TECHNICAL SPECIFICATION

ISO/TS 16401-1

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Electronic fee collection — Evaluation of equipment for conformity to ISO/TS 17575-2 —

Part 1:

Test suite structure and test purposes

Perception du télépéage — Évaluation de conformité de l'équipement à l'ISO/TS 17575-2 —

Partie 1: Structure de la suite d'essais et objectifs d'essai



Reference number ISO/TS 16401-1:2012(E)



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 16401-1 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*, in collaboration with Technical Committee CEN/TC 278, *Road transport and traffic telematics*.

ISO/TS 16401 consists of the following parts, under the general title *Electronic fee collection — Evaluation of equipment for conformity to ISO/TS 17575-2*:

- Part 1: Test suite structure and test purposes
- Part 2: Abstract test suite

Introduction

This part of ISO/TS 16401 is part of a set of standards that supports interoperability of autonomous EFC-systems, which includes ISO/TS 17575 parts 1 to 4 that define the EFC context data, their *charge reports* and their use of communication infrastructure.

Within the suite of EFC standards this conformance evaluation procedure defines the process and tests for conformity evaluation of Front End Communications API and *Front End application* that comply with the requirements in ISO/TS 17575-2.

This part of ISO/TS 16401 is intended to

- assess Front End Communications API and Front End application capabilities,
- assess Front End Communications API and Front End application behaviour,
- serve as a guide for Front End Communications API and Front End application conformance evaluation and type approval,
- achieve comparability between the results of the corresponding tests applied in different places at different times, and
- facilitate communications between parties.

This part of ISO/TS 16401 is based on

- ISO/TS 17575-2, and
- the ISO/IEC 9646 family of standards on conformance test methodology.

Electronic fee collection — Evaluation of equipment for conformity to ISO/TS 17575-2 —

Part 1:

Test suite structure and test purposes

1 Scope

This part of ISO/TS 16401 specifies the test suite structure (TSS) and test purposes (TP) to evaluate the conformity of Front End Communications API and *Front End application* to ISO/TS 17575-2.

The objective of this part of ISO/TS 16401 is to provide a basis for conformance tests for Front Ent Communications API and *Front End application* in Electronic Fee Collection based on autonomous on-board equipment (OBE) to enable interoperability between different equipment supplied by different manufacturers.

This part of ISO/TS 16401 covers the test purposes for Front End Communications API covering functionalities related to instance handling, session handling, communication service primitives (i.e. sending/receiving of ADUs) and visible state transitions. It fully covers EFC communication services claimed in ISO/TS 17575-2 clause 7 and PICS proforma Clause B.2 ISO/TS 17575-2. Claims related to Front End Storage capacity are outside of the scope of this part of ISO/TS 16401.

This part of ISO/TS 16401 covers the test purposes for *Front End application* related to session establishment on *Back End* request and related to session re-establishment when session requested by *Back End* failed. There are no other claims with respect to *Front End application* claimed in ISO/TS 17575-2.

The underlying communication technology requirements for layer 1-4 specified in Clause 8 ISO/TS 17575-2 is outside of the scope of this part of ISO/TS 16401.

Similarly *Back End* communications API is outside of the scope of this part of ISO/TS 16401. According to ISO/TS 17575-2 it is expected that these Front End Communications API will be reflected in the BE, however BE Communications API is outside of the scope of ISO/TS 17575-2.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 17575-1, Electronic fee collection — Application interface definition for autonomous systems — Part 2: Charging

ISO/TS 17575-2, Electronic fee collection — Application interface definition for autonomous systems — Part 2: Communication and connection to the lower layers

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/TS 17575-1 and the following apply.

3.1

contract

expression of an agreement between two or more parties concerning the use of the road infrastructure

[ISO 14906:2011, definition 3.7]

NOTE A contract specifies obligations, permissions and prohibitions for the objects involved.

3.2

Front End application

part of the Front End above the API

3.3

service provider

operator that accepts the user's payment means and in return provides a road-use service to the user

NOTE Taken from ISO 14906:2004.

3.4

toll charger

legal entity charging toll for vehicles in a toll domain

[ISO/TS 17574:2009, definition 3.27]

Abbreviations

For the purposes of this document, the following abbreviations apply throughout the document unless otherwise specified.

ADU **Application Data Unit**

API Application Programming Interface

Abstract Syntax Notation One ASN.1

Abstract Test Suite **ATS**

Back End BE

ВΙ Invalid Behaviour

BV Valid Behaviour

CCC Compliance Check Communication

CN Cellular Network

DUT **Device Under Tests**

EFC Electronic Fee Collection

Front End FE

GNSS Global Navigation Satellite Systems

HMI **Human Machine Interface**

ID Identifier OBE On-Board Equipment

PCTR Protocol Conformance Test Report

PICS Protocol Implementation Conformance Statements

TP Test Purposes

TSS Test Suite Structure

VAT Value Added Tax

5 Test Suite Structure (TSS)

5.1 Structure

Table 1 — Test Suite Structures shows the Test Suite Structure (TSS).

Table 1 — Test Suite Structures

Group	Type of DUT	Behaviour
Instance Handling	Front End Communications API	Valid Behaviour
	AFI	Invalid Behaviour
Session Handling	Front End Communications	Valid Behaviour
	Art	Invalid Behaviour
	Front End application	Valid Behaviour
Communication Service Primitives	Front End Communications	Valid Behaviour
Fillilluves	AFI	Invalid Behaviour
State Transitions	Front End Communications API	Valid Behaviour

5.2 Reference to conformance test specifications

This part of ISO/TS 16401 takes into account already defined test purposes for conformance to the base standards by referencing them, so that:

- a) For test purposes that are **identical** to those defined in the base standards conformance test cases direct reference is reported. For reader's convenience, the title or a verbal description of the referenced test purpose is given, together with the reference.
- b) For test purposes that are **derived** from those defined in the base standards conformance test cases, a direct reference is reported, plus an indication on how the referred test purpose has to be modified for the profile conformance testing.
- c) For test purposes that are **specific** to ISO/TS 17575-2, a complete description is given.
- d) An indication on whether a test purpose is **identical**, **derived**, or **specific** is given in each test purpose.

Test Purposes (TP)

5.3.1 TP definition conventions

The TPs are defined following the rules shown in Table 2 — TP Definition Rules below. All Test Purposes are defined in Annex A and Annex B, including the special notation and symbol conventions that shall be used.

Table 2 — TP Definition Rules

TP ID according to the TP naming	Title
conventions	Reference
	TP origin
	Initial condition
	Stimulus and expected behaviour

TP ID	The TP ID is a unique identifier. It shall be specified according to the TP naming conventions defined in the sub-clause below.
Title	Short description of Test Purpose objective.
Reference	The reference should contain the references of the subject to be validated by the actual TP (specification reference, clause, paragraph), or the reference to the standard document defining the TP.
TP origin	Indicates if the TP is identical to a TP defined in another test standard, derived from a TP defined in another test standard, or specific for this standard profile.
Initial condition	The condition defines in which initial state the DUT has to be to apply the actual TP.
Stimulus and expected behaviour	Definition of the events the tester performs, and the events that are expected from the
	DUT to conform to the base specification.

5.3.2 TP naming conventions

Each TP is given a unique identification. This unique identification is built up to contain the following string of information:

TP/<group>/<dut>/<x>-<nn>

TP : to indicate that it is a Test Purpose;

<group> : which group TP belongs to;

: type of DUT (i.e. API or APPL); <dut>

Χ : type of testing (i.e. Valid Behaviour tests – BV, or Invalid Behaviour tests – BI);

: sequential TP number (01-99).

The naming conventions are as described in Table 3.

Table 3 — TP naming convention

Identifier: TP/<group>/<dut>/<x>-<nn>

<pre><group> applicable for FE Communications API applicable for FE Communications API applicable for FE Application applicable for FE Communications API applicable for FE Communications API</group></pre>	IH SH SH CSP ST	Instance Handling Session Handling Session Handling Communications Service Primitives State Transitions
<dut> = type of DUT</dut>	API	Front End Communications API
x = Type of testing	APPL BV BI	Front End application Valid Behaviour Tests Invalid Behaviour Tests
<nn> = sequential number</nn>	(01-99)	Test Purpose Number

5.4 Protocol Conformance Test Report (PCTR)

The supplier of the Front End and Back End, respectively, is responsible for providing a Protocol Conformance Test Report (PCTR).

The supplier of the Front End and the Back End shall complete a PCTR; see Annex C and Annex D for the proformas.

Annex A (normative)

TP for Front End Communications API

A.1 Introduction

This annex contains the Test Purposes (TP) for the conformity evaluation of Front End Communications API to ISO/TS 17575-2.

A.1.1 TP symbols conventions

A special notation and symbol convention is used, as defined in what follows.

Symbols are used in the description of the TPs, with meanings according to Table A.1 below.

Table A.1 — Description of TP Symbols

	SYMBOL	DESCRIPTION
	XXX(Type1=value1) □	The Tester executes an XXX method of Front End Communications API with argument of Type1 having value value1.
l,		Value1 shall be stored in tester's memory for further TP processing.
	□ R:ReturnedType	The DUT returns a value of type ReturnedType
	□ C:CallbackName (Type1)	The DUT provides a callback CallbackName receiving variable of type Type1.
	Type ISO/TS 17575-2	Anytime Type defined in ISO/TS 17575-2 is used, it means a variable of Type.
	$A\toB$	A "is transformed" into B
	Ø	Means "empty" or "not set".
	A B	A OR B
	A != B	A is not equal B
	i = i+1	Increment variable i by 1

Testing Front End Communications API it is needed to trigger operations and observe the DUT feedback both from the Front End application and Remote End (i.e. Back End) perspective. Thus there are two test points located as shown in Figure A.1.

Application emulation test point is using directly with DUT and emulates the Front End application layer. It is identified in the following test purposes by AppEm discriminator.

Remote End emulation test point is linked with DUT over communications channel. Depending on the test purposes it emulates application, presentation and session layer. It is identified in the following test purposes by RemEnd discriminator.

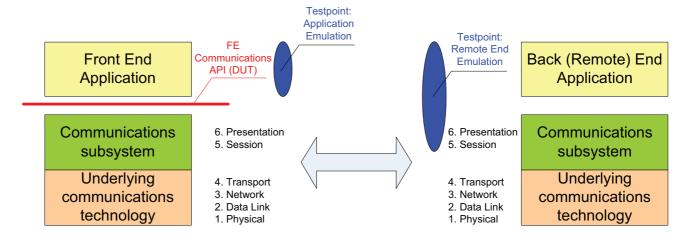


Figure A.1 — Handling of ADUs applicable for particular TP

A.2 Instance Handling

These Test Purposes apply to instance handling as claimed in ISO/TS 17575-2 clause B.2 with respect to following PICS proforma entries:

- API supports InitialiseInstance;
- API supports SetParameter;
- API supports GetParameter;
- API supports DeleteParameter;
- API supports DropInstance;
- API supports StackAvail.

A.2.1 BV test purposes (Valid Behaviour tests)

Test subgroup objective:

- to test DUT behaviour with respect to instance initialization including multiple instance handling in parallel;
- to test DUT behaviour with respect to parameter setting and updating;
- to test DUT behaviour with respect to parameter getting;
- to test DUT behaviour with respect to parameter deleting;
- to test DUT behaviour with respect to availability of communications stack;

—	to test DUT	behaviour	with respect to	dropping the	session wit	h following	severities:

- SEUrgent;
- SEUnconditional.

