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Foundations Directorate

Supplement 6 to Annex 1 to the EETS- and NETS-Provider-Ordinance FOCBS

EETS Provider Interface Test Specification - Level 2

EUROPEAN ELECTRONIC TOLL SERVICE FOR THE LSVA   VERSION 3.0

Contents

1 Introduction

1.1 Scope

The scope of the EETS provider interface test specification is to assess the conformity of the EETS provider's back office interface (the system to be tested) to the FOCBS's.

The focus of the tests defined in this document is the assessment of compliance of the implementation of application transactions and messages as defined in the LSVA EETS Provider Interface Specification ([section 2 in Supplement 3). The primary focus is the syntax (not the semantic) of the application data units (ADUs) of the EETS provider (as the sender and the receiver of messages).

This document defines the test environment and prerequisites (section 2). It further defines the test cases for the assessment of the compliance APDUs (sections 3-5), including test data (section 6).

The test cases cover only the handling of correct messages. Hence, assessment of the implementation's robustness and behaviour at (the required) maximum load are outside the scope of this document.

It should be noted that the system under test includes the EETS provider's implementation of the transport layer, whereas no explicit test cases are defined in this document to assess the compliance of the requirements of the transport layer (corresponding to section 3 in Supplement 3).

1.1 List of changes

Version	Date	Section	Change
2.0	01.03.2020		First published version
2.1	12.06.2020	4.3.3 6.2 6.3	issue.issueCode (11102) EquipmentOBUId contains a length byte PAN with correct checksum and padding
2.2	01.01.2022	various	Renaming of the Federal Customs Administration (FCA) to the Federal Office for Customs and Border Security (FOCBS)
3.0	01.09.2024	various	Changes to the technical and operational requirements in line with the legal basis of the LSVA III system

1.2 References

Document
[1]   Annex 1 to the EETS- and NETS-Provider-Ordinance FOCBS: Technical and Operational Requirements for EETS Provider
[2]   Supplement 3 to annex 1: EETS Provider Interface

1.3 Terms and abbreviations

See Annex 1

EETS Provider Interface Test Specification – Level 2

Additional terms below:

Term/Abbreviation	Meaning
ADU	Application Data Unit
APDU	Application Protocol Data Unit
CCC	Compliance check communication (ISO 12813)
Declaration	Notification of all information required for the assessment.
exception list	A list either of type black list or of white list.
OBU	On-board equipment = On-board unit = OBU
PAN	Personal account number, the primary user identifier in the EETS provider interface, data element according to EN ISO 14906.

2 General

2.1 Test environment – Docker Container

The test environment will be provided by the FOCBS in form of a Docker Container:

- simulating FOCBS's back office interface to the EETS provider

- testing evaluation tool including basic test reporting features (i.e. test passed or failed, if failed first error indication)

The Docker Container shall be used by the EETS provider when performing the test cases defined in this document. It can be used at the EETS provider's premises and shall be used to assess the EETS provider's real implementation of its back office interface to the FOCBS.
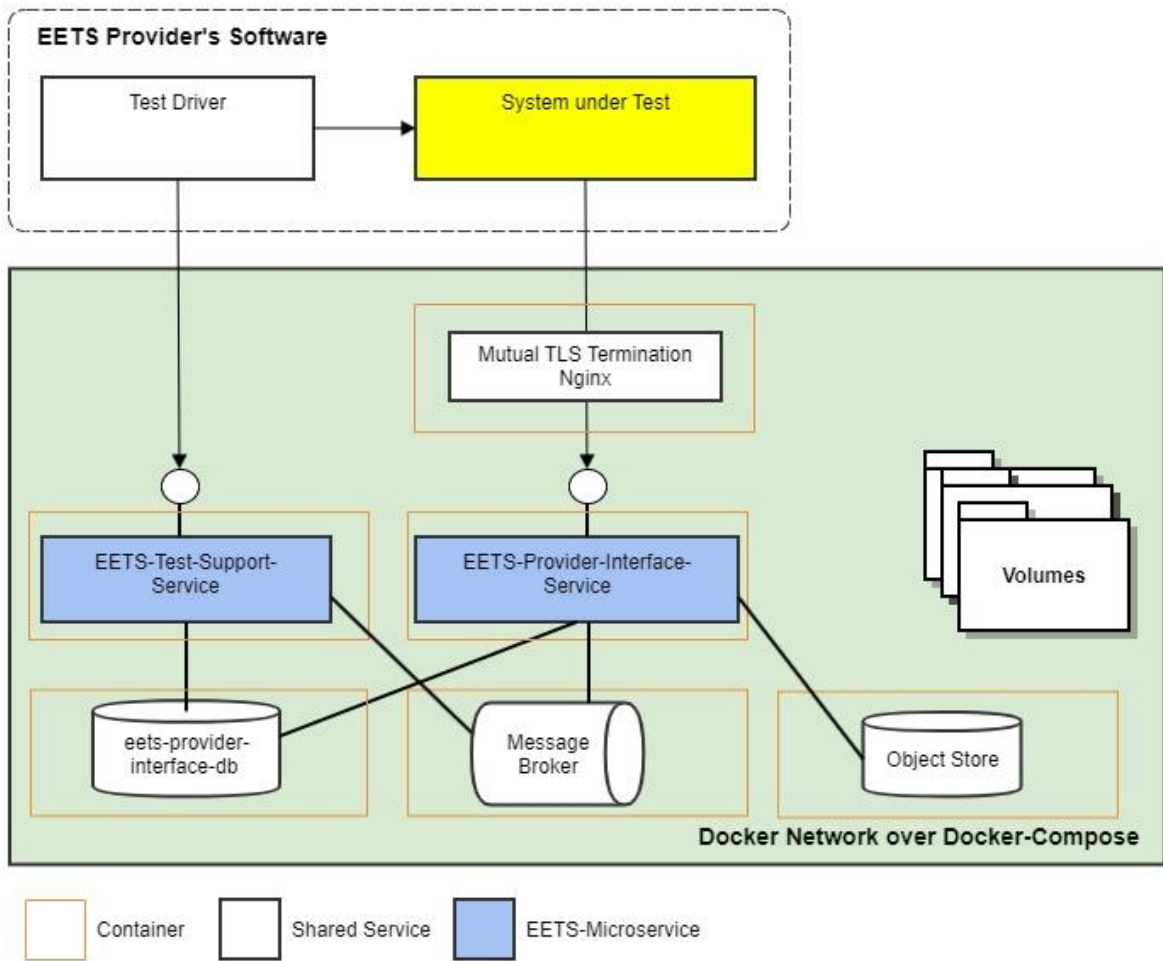
Figure 1 – Docker Container test environment

The figure above illustrates the EETS provider's real implementation of its back office to the FOCBS in the test environment. The various main constituents of the testing environment are further highlighted in the following table.

Constituent	Description
System under Test	EETS provider's implementation of its back office interface to the FOCBS
Test Driver	EETS provider's testing software to automate the tests • prepare test using Test-Support-Service

Constituent	Description
	• trigger test • check result
Test-Support-Service	Service to prepare the test environment for a given test case and to check whether a test was successful. This service supports a list of defined test cases. For each of these test cases: • it can prepare the state of the EETS provider's Interface (contents of the database) • after the executed test, it can check whether the status of the EETS Provider-Interface service is correct (i.e. as expected) It may be used to record the test and generate input to the test report.
Mutual TLS Termination	Communication with the test environment uses https. The EETS provider identifies himself using a client certificate (mutual TLS). Communication with the test system is identical to the real system, except using different certificates for testing.
EETS-Provider-Interface-Service	FOCBS's implementation of the EETS provider's application interface service
Signature-Service	Responsible service to sign outgoing messages and to verify signatures on incoming messages like the real system, except using different keys and certificates for testing.

2.2 Prerequisites

A prerequisite for performing the phase 2 tests of the EETS provider approval procedure is the successful completion of phase 1 (see section 4 in the Annex 1).

Further, the following prerequisites apply:

- Use of (test) certificates (see section 3.5 in Supplement 3), noting that the Docker Container will not assess the validity of the EETS provider's certificate in phase 2 of the assessment of the EETS provider.

- exchange, installation and use of the test keys (incl. the import of the EETS provider certificate in the Docker Container environment) for

    o transport layer security (see section 3.3 in Supplement 3)

    o data integrity (the XML signature, see section 3.4 in Supplement 3)

- configuration of the test cases (test drivers) prior to their execution

Detailed instructions on how to download and configure the container can be found in the readme file on https://github.com/ezv-eets/EETS-Test-Container.

2.3 General test case workflow

The EETS provider is responsible for the initialisation, preparation, execution and verification of the results of the test cases defined in this document (sections 3-5).

The FOCBS reserves the right to accompany the tests with a test witness.

The following sequence diagram illustrates the general test case workflow, the initialisation of the Test-Support-Service (once for all test cases), in the preparation, execution and verifica-

tion of the test results (including basic reporting), and how the EETS provider can test its system under test using the Docker Container.
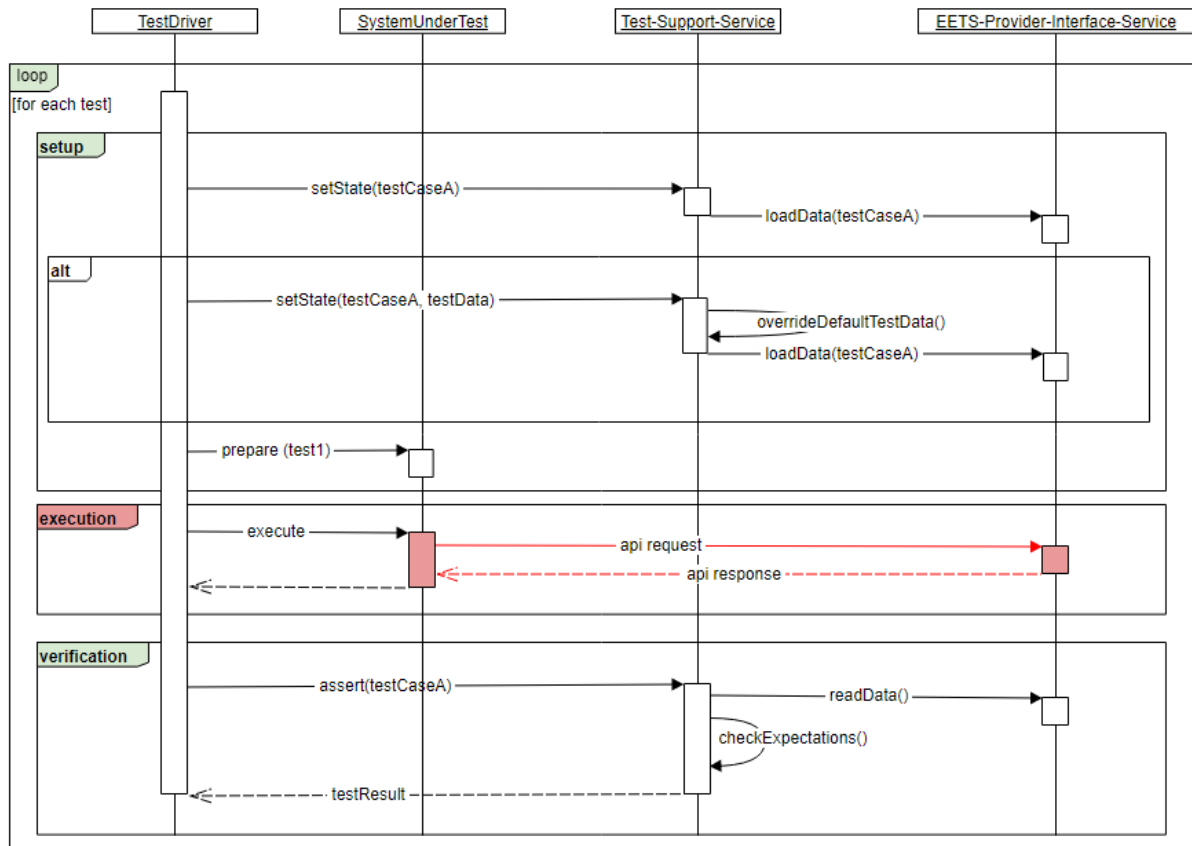
Figure 2 – Test sequence diagram

It should be noted that some parts in the sequence diagram above are subject to design choices at the discretion of the EETS provider, i.e. the interaction between the System under Test (SUT) and the Test Driver. The conceptual messages with the interaction between the SUT and the Test Driver have been included in order to provide an overview of the overall test case workflow.

The exchange of transport API messages during the execution step is defined in Supplement 3 in section 3.5.

The transport API messages in the setup and verification steps are defined in section 2.4.1 below.

2.4 Transport API messages in the test setup and verification steps

This section describes the concept of the API used in the setup and verification steps.

2.4.1 Setup

The EETS provider shall use the following operations during the setup step:

- setup: to instruct the Docker Container of the which test case to perform, in the execution step with parameter
  - o Test case ID (e.g. setup("SST-01a"))
  - o Test data (optional)

See chapter 6.6 to override the predefined test data.

2.4.2   Verification

The EETS provider shall use the following operations during the verification step:

- − assert: to instruct the Docker Container of the assessment of the result of the executed test case with parameter
  - o Test case ID (e.g. assert("SST-01a"))
- − assert result: "passed" or "failed", if failed first error indication

2.4.3   Technical API specification

The API definition (OpenAPI format) can be found at: https://github.com/ezv-eets/EETS-Test-Container

2.5   General verification of basic protocol (InfoExchange)

In each test case, the correct syntax and semantics of the basic protocol element InfoExchange will be checked for messages

- -   from FOCBS to EETS provider against the definition in Supplement 3 section 2.2.2 and

- -   from EETS provider to FOCBS against the definition in Supplement 3 section 2.2.3.

This is a part of every test cases expected result / success criteria in section 3-5.

2.6   Reporting of the results

The EETS provider is responsible for providing FOCBS with a concise test report on the results of the execution of the tests defined by the test cases in this document (sections 3-5). The concise test report shall contain, at least, the following information:

- • Identification of the EETS Service provider (legal name and contact details)
- • Unique test report identification
- • Identification of the system under test (including version number)
- • Identification of used test environment
- • Overall result of the executed tests
- • For each test case, the result of the executed test
  - o Test case ID (as defined in this document)
  - o Overall verdict of the test result (passed, inconclusive or failed)
  - o In case of test result inconclusive or failed, a problem or failure description
- • Date and signature of the test manager

3   Test cases - Messages from EETS provider to FOCBS

3.1   Overview

Section 3 contains the definition of the test cases to be performed in the assessment of the correct syntax of messages from the EETS provider to the FOCBS, as defined in Supplement 3 section 2.2.3.

Below an overview of these messages:

- TollDeclarationADU

- ExceptionListADU

The figure below illustrates the transmission of the application data units (ADUs) associated with a message from the EETS provider to the FOCBS, where XxxADU is one of the listed ADUs in the overview above.
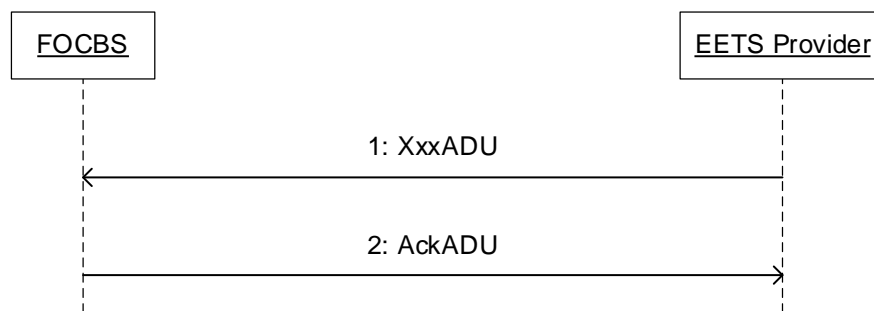

Figure 3 – Messages from EETS provider to FOCBS

The figure below illustrates conceptually the transmission of the ADUs using the transport layer protocol, as defined in Supplement 3 section 3.5.
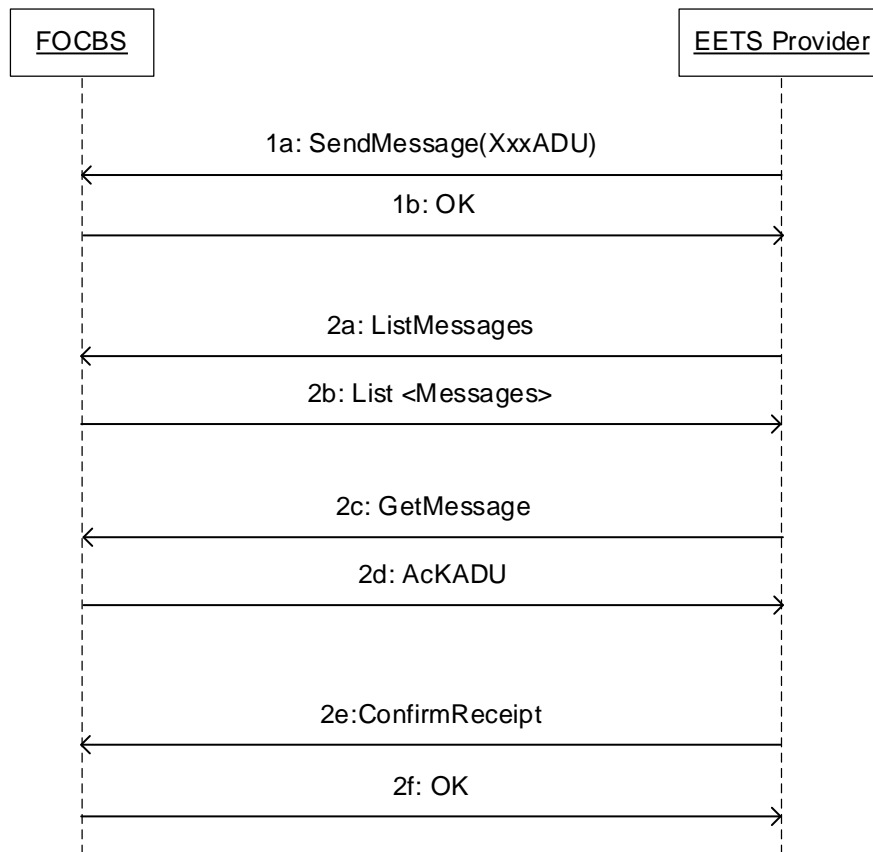
Figure 4 – EETS provider to FOCBS transport layer protocol

Whereas the ADUs indeed are to be transmitted using the transport layer protocol (see also the Scope above), as defined in Supplement 3 section 3.5, these exchanges are not described in the description of the test cases that follow below.

3.2 TollDeclarationADU

3.2.1 1 UsageStatement

ID	**SST-01a**
Title	TollDeclarationADU – 1 UsageStatement
Description	EETS provider sends a TollDeclarationADU, containing 1 UsageStatement, FOCBS responds with AckADU.
References	TollDeclarationADU, as defined in Supplement 3 section 2.3.2.2, with – ChargeReport as defined in Supplement 3 section 2.3.2.3 – UsageStatement, as defined in Supplement 3 section 2.3.2.4. FOCBS responds with AckADU (apduOK = 2) as defined in Supplement 3 section 2.9.1.
Input data	-
Expected result / success criteria	Correct syntax and attribute value ranges of the TollDeclarationADU. Verification that the EETS provider receives AckADU (with apduAckCode = apduOK (2)) from FOCBS in response to the TollDeclarationADU message. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 4**Figure 4**).

Remarks	

3.2.2   3 UsageStatements

ID	**SST-01b**
Title	TollDeclarationADU – 3 UsageStatements
Description	EETS provider sends a TollDeclarationADU, containing 3 UsageStatements (including two times trailer status change), FOCBS responds with AckADU.
References	TollDeclarationADU, as defined in Supplement 3 section 2.3.2.2 with − ChargeReport as defined in Supplement 3 section 2.3.2.3 − UsageStatement, as defined in Supplement 3 section 2.3.2.4. FOCBS responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	-
Expected result / success criteria	Correct syntax and attribute value ranges of the TollDeclarationADU. Verification that the EETS provider receives AckADU (with apduAckCode = apduOK (2)) from FOCBS in response to the TollDeclarationADU message. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 4).
Remarks	

3.2.3   0 UsageStatements

ID	**SST-01c**
Title	TollDeclarationADU – 0 UsageStatement
Description	EETS provider sends a TollDeclarationADU, containing 0 UsageStatement (empty EETS journey declaration), FOCBS responds with AckADU.
References	TollDeclarationADU, as defined in Supplement 3 section 2.3.2.2, with − ChargeReport with empty UsageStatementList and reportPeriod covering the whole day as defined in Supplement 3 section 2.3.2.3 FOCBS responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	-
Expected result / success criteria	Correct syntax and attribute value ranges of the TollDeclarationADU. Verification that the EETS provider receives AckADU (with apduAckCode = apduOK (2)) from FOCBS in response to the TollDeclarationADU message. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 4).
Remarks	This test case represents an empty EETS journey declaration covering then the whole day (00:00 to 24:00) without vehicle movement.

Remark:

The test case IDs SST-02x to SST-04x has been used in a former version of this test specification. To avoid wrong test results with the old test environment, these test case IDs has not been reused in this new version of the test specification.

3.3   ExceptionListADU (white list)

3.3.1   Valid list entries

ID	**SST-08b**
Title	ExceptionListADU – Non-empty list
Description	EETS provider sends an Exception List with valid entries, FOCBS responds with AckADU
References	ExceptionListADU as defined in Supplement 3 section 2.8.2. FOCBS responds with AckADU (apduAckCode = apduOK (2)) as defined in Supplement 3 section 2.9.1.
Input data	ExceptionListADU with – exceptionListType = 2 (white list) – exceptionListEntry = 1...n entries
Expected result / success criteria	Correct syntax and attribute value ranges of the ExceptionListADU. Verification that the EETS provider receives AckADU from FOCBS in response to ExceptionListADU. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 4).
Remarks	

4 Test cases - Messages from FOCBS to EETS provider

4.1 Overview

Section 4 contains the definition of the test cases to be performed in the assessment of the correct syntax of messages from the FOCBS to the EETS provider, as defined in Supplement 3 section 2.2.2.

Below an overview of these messages:

- BillingDetailsADU

- PaymentClaimADU

The figure below illustrates the transmission of the application data units (ADUs) associated with a message from the FOCBS to the EETS provider, where YyyADU is one of the listed ADUs in the overview above.
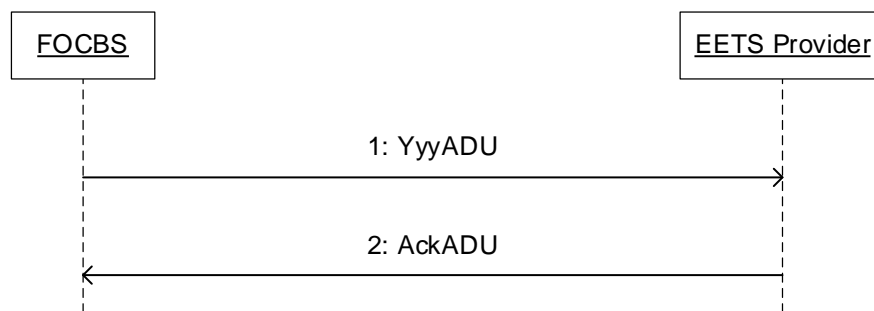

Figure 5 – Messages from FOCBS to EETS provider

The figure below illustrates conceptually the transmission of the ADUs using the transport layer protocol, as defined in Supplement 3 section 3.6.
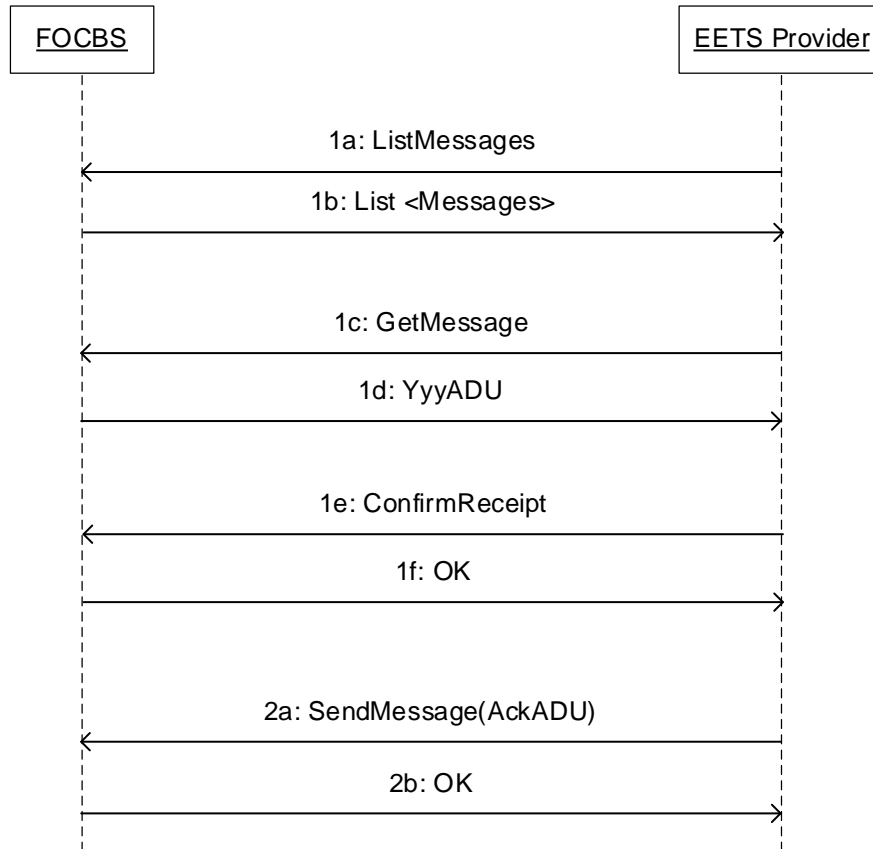
Figure 6 – FOCBS to EETS provider transport layer protocol

Whereas the ADUs indeed are to be transmitted using the transport layer protocol (see also the Scope above), as defined in Supplement 3 section 3.5, these exchanges are not described in the description of the test cases that follow below.

4.2 BillingDetailsADU

4.2.1 Ordinary OK

ID	**SST-05a**
Title	BillingDetailsADU – Ordinary
Description	FOCBS sends BillingDetailsADU containing ordinary details, EETS provider responds with AckADU.
References	BillingDetailsADU as defined in Supplement 3 section 2.5.2, without refund and subsequent payment
	EETS provider responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	BillingDetailsADU with the following test data from section 6 in this document:
	− userID = UserId-1
	− refTollDeclaration = TollDeclarationId-1

Expected result / success criteria	Verification of BillingDetailsADU reception by the EETS Provider.
	Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with BillingDetailsADU
	− apduAckCode = apduOK (2)
	in response to BillingDetailsADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.2.2   Ordinary not OK

ID	**SST-05b**
Title	BillingDetailsADU – Ordinary not OK
Description	FOCBS sends BillingDetailsADU containing ordinary details, EETS provider responds with AckADU.
	The userId (PAN) of the BilllingDetailsADU is unknown to the EETS provider.
References	BillingDetailsADU as defined in Supplement 3 section 2.5.2
	EETS provider responds with AckADU as defined in Supplement 3 section 2.9.2 with the issueCode defined in Supplement 3 section 2.5.5.
Input data	BillingDetailsADU with the following test data from section 6 in this document:
	− userID = UserId-3 (unknown user)
	− refTollDeclaration = TollDeclarationId-2
Expected result / success criteria	Verification of BillingDetailsADU reception by the EETS provider.
	Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with BillingDetailsADU
	− apduAckCode = apduNokOK (3)
	− issue.issueADUStruct = 0
	− issue.issueCode = bilD-invalidPan (11003)
	in response to BillingDetailsADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.2.3   Refund

ID	**SST-05c**
Title	BillingDetailsADU – Refund
Description	FOCBS sends BillingDetailsADU including refund details, EETS provider responds with AckADU.

References	BillingDetailsADU as defined in Supplement 3 section 2.5.2, including refund details (i.e. paymentFeeAmount contains negativ amount).
	The XML EETSJourneAssessment in textDetail defined in Supplement 3 section 2.5.4 contains a RelatedAssessment.
	EETS provider responds with as defined in Supplement 3 section 2.9.1.
Input data	BillingDetailsADU with the following test data from section 6 in this document:
	− userID = UserId-1
	− refTollDeclaration = TollDeclarationId-1
	− relatedBillingDetails = BillingDetailsId-1
Expected result / success criteria	Verification of BillingDetailsADU reception by the EETS provider.
	Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with BillingDetailsADU
	− apduAckCode = apduOK (2)
	in response to BillingDetailsADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.2.4   Subsequent payment

ID	**SST-05d**
Title	BillingDetailsADU – Subsequent payment
Description	FOCBS sends BillingDetailsADU including subsequent payment details, EETS provider responds with AckADU.
References	BillingDetailsADU as defined in Supplement 3 section 2.5.2, including refund details (i.e. paymentFeeAmount contains a positive amount).
	The XML EETSJourneAssessment in textDetail defined in Supplement 3 section 2.5.4 contains a RelatedAssessment.
	EETS provider responds with AckADU (apduOK = 2) as defined in Supplement 3 section 2.9.1.
Input data	BillingDetailsADU with the following test data from section 6 in this document:
	− userID = UserId-1
	− refTollDeclaration = TollDeclarationId-1
	− relatedBillingDetails = BillingDetailsId-1
Expected result / success criteria	Verification of BillingDetailsADU reception by the EETS provider.
	Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with BillingDetailsADU
	− apduAckCode = apduOK (2)
	in response to BillingDetailsADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.2.5 Without toll declaration

ID	**SST-05e**
Title	BillingDetailsADU – without toll declaration
Description	FOCBS sends BillingDetailsADU without reference to a TollDeclarationADU, EETS provider responds with AckADU.
References	BillingDetailsADU as defined in Supplement 3 section 2.5.2, without reference to a TollDeclarationADU. EETS provider responds AckADU as defined in Supplement 3 section 2.9.1.
Input data	BillingDetailsADU with the following test data from section 6 in this document: − userID = UserId-1
Expected result / success criteria	Verification of BillingDetailsADU reception by the EETS provider. Verification that the EETS provider responds with an AckADU containing − apduIdentifier = APDU ID of prior sent InfoExchange with BillingDetailsADU − apduAckCode = apduOK (2) in response to BillingDetailsADU. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	In this test case the data element refTollDeclaration is not present. This happens in practice if there was no EETS journey declaration in time and the assessment was made at the discretion of the FOCBS (the vehicle was identified by one or more CCC transaction in the LSVA toll domain).

4.3 PaymentClaimADU

4.3.1 Empty

ID	**SST-06a**
Title	PaymentClaimADU – Empty
Description	FOCBS sends PaymentClaimADU with paymentFeeAmount = 0, EETS provider responds with AckADU.
References	PaymentClaimADU as defined in Supplement 3 section 2.7.2. EETS provider responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	PaymentClaimADU with − paymentClaimAmount.paymentFeeAmount = 0 − referenceDetailsList.billingDetailsList not present, empty sequence

Expected result / success criteria	Verification of PaymentClaimADU reception by the EETS provider. Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with PaymentClaimADU
	− apduAckCode = apduOK (2)
	in response to PaymentClaimADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.3.2 Ordinary

ID	**SST-06b**
Title	PaymentClaimADU – Ordinary
Description	FOCBS sends an ordinary PaymentClaimADU, EETS provider responds with AckADU.
References	PaymentClaimADU as defined in Supplement 3 section 2.7.2. EETS provider responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	PaymentClaimADU with
	− paymentClaimAmount.paymentFeeAmount > 0
	− referenceDetailsList.billingDetailsList with the following 3 entries according to section 6 in this document:
	- BillingDetailsId-1, BillingDetailsId-2, BillingDetailsId-3
Expected result / success criteria	Verification of PaymentClaimADU reception by the EETS provider. Verification that the EETS provider responds with an AckADU containing
	− apduIdentifier = APDU ID of prior sent InfoExchange with PaymentClaimADU
	− apduAckCode = apduOK (2)
	in response to PaymentClaimADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.3.3 Ordinary not OK

ID	**SST-06c**
Title	PaymentClaimADU – Ordinary with an unknown BillingDetails
Description	FOCBS sends an ordinary PaymentClaimADU, EETS provider responds with AckADU
References	PaymentClaimADU as defined in Supplement 3 section 2.7.2. EETS provider responds with AckADU as defined in Supplement 3 section 2.9.2, with the issueCode and issueLocation defined in Supplement 3 section 2.7.3.

Input data	PaymentClaimADU with − paymentClaimAmount.paymentFeeAmount > 0 − referenceDetailsList.billingDetailsList with the following 3 entries according to section 6 in this document: - BillingDetailsId-1, BillingDetailsId-X, BillingDetailsId-3
Expected result / success criteria	Verification PaymentClaimADU reception by the EETS provider. Verification that the EETS provider responds with an AckADU containing − apduIdentifier = APDU ID of prior sent InfoExchange with PaymentClaimADU − apduAckCode = apduNotOK (3) − issue.issueCode = paC-unknownBillingDetails (11102) − issue.issueLocation = billingDetailsNum of the unknown entry in the prior sent billinigDetailsList (2) in response to PaymentClaimADU. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

4.3.4　With refund

ID	**SST-06d**
Title	PaymentClaimADU – With refund
Description	FOCBS sends PaymentClaimADU with refund, EETS provider responds with AckADU.
References	PaymentClaimADU as defined in Supplement 3 section 2.7.2. EETS provider responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	PaymentClaimADU with − paymentClaimAmount.paymentFeeAmount < 0 − referenceDetailsList.billingDetailsList with the following entry according to section 6 in this document: - BillingDetailsId-4
Expected result / success criteria	Verification of PaymentClaimADU reception by the EETS provider. Verification that the EETS provider responds with an AckADU containing − apduIdentifier = APDU ID of prior sent InfoExchange with PaymentClaimADU − apduAckCode = apduOK (2) in response to PaymentClaimADU. Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 6).
Remarks	

5 Test cases – Exchange of messages

5.1 Overview

This section contains the definition of the test cases to be performed in the assessment of the correct syntax of the exchange of messages between the EETS provider to the FOCBS, as defined in Supplement 3 section 2.4.

The test cases in this section assess the correct syntax of the exchange of messages associated with transmission of the ProvideUserDetailsADU, which is illustrated in the figure below.
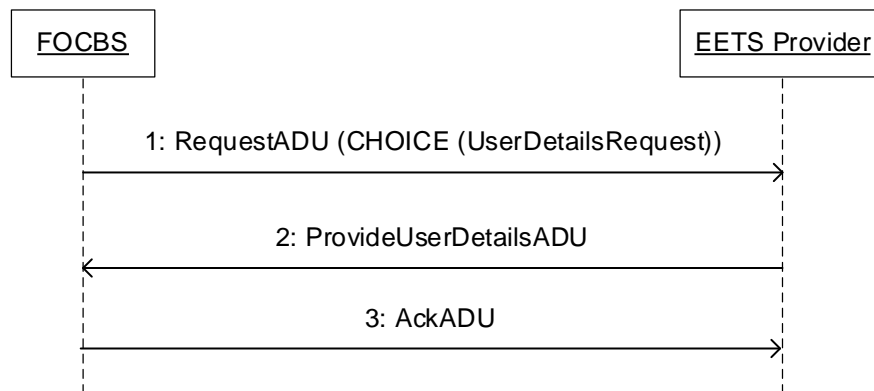
Figure 7 – Request messages from FOCBS to EETS provider

The figure below illustrates conceptually the transmission of the ADUs using the transport layer protocol, as defined in Supplement 3 section 3.
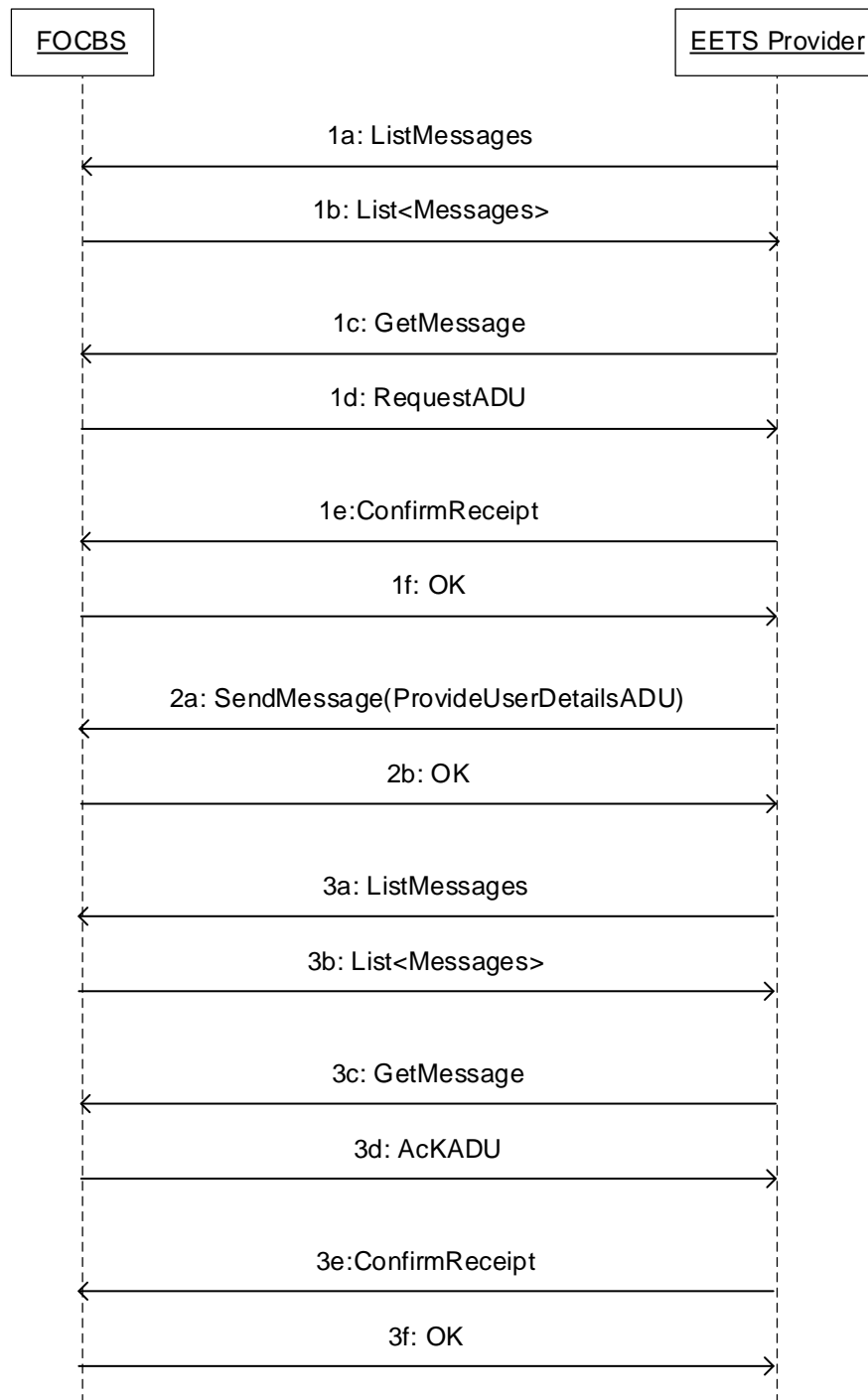
Figure 8 – FOCBS to EETS provider request message transport layer protocol

Whereas the ADUs indeed are to be transmitted using the transport layer protocol (see also the Scope above), as defined in Supplement 3 section 3.5, these exchanges are not described in the description of the test cases that follow below.

5.2   ProvideUserDetailsADU

5.2.1   User known with all details

| ID	**SST-07a**
Title	ProvideUserDetailsADU – User known with all details
Description	FOCBS sends RequestADU, EETS provider responds with ProvideUserDetailsADU (including User known with all details), to which FOCBS responds with AckADU.
References	RequestADU, with CHOICE userDetailsRequest, as defined in Supplement 3 section 2.4.2. ProvideUserDetailsADU as defined in Supplement 3 section 2.4.3. FOCBS responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	RequestADU, with CHOICE userDetailsRequest, with − userId.pan = PAN-1 as defined in section 6.3 in this document.

Expected result / success criteria	Verification that the EETS provider receives RequestADU, with CHOICE userDetailsRequest.
	
	Correct InfoExchange reply with
	− inResponseToApduId = APDU ID of prior sent InfoExchange with RequestADU
	Correct syntax and attribute value ranges of a ProvideUserDetailsADU with
	− ProvideUserDetails.statusFlag (1..5)
	− ProvideUserDetails.listOfUserParameters (2) and both UserParameterResponseDetails present
	  o extendedUserPostalAddress
	  o preferredUserLanguage
	− ProvideUserDetails.listOfUserParameters.userParameterStatus = 0 (available) for all UserParameterResponse
	
	Verification that the EETS provider receives AckADU (apduAckCode = apduOK (2)) from FOCBS in response to ExceptionListADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 8).

Remarks	The FOCBS will not send any error message for this ADU and always send an AckADU (apduAckCode = apduOK (2)) according to Supplement 3 section 2.4.4.

5.2.2   User known with some details

ID	**SST-07b**
Title	ProvideUserDetailsADU – User known with some details
Description	FOCBS sends RequestADU, EETS provider responds with ProvideUserDetailsADU (including user known only one detail), to which FOCBS responds with AckADU.

References	RequestADU, with CHOICE userDetailsRequest, as defined in Supplement 3 section 2.4.2. ProvideUserDetailsADU as defined in Supplement 3 section 2.4.3. FOCBS responds with AckADU as defined in Supplement 3 section 2.9.1.
Input data	RequestADU, with CHOICE userDetailsRequest with − userId.pan = PAN-2 as defined in section 6.3 in this document.

Expected result / success criteria	Verification that the EETS provider receives RequestADU, with CHOICE userDetailsRequest.
	
	Correct InfoExchange reply with
	− inResponseToApduId = APDU ID of prior sent InfoExchange with RequestADU
	Correct syntax and attribute value ranges of a ProvideUserDetailsADU with
	− ProvideUserDetails.statusFlag (1..5)
	− ProvideUserDetails.listOfUserParameters (2) and one UserParameterResponseDetails present
	     o extendedUserPostalAddress
	− ProvideUserDetails.listOfUserParameters.userParameterStatus
	    = 0 (available) for extendedUserPostalAddress and
	    = 1 (not available) for preferredUserLanguage
	
	Verification that the EETS provider receives AckADU (apduAckCode = apduOK (2)) from FOCBS in response to ProvideUserDetailsADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 8).

Remarks	The FOCBS will not send any error message for this ADU and always send an AckADU (apduAckCode = apduOK (2)) according to Supplement 3 section 2.4.4.

5.2.3   User unknown

ID	**SST-07c**
Title	ProvideUserDetailsADU – User unkown
Description	FOCBS sends RequestADU, EETS provider responds with ProvideUserDetailsADU (for an unknown user, no details), to which FOCBS responds with AckADU.
References	RequestADU, with CHOICE userDetailsRequest, as defined in Supplement 3 section 2.4.2. ProvideUserDetailsADU as defined in Supplement 3 section 2.4.3. FOCBS responds with AckADU (apduOK = 2) as defined in Supplement 3 section 2.9.1
Input data	RequestADU, with CHOICE userDetailsRequest with − userId.pan = PAN-3 as defined in section 6.3 in this document.

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Expected result / success criteria	Verification that the EETS provider receives RequestADU, with CHOICE userDetailsRequest.
	Correct InfoExchange reply with
	− inResponseToApduId = APDU ID of prior sent InfoExchange with RequestADU
	Correct syntax of a ProvideUserDetailsADU with
	− ProvideUserDetails.statusFlag (User Unknown = 0)
	− ProvideUserDetails.listOfUserParameters = not present, empty sequence
	Verification that the EETS provider receives AckADU (apduAckCode = apduOK (2)) from FOCBS in response to ExceptionListADU.
	Verification of the ADUs transmission according to the transport layer protocol defined in Supplement 3 section 3.6 (see also Figure 8).
Remarks	The FOCBS will not send any error message for this ADU and always send an AckADU (apduAckCode = apduOK (2)) according to Supplement 3 section 2.4.4.

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6 Test data

This section defines test data that are referenced in test cases in section 3-5. They are to be used in the test cases that reference the test data below.

6.1 Overview - Test data matrix

This table defines the data elements which have to be known by the EETS provider test system for the specified test cases.

Test case Id	UserId	refTollDeclaration	relatedBillingDetails	Remarks
SST-05a	UserId-1	TollDeclarationId-1		
SST-05b	UserId-3	TollDeclarationId-2		
SST-05c	UserId-1	TollDeclarationId-1	BillingDetailsId-1	BillingDetailsId-1 result from SST-05a
SST-05d	UserId-1	TollDeclarationId-1	BillingDetailsId-1	BillingDetailsId-1 result from SST-05a
SST-05e	UserId-1	none, empty list		
SST-06a			none, empty list	
SST-06b			BillingDetailsId-1, BillingDetailsId-2, BillingDetailsId-3	
SST-06c			BillingDetailsId-1, BillingDetailsId-X, BillingDetailsId-3	BillingDetailsId-X is unknown to the EETS provider
SST-06d			BillingDetailsId-4	
SST-07a	UserId-1			
SST-07b	UserId-2			
SST-07c	UserId-3			

The value range or assignment of values of the test data are given in decimal numeral system unless otherwise explicitly stated. Binary numbers are expressed using the notation 'B immediately following binary numbers, whereas hexadecimal numbers are expressed using the notation 'H immediately following hexadecimal numbers.

6.2 UserId

UserId	PAN	LicencePlateNumber - countryCode - alphabetIndicator - licencePlateNumber	ObeID - manufacturerID - EquipmentOBUId (length byte) - EquipmentOBUId (ID)	Remarks
UserId-1	PAN-1	AT latinAlphabetNo1 W1020	00 01'H 04'H 10 00 00 10'H	
UserId-2	PAN-2	DE latinAlphabetNo1 HHAB123	00 07'H 04'H 16 08 12 34'H	

| UserId-3 | PAN-3 | NO
latinAlphabetNo1
AN2015 | 00 06'H
04'H
10 10 20 30'H | Unknown user to the EETS provider. |

6.3 PAN

Personal account number (PAN) format consist as follows: Issuer identification number + Individual account number (XX XX XX XX XX XX) + check digit + padding bits (set to 1'B to accomplish a total length of 10 octets).

	PAN value	**ProvideUserDetailsADU**
PAN-1	32 03 02 00 00 01 80 00 10 2F'H	All user details available (known)
PAN-2	31 23 45 12 34 56 78 94 71 FF'H	User detail "preferredUserLanguage" not available
PAN-3	41 15 50 11 22 33 44 55 66 2F'H	Unknown user, no user details available

6.4 TollDeclarationId

TollDeclarationId	**issuerId (provider)**	**declarationId**	**Remark**
TollDeclarationId-1	EETS provider	101	
TollDeclarationId-2	EETS provider	201	

6.5 BillingdetailsId

BillingDetailsId	**issuerId (provider)**	**billingDetailsNum**	**Remark**
BillingDetailsId-1,	FOCBS	10	
BillingDetailsId-2,	FOCBS	20	
BillingDetailsId-3,	FOCBS	30	
BillingDetailsId-4,	FOCBS	40	
BillingDetailsId-X,	FOCBS	9999	Unknown BillingDetailsId to the EETS provider

Remark:

- FOCBS issuerID.countryCode = CH, binary (10 Bits) = 0111000101'B

- FOCBS issuerID.providerIdentifier = 1

6.6 Override Test data

To use providers "real" data, it is possible to override the default test data mentioned in chapter 6.

The meaning of a test data property is left untouched. For example, the meaning of the test data property PAN-3 is unknown user. Therefore, the overridden PAN-3 means also unknown user.

The following test data properties can be defined:

- billingDetailsId_1_billingDetailsNum

- billingDetailsId_2_billingDetailsNum

- billingDetailsId_3_billingDetailsNum

- billingDetailsId_4_billingDetailsNum

- billingDetailsId_X_billingDetailsNum

- pan_1

- pan_2

- pan_3

- tollDeclarationId_1_declarationId

- tollDeclarationId_1_issuerId

- tollDeclarationId_2_declarationId

- tollDeclarationId_2_issuerId

- userId_1_alphabetIndicator

- userId_1_countryCode

- userId_1_equipmentOBUId

- userId_1_licencePlateNumber

- userId_1_manufacturerId

- userId_2_alphabetIndicator

- userId_2_countryCode

- userId_2_equipmentOBUId

- userId_2_licencePlateNumber

- userId_2_manufacturerId

- userId_3_alphabetIndicator

- userId_3_countryCode

- userId_3_equipmentOBUId

- userId_3_licencePlateNumber

- userId_3_manufacturerId

It is possible to change none, all or several of these properties. While the test case id is transmitted as a path variable, the test data properties are added to the message body. The

data type of each property has to be the same as the corresponding default test data property.

6.6.1   Examples

Change one property

In this example, the testcase SST-01a will be prepared with overriding the BillingDetailsId-1 property (default value 10) to the value 20. All other properties are left untouched.

```
curl -X PUT "http://${host}:${port}/api/testsupport/setState/SST-01a" -H "accept: */*" -H "Content-Type: application/json" -d '{ "billingDetailsId_1_billingDetailsNum": 20} '
```

Change several properties

To change the property PAN-1 beside the BillingDetailsId-1, separate with a comma and add the property at the end of the message body.

```
curl -X PUT "http:// ${host}:${port}/api/testsupport/setState/SST-01a" -H "accept: */*" -H "Content-Type: application/json" -d '{ "billingDetailsId_1_billingDetailsNum": 20, "pan_1": "308417112233445501AA" } '
```