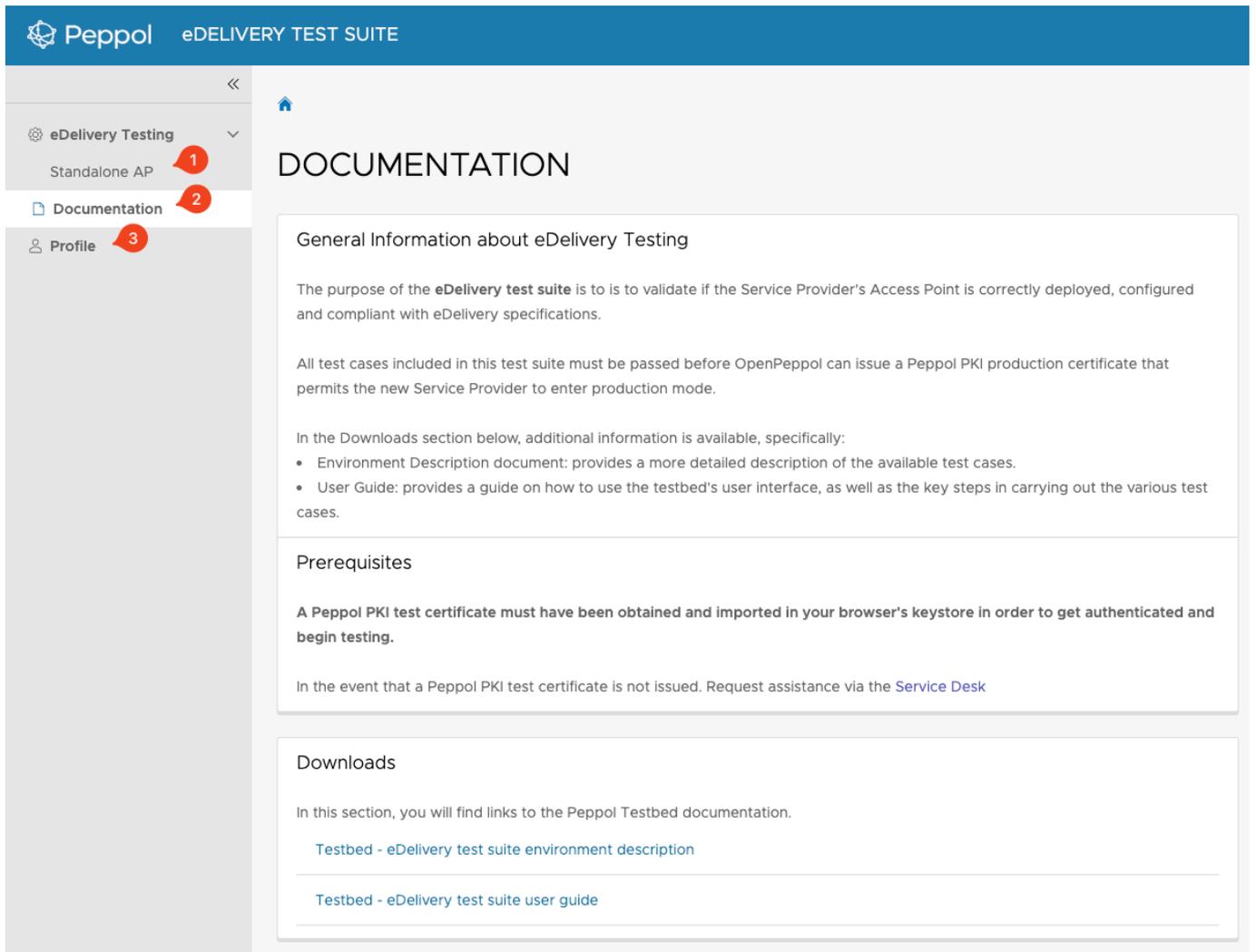


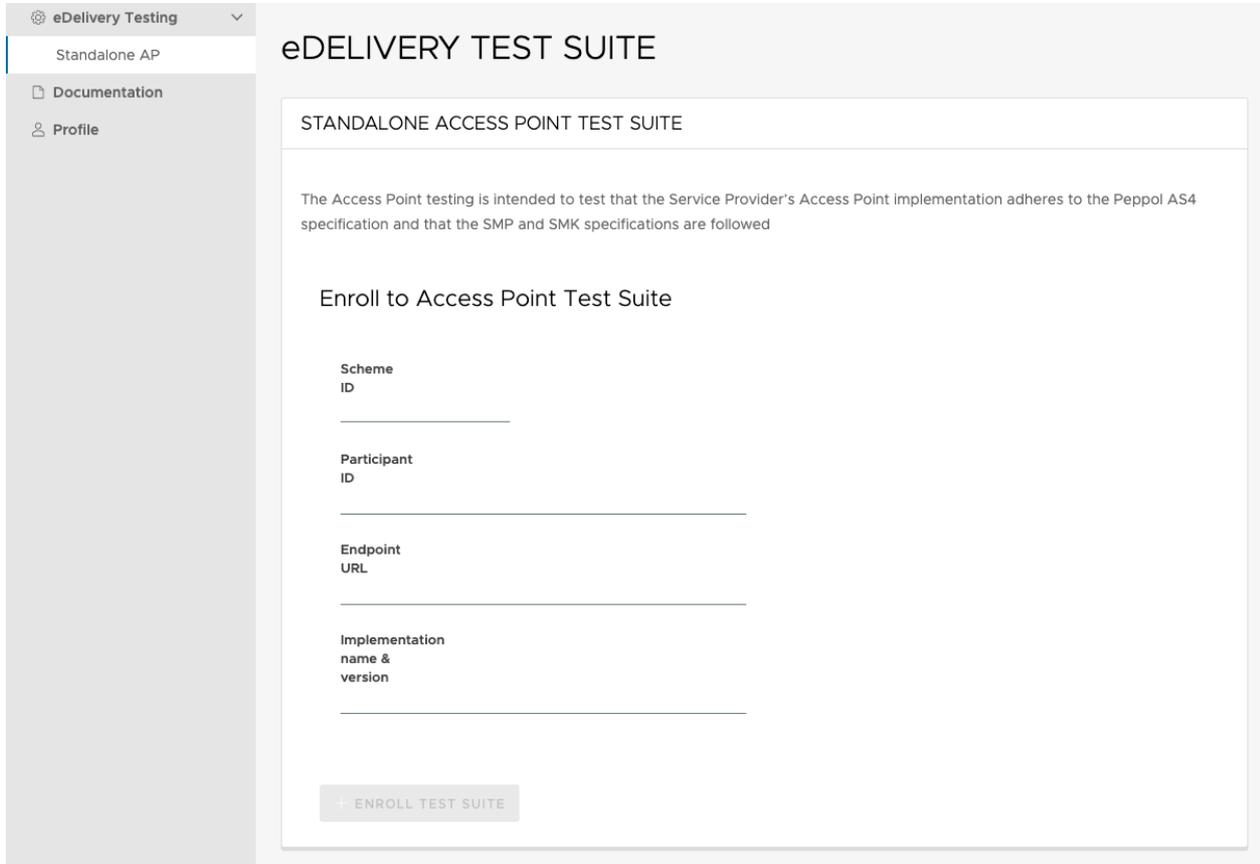
Figure 2 UI overview after entering the eDelivery test suite (documentation page)

When the eDelivery test configuration is created, the user is navigated to the documentation page as shown in Figure 2. The next section provides a general overview of the UI.

The UI consists of the following pages (as shown in Figure 2):

1. eDelivery Testing > Standalone AP
2. Documentation
3. Profile

1. The eDelivery Testing > Standalone AP page (shown in Figure 3) is used to enroll to the eDelivery test suite.



The screenshot shows a web interface for enrolling to a test suite. On the left is a navigation menu with 'eDelivery Testing' (selected), 'Standalone AP', 'Documentation', and 'Profile'. The main content area is titled 'eDELIVERY TEST SUITE' and contains a section for 'STANDALONE ACCESS POINT TEST SUITE'. Below this, there is explanatory text: 'The Access Point testing is intended to test that the Service Provider's Access Point implementation adheres to the Peppol AS4 specification and that the SMP and SMK specifications are followed'. The main heading is 'Enroll to Access Point Test Suite'. The form includes four input fields: 'Scheme ID', 'Participant ID', 'Endpoint URL', and 'Implementation name & version'. At the bottom of the form is a button labeled '+ ENROLL TEST SUITE'.

- 2.

Figure 3 eDelivery test suite enrollment

After enrolling to a test suite, the user can choose test cases to execute, as shown in Figure 4, label 1. As illustrated in Figure 4, label 2, the user may also view details about the enrolled configuration.

eDELIVERY TEST SUITE

STANDALONE ACCESS POINT TEST SUITE

RESET TEST SUITE

The Access Point testing is intended to test that the Service Provider's Access Point implementation adheres to the Peppol AS4 specification and that the SMP and SMK specifications are followed

Available test cases 1

Select test case to see more details

TC2A.1: TLS grading verification	Paused
TC2A.2B: AS4 message reception	Passed
TC2A.3: AS4 message submission	Paused
TC2A.4: Invalid certificate handling	Paused
TC2A.5B: Large AS4 message reception	Paused
TC2A.6: Large AS4 message submission	Paused

Enrolled configuration 2

Participant	9901:ng-local
Domain	POST_AWARD
Jurisdiction	EU
Endpoint URL	http://host.docker.internal:8081/as4
Implementation name & version	test

TC2A.3: AS4 message submission

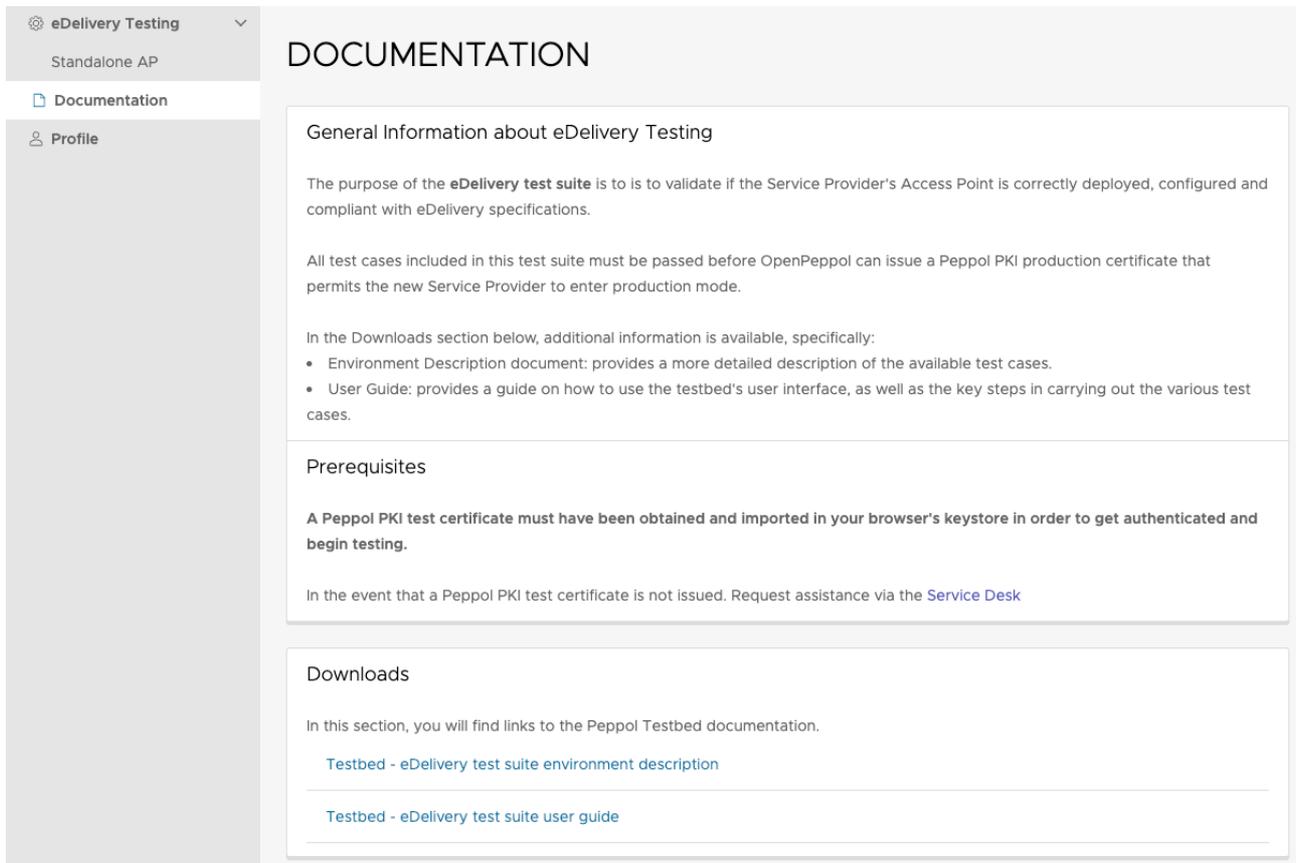
Paused

The AccessPoint under test is expected to send the document(s) supplied by the TestBed. Sender will now be **9901:ng-local**, and receiver will be **9922:NGTBCNTRLS1001**. No changes should be made to the document and it is essential that the Document ID (Invoice number of the payload) is kept intact.

▶ START

Figure 4 example of eDelivery test case execution

- The Documentation page (shown in Figure 5) collects and makes available useful links and resources (e.g., environment documentation, user guide, etc.)



DOCUMENTATION

General Information about eDelivery Testing

The purpose of the **eDelivery test suite** is to validate if the Service Provider's Access Point is correctly deployed, configured and compliant with eDelivery specifications.

All test cases included in this test suite must be passed before OpenPeppol can issue a Peppol PKI production certificate that permits the new Service Provider to enter production mode.

In the Downloads section below, additional information is available, specifically:

- Environment Description document: provides a more detailed description of the available test cases.
- User Guide: provides a guide on how to use the testbed's user interface, as well as the key steps in carrying out the various test cases.

Prerequisites

A Peppol PKI test certificate must have been obtained and imported in your browser's keystore in order to get authenticated and begin testing.

In the event that a Peppol PKI test certificate is not issued. Request assistance via the [Service Desk](#)

Downloads

In this section, you will find links to the Peppol Testbed documentation.

[Testbed - eDelivery test suite environment description](#)

[Testbed - eDelivery test suite user guide](#)

Figure 5 eDelivery test suite Documentation page

- The Profile page (shown in Figure 6) provides details about the user account that the Testbed creates using the Peppol PKI Test Certificate that was imported into the browser.



USER PROFILE

Certificate details

User identifier	1
Common name	PGD000001
Organization name	OpenPeppol
Country	BE
Certificate Type	TEST_AP

Figure 6 User profile page

4 eDelivery Test Suite Walkthrough

This part aims to show you how to use and complete the eDelivery test suite. This part requires that you have correctly setup your browser by installing a Peppol PKI test certificate as specified in section 2.3.

4.1 eDelivery test suite

Navigate to <https://www.testbed.peppol.org/post-award> after installing a Peppol Test AP certificate in your browser. The Testbed environment will automatically recognize that it is an AP certificate and load the eDelivery test suite page if your browser is set correctly and the certificate is installed.

If this is your first time using the eDelivery test suite, you must first enroll by providing the following information:

Participant ID and Scheme ID: Give a valid participant identifier. All the test cases available in the test suite will be carried out by using these identifiers

Endpoint URL: The participant's AS4 endpoint

Implementation name & version: Give a name and version for your AP implementation

After filling in the information, click the "ENROLL TEST SUITE" button.

An example filled-in the enrolment form is shown in Figure 7.

eDELIVERY TEST SUITE - EU

STANDALONE ACCESS POINT TEST SUITE

The Access Point testing is intended to test that the Service Provider's Access Point implementation adheres to the Peppol AS4 specification and that the SMP and SMK specifications are followed

Enroll to Access Point Test Suite

Scheme ID
9901

Participant ID
ng-test

Endpoint URL
https://sut-ap.testbedng.sandbox.peppol.eu/as4

Implementation name & version
AP test name v0.1

[+ ENROLL TEST SUITE](#)

Figure 7 example AP filled in form

You will be presented with the available test cases for this test suite once you have successfully enrolled in the test suite. Figure 8 illustrates this. The following are the test cases included in the AP test suites:

- TLS grading verification
- AS4 message reception
- AS4 message submission
- Invalid certificate handling
- Large AS4 message reception
- Large AS4 message submission

It's worth noting that the eDelivery test suite's test cases don't have to be performed in order. Instead, any test case is ready to be run at any moment. The sole restriction is that **only one test case may run at a time**. Once a test case is running, the remainder of the test cases become **unavailable** until the current one is finished.

FULL eDELIVERY ACCESS POINT TEST SUITE RESET TEST SUITE

The Access Point testing is intended to test that the Service Provider's Access Point implementation adheres to the Peppol AS4 specification and that the SMP and SMK specifications are followed

Available test cases
Select test case to see more details

TC2A.1: TLS grading verification	Paused
TC2A.2A: AS4 message reception	Paused
TC2A.3: AS4 message submission	Paused
TC2A.4: Invalid certificate handling	Paused
TC2A.5A: Large AS4 message reception	Paused
TC2A.6: Large AS4 message submission	Paused

> Enrolled configuration

TC2A.3: AS4 message submission Paused

The AccessPoint under test is expected to send the document(s) supplied by the TestBed. Sender will now be **9901:ng-test**, and receiver will be **9922:NGTBCNTRLSB1001**. No changes should be made to the document and it is essential that the Document ID (Invoice number of the payload) is kept intact.

▶ START

Figure 8 AP test suite Test cases

The “TLS grading verification” test case performs an automatic grading of the TLS configuration on the provided endpoint URL. The result must be an A or above to fulfil Peppol’s requirements to pass this test. This test case may take up to 15 minutes to complete depending on how complex your infrastructure is to evaluate. The grading is done by a tool provided by Qualys SSL Labs. The grade is A in this example walkthrough supplied endpoint URL; therefore, it passes the test, as seen in Figure 9.

Available test cases
Select test case to see more details

TC2A.1: TLS grading verification	Passed
TC2A.2A: AS4 message reception	Paused
TC2A.3: AS4 message submission	Paused
TC2A.4: Invalid certificate handling	Paused
TC2A.5A: Large AS4 message reception	Paused
TC2A.6: Large AS4 message submission	Paused
> Enrolled configuration	

TC2A.1: TLS grading verification Passed

Testbed will perform an automatic grading of the TLS configuration on the provided hostname. To pass this test the result must return a grade of A or above, to meet the Peppol specifications.

[▶ START](#)

Audit Log

Event Time	Action	Description	Status
2023-01-27T12:51:08	START	The test case has been successfully initiated and your hostname (sut-ap.testbedng.sandbox.peppol.eu) is currently being analyzed by Qualys SSL Labs (you can click this link to follow your analysis in an interactive manner). The process of this test might take up to 15 minutes, do not try to restart your test case during this time frame to avoid an even longer verification time. Leave the test case in its running state and it will automatically be updated when the verification process completes.	Running
2023-01-27T12:59:48	EVALUATION	You have successfully verified your TLS configuration as being aligned to the Peppol specification. Your grade was evaluated as A. To view a detailed report of your TLS configuration follow this link to Qualys SSL Labs (this link will only be working for a limited time).	Passed

Figure 9 TLS grading example evaluation

In the “AS4 message reception” test case, the Testbed environment will generate a file and send it to the under-test AP. No SMK/SMP participant registration is required, a static configuration will be utilized to address the transaction directly to the AP endpoint URL provided during the AP enrolment form. Figure 10 depicts successfully receiving the message (directly with no SMK/SMP) and passing the test.

Available test cases	
Select test case to see more details	
TC2A.1: TLS grading verification	Passed
TC2A.2B: AS4 message reception	Passed
TC2A.3: AS4 message submission	Passed
TC2A.4: Invalid certificate handling	Passed
TC2A.5B: Large AS4 message reception	Passed
TC2A.6: Large AS4 message submission	Paused
> Enrolled configuration	

TC2A.2B: AS4 message reception Passed

Testbed will generate a file and send to the AccessPoint that is under test. Transaction will be addressed to receiver **9901:peppol-pgd-sb** from **9922:NGTBCNTRLSB1001**. There is no need for the receiver to be registered in the SMK, a static configuration will be used to address the transaction to AP endpoint URL <https://sut-ap.testbedng.sandbox.peppol.eu/as4>.

[▶ START](#)

Audit Log

Event Time	Action	Description	Status
2022-11-25T15:06:55	START	Transaction (with instance identifier PGD000001-74-20221125T150655) to testing AP was sent without any reported errors.	Passed

Figure 10 AS4 message reception

In the “AS4 message submission” test case, the under-test AP is expected to send a document supplied by the Testbed environment. The sender will be the participant provided during enrolment (participant id and scheme id), and the receiver will be the Testbed. Download the zip package containing the ready-to-send XML artifact, as shown in Figure 11. Before sending the file, do not alter it in any way, as the Testbed may have trouble correlating it appropriately. Figure 11 also depicts successfully passing the test. In case of errors, examine them, and once corrected, restart the test.

Available test cases	
Select test case to see more details	
TC2A.1: TLS grading verification	Passed
TC2A.2A: AS4 message reception	Passed
TC2A.3: AS4 message submission	Passed
TC2A.4: Invalid certificate handling	Paused
TC2A.5A: Large AS4 message reception	Paused
TC2A.6: Large AS4 message submission	Paused
> Enrolled configuration	

TC2A.3: AS4 message submission Passed

The AccessPoint under test is expected to send the document(s) supplied by the TestBed. Sender will now be **9901:ng-test**, and receiver will be **9922:NGTBCNTRLBS1001**. No changes should be made to the document and it is essential that the Document ID (invoice number of the payload) is kept intact.

[▶ START](#)

Audit Log

Event Time	Action	Description	Status
2023-01-27T13:23:39	START	Here is a prepared ZIP-package . Download it locally and extract its contents. It contains one or more files that are ready to be sent by your Access Point implementation. Please send them in any sequence you like and be observant of any errors that would occur. Do not manipulate the files in any way before sending them, otherwise the Test Bed might experience problems correlating them appropriately.	Running
2023-01-27T13:26:40	RECEIVE	Received file: PGD000001-151-20230127T132338. It matched correctly and was expected to be seen.	Passed

Figure 11 AS4 Message submission

The “Invalid certificate handling” verifies that your implementation can identify invalid certificates. Download the zip package, containing ready-to-send XML artifacts. The zip package includes 3 XML artifacts to be sent. Please send them in the same sequence as their naming suggests and be observant if any errors occur. Before sending the file, do not alter it in any way, as the Testbed may have trouble correlating it appropriately. Figure 12 shows the successful test scenario. If any errors occur, examine them, and once corrected, restart the test case.

Available test cases	
Select test case to see more details	
TC2A.1: TLS grading verification	Passed
TC2A.2A: AS4 message reception	Passed
TC2A.3: AS4 message submission	Passed
TC2A.4: Invalid certificate handling	Passed
TC2A.5A: Large AS4 message reception	Paused
TC2A.6: Large AS4 message submission	Paused
> Enrolled configuration	

TC2A.4: Invalid certificate handling Passed

In the Peppol eDelivery network only certificates from the OpenPEPPOL PKI infrastructure must be entrusted. This test case verifies that your implementation is able to identify invalid certificates. Files will be prepared by the Test Bed that the Access Point under test is expected to transact. Start the test case and follow the instructions carefully.

[▶ START](#)

Audit Log

Event Time	Action	Description	Status
2023-01-27T13:29:59	START	Here is a prepared ZIP-package , download it locally and extract its contents. It contains one or more files that are ready to be sent by your Access Point implementation. Please send them in the same sequence as their naming suggests and be observant of any error that would occur. Do not manipulate the files in any way before sending them, otherwise the Test Bed might experience problem correlating them appropriately.	Running
2023-01-27T13:30:33	RECEIVE	Received file: TestFile_001__BISv3_Invoice.xml. It matched correctly and was expected to be seen.	Passed
2023-01-27T13:30:33	EVALUATION	Please continue with sending the next expected file.	Running
2023-01-27T13:31:21	RECEIVE	Received file: TestFile_003__BISv3_Invoice.xml. It matched correctly and was expected to be seen.	Passed

Figure 12 Invalid certificate handling

In the “Large AS4 message reception” test case, the Testbed environment will generate a large file and send it to the under-test AP. No SMK/SMP participant registration is required, a static configuration will be utilized to address the transaction directly to the AP endpoint URL provided during the AP enrolment form. Figure 13 Large AS4 message reception example depicts successfully receiving the message (directly with no SMK/SMP) and passing the test.

Available test cases	
Select test case to see more details	
TC2A.1: TLS grading verification	Passed
TC2A.2A: AS4 message reception	Passed
TC2A.3: AS4 message submission	Passed
TC2A.4: Invalid certificate handling	Passed
TC2A.5A: Large AS4 message reception	Passed
TC2A.6: Large AS4 message submission	Paused
<input type="button" value="Enrolled configuration"/>	

TC2A.5A: Large AS4 message reception Passed

In order to properly receive the AS4 message that will be sent by the testbed AP, you must register your enrolled participant to your SMP, with the capability of receiving **Peppol BIS 3.0 Based Orders** (document Type Id: busdox-docId-qns::urn:oasis:names:specification:ubl:schema:xsd:Order-2::Order#urn:fdc:peppol.eu:poacc:trns:order:3::2.1, Process ID: cenbii-procid-ubl::urn:fdc:peppol.eu:poacc:bis:ordering:3). Testbed will generate a large file (50 MB+) and send to the AccessPoint that is under test. Transaction will be addressed to receiver **9901:ng-test** from **9922:NGTBCNTRLSB1001**. The receiver must be registered in the SMK to address the transaction to AP endpoint.

Audit Log

Event Time	Action	Description	Status
2023-01-27T13:32:50	START	Transaction (with instance identifier PGD000001-155-20230127T133249) to testing AP was rejected, with reason: Transaction unsuccessful, Unable to send message because SMP lookup failed.	Failed
2023-01-27T13:34:08	RESTART	Transaction (with instance identifier PGD000001-156-20230127T133408) to testing AP was sent without any reported errors.	Passed

Figure 13 Large AS4 message reception example

In the “Large AS4 message submission” test case, the under-test AP is expected to send a large document supplied by the Testbed environment. The sender will be the participant provided during enrolment (participant id and scheme id), and the receiver will be the Testbed. Download the zip package containing the ready-to-send XML artifact, as shown in Figure 14. Before sending the file, do not alter it in any way, as the Testbed may have trouble correlating it appropriately. Figure 14 also depicts successfully passing the test. In case of errors, examine them, and once corrected, restart the test. When the test suite is complete (all test cases are passed), the user may also download a PDF report, as shown in Figure 14.

Available test cases TEST SUITE COMPLETED

Select test case to see more details

TC2A.1: TLS grading verification	Passed
TC2A.2A: AS4 message reception	Passed
TC2A.3: AS4 message submission	Passed
TC2A.4: Invalid certificate handling	Passed
TC2A.5A: Large AS4 message reception	Passed
TC2A.6: Large AS4 message submission	Passed

> Enrolled configuration

DOWNLOAD REPORT

TC2A.6: Large AS4 message submission

The AccessPoint under test is expected to send the document(s) supplied by the TestBed. Sender will be **9901:ng-test**, and receiver will be **9922:NGTBCNTRL5B1001**. No changes should be made to the document(s) and it is essential that the Document ID (Invoice number or Order number of the payload) is kept intact.

▶ START

Audit Log

Event Time	Action	Description	Status
2023-01-27T13:50:18	START	Here is a prepared ZIP-package, download it locally and extract its contents. It contains one or more files that are ready to be sent by your Access Point implementation. Please send them in any sequence you like and be observant of any errors that would occur. Do not manipulate the files in any way before sending them, otherwise the Test Bed might experience problems correlating them appropriately.	Running
2023-01-27T13:51:10	RECEIVE	Received file: PGD000001-157-20230127T135017. It matched correctly and was expected to be seen.	Passed

Figure 14 Large AS4 message submission example