IF verify OK

ENDI

ELSE TP failed

THEN TP passed

TP/IH/API/BV/01 Verify the		communications interface initialization					
TP C	Prigin	Specific	ecific				
Refe	rence	ISO/TS 175	575-2, CI	ause	7.2.1		
			Front End Communications API must handle at least one underlying communications stack which StackID equals to stack1.				
		Set of Call	Set of Callback instances is instantiated.				
Stim	ulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	InitialiseInstance (StackID = stack1 Callbacks = cb1)	,	AppEm				
2			AppEm		R: Instace		
3	Verify whether Instance is valid						

					ance communications interface initialization nmunications stack		
TP Origin		Specific					
Refere	ence	ISO/TS 175	ISO/TS 17575-2, Clause 7.2.1				
Initial	Condition	communica	Front End Communications API must handle at least one underlying communications stack which StackID equals to stack1. Sets of Callback instances are instantiated.				
OtiI	has and Europeted Debasies	Sets of Call	IDACK IIIS	lance	es are instantiateu.		
Stimui	us and Expected Behaviour		1				
	Tester		Test Point		DUT		
1	InitialiseInstance (StackID = stack1, Callbacks = cb1)		AppEm				
2			AppEm		R: Instance		
3	Verify whether Instance is valid						
4	IF verify OK THEN GOTO step5 ELSE TP failed ENDIF						
5	InitialiseInstance (StackID = stack1, Callbacks = cb2)		AppEm				
6			AppEm		R: Instance		
7	Verify whether Instance is vali						
8	IF verify OK THEN GOTO step 9 ELSE TP failed ENDIF						
9	InitialiseInstance (StackID = stack1, Callbacks = cb3)		AppEm				
10			AppEm		Instance		
11	Verify whether Instance □s valid						
12	IF verify OK THEN TP passed ELSE TF ENDIF	P failed					

TP/IH/	API/BV/03				ance communications interface initialization munications stack		
TP Origin Specific		Specific					
Refere	ence	ISO/TS 175	575-2, CI	ause	7.2.1		
CC		communica	Front End Communications API must handle at least 2 underlying communications stacks which StackID equals to stack1 and stack2. Sets of Callback instances are instantiated.				
Stimul	us and Expected Behaviour						
	Tester		Test Point		DUT		
1	InitialiseInstance (StackID = stack1, Callbacks = cb1)		AppEm				
2			AppEm		R: Instance		
3	Verify whether Instance is valid						
4	IF verify OK THEN GOTO step5 ELSE TP failed ENDIF						
5	InitialiseInstance (StackID = stack2, Callbacks = cb2)		AppEm				
6			AppEm		R: Instance		
7	Verify whether Instance is vali						
8	IF verify OK THEN TP passed ELSE TP failed ENDIF						

TP/IH/API/BV/04		Verify that pa parameter)	aram	eter	is set by Front End Application (single
TP C	Prigin	Specific			
Refe	rence	ISO/TS 17575	5-2, C	Claus	se 7.2.1
Initia	I Condition	A valid Instanc	ce in	stand	ce1 is created.
Stim	ulus and Expected Behaviour	1			
	Tester		est oint		DUT
1	SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "Value1")	Арр	pEm		
2		Арр	pEm		R:CEN175 52Error
3	Verify whether CEN175752Error equal ERNoError	als to			
4	IF verify NOT OK THEN TP failed ENDIF				
5	GetParameter (Instance = instance1, Parameter = "Parameter1")	Арр	pEm		
6		App	pEm		R: String
7	IF (String equals to Valu1) THEN T passed ELSE TP failed ENDIF				

TP/IH/	API/BV/05	Verify that parameter is set by Front End Application for multiple instances (different parameter names)						
TP Origin Specific								
Refere	ence	ISO/TS 1	7575-2, (Claus	e 7.2.1			
Initial	Condition	A valid In	stance in	stand	ce1 and instance2 are created.			
Stimul	us and Expected Behaviour							
	Tester		Test Point		DUT			
1	SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "Value1")		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equals to ERNoError							
4	IF verify NOT OK THEN TP failed ENDIF							
5	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
6			AppEm		R: String			
7	IF (String equals⊡to Value1) THEN GOTO step8 ELSE TP failed ENDIF							
8	SetParameter (Instance = instance2, Parameter = "Parameter2", Value = "Value2")		AppEm					
9			AppEm		R: CEN175752Error			
10	Verify whether CEN175752Error equa ERNoError	als to						
11	IF verify NOT □K THEN TP failed ENDIF							
12	GetParameter (Instance = instance2, Parameter = "Parameter2")		AppEm					
13			AppEm		R: String			
14	IF (String equals to Value2) THEN TP passed ELSE TP failed ENDIF							

TP/IH/API/BV/06		Verify that parameter is set by Front End Application for multiple instances (the same parameter names)						
TP Or	igin	Specific						
Refere	ence	ISO/TS 1	7575-2, (Claus	se 7.2.1			
Initial	Condition	A valid In	stance in	stand	ce1 and instance2 are created.			
Stimu	lus and Expected Behaviour							
	Tester		Test Point		DUT			
1	SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "Value1")		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equa ERNoError	als to						
4	IF verify NOT OK THEN TP failed ENDIF							
5	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
6			AppEm		R: String			
7	IF (String equals⊡to Value1) THEN GOTO step8 ELSE TP failed ENDIF							
8	SetParameter (Instance = instance2, Parameter = "Parameter1", Value = "Value2")		AppEm					
9			AppEm		R: CEN175752Error			
10	Verify whether CEN175752Error equa ERNoError	als to						
11	IF verify NOT O□ THEN TP failed ENDIF							
12	GetParameter (Instance = instance2, Parameter = "Parameter1")		AppEm					
13			AppEm		R: String			
14	IF (String equals to Value2) THEN TP passed ELSE TP failed ENDIF							

TP/IH/API/BV/07		Verify that	Verify that parameter is updated by Front End Application					
TP Or	igin	Specific						
Refere	ence	ISO/TS 1	7575-2, (Claus	e 7.2.1			
Initial	Condition	A valid In:	stance in	stand	ce1 is created.			
Stimu	lus and Expected Behaviour							
	Tester		Test		DUT			
			Point					
1	SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "Value1")		AppEm					
2			AppEm		R: CEN175752Error			
3								
4	IF verify NOT OK THEN TP failed ENDIF							
5	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
6			AppEm		R: String			
7	IF (String equals⊡to Value1) THEN GOTO step8 ELSE TP failed ENDIF							
8	SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "Value2")		AppEm					
9			AppEm		R: CEN175752Error			
10	Verify whether CEN175752Error equa	als to						
11	IF verify NOT⊡OK THEN TP failed ENDIF							
12	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
13			AppEm		R: String			
14	IF (String equals to Value2) THEN GOTO step8 ELSE TP failed ENDIF							

TP/I	H/API/BV/08	Verify that parameter's value is fetched by the Front End Application					
TP (Drigin	Specific					
Refe	erence	ISO/TS 17	7575-2, C	Claus	se 7.2.1		
Initia	al Condition		A valid Instance instance1 is created. Parameter1 has already been set with value1.				
Stim	ulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm				
2			AppEm		R: String		
3	IF (String equals to Value1) THEN TP passed ELSE TP failed ENDIF						

TP/IF	H/API/BV/09	Verify that parameter's value is fetched by the Front End Application (multiple instances)						
TP O	Prigin	Specific						
Refe	rence	ISO/TS 17	7575-2, C	Claus	e 7.2.1			
Initial	l Condition	A valid Instance instance1, instance2 and instance3 are created.						
		Parameter1 in instance1 has already been set with value1.						
		Paramete	r2 in inst	ance	1 has already been set with value2.			
		Paramete	r1 in inst	ance	3 has already been set with value3.			
Stimu	ulus and Expected Behaviour							
	Tester		Test Point		DUT			
1	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
2			AppEm		R: String			
3	IF (String equals to Value1) THEN GOTO step4 ELSE TP failed ENDIF							
4	GetParameter (Instance = instance2, Parameter = "Parameter2")		AppEm					
5			AppEm		R: String			
6	IF (String equals to Value2) THEN GOTO step7 ELSE □P failed ENDIF							
7	GetParameter (Instance = instance3, Parameter = "Parameter1")		AppEm					
8			AppEm		R: String			
9	IF (String equals to Value3) THEN TP passed ELSE TP failed ENDIF							

TP/IH/API/BV/10 Verify the parameter		at parameter is deleted by Front End Application (single er)				
TP Origin Specific						
Refer	rence	ISO/TS 1	7575-2, (Claus	se 7.2.1	
Initial	Condition	A valid In	stance in	stan	ce1 is created.	
		Paramete	er1 has al	lread	y been set by <i>Front End application</i> .	
Stimu	ulus and Expected Behaviour					
	Tester		Test Point		DUT	
1	DeleteParameter (Instance = instance1, Parameter = "Parameter1")		AppEm			
2			AppEm		R: CEN175752Error	
3	Verify whether CEN175752Error equ ERNoError	als to				
4	IF verify NOT OK THEN TP failed ENDIF					
5	GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm			
6			AppEm		R: String	
7	IF (String has invalid value) THEN TP passed ELSE TP failed ENDIF					

TP/IH/API/BV/11		Verify that parameter is deleted by Front End Application (multiple parameters)							
TP Origin		Specific	Specific						
Reference		ISO/TS 1	ISO/TS 17575-2, Clause 7.2.1						
Initial	Condition	A valid In	stance in	stand	ce1, instance2 and instance3 are created.				
		Paramete	er1 in inst	ance	1 has already been set.				
		Paramete	er2 in inst	ance	2 has already been set.				
		Paramete	er1 in inst	ance	3 has already been set.				
Stimu	lus and Expected Behaviour	I.							
	Tester		Test Point		DUT				
1	DeleteParameter (Instance = instance1, Parameter = "Parameter1")		AppEm						
2			AppEm		R: CEN175752Error				
3	Verify whether CEN175752Error equ ERNoError	als to							
4	IF verify NOT OK THEN TP failed ENDIF								
5	GetParameter (Instance = instance1, Parameter = "Parameter1"		AppEm						
6			AppEm		R: String				
7	IF (String has invalid value) THEN GOTO step8 ELSE TP failed ENDIF								
8	DeleteParameter (Instance = instanc Parameter = "Parameter2")	e2,							
9			AppEm		R: CEN175752Error				
10	Verify whether CEN175752Error equ ERNoError	a⊡s o	AppEm						
11	IF verify NOT OK THEN TP failed ENDIF								
12	GetParameter (Instance = instance2, Parameter = "Parameter2")								
13					R: String				
14	IF (String has invalid value) THEN GOTO step15 ELSE TP failed ENDIF								

15	DeleteParameter (Instance = instance3, Parameter = "Parameter1")		
16			R: CEN175752Error
17	Verify whether CEN175752Error equals to ERNoError		
18	IF verify NOT OK THEN TP failed ENDIF		
19	GetParameter (Instance = instance3, Parameter = "Parameter1)		
20			R: String
21	IF (String has invalid value) THEN TP passed ELSE TP failed ENDIF		

TP/IH/API/BV/12 Verify whether StackAvail returns that communication stack is available.					rns that communication stack is available		
TP Origin Specific							
Reference ISO/TS 17575-2, C			Clause 7.5	5			
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.		
Communication sta			ack for instance1 is available				
Stimu	Stimulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	StackAvail (Instance = instance1)		AppEm				
2	2		AppEm		R: Boolean		
3	3 IF (returned □TRUE THEN TP passed ELSE TP failed ENDIF						

TP/IH/API/BV/13 Verify whether Sta (multiple instance				retu	rns that communication stack is available		
TP Or	rigin	Specific					
Refer	ence	ISO/TS 17575-2, C	lause 7.5)			
			stance1 and instance2 have already been created. ack for instance1 and instance2 is available				
Stimu	lus and Expected Bel	naviour					
	Tester		Test Point		DUT		
1	StackAvail (Instance = instance1)		AppEm				
2			AppEm		R: Boolean		
3	IF (returned FALSE) THEN TP failed ENDIF						
4	StackAvail (Instance = instance2)		AppEm				
5			AppEm		R: Boolean		
6	IF (returned TRUE) THEN TP passed ELSE TP failed ENDIF						

TP/IH	/API/BV/14	/BV/14 Verify whether StackAvail returns that communication stack is unavailable					
TP O	rigin	Specific					
Reference ISO/TS 17575-2, C			lause 7.5	5			
Initial	Condition	A valid Instance ins	stance1 h	as al	ready been created.		
		Communication sta	ack for ins	tanc	e1 is not available		
Stimu	Stimulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	StackAvail (Instance = instance1)		AppEm				
2			AppEm		R: Boolean		
3	3 IF (returned FALSE) THEN TP passed ELSE TP failed ENDIF						

TP/IH	/IH/API/BV/15 Verify whether StackAvail returns that communication stack is unavailable (multiple instances)						
TP O	rigin	Specific					
Refer	rence	ISO/TS 17575-2, C	Clause 7.5	5			
Initial	Condition		stance1 and instance2 have already been created. ack for instance1 and instance2 are not available				
Stimu	Stimulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	StackAvail (Instance = instance1)		AppEm				
2			AppEm		R: Boolean		
3	IF (returned TRUE) THEN TP failed ENDIF						
4	StackAvail (Instance = instance2)		AppEm				
5			AppEm		R: Boolean		
6	IF (returned FALSE) THEN TP passed ELSE TP failed						

TP/IF	I/API/BV/16				rns that communication stack is available able (for second instance)		
TP Origin Specific							
Refe	rence	ISO/TS 17575-2, C	Clause 7.5	j			
Communication		Communication sta	nstance1 and instance2 has already been created. stack for instance1 is available. stack for instance2 is unavailable				
Stimu	ulus and Expected	Behaviour					
	Tester		Test Point		DUT		
1	StackAvail (Instance = instance1)		AppEm				
2			AppEm		R: Boolean		
3	IF (returned FALSI THEN TP faile ENDIF	•					
4	StackAvail (Instance = instance2)		AppEm				
5			AppEm		R: Boolean		
6	IF (returned FALSI THEN TP pas ELSE TP faile ENDIF	sed					

TP/IH/API/BV/17 Dropping the insta		ance witl	h SE	Normal severity				
TP Origin Specific								
Refer	ence	ISO/TS 17575-2, C	Clause 7.2	2				
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.			
		No session exists f	No session exists for instance1.					
Stimu	lus and Expected Bel	naviour						
	Tester		Test Point		DUT			
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equals to ERNoError							
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/IH/API/BV/18 Dropping the insta		ance witl	n SE	Urgent severity			
TP Origin Specific							
Refer	ence	ISO/TS 17575-2, C	clause 7.2)			
Initial Condition A valid Instance inst		stance1 has already been created. for instance1.					
Stimu	lus and Expected Bel	haviour					
	Tester		Test Point		DUT		
1	DropInstance (Instance = instance1, Severity = SEUrgent)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175752Error equals to ERNoError						
4	4 IF verify OK THEN TP passed ELSE TP failed ENDIF						

TP/IH/API/BV/19 Di		Dropping the instance with SEUnconditional severity					
TP Origin Specific							
Refer	ence	ISO/TS 17575-2, C	Clause 7.2				
		A valid Instance instance1 has already been created. No session exists for instance1.					
Stimu	lus and Expected Be	haviour					
	Tester		Test Point		DUT		
1	DropInstance (Instance = instance1, Severity = SEUnconditional)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175752Error equals to ERNoError						
4	IF verify OK THEN TP passed ELSE TP failed ENDIF						

TP/IH/API/BV/20	Dropping the inst STStarting state	Dropping the instance with SEUnconditional severity once session is in STStarting state				
TP Origin	Specific	Specific				
Reference	ISO/TS 17575-2, C	ISO/TS 17575-2, Clause 7.2				
Initial Condition	Session for instance Session is in state NOTE see test which specify the ste Correct paramete	A valid Instance instance1 has already been created. Session for instance1 is being established. Session is in state Session is in state STStarting NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition. Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimulus and Expecte	ed Behaviour					
	Tester	Test Point		DUT		

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUnconditional)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify OK THEN TP passed ELSE TP fail □d ENDIF		

TP/IH/API/BV/21	Dropping the instance with SEUnconditional severity once session is in STSessionIdle state				
TP Origin	Specific				
Reference	ISO/TS 17575-2, Clause 7.2				
Initial Condition	A valid Instance instance1 has already been created.				
	Session for instance1 is established.				
	Session is in state Session is in state STSessionIdle				
	NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimulus and Expecte	d Behaviour				

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUnconditional)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/IF	I/API/BV/22	Dropping the instance with SEUnconditional severity once session is in STSendingADU state					
TP O	rigin	Specific					
Refer	rence	ISO/TS 17575-2, Clause 7.2					
Initial	Condition	A valid Instance ins	stance1 h	as al	ready been created.		
		Session for instance	e1 is esta	ablish	ned.		
		Session is in state	Session is in state STSendingADU				
			purposes for other operations and corresponding to this state eps how to fulfil this precondition.				
			Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimu	ılus and Expected Be	haviour					
	Те	ster	Test Point		DUT		
1	DropInstance (Instance = instar Severity = S SEU	•	AppEm				

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = S SEUnconditional)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/II	TP/IH/API/BV/23 Dropping the instance with SEUnconditional severity once session STSendingADURequest state						
TP C	Prigin	Specific					
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	2			
Initia	I Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	ce1 is esta	ablish	ned.		
		Session is in state	Session i	s in s	state STSendingADURequest		
which specify the st Correct paramet			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
			parameterization has already been done to establish session ble: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stim	ulus and Expected Be	haviour					
	Те	ster	Test Point		DUT		
1	DropInstance (Instance = instar Severity = SEUnd	•	AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN17 ERNoError	5752Error equals to					

4

IF verify OK

ENDIF

THEN TP passed ESE TP failed

TP/IH/API/BV/24	Dropping the instance with SEUnconditional severity once session is in STSendingUnformattedADU state				
TP Origin	Specific				
Reference	ISO/TS 17575-2, Clause 7.2				
Initial Condition	A valid Instance instance1 has already been created.				
	Session for instance1 is established.				
	Session is in state Session is in state STSendingUnformattedADU				
	NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				

Stimulus and Expected Behaviour

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUnconditional)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify OK THEN TP passed ELS TP failed ENDIF		

TP/IH/API/BV/25			Dropping the instance with SEUnconditional severity once session is in STSessionRxADUs state				
TP Origin		Specific	Specific				
Reference		ISO/TS 17575-2, C	ISO/TS 17575-2, Clause 7.2				
Initial Condition		A valid Instance in	A valid Instance instance1 has already been created.				
		Session for instance	Session for instance1 is established.				
		Session is in state	Session is in state Session is in state STSessionRxADUs				
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
			Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stim	ulus and Expected	Behaviour					
	Tester		Test Point		DUT		
1	DropInstance (Instance = instance1, Severity = SEUnconditional)		AppEm				
2			AppEm		R: CEN175752Error		

3

4

ERNoError

IF verify OK

ENDIF

THEN TP passed **ELSE TP**□failed

Verify whether CEN175752Error equals to

TP/IH/API/BV/26 Dropping the insta			ance wit	h SE	Unconditional severity once session is in			
TP O	rigin	Specific						
Refe	rence	ISO/TS 17575-2, C	lause 7.2	2				
Initia	I Condition	A valid Instance ins	stance1 h	as a	ready been created.			
		Session for instance1 is established. Session is in state Session is in state STErrored						
NOTE		NOTE see test						
			erization has already been done to establish session ess, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected Be	haviour						
	Te	ster	Test Point		DUT			
1	DropInstance (Instance = instan Severity = SEUnc	•	AppEm					
2	2		AppEm		R:□CEN15752Error			
3	3 Verify whether CEN175752Error equals to ERNoError							
4	IF verify OK THEN TP passed ELSE TP failed ENDI							

TP/IH/API/BV/27 Dropping the insta STEnding state			ince wit	h SE	Unconditional severity once session is in				
TP C	Drigin	Specific							
Refe	rence	ISO/TS 17575-2, CI	ause 7.2	2					
Initia	l Condition	A valid Instance instar	nce1 has	alrea	dy been created.				
			Session for instance1 is established.						
NOTE see to which specify the Correct parameters			est purposes for other operations and corresponding to this state steps how to fulfil this precondition. eterization has already been done to establish session dress, port, url, protocol, PDP context, etc. are set)						
Stim	ulus and Expected B	ehaviour							
	Te	ester	Test Point		DUT				
1	DropInstance (Instance = insta Severity = SEUr	· ·	AppEm						
2			AppEm		R: CEN175752Errr				
3	Werify whether CEN175752Error equals to ERNoError								
4	IF verify OK THEN TP passe ELSE TP failed ENDIF	d							

A.2.2 BI test purposes (Invalid Behaviour tests)

Test subgroup objective:

 to test DUT invalid behaviour with respect to instance in 	nitialization;
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- to test DUT invalid behaviour with respect to parameter setting;
- to test DUT invalid behaviour with respect to parameter getting;
- to test DUT invalid behaviour with respect to parameter deleting;
- to test DUT invalid behaviour with respect to availability of communications stack;
- to test DUT invalid behaviour with respect to dropping the session including following severities:
 - SENormal;
 - SEUrgent;

		FE Communications API returns invalid instance once ation selected invalid communication stack				
TP O	rigin	Specific				
Refer	rence	ISO/TS 175	75-2, Cla	ause	7.2.1	
Initial	Condition	Set of Callb	ack insta	nces	s is instantiated.	
Stimu	ulus and Expected Behaviour	1				
	Tester		Test Point		DUT	
1	1 InitialiseInstance (StackID =invalidStack, Callbacks = cb1)		AppEm			
2			AppEm		R: Instance	
3	Verify whether Instance is invalid					
4	IF verify OK THEN TP passed ELSE TP failed ENDIF					

		FE Communications API returns invalid instance once tion provides invalid Callbacks				
TP	Origin	Specific				
Re	ference	ISO/TS 175	75-2, Cla	use	7.2.1	
		ront End Communications API must handle at least one underlying ommunications stacks which StackID equals to stack1.				
Sti	mulus and Expected Behaviour					
	Tester	Tester			DUT	
1	InitialiseInstance (StackID =invalidStack, Callbacks = Ø)		AppEm			
2			AppEm		R: Instance	
3	Verify whether Instance is invali	d				
4	IF verify OK THEN TP passed ELSE TP failed ENDIF					

TP/IH/API/BI/03		Verify par	Verify parameter setting upon invalid instance					
TP Origin Spec		Specific	pecific					
Refer	ence	ISO/TS 17	7575-2, C	laus	e 7.2.1			
Initial	Condition							
Stimu	lus and Expected Behaviour	I						
Tester		Test Point		DUT				
1	SetParameter (Instance = invalidInst Parameter = "Parameter1", Value = "Value1") Note: InvalidParameter1 may have t characters what is not handled by F Communications API	oo many	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equal ERNotSet	als to						
4	IF verify OK THEN GOTO step5 ELSE TP failed ENDIF							
5	GetParameter (Instance = instance1, Parameter = "InvalidParameter		AppEm					
6			AppEm		R: String			
	IF (String is invalid) THEN TP passed ELSE TP failed ENDIF							

TP/IH/API/BI/04		Verify parameter setting upon invalid parameter							
TP Origin		Specific	Specific						
Refe	rence	ISO/TS 1757	75-2, C	laus	e 7.2.1				
Initia	Condition	A valid Insta	nce ins	stanc	e1 is created.				
Stimulus and Expected Behaviour									
Tester			Test Point		DUT				
1	SetParameter (Instance = instance1, Parameter = "InvalidParameter1", Value = "Value1")		AppEm						
	Note: InvalidParameter1 may have to characters what is not handled by F Communications API	-							
2		Δ	AppEm		R: CEN175752Error				
3	Verify whether CEN175752Error equal ERNotSet	als to							
4	IF verify NOT OK THEN TP failed ENDIF								
5 GetParameter (Instance = instance1, Parameter = "InvalidParameter1")			AppEm						
6		A	AppEm		R: String				
7	IF (String □s invalid) THEN TP passed ELSE TP failed ENDIF								

TP/IH/API/BI/05 Verif		Verify pa	fy parameter setting upon invalid value					
TP Origin Specific								
Refere	ence	ISO/TS 17	7575-2, Clause 7.2.1					
Initial	Condition	A valid Ins	stance in	stanc	ce1 is created.			
Stimu	lus and Expected Behaviour	1						
	Tester		Test Point		DUT			
1	1 SetParameter (Instance = instance1, Parameter = "Parameter1", Value = "InvalidValue1") Note: InvalidValue1 may have too many characters what is not handled by FE		AppEm					
2	Communications API		AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equ ERNotSet	als to						
4	4 IF verify NOT OK THEN TP failed ENDIF							
5	5 GetParameter (Instance = instance1, Parameter = "Parameter1")		AppEm					
6			AppEm		R: String			
7	IF (String is inva□id) THEN TP passed ELSE TP failed ENDIF							
TP/IH	/API/BI/06	Verify get	etting the parameter's value upon invalid instance					
TP Or	igin	Specific						
Refere	ence	ISO/TS 17	7575-2, Clause 7.2.1					
Initial	Condition							
Stimu	lus and Expected Behaviour	l						
	Tester		Test Point		DUT			
1	1 GetParameter (Instance = invalidInstance1, Parameter = "Parameter1")		AppEm					
2			AppEm		R: String			
3	IF (String is invalid) THEN TP passed							

ENDIF

ELSE TP failed

TP/IH/API/BI/07 Verify gettin		ng the parameter's value once parameter does not exist					
TP Origin Specific							
Refe	rence	ISO/TS 175	75-2, Cla	ause	7.2.1		
Initia	l Condition	A valid Insta	ance insta	ance	1 is created.		
	InvalidPara		Parameter has not been set by Front End application.				
Stim	Stimulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	GetParameter (Instance = instance1, Parameter = "invalidParameter")		AppEm				
2	2		AppEm		R: String		
3	IF (String is invalid) THEN TP passed ELSE TP failed ENDIF						

			rameter	ameter deletion upon invalid instance				
TP Origin Specific								
Refer	ence	ISO/TS 1	7575-2, C	Claus	se 7.2.1			
Initial	Condition							
Stimu	llus and Expected Behaviour							
	Tester		Test Point		DUT			
1	DeleteParameter (Instance = invalidInstance1, Parameter = "Parameter1")		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equ ERNotSet	als to						
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							

		rameter	dele	tion once parameter does not exist				
TP Origin Specific								
Refer	ence	ISO/TS 17	'575-2, C	Claus	e 7.2.1			
Initial	Condition	A valid Ins	tance in	stand	ce1 is created.			
Stimulus and Expected Behaviour								
	Tester		Test Point		DUT			
1	1 DeleteParameter (Instance =instance1, Parameter = "Parameter1")		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equ ERNotSet	als to						
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/II	H/API/BI/10	Verify whether StackAvail returns false not having instance initialized						
TP C	Drigin	Specific						
Reference ISO/TS 17575-2, C			Clause 7.5	5				
Initial Condition FE Communication			ns API is i	ns API is initialized				
Stim	Stimulus and Expected Behaviour							
	Tester		Test Point		DUT			
1	StackAvail (Instance = i	nvalidInstance)	AppEm					
2	2		AppEm		R: Boolean			
3	3 IF (returned FALSE) THEN TP passed ELSE TP failed ENDIF							

TP/IH	I/API/BI/11	Dropping the inst initialized	ance wit	h SE	Normal severity once no instance is			
TP O	rigin	Specific						
Refer	ence	ISO/TS 17575-2, 0	Clause 7.2	2				
Initial	Condition	FE Communication	ns API is i	nitial	ized			
Stimu	Stimulus and Expected Behaviour							
	Tester		Test Point		DUT			
1	Dropinstance (Instance = invalidinstance, Severity = SENormal)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equals □o EUnknownInstance							
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/II	H/API/BI/12	Dropping the ins initialized	tance wit	h SE	Urgent severity once no instance is
TP Origin Specific					
Refe	erence ISO/TS 17575-2, Clause 7.2				
Initia	I Condition	FE Communication	ns API is i	initial	ized
Stim	ulus and Expected E	Behaviour			
	Tester		Test Point		DUT
1	DropInstance (Instance = invalidInstance, Severity = SEUrgent)		AppEm		
2			AppEm		R: CEN175752Error
3	Verify whether CEN175752Error equals to ERUnknownInstance				
4	IF verify OK THEN TP passe ELSE TP failed ENDIF	ed			

TP/IH	I/API/BI/13	Dropping the ins is initialized	tance wit	h SE	Unconditional severity once no instance			
TP Origin Specific								
Refer	rence	ISO/TS 17575-2,	Clause 7.2	2				
Initial	Condition	FE Communication	ns API is i	nitial	ized			
Stimu	ılus and Expected E	Sehaviour						
	Tester		Test Point		DUT			
1	Dropinstance (Instance = inva Severity = SEU	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN1 ERUnknownInstance	75752Error equals to						
4	IF verify OK THEN TP passe ELSE TP failed ENDIF	d						

TP/II	H/API/BI/14	Dropping the instance with SENormal severity once session is in STStarting state						
TP C	Prigin	Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.2	2				
Initia	l Condition	A valid Instance in	stance1 h	as a	Iready been created.			
		Session for instance	ce1 is bei	ng es	stablished.			
		Session is in state	Session i	s in s	state STStarting			
		NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.						
			Correct parameterization has already been done to establish session example: ipAddress, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected Be	haviour						
	Те	ster	Test Point		DUT			
1	DropInstance (Instance = instar Severity = SENor	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN17 ERBadState	5752Error equals to						

IF verify OK

ENDF

THEN TP passed ELSE TP failed

TP/IH/API/BI/15	Dropping the instance with SENormal severity once session is in STSessionIdle state
TP Origin	Specific
Reference	ISO/TS 17575-2, Clause 7.2
Initial Condition	A valid Instance instance1 has already been created.
	Session for instance1 is established.
	Session is in state Session is in state STSessionIdle
	NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)
Ctimulus and Evacete	d Deboviour

Stimulus and Expected Behaviour

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SENormal)	AppEm	
2		AppEm	R: CEN175752 Err□r
3	Verify whether CEN175752Error equals to ERBadState		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/II	H/API/BI/16		Dropping the instance with SENormal severity once session is in STSendingADU state					
TP C	rigin	Specific						
Refe	rence	ISO/TS 17575-2, CI	ISO/TS 17575-2, Clause 7.2					
Initia	I Condition	A valid Instance inst	tance1 h	as a	ready been created.			
		Session for instance	e1 is esta	ablisł	ned.			
		Session is in state S	Session i	s in s	state STSendingADU			
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.					
			Correct parameterization has already been done to establish session example: ipAddress, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected E	Behaviour						
	7	ester	Test Point		DUT			
1	DropInstance (Instance = inst Severity = SEN	,	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN	175752Error equals to						

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

4

TP/II	I/API/BI/17	Dropping the instance with SENormal severity once session is in STSendingADURequest state					
TP O	rigin	Specific					
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	2			
Initia	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	ce1 is esta	ablish	ned.		
		Session is in state	Session i	s in s	state STSendingADURequest		
which specify the ste Correct paramete			t purposes for other operations and corresponding to this state eps how to fulfil this precondition. erization has already been done to establish session ess, port, url, protocol, PDP context, etc. are set)				
Stim	ulus and Expected Be	ehaviour					
	Te	ester	Test Point		DUT		
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm				
2			AppEm		R: CEN175752Error		

3

4

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP fa ☐ led

TP/IH/API/BI/18 Dropping the insta					Normal severity once session is in ate			
TP O	rigin	Specific						
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	<u> </u>				
Initia	Condition	A valid Instance in	stance1 h	as a	ready been created.			
		Session for instance	e1 is esta	ablisł	ned.			
		Session is in state	Session i	s in s	state STSendingUnformattedADU			
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.					
				erization has already been done to establish session ss, port, url, protocol, PDP context, etc. are set)				
Stim	ulus and Expected Be	haviour						
	Tes	ster	Test Point		DUT			
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm					
			AppEm		R: CEN175752Error			
3	3 Verify whether CEN175752Error equals to ERBadState							
4	IF verify OK THEN TP passed							

ELSE TP failed

TP/IF	I/API/BI/19		Dropping the instance with SENormal severity once session is in STSessionRxADUs state					
TP O	rigin	Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.2	2				
Initial	l Condition	A valid Instance in	stance1 h	as al	ready been created.			
		Session for instance	ce1 is esta	ablisł	ned.			
		Session is in state	Session i	s in s	state STSessionRxADUs			
	which specify the ste	t purposes for other operations and corresponding to this state eps how to fulfil this precondition. erization has already been done to establish session iss, port, url, protocol, PDP context, etc. are set)						
Stimu	ulus and Expected	Behaviour						
	Tester		Test Point		DUT			
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm					
2			AppEm		R: CEN175752Error			

3

4

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

TP/II	Dropping the inst STErrored state	ance wit	h SE	Normal severity once session is in					
TP Origin Specific									
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	2					
Initia	Condition	A valid Instance in	stance1 h	as a	lready been created.				
		Session for instance	ce1 is esta	ablisl	ned.				
		Session is in state	Session i	s in s	state STErrored				
				e test purposes for other operations and corresponding to this state he steps how to fulfil this precondition.					
					already been done to establish session otocol, PDP context, etc. are set)				
Stimu	ulus and Expected Be	haviour							
	Tes	ster	Test Point		DUT				
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm						
2	2		AppEm		R: CEN175752Error				
3	Werify whether CEN175752Error equals to ERBadState								
4	4 IF verify OK THEN TP passed ELSE TP failed ENDIF				Transition of the state of the				

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

4

TP/IF	I/API/BI/21	Dropping the instance with SENormal severity once session is in STEnding state						
TP O	rigin	Specific						
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	2				
Initia	Condition	A valid Instance in	stance1 h	as al	ready been created.			
		Session for instance	e1 is esta	ablish	ned.			
		Session is in state	Session i	s in s	state STEnding			
which specify the			which specify the steps how to fulfil this precondition.					
			parameterization has already been done to establish session ipAddress, port, url, protocol, PDP context, etc. are set)					
Stimu	ulus and Expected Be	haviour						
	Tes	ster	Test Point		DUT			
1	DropInstance (Instance = instance1, Severity = SENormal)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175	5752Error equals to						

TP/II	H/API/BI/22	Dropping the inst	ance wit	h SE	Urgent severity once session is in			
TP C	Origin	Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.2	2				
Initia	I Condition	A valid Instance in	stance1 h	as a	ready been created.			
		Session for instance	ce1 is bei	ng es	stablished.			
		Session is in state	Session i	s in s	state STStarting			
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.					
			Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected Be	haviour						
	Те	ster	Test Point		DUT			
1	DropInstance (Instance = instar Severity = SEUrg	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN17 ERBadState	5752Error equals to						
4	IF verify OK			1				

THEN TP passed ELSE TP failed

TP/IH/API/BI/23	Dropping the instance with SEUrgent severity once session is in STSessionIdle state				
TP Origin	Specific				
Reference	ISO/TS 17575-2, Clause 7.2				
Initial Condition	al Condition A valid Instance instance1 has already been created.				
	Session for instance1 is established.				
	Session is in state Session is in state STSessionIdle				
	NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimulus and Expected Behaviour					

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUrgent)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERBadState		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/IF	I/API/BI/24	Dropping the instance with SEUrgent severity once session is in STSendingADU state					
TP O	rigin	Specific					
Reference ISO/TS 17575-2, Clause 7.2							
Initial	Condition	A valid Instance ins	stance1 h	as a	Iready been created.		
		Session for instance	e1 is esta	ablisl	hed.		
		Session is in state	Session i	s in s	state STSendingADU		
	which specify the si Correct paramet			st purposes for other operations and corresponding to this state teps how to fulfil this precondition. derization has already been done to establish session ess, port, url, protocol, PDP context, etc. are set)			
Stimu	ulus and Expected Be	haviour					
	Те	ster	Test Point		DUT		
1	DropInstance (Instance = instar Severity = SEUrg	•	AppEm				
2	2		AppEm		R: CEN175752Error		
3	3 Verify whether CEN175752Error equals to ERBadState						
4	4 IF verify OK THEN TP passed ELSE TP failed						

TP/IF	I/API/BI/25	Dropping the instance with SEUrgent severity once session is in STSendingADURequest state					
TP O	rigin	Specific					
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	2			
Initia	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	e1 is esta	ablish	ned.		
		Session is in state	Session i	s in s	state STSendingADURequest		
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
		-	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimu	ulus and Expected Be	ehaviour					
	Te	ester	Test Point		DUT		
1	DropInstance (Instance = instance = Severity = SEUrg	,	AppEm				
2			AppEm		R: CEN175752Error		

3

4

ERBadState

IF verify OK

ENDIF

THEN TP passed **ELSE TP failed**

TP/IH/API/BI/26		Dropping the instance with SEUrgent severity once session is in STSendingUnformattedADU state				
TP Origin	Specific	Specific				
Reference	ISO/TS 17575-2, 0	ISO/TS 17575-2, Clause 7.2				
Initial Condition	A valid Instance in	A valid Instance instance1 has already been created.				
	Session for instance	ce1 is esta	ablish	ned.		
	Session is in state	Session is in state Session is in state STSendingUnformattedADU				
		NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
		Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
Stimulus and Expect	ed Behaviour					
	Tester	Test Point		DUT		
1 DropInstance (AppEm	П			

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUrgent)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERBadState		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/II	H/API/BI/27		Dropping the instance with SEUrgent severity once session is in STSessionRxADUs state					
TP C	Prigin	Specific	Specific					
Refe	rence	ISO/TS 17575-2, C	ISO/TS 17575-2, Clause 7.2					
Initia	I Condition	A valid Instance in	stance1 h	as al	ready been created.			
		Session for instance	ce1 is esta	ablish	ned.			
		Session is in state	Session i	s in s	state STSessionRxADUs			
which specify the ste			t purposes for other operations and corresponding to this state eps how to fulfil this precondition. erization has already been done to establish session ess, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected	Behaviour						
		Tester	Test Point		DUT			
1	DropInstance (Instance = ins Severity = SE	•	AppEm					
2			AppEm		R: CEN175752Error			

3

4

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

TP/IH	I/API/BI/28	Dropping the instance with SEUrgent severity once session is in STErrored state					
TP O	rigin	Specific	Specific				
Refer	ence	ISO/TS 17575-2, C	Clause 7.2	2			
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	Session for instance1 is established.				
		Session is in state	Session is in state Session is in state STErrored				
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.				
		Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)					
Stimu	ılus and Expected B	Behaviour					
	Т	ester	Test Point		DUT		
1	DropInstance (ance1	AppEm				

	Tester	Test Point	DUT
1	DropInstance (Instance = instance1, Severity = SEUrgent)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERBadState		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/IH	I/API/BI/29	Dropping the instance with SEUrgent severity once session is in STEnding state				
TP Or	rigin	Specific				
Refer	ence	ISO/TS 17575-2, Clause 7.2				
Initial	I Condition A valid Instance instance1 has already been created.					
		Session for instance	e1 is esta	ablish	ned.	
Session is in state			Session is in state STEnding			
			NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.			
		-	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)			
Stimu	llus and Expected Be	ehaviour				
	Tester		Test Point		DUT	
1	DropInstance (Instance = instal Severity = SEUrg	•	AppEm			

A.3 Session Handling

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

2

3

4

These Test Purposes apply to session handling as claimed in ISO/TS 17575-2 Clause B.2 with respect to following PICS proforma entries:

AppEm

R: CEN175752Error

	API	supports	StartSession;
--	-----	----------	---------------

API supports EndSession.

A.3.1 BV test purposes (Valid Behaviour tests)

Verify whether CEN175752Error equals to

Test subgroup objective:

- to test DUT behaviour with respect to session establishment including multiple session establishment in parallel;
- to test DUT behaviour with respect to session ending;
- to test DUT behaviour with respect to session failure.

TP/S	SH/API/BV/01 Session establishment							
TP C	Drigin	Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.2	2.3				
Initia	I Condition	A valid Instance in	stance1 h	as al	ready been created.			
		No session exists	for instand	e1 (S	STNoSession state).			
					already been done to establish session otocol, PDP context, etc. are set)			
Stim	ulus and Expected	Behaviour						
		Tester	Test Point		DUT			
1	•	StartSession (Instance = instance1, Reason = any, SessionHandle)						
2			AppEm		R: CEN175752Error			
3	Verify whether CENERNOError	N175752Error equals to						
4	IF verify NOT OK THEN TP faile ENDIF	ed						
					Session establishment process over communications stack in progress			
5	Verify whether session has been established at remote end		RemEnd					
6	IF verify NOT OK THEN TP failed ENDIF							
7					C: InstanceStateChange (Instance, OldState, NewState)			

8

IF (Instance equals to instance1 AND

STStarting) AND

THEN TP passed ELSE TP failed

ENDIF

OldState equals to (STNoSession OR

NewState equals to STSessionI□le)

TP/SH/API/BV/02 Multiple session e			establish	men	t		
TP Origin Specific							
Refe	ISO/TS 17575-2, 0	Clause 7.2.3					
Initial	Condition	A valid Instance in	stance1 and instance2 have already been created.				
		No session exists	for instanc	:e1 a	and instance2 (STNoSession state).		
			ess, port,		already been done to establish session protocol, PDP context, etc. are set) using		
Stimu	ulus and Expected Be	haviour					
	Те	ster	Test Point		DUT		
1	StartSession (Instance Reason = any, So		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN17 ERNoError	5752Error equals to	AppEm				
4	IF verifyNOT OK THEN TP failed ENDIF		AppEm				
			RemEnd		Session establishment process over communications stack in progress		
5	Verify whether session at remote end	n has been established	RemEnd				
6	IF verify NOT OK THEN TP failed ENDIF		RemEnd				
7			AppEm		C: InstanceStateChange (Instance, OldState, NewStat□)		
8	IF (Instance equals to instance1 AND OldState equals to (STNoSession OR STStarting) AND NewState equals to STSessionIdle) THEN TP passed ELSE TP failed ENDIF		AppEm				
9	StartSession (Instance Reason = any, Se		AppEm				
10			AppEm		R: CEN175752Error		
11	Verify whether CEN17 ERNoError	5752Error equals to	AppEm				
12	IF verify NOT OK THEN TP failed ENDIF		AppEm				

		RemEnd	Session establishment process over communications stack in progress
13	Verify whether session has been established at remote end	RemEnd	
14	IF verify NOT OK THEN TP failed ENDIF	RemEnd	
15		AppEm	C: InstanceStateChange (Instance, OldState, NewState)
16	IF (Instance equals to instance1 AND OldState equals to (STNoSession OR STStarting) AN□ NewState equals to STSessionIdle) THEN TP passed ELSE TP failed ENDIF	AppEm	

TP/S	SH/API/BV/03	Ending the sessi	on					
TP C	Specific							
Refe	rence	ISO/TS 17575-2,	Clause 7.4					
Initia	I Condition	A valid Instance in	stance1 h	as a	ready been created.			
		Session for instan	ce 1 is est	ablis	hed.			
					already been done to establish session otocol, PDP context, etc. are set)			
Stim	ulus and Expected Be	ehaviour						
	Те	ester	Test Point		DUT			
1	EndSession (Instance = instance1, Reason = any)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN17 ERNoError	5752Error equals to						
4	IF verify NOT OK THEN TP failed ENDIF							
5					Completion of transaction in progress			
6	Verify whether sessio	n has been closed	□emEnd					
7	IF verify NOT OK THEN TP failed ENDIF							
8					C: InstanceStateChange (Instance, OldState, NewState)			
9	AND	to (STSessionIdle)						

TP/SH/API/BV/04 Session failure han			andling				
TP O	Specific						
Refe	rence	ISO/TS 17575-2, C	lause 7.5				
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	e 1 is est	ablis	hed.		
					already been done to establish session otocol, PDP context, etc. are set)		
Stimu	ulus and Expected Bel	naviour					
	Tester		Test Point		DUT		
1	CommsQuery (Instance = instance1)		AppEm				
2			AppEm		R: CEN175752StateE		
3	Assign a received	state to oldState1					
4	Session failed due communication inf failure		RemEnd				
5			AppEm		C: InstanceStateChange (Instance, OldState, NewState)		
6	IF (Instance equals to inst⊡nce1 AND OldState equals to oldState1 AND NewState equals to STErrored) THEN TP passed ELSE TP failed ENDIF						

A.3.2 BI test purposes (Invalid Behaviour tests)

Test subgroup objective:

- to test DUT invalid behaviour with respect to session establishment including multiple session establishment in parallel;
- to test DUT invalid behaviour with respect to session ending in each visible state.

TP/S	Session establish	ment on	ce se	ession is already established		
TP Origin Specific						
Refe	rence	ISO/TS 17575-2, C	Clause 7.2	.3		
Initia	Condition	A valid Instance in	stance1 h	as al	ready been created.	
		Session exists for i	instance1			
Correct parameter			erization has already been done to establish session ss, port, url, protocol, PDP context, etc. are set)			
Stim	ulus and Expected Be	ehaviour				
	Tester		Test Point		DUT	
1	StartSession (Instance Reason = any, S		AppEm			
2			AppEm		R: CEN175752Error	
3	Verify whether CEN17 ERInSession	75752Error equals to				
4	IF verify NOT OK THEN TP failed ENDIF					
5	Verify whether session has been established at remote end		RemEnd			
6	IF verify OK THEN TP failed ELSE TP passed	ı				

TP/SI	H/API/BI/02	Session establis	hment on	ce n	o instance initialized			
TP Or	rigin	Specific						
Refer	ence	ISO/TS 17575-2, (Clause 7.2	2.3				
Initial	Condition	FE Communicatio	ns API is i	nitial	ized			
Stimu	timulus and Expected Behaviour							
	Tester		Test Point		DUT			
1	StartSession (Instance = invalidInstance1, Reason = any, SessionHandle)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175 ERNoInstance	752Error equals to						
4	IF verify NOT OK THEN TP failed ELSE TP passed ENDIF							

TP/SH/API/BI/03 Session establish			ce e	nd point unknown	
Prigin	Specific				
rence	ISO/TS 17575-2,	Clause 7.2	2.3		
l Condition	A valid Instance in	nstance1 h	as a	lready been created.	
	No parameterizati	on has be	en do	one to establish session	
ulus and Expected Be	haviour				
Tester		Test Point		DUT	
		AppEm			
		AppEm		R: CEN175752Error	
Verify whether CEN175752Error equals to ERUnknownEndpoint					
4 IF verify NOT OK THEN TP failed ELSE TP passed ENDIF					
	Origin rence I Condition ulus and Expected Bel Tes StartSession (Instance : Reason = any, Se Verify whether CEN175 ERUnknownEndpoint IF verify NOT OK THEN TP failed ELSE TP passed	Origin Specific Tence ISO/TS 17575-2, I Condition A valid Instance in No parameterization Ulus and Expected Behaviour Tester StartSession (Instance = instance1, Reason = any, SessionHandle) Verify whether CEN175752Error equals to ERUnknownEndpoint IF verify NOT OK THEN TP failed ELSE TP passed	Prigin Specific Trence ISO/TS 17575-2, Clause 7.2 I Condition A valid Instance instance1 in No parameterization has be allus and Expected Behaviour Tester Test Point StartSession (Instance = instance1, Reason = any, SessionHandle) AppEm Verify whether CEN175752Error equals to ERUnknownEndpoint IF verify NOT OK THEN TP failed ELSE TP passed	Origin Specific Tence ISO/TS 17575-2, Clause 7.2.3 I Condition A valid Instance instance1 has a No parameterization has been do ulus and Expected Behaviour Tester Test Point StartSession (Instance = instance1, Reason = any, SessionHandle) Verify whether CEN175752Error equals to ERUnknownEndpoint IF verify NOT OK THEN TP failed ELSE TP passed	Prigin Specific rence ISO/TS 17575-2, Clause 7.2.3 I Condition A valid Instance instance1 has already been created. No parameterization has been done to establish session ulus and Expected Behaviour Tester Test Point DUT StartSession (Instance = instance1, Reason = any, SessionHandle) AppEm Rescon Rescondant Re

TP/SI	TP/SH/API/BI/04 Ending the session				stance initialized			
TP Origin Specific								
Refer	ence	ISO/TS 17575-2, C	lause 7.4					
Initial	Condition	FE Communication	s API is i	nitiali	zed			
Stimu	lus and Expected Bel	naviour						
	Tester		Test Point		DUT			
1	EndSession (Instance = invalidInstance, Reason = any)		AppEm					
2			AppEm		R: CEN175752Error			
3	3 Verify whether CEN175752Error equals to ERNoInstance							
4	4 IF verify NOT OK THEN TP failed ELSE TP passed ENDIF							

TP/S	H/API/BI/05	Ending the session	on once r	no se	ession is established		
TP C	Specific						
Refe	rence	ISO/TS 17575-2, C	lause 7.4				
Initia	I Condition	A valid Instance ins	stance1 h	as a	ready been created.		
		No session exists f	or instand	ce1.			
Stim	ulus and Expected	Behaviour					
		Tester	Test Point		DUT		
1	EndSession (Instant Reason = any		AppEm				
2			AppEm		R: CEN175752Error		
3	Werify whether CEN175752Error equals to ERNoInstance						
4	IF verify NOT OK THEN TP faile	d					
	ELSE TP pass ENDIF	sed					

TP/SF	H/API/BI/06	Ending the session	Ending the session once session is in STSendingUnformattedADU					
TP Or	igin	Specific						
Refere	ence	ISO/TS 17575-2, C	lause 7.4	ļ				
Initial	Condition	A valid Instance ins	stance1 h	as al	ready been created.			
		Session for instance	e 1 is est	ablis	hed.			
		Session is in state	STSendir	ngUn	formattedADU			
			t purposes for other operations and corresponding to this state eps how to fulfil this precondition.					
					already been done to establish session otocol, PDP context, etc. are set)			
Stimu	lus and Expected Be	haviour						
	Tester		Test Point		DUT			
1	EndSession (Instance = instance1, Reason != RERemoteDrop)		AppEm					
2			AppEm		R: CEN175752Error			

3

4

ERInSession

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

ERInSession

IF verify□K

ENDIF

THEN TP passed **ELSE TP failed**

TP/S	H/API/BI/07	Ending the session once session is in STSendingADU					
TP O	rigin	Specific					
Refe	rence	ISO/TS 17575-2, C	Clause 7.4				
Initia	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session for instance	ce 1 is est	ablis	hed.		
		Session is in state	Session i	s in s	state STSendingADU		
		NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition. Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)					
Stimu	ulus and Expected Be	haviour					
	Tes	ster	Test Point		DUT		
1	EndSession (Instance = instance1, Reason != RERemoteDrop)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175	5752Error equals to					

4

TP/SH/API/BI/08 Ending the session		on once session is in STSendingADURequest						
TP Origin Specific								
Refe	rence	ISO/TS 17575-2, C	Clause 7.4	ļ				
Initia	l Condition	A valid Instance in	stance1 h	as al	ready been created.			
		Session for instance	ce 1 is est	ablis	hed.			
		Session is in state	Session i	s in s	state STSendingADURequest			
	which specify the st Correct paramete		purposes for other operations and corresponding to this state ps how to fulfil this precondition. rization has already been done to establish sessions, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected B	 ehaviour						
	Te	ester	Test Point		DUT			
1	EndSession (Instance Reason != RERe	·	AppEm					
2	2		AppEm		R: EN 5752Error			
3	Verify whether CEN175752Error equals to ERInSession							
4	4 IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/SH/API/BI/09 Ending the session		on once session is in STAwaitingADUConfirm						
TP Origin Specific								
Refe	rence	ISO/TS 17575-2, 0	Clause 7.4	1				
Initia	l Condition	A valid Instance in	stance1 h	as a	Iready been created.			
		Session for instan	ce 1 is est	tablis	hed.			
		Session is in state	Session i	s in s	state STAwaitingADUConfirm			
	NOTE which s		NOTE see test purposes for other operations and corresponding to this state which specify the steps how to fulfil this precondition.					
			terization has already been done to establish session ess, port, url, protocol, PDP context, etc. are set)					
Stim	ulus and Expected Be	haviour						
	Те	ster	Test Point		DUT			
1	EndSession (Instance : Reason != RERei	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Werify whether CEN175752Error equals to ERInSession							
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							

A.4 Communication Service Primitives

These Test Purposes apply to communication service primitives as claimed in ISO/TS 17575-2 Clause B.2

with respect to following PICS proforma entries:	
 API supports SendUnformattedADU; 	

- API supports SendADUSetStart;
- API supports SendADU;
- API supports SendADUSetEnd;
- API supports UnformattedADUReceived Event;
- API supports ADUReceived Event;
- API supports ADUSent Event;
- API supports ADUSendOK Event.

A.4.1 BV test purposes (Valid Behaviour tests)

Test subgroup objective:

- to test DUT behaviour with respect to sending unformatted ADU while one and multiple sessions are established;
- to test DUT behaviour with respect to sending set of structured ADU while one and multiple sessions are established:
 - having one ADU in a set;
 - having multiple ADUs in a set;
- to test DUT behaviour with respect to receiving unformatted ADU while one and multiple sessions are established;
- to test DUT behaviour with respect to receiving structured ADU while one and multiple sessions are established;
- to test DUT behaviour with respect to ADU request from remote end.

TP/CSP/API/BV/01	Sending unforma	Sending unformatted ADU					
TP Origin	Specific	Specific					
Reference	ISO/TS 17575-2, C	ISO/TS 17575-2, Clause 7.3.2					
Initial Condition	A valid Instance in	A valid Instance instance1 has already been created.					
	Session for instance	Session for instance1 has already been established.					
	Session related to	Session related to Instance1 is in STSessionIdle state.					
Stimulus and Expected Behaviour							
	Tester Test DIIT						

	Tester	Test Point	DUT
1	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
			Unformatted ADU is being sent
5	Remote end acknowledges receipt of ADU	RemEnd	
6			C: ADUSent (Instance)
7	□F (Instance equals to instance1) THEN TP passed ELSE TP failed ENDIF		

TP/CSP/API/BV/02 Sending unformation			tted ADU (multiple sessions)					
TP O	rigin	Specific						
Refer	rence	ISO/TS 17575-2, (Clause 7.3	3.2				
		A valid Instance in	stance1 a	nd in	stance2 has already been created.			
Initial	Condition	Session for instance	ce1 and ir	stan	ce2 has already been established.			
		Instance1 and inst	ance2 are	in S	TSessionIdle state.			
Stimu	ulus and Expected E	 Behaviour						
	Tester		Test Point		DUT			
1	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CENERNOError	175752Error equals to						
4	IF verify NOT OK THEN TP failed ENDIF	ı						
	9				Unformatted ADU is being sent			
5	Remote end acknow	ledges receipt of ADU	RemEn					
6					C: ADUSent (Instance)			
7	IF (Instance NOT equals to instance1) THEN TP failed ENDIF							
8		J (Instance = instance2, any, Message = any)	AppEm					
9			AppEm		R: CEN175752Error			

RemEnd

10

11

12

13

14

ERNoError

ENDIF

IF verify NOT OK THEN TP failed

Verify whether CEN175752Error e □ uals to

Remote end acknowledges receipt of ADU

IF (Instance equals to instance2) **THEN TP passed ELSE TP faild** ■ NDIF

Unformatted ADU is being sent

C: ADUSent (Instance)

TP/CSP/API/BV/03 Sending one structure Sending Sending one structure Sending Sen			ctured Al	OU				
TP Origin Specific								
Refe	rence	ISO/TS 17575-2, C	lause 7.3.3					
Initial Condition A valid Instance in			stance1 has already been created.					
		ce1 has already been established.						
	Session related to			instance1 is in STSessionIdle state.				
Stimi	l ulus and Expected Beha	wiour						
Juille	Teste		Test		DUT			
	reste	:1	Point		501			
1	SendADUSetStart (Instance	ce = instance1)	AppEm					
	,	,						
2			AppEm		R: CEN175752Error			
3	Verify whether CEN17575	52Frror equals to	7 40 10					
•	ERNoError	DELITOR Equals to						
4	IF verify NOT OK							
	THEN TP failed							
_	ENDIF							
5	Remote End indicates its ability to receive elements		RemEnd					
6			AppEm		C: ADUSendOK(Instance, CanSend)			
7	Verify⊡whether Instance equals to instance1 AND CanSend equals to TRUE							
8	IF verify NOT OK							
	THEN TP failed ENDIF							
9	SendADU (Instance = inst	tance1,	AppEm					
	ElementLen = any, Element = any)							
10			AppEm		R: WORD			
11	Verify whether returned v	value is greater than						
	0	-						
12	IF verify NOT OK							
	THEN TP failed ENDIF							
13	SendADUSetEnd(Instance	e = instance1)	AppEm					
	23							
14			AppEm		R: CEN175752Error			
15	Verify whether CEN17575	52Error equals to						
_	ERNoError							
16	IF verify NOT OK							
	THEN TP failed ENDIF							
17	Remote end acknowledge		RemEnd					

18		AppEm	C: ADUSent (Instance)
19	IF (Instance equals to instance1) THEN TP passed ELSE TP failed ENDIF		

P/CSI	P/API/BV/04	Sending multiple s	tructured	ADI	Js in one ADU set (n messages)		
TP Oriç	gin	Specific					
Refere	nce	ISO/TS 17575-2, Cla	ause 7.3.3				
Initial C	Condition	A valid Instance inst	ance1 has	alre	eady been created.		
		Session for instance	1 has alre	ady	been established.		
	Session related to in	stance1 is	s in S	STSessionIdle state.			
Stimulu	us and Expected B	ehaviour					
		Tester	Test Point		DUT		
1	SendADUSetStart	(Instance = instance1)	AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CE ERNoError	EN175752Error equals to					
4	IF verify NOT OK THEN TP failed ENDIF						
5	Remote End indicates its ability to receive elements		RemEnd				
6			AppEm		C: ADUSendOK(Instance, CanSend)		
7	Verify whether Ins	stance equals to instance1 quals to TRUE					
8	IF verify NOT OK THEN TP fail ENDIF	led					
9	i=0						
	NOTE: i is internal counter used by DUT to send n consecutive SendADU messages						
10	SendADU (Instanc ElementLen Element = a	= any,	AppEm				
11			AppEm		R: WORD		
12	Verify whether ret	turned value is greater					
13	IF verify NOT OK THEN TP fai	led					

	ENDIF		
14	i=i+1		
15	IF (i < n) THEN GOTO STEP10 ENDIF		
16	SendADUSetEnd(Instance = instance1)	AppEm	
17		AppEm	R: CEN□75752Error
18	Verify whether CEN175752Error equals to ERNoError		
19	IF verify NOT OK THEN TP failed ENDIF		
20	Remote end acknowledges receipt of ADU	RemEnd	
21		AppEm	C: ADUSent (Instance)
22	IF (Instance equals to instance1) THEN TP pass□d ELSE TP failed ENDIF		

•	Specific							
TP Origin Specific								
Reference ISO/TS 17575-2, C				Clause 7.3.3				
Initial Condition A valid Instance ins			stance1 and instance 2has already been created.					
			stan	ce2 has already been established.				
Instance1 and inst			·					
us and Evnected Reh	aviour							
		Toet		DUT				
1 650	5 1	Point		501				
SendADUSetStart (Instan	ce = instance1)	AppEm						
		AppEm	П	R: CEN175752Error				
Verify whether CEN1757	52Error equals to							
ERNoError								
IF verify NOT OK								
THEN TP failed								
		Down Fred						
-		Remena						
		AppEm		C: ADUSendOK(Instance, CanSend)				
Verify whether Instance equals to instance1								
-	TRUE							
THEN TP failed								
SendADU (Instance = ins ElementLen = any, Element = any)	tance1,	AppEm						
		A F	1	D. WODD				
Walter of the control of		App⊏m	Ш	R: WORD				
Verify whether returned v	value is greater than							
IF verify NOT OK THEN TP failed								
ENDIF								
SendADUSetEnd(Instanc	e = instance1)	AppEm						
		AppEm		R: CEN175752Error				
Verify whether CEN17579	52Error equals to							
IF verify NOT OK THEN TP failed ENDIF								
	Us and Expected Beha Teste SendADUSetStart (Instan Verify whether CEN1757: ERNoError IF verify NOT OK THEN TP failed ENDIF Remote End indicates its elements Verify□whether Instance AND CanSend equals to IF verify NOT OK THEN TP failed ENDIF SendADU (Instance = ins ElementLen = any, Element = any) Verify whether returned to IF verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance) Verify whether CEN1757: ERNoError IF verify NOT OK	Instance1 and instance and Expected Behaviour Tester SendADUSetStart (Instance = instance1) Verify whether CEN175752Error equals to ERNoError IF verify NOT OK THEN TP failed ENDIF Remote End indicates its ability to receive elements Verify whether Instance equals to instance1 AND CanSend equals to TRUE IF verify NOT OK THEN TP failed ENDIF SendADU (Instance = instance1, ElementLen = any, Element = any) Verify whether returned value is greater than 0 IF verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) Verify whether CEN175752Error equals to ERNoError IF verify NOT OK THEN TP failed	Instance1 and instance2 is in us and Expected Behaviour Tester Test Point SendADUSetStart (Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError F verify NOT OK THEN TP failed ENDIF Ements AppEm Verify whether Instance equals to instance1 AND CanSend equals to TRUE F verify NOT OK THEN TP failed ENDIF SendADU (Instance = instance1, ElementLen = any, Element = any) F verify whether returned value is greater than 0 F verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether centraled F verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError F verify NOT OK F verify NOT OK F verify whether CEN175752Error equals to ERNoError F verify NOT OK F verify NOT	Use and Expected Behaviour Tester Test Point SendADUSetStart (Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError Remote End indicates its ability to receive elements Verify Whether Instance equals to instance1 AND CanSend equals to TRUE If verify NOT OK THEN TP failed ENDIF SendADU (Instance = instance1, ElementLen = any, Element = any) Verify whether returned value is greater than 0 If verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether returned value is greater than 0 Verify whether returned value is greater than 0 If verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError If verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError If verify NOT OK If verify NOT OK THEN TP failed ENDIF SendADUSetEnd(Instance = instance1) AppEm Verify whether CEN175752Error equals to ERNoError				

18		AppEm	C: ADUSent (Instance)
19	IF (Instance equals to instance1) THEN TP GOTO STEP20 ELSE TP failed ENDIF		
20	SendADUSetStart (Instance = instance2)	AppEm	
21		AppEm	R: CEN175752Error
22	Verify whether CEN175752Error equals to ERNoError		
23	IF verify NOT OK THEN TP failed ENDIF		
24	Remote End indicates its ability to receive elements	RemEnd	
25		AppEm	C: ADUSendOK(Instance, CanSend)
26	Verify whether Instance equals to instan□e1 AND CanSend equals to TRUE		
27	IF verify NOT OK THEN TP failed ENDIF		
28	SendADU (Instance = instance2, ElementLen = any, Element = any)	AppEm	
29		AppEm	R: WORD
30	Verify whether returned value is greater than 0		
31	IF verify N□T OK THEN TP failed ENDIF		
32	SendADUSetEnd(Instance = instance2)	AppEm	
33		AppEm	R: CEN175752Error
34	Verify whether CEN175752Error equals to ERNoError		
35	IF verify NOT OK THEN TP failed ENDIF		
36	Remote end acknowledges receipt of ADU	RemEnd	
37		AppEm	C: ADUSent (Instance)
38	IF (Instance equals to instance2) THEN TP passed ELSE TP failed ENDIF		

TP/CSP/API/BV/06	Receipt of unformatted ADU
TP Origin	Specific
Reference	ISO/TS 17575-2, Clause 7.2.1
Initial Condition	A valid Instance instance1 has already been created.
	Session for instance 1 is established.
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)

	Tester	Test Point	DUT
1	Unformatted ADU is sent from the remote end, consisting of certain payload P of length L, using a session related to instance1.	RemEnd	
2		AppEm	C: UnformattedADUReceived (Instance, UnformattedMessageLen, UnformattedMessage)
3	Verify whether: Instance equals to instance1 AND UnformattedMessageLen equals to L AND UnformattedMessage equals to P		
4	IF verify NOT OK THEN T□ failed ENDIF		
5	Verify whether the remote end has been informed that ADU was received.	RemEnd	
6	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/C	Receipt of unform	natted AD	Us f	or multiple sessions					
TP C	rigin	Specific							
Refe	rence	ISO/TS 17575-2, 0	Dause 7.2.1						
Initial Condition A valid Instance ins		stance1 and instance2 have already been created.							
	Session		ssion for instance1 and instance2 are established.						
		rization has already been done to establish session							
		(example: ipAddre	ss, port, u	rl, pr	otocol, PDP context, etc. are set)				
Stim	ulus and Expected B	ehaviour							
	Te	ester	Test Point		DUT				
1	Unformatted ADU is a end, consisting of ce length L1, using a se instance1.	rtain payload P1 of	RemEnd						
			AppEm		C: UnformattedADUReceived (Instance, UnformattedMessageLen, UnformattedMessage)				
3	Verify whether: Instance equals to instance1 AND UnformattedMessageLen equals to L1 AND UnformattedMessage equals to P1								
4	IF verify NOT OK THEN TP⊡failed ENDIF								
5	Verify whether the remote end has been informed that ADU was received.		RemEnd						
6	IF verify NOT OK THEN TP failed ENDIF								
7	ENDIF Unformatted ADU is sent from the remote end, consisting of certain payload P2 of length L2, using a session related to instance2.		RemEnd						
8			AppEm		C: UnformattedADUReceived (Instance, UnformattedMessageLen, UnformattedMessage)				
9	UnformattedMes	to instance2 AND ssageLen equals to L2 ssage equals to P2							
10	IF verify NOT OK TH□N TP failed ENDIF								

11	Verify whether the remote end has been informed that ADU was received.	RemEnd	
12	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/C	SP/API/BV/08	Receipt of struct	ured ADU			
TP Origin Specific						
Reference ISO/TS 17575-2, Clause 7.2.1						
Initia	I Condition	A valid Instance in	stance1 h	as al	ready been created.	
		Session for instance	ce 1 is est	ablis	hed.	
			erization has already been done to establish sessionss, port, url, protocol, PDP context, etc. are set)			
Stim	ulus and Expected l	Behaviour				
	7	Tester	Test Point		DUT	
1	Structured ADU is susing a session rela	sent from the remote end ated to instance1.	RemEnd			
2			AppEm		C: ADUReceived (Instance, Element)	
3	3 Verify whether: Instance equals to instance□AD Element corresponds to sent ADU					
4	IF verify NOT OK THEN TP failed					

RemEnd

ENDIF

Verify whether the remote end has been

5

TP/CSP/API/BV/09 Receipt of structure TP Origin Specific		ured ADU	for	multiple sessions			
TP Origin Specific							
Reference ISO/TS 17575-2, C			lause 7.2.1				
		stance1 and instance2 have already been created.					
		ce1 and in	e1 and instance2 are established.				
					already been done to otocol, PDP context, etc. a		
Stimu	ulus and Expected B	sehaviour					
	T	ester	Test Point		DUT		
1	Structured ADU is se using a session relat	ent from the remote end ted to instance1.	RemEnd				
2			AppEm		C: ADUReceived (Instance,	Element)	
3	-	s to instance1 AND ponds to sent ADU					
4	IF verify NOT OK THEN TP failed ENDIF						
5	Verify whether the re informed that ADU w		RemEnd				
6	IF verify NOT OK THEN TP failed ENDIF						
7	Structured ADU is se using a session relat	ent from the remote end ted to instance2.	RemEnd				
8			AppEm		C: ADUReceived (Instance,	Element)	
9		s to instance2 AND□ ponds to sent ADU				_	
10	IF verify NOT OK THEN TP failed ENDIF						
11	Verify whether the re informed that ADU w		RemEnd				
12	IF verify OK THEN TP passe ELSE TP failed ENDIF						

TDC			E Applicat	ion	receives ADURequest callback		
TP Origin Specific							
Refe	rence	ISO/TS 17575-2,	Clause 7.2.1				
Initial Condition A valid Instance in		stance1 h	as b	een created.			
Session for instar							
	Session is in STS						
					already been done to establish sessic otocol, PDP context, etc. are set)		
Stim	ulus and Expected Be	ehaviour					
	T€	ester	Test Point		DUT		
1	Remote end sends Al elements E correspor		RemEnd				
2			AppEm		C: ADURequest (Instance, Elements)		
3	Verify whether: Instance equals Elements corres	to instance1 AND					
4	IF verify NOT OK THEN TP failed						
	ELSE TP passed	İ					
	BI test purposes	(Invalid Behaviou	r tests)				
- to	ubgroup objective:	aviour with respect to	sendina ı	ınfor	matted ADI Lonce:		
- to	test DUT invalid beh	·	sending ι	ınfor	matted ADU once:		
- to —		·	sending ι	ınfor	matted ADU once:		
- to 	test DUT invalid beh	·	sending (ınfor	matted ADU once:		
- to 	test DUT invalid behavior no instance exists; no session exists;	·	Ū				
_	test DUT invalid behavior no instance exists; no session exists;	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible st	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible statest DUT invalid behavior.	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible statest DUT invalid behavior.	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible statest DUT invalid behavior starting ADU set; ending ADU set;	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible statest DUT invalid behavior starting ADU set; ending ADU set; sending ADU;	ate which does not a	llow sendi				
_	test DUT invalid behavior no instance exists; no session exists; DUT is in visible statest DUT invalid behavior starting ADU set; ending ADU set; sending ADU; once:	ate which does not a	llow sendi				

DUT is in visible state which does not allow starting and ending ADU set and sending structured ADU

TP/C	SP/API/BI/01	Sending unformatted ADU once no instance is initialized					
TP Origin Specific							
Reference ISO/TS 17575-2, C			Clause 7.3.2				
Initial Condition FE Communication			ns API is ir	nitiali	zed		
Stimulus and Expected Behaviour							
Tester		Test Point		DUT			
1	SendUnformattedADU (Instance = invalidInstance, MessageLen = any, Message = any)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175 ERNoInstance	752Error equals to					
4	4 IF verify NOT OK THEN TP failed ENDIF						
5	5 Verify whether an ADU payload transmitted to remote end		RemEnd				
6	6 IF verify OK THEN TP failed ELSE TP passed ENDIF						

TP/CSP/API/BI/02 Sending unformation			tted ADU	onc	e no session is established			
TP Origin Specific								
Reference ISO/TS 17575-2, C		Clause 7.3	.2					
			valid Instance instance1 has already been created. o session exists for instance1.					
Stimu	ulus and Expected Be	ehaviour						
	Tester		Test Point		DUT			
1	SendUnformattedADU (Instance = instar MessageLen = ar	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN17 ERBadState	5752Error equals to						
4	IF verify NOT OK THEN TP failed ENDIF							
5	Verify whether an ADU payload transmitted to remote end		RemEnd					
6	IF verify OK THEN TP failed ELSE TP passed ENDIF							

TP/C	P/CSP/API/BI/03 Sending unformatted ADU once session is in STStarting state							
TP O	TP Origin Specific							
Refer	ence	ISO/TS 17575-2, (Clause 7.3	lause 7.3.2				
Initial	Initial Condition A valid Instance in			as al	ready been created.			
		No session exists	for instanc	e1.				
Stimu	llus and Expected B	ehaviour						
	Tester		Test Point		DUT			
1	StartSession (Instance = instance1, Reason = any, SessionHandle)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equals to ERNoError							
4	IF verify NOT OK THEN TP failed ENDIF							
5	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)		AppEm					
6			AppEm		R: CEN175752Er□or			
7	Verify whether CEN1 ERBadState	75752Error equals to						
8	IF verify NOT OK THEN TP failed ENDIF							
9	Verify whether an ADU payload transmitted to remote end		RemEnd					
10	IF verify OK THEN TP failed ELSE TP passed ENDIF	d						

TP/CSP/API/BI/04	Sending unformatted ADU once session is in STEnding state
TP Origin	Specific
Reference	ISO/TS 17575-2, Clause 7.3.2
Initial Condition	A valid Instance instance1 has already been created.
	Session exists for instance1.
	Session related to instance1 is in STSessionIdle state.
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set).

	Tester	Test Point	DUT
1	EndSession (Instance = instance1, Reason = any)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
6		AppEm	R: CEN175752Er□or
7	Verify whether CEN175752Error equals to ERBadState		
8	IF verify NOT OK THEN TP failed ENDIF		
9	Verify whether an ADU payload transmitted to remote end	RemEnd	
10	IF verify OK THEN TP failed ELSE TP passed ENDIF		

TP/CSP/API/BI/05 Send		Sending unforma	tted ADU	onc	e session is in STErrored state	
TP Origin Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.3	.2		
Initia	Condition	Session related to	instance1	is in	STErrored state.	
Stim	ulus and Expected Be	haviour				
	Tester		Test Point		DUT	
1	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)		AppEm			
2			AppEm		R: CEN175752Error	
3	Werify whether CEN175752Error equals to ERBadState					
4	IF verify NOT OK THEN TP failed ENDIF					
5	Verify whether an ADU payload transmitted to remote end		RemEnd			
6						

TP/CSP/API/BI/06	Sending unformatted ADU once another unformatted ADU is being sent				
TP Origin	Specific				
Reference	ISO/TS 17575-2, Clause 7.3.2				
Initial Condition	A valid Instance instance1 has already been created.				
	Session exists for instance1.				
	Session related to instance1 is in STSessionIdle state.				
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set).				

	Tester	Test Point	DUT
1	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
6		AppEm	R: CEN175752Error
7	Verify whether CEN175752Error equals to ERBadState		
8	IF verify NOT OK THEN TP ⊡iled NDIF		
9	Verify whether an ADU payload transmitted to remote end	RemEnd	
10	IF verify OK THEN TP failed ELSE TP passed ENDIF		

TP/CSP/API/BI/07 Sending unformation state			tted ADU	onc	e session is in STSendingADURequest				
TP C	rigin	Specific							
Reference ISO/TS 17575-2, 0			Clause 7.3	.2					
Initial Condition A valid Instance in		stance1 h	as al	ready been created.					
		Session exists for instance1.							
		Session related to	Session related to instance1 is in STSessionIdle state.						
					already been done to establish session otocol, PDP context, etc. are set)				
Stim	ulus and Expected Bel	haviour							
	Tester		Test Point		DUT				
1	SendADUSetStart (Insta	ance = instance1)	AppEm						
2			AppEm		R: CEN175752Error				
3	Verify whether CEN175752Error equals t□ ERNoError								
4	IF verify NOT OK THEN TP failed ENDIF								
5	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)		AppEm						
6			AppEm		R: CEN175752Error				
7	Verify whether CEN175 ERBadState	752Error equals to							
8	IF verify NO□ OK THEN TP failed ENDIF								
9	Verify whether an ADU payload transmitted to remote end		RemEnd						
10	IF verify OK THEN TP failed ELSE TP passed ENDIF								

TP/CSP/API/BI/08	Sending unformatted ADU once session is in STSendingADU state				
TP Origin	Specific				
Reference	ISO/TS 17575-2, Clause 7.3.2				
Initial Condition	A valid Instance instance1 has already been created.				
	Session exists for instance1.				
	Session related to instance1 is in STSessionIdle state.				
	Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set)				
00 1 15 6 1	D.L.				

		1	
	Tester	Test Point	DUT
1	SendADUSetStart (Instance = instance1)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	Remote End indicates its ability to receive elements	RemEnd	
6		AppEm	C: ADUSendOK(instance, CanSend)
7	IF (Instance equals to instance1 AND CanSend equals to TRUE) THEN GOT□ STEP7 ELSE TP failed ENDIF		
8	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
9		AppEm	R: CEN175752Error
10	Verify whether CEN175752Error equals to ERBadState		
11	IF verify NOT OK THEN TP failed ENIF		
12	Verify whether an ADU payload transmitted to remote end	RemEnd	
13	IF verify OK THEN TP failed ELSE TP passed ENDIF		

ERNoError

TP/CSP/API/BI/10	Sending unformatted ADU once session failed
TP Origin	Specific
Reference	ISO/TS 17575-2, Clause 7.3.2
Initial Condition	A valid Instance instance1 has already been created.
	Session for instance1 has already been established.
	Session related to instance1 is in STSessionIdle state.

	Tester	Test Point	DUT
1a	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)	AppEm	
1b		RemEnd	In parallel to STEP1a terminate a session at remote en
2		AppEm	R: CEN17572Error
3	Verify whether CEN175752Error equals to ERSessionFailed		
4	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP Origin		Specific						
Refer	ence	ISO/TS 17575-2, Clause 7.3.3						
Initial Condition FE Communication		ns API is initialized						
Stimu	llus and Expected Bel	naviour						
	Tester		Test Point		DUT			
1	SendADUSetStart (Instance = instance1)		AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175 to□ERNoInstance	752Error equals						
4	IF verify OK THEN TP passed ELSE TP failed ENDIF							
TP/C	SP/API/BI/12	Starting ADU set	once no	sess	ion is established			
TP O	rigin	Specific						
Refer	ence	ISO/TS 17575-2, C	Clause 7.3.3					
Initial	Initial Condition A valid Instance in: No session exists to		stance1 has already been created. for instance1.					
Stimu	ılus and Expected Bel	naviour						
	Tester		Test Point		DUT			
1	SendADUSetStart (Insta	nce = instance1)	AppEm					
2			AppEm		R: CEN75752Error			

Starting ADU set once no instance is initialized

3

4

ERBadState

IF verify OK

ENDIF

THEN TP passed ELSE TP failed

Verify whether CEN175752Error equals to

TP/CSP/API/BI/11

TP/CSP/API/BI/13 Starting ADU		Starting ADU se	t once ses	sion	is in STStarting state
TP Origin Specific					
Reference ISO/TS 17575-2, C			Clause 7.3	3.3	
Initia	l Condition	A valid Instance in	nstance1 h	as a	Iready been created.
		No session exists	for instance	ce1.	
Stim	ulus and Expected	Behaviour			
Tester		Test Point		DUT	
1	StartSession (Instance = instance1, Reason = any, SessionHandle)		AppEm		
2			AppEm		R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError				
4	4 IF verify NOT OK THEN TP failed ENDIF				
5	SendADUSetStart (II	nstance = instance1)	AppEm		
6	6		AppEm		R: CEN175752Error
7	Verify whether CEN175752Error equ□ls to ERBadState				
8	IF verify OK THEN TP passed ELSE TP failed ENDIF				

TP/CSP/API/BI/14 Starting ADU s		Starting ADU set	once ses	sion	is in STEnding state		
TP Origin Specific							
Reference ISO/TS 17575-2, CI		Clause 7.3	lause 7.3.3				
Initia	l Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session exists for	instance1				
		Session related to	instance1	is in	STSessionIdle state.		
					already been done to establish session otocol, PDP context, etc. are set).		
Stim	ulus and Expected Be	haviour					
	Tester		Test Point		DUT		
1	EndSession (Instance = instance1, Reason = any)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175 ERNoError	5752Error equals to					
4	4 IF verify NOT OK THEN TP failed ENDIF						
5	SendADUSetStart (Instance = instance1)		AppEm				
6	6		AppEm		R: CEN175752Error		
7	7 Verify whether CEN175752Error equals to ERBadState						
8 IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/C	Starting ADU set	once ses	sion	is in STErrored state				
TP Origin Specific								
Reference ISO/TS 17575-2, CI			Clause 7.3	3.3				
Initia	I Condition	Session related to	instance1	is in	STErrored state.			
Stim	ulus and Expected Be	ehaviour						
	Tester		Test Point		DUT			
1	SendADUSetStart (Inst	ance = instance1)	AppEm					
2	2		AppEm		R: CEN175752Error			
3	Werify whether CEN175752Error equals to ERBadState							
4	4 IF verify OK THEN TP passed ELSE TP failed ENDIF							

TP/CSP/API/BI/16 Starting ADU set of			once ses	sion	is in STSendingUnformattedADU state		
TP O	rigin	Specific					
Refe	rence	ISO/TS 17575-2, C	Clause 7.3.3				
Initial Condition A valid Instance ins		stance1 h	as a	ready been created.			
		Session exists for	instance1				
		Session related to	instance1	l is ir	STSessionIdle state.		
					already been done to establish session otocol, PDP context, etc. are set).		
Stimu	ulus and Expected Be	haviour					
	Tes	ster	Test Point		DUT		
1	SendUnformattedADU (Instance = instance MessageLen = and		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175 ERNoError	752Error equals to					
4	IF verify NOT OK THEN TP failed ENDIF						
5	SendADUSetStart (Insta	ance = instance1)	AppEm				
6			AppEm		R: CEN175752Error		
7	Verify whether CEN175 ERBadState	5752Error equ □ ls to					
8	IF verify OK THEN TP passed ELSE TP failed						

ENDIF

TP/CS	SP/API/BI/17	Starting ADU set once session is in STSendingADURequest state					
TP Ori	igin	Specific					
Refere	ence	ISO/TS 17575-2, C	lause 7.3	.3			
Initial (Condition	A valid Instance ins	stance1 h	as al	ready been created.		
		Session exists for i	nstance1.				
		Session related to	elated to instance1 is in STSessionIdle state.				
			ect parameterization has already been done to establish session nple: ipAddress, port, url, protocol, PDP context, etc. are set).				
Stimul	us and Expected Be	ehaviour					
	Tester		Test Point		DUT		
1	SendADUSetStart (Ins	tance = instance1)	AppEm				
2			Annem		D. 05N4757505		

	Tester	Test Point	DUT
1	SendADUSetStart (Instance = instance1)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	SendADUSetStart (Instance = instance1)	AppEm	
6		AppEm	R: CEN175752Error
7	Verify whether CEN175752Error equals to ERBadState		
8	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/C	SP/API/BI/18	Starting ADU set	once session is in STSendingADU state			
TP Origin Specific						
Refe	rence	ISO/TS 17575-2, 0	Clause 7.3	.3		
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.	
		Session exists for	instance1.			
		Session related to	instance1	is in	STSessionIdle state.	
			erization has already been done to establish session ss, port, url, protocol, PDP context, etc. are set).			
Stimu	ulus and Expected B	ehaviour				
	Tester		Test Point		DUT	
1	SendADUSetStart (Instance = instance1)		AppEm			
2			AppEm		R: CEN175752Error	
3	Verify whether CEN1 ERNoError	75752Error equals to				
4	IF verify NOT OK THEN TP failed ENDIF					
5	Remote End indicates its ability to receive elements		RemEnd			
6	6		AppEm		C: ADUSendOK(Instance, CanSend)	
7	IF (Instance equals to CanSend equals THEN GOTO ST ELSE TP failed ENDIF	s to TRUE)				

AppEm

AppEm

R: CEN175752Error

8

9

10

11

ERBadState

IF verify K

ENDIF

THEN TP passed ELSE TP failed

SendADUSetStart (Instance = instance1)

Verify whether CEN175752Error equals to

TP/CS	SP/API/BI/19	Starting ADU set once session is in STAwaitingADUConfirm state					
TP Or	igin	Specific					
Refere	ence	ISO/TS 17575-2, Clause 7.3.3					
Initial	nitial Condition A valid Instance instance1 has already been created.				ready been created.		
		Session exists for	instance1.				
		Session related to	instance1 is in STSessionIdle state.				
					already been done to establish session otocol, PDP context, etc. are set).		
Stimu	Stimulus and Expected Behaviour						
	Tester		Test Point		DUT		
1	SendADUSetStart (Insta	ince = instance1)	AppEm				

1 So	SendADUSetStart (Instance = instance1)		
		AppEm	
2		AppEm	R: CEN175752Error
	erify whether CEN175752Error equals to RNoError		
	F verify NOT OK THEN TP failed :NDIF		
	Remote End indicates its ability to re□eive lements	RemEnd	
6			C: ADUSendOK(instance, CanSend)
	F (Instance equals to instance1 AND CanSend equals to TRUE) THEN GOTO STEP8 ELSE TP failed ENDIF		
8 S	SendADU (Instance = instance1, ElementLen = any, Element = any)	AppEm	
9		AppEm	R: WORD
10 V	erify whether returned value is greater than		
	F verify NOT OK THEN TP failed :NDIF		
12 Se	GendADUSetEnd (Instance = instance1)		
13		AppEm	R: CEN175752Error
	Verify whether CEN175752Error equals to		

	I verify NOT OK THEN TP failed ENDIF		
16	SendADUSetStart (Instance = instance1)	AppEm	
17		AppEm	R: CEN175752Error
18	Verify whether CEN175752Error equals to ERBadState		
19	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/C	SP/API/BI/20	Starting ADU set	once ses	sion	failed			
TP O	Specific							
Refe	rence	ISO/TS 17575-2,	Clause 7.3	3.3				
Initial	Condition	A valid Instance in	nstance1 h	as al	ready been created.			
		Session for instan	Session for instance1 has already been established.					
		Session related to	Session related to instance1 is in STSessionIdle state.					
Stimu	ulus and Expected l	3ehaviour						
	Tester		Test Point		DUT			
1a	SendADUSetStart (In	stance = instance1)	AppEm					
1b			RemEnd		In parallel to STEP1a terminate a session at remote end			
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175752Error equals to ERSessionFailed							
4	IF verify OK THEN TP pass ELSE TP failed							

ENDIF

TP/CSP/API/BI/21 Sending structure		ed ADU o	nce	no instance is initialized				
TP Origin Specific								
Reference ISO/TS 17575-2, C			Clause 7.3	.3				
Initia	I Condition	FE Communicatio	ns API is in	nitial	ized			
Stim	ulus and Expected Be	haviour						
Tester			Test Point		DUT			
1	SendADU (Instance = in ElementLen = any Element = any)		AppEm					
2			AppEm		R: WORD			
3	Verify whether returne	d value equals to 0						
4	IF verify NOT OK THEN TP failed ENDIF							
5	Verify whether an ADU to remote end	payload transmitted	RemEnd					
6	IF verify OK THEN TP failed ELSE TP passed ENDIF							

TP/CSP/API/BI/22 Sending structure		ed ADU o	nce	no session is established				
TP Origin Specific								
Reference ISO/TS 17575-2		ISO/TS 17575-2, (Clause 7.3	3.3				
Initial Condition		A valid Instance instance1 has already been created. No session exists for instance1.						
Stim	ulus and Expected Be	ehaviour						
	Те	ster	Test Point		DUT			
1	SendADU (Instance = ElementLen = any)		AppEm					
2			AppEm		R: WORD			
3	Verify whether returns	ed value equals to 0						
4	IF verify NOT OK THEN TP failed ENDIF							
5	Verify whether an ADI to remote end	J payload transmitted	RemEnd					
6	IF verify OK THEN TP failed ELSE TP passed ENDIF							

TP/CSP/API/BI/23		Sending structured ADU once session is in STStarting state						
TP Origin Specific								
Refer	ISO/TS 17575-2, (Clause 7.3.3						
Initial Condition A valid Instance in		stance1 has already been created.						
No session exists			for instanc	e1.				
Stimu	ılus and Expected Bel	l naviour						
	Tes		Test		DUT			
	1 65161		Point					
1	StartSession (Instance = Reason = any, Ses	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN175 ERNoError	752Error equals to						
4	IF verify NOT OK THEN TP failed ENDIF							
5	SendADU (Instance = in ElementLen = any Element = any)		AppEm					
6			AppEm		R: WORD			
7	Verify whether returned	I value equals to 0						
8	IF verify NOT OK THEN TP failed ENDIF							
9	Verify whether an ADU to remote end	payload transmitted	RemEnd					
10	IF verify OK THEN TP failed ELSE TP passed ENDIF							

TP/C	TP/CSP/API/BI/24 Sending structured ADU once session is in STEnding start TP Origin Specific					
TP Origin Specific						
Reference ISO/TS 17575-2, C				.3		
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.	
		Session exists for	instance1.			
		Session related to	instance1	is in	STSessionIdle state.	
					already been done to establish session otocol, PDP context, etc. are set).	
Stimu	ılus and Expected Be	ehaviour				
	Те	Test Point		DUT		
1	EndSession (Instance Reason = any)	= instance1,	AppEm			
2			AppEm		R: EN175752Error	
3	Verify whether CEN175752Error equals to ERNoError					
4	IF verify NOT OK THEN TP failed ENDIF					
5	SendADU (Instance = ElementLen = ar Element = any)		AppEm			
6			AppEm		R: WORD	
7	Verify whether return	ed value equals to 0				
8	IF verify NOT OK THEN TP failed ENDIF					
9	Verify whether an ADI to remote end	U payload transmitted	RemEnd			
10	IF verify OK THEN TP failed					

ELSE TP passed

TP/CSP/API/BI/25 Sending structured ADU once session is in STErrored state					session is in STErrored state			
TP Origin Specific								
Refe	rence	ISO/TS 17575-2, (Clause 7.3	.3				
Initia	l Condition	Session related to	instance1	is in	STErrored state.			
Stim	ulus and Expected Bel	naviour						
Teste		ter	Test Point		DUT			
1	SendADU (Instance = ir ElementLen = any Element = any)		AppEm					
2			AppEm		R: WORD			
3	Verify whether returned	d value equals to 0						
4	IF verify NOT OK THEN TP failed ENDIF							
5	Verify whether an ADU to remote end	payload transmitted	RemEnd					
6	IF verify OK THEN TP failed ELSE TP passed ENDIF							

TP/0	CSP/API/BI/26	Sending structured ADU once session is in STSendingUnformattedAD state					
TP (Specific						
Refe	erence	ISO/TS 17575-2, C	Clause 7.3	.3			
Initia	al Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session exists for i	instance1.				
		Session related to	instance1	is in	STSessionIdle state.		
					already been done to establish session otocol, PDP context, etc. are set).		
Stim	ulus and Expected Bel	haviour					
	Tes	ster	Test Point		DUT		
1	SendUnformattedADU (Instance = instance1, MessageLen = any, Message = any)		AppEm				
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175752Error equals to ERNoError						
4	IF verify NOT OK THEN TP failed ENDIF						
5	SendADU (Instance = ir ElementLen = any Element = any)		AppEm				
6			AppEm		R: WORD		
7	Verify whether returned	d value equals to 0					
8	IF verify NOT OK THEN TP failed ENDIF						
9	Verify whether an ADU to remote end	RemEnd					
10	IF verify OK THEN TP failed ELSE TP passed ENDIF						

		Point	
1	SendADUSetStart (Instance = instance1)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	SendADU (Instance = instance1, ElementLen = any, Element = any)	AppEm	
6		AppEm	R: WORD
7	Verify whether returned value equals to 0		
8	IF verify NOT OK THEN TP failed ENDIF		
9	Verify whether an ADU payload transmitted to remote end	RemEnd	
10	IF verify OK THEN TP failed ELSE TP passed ENDIF		

15	IF verify NOT OK THE□ T failed ENDIF		
16	SendADU (Instance = instance1, ElementLen = any, Element = any)	AppEm	
17		AppEm	R: WORD
18	Verify whether returned value equals to 0		
19	IF verify OK THEN TP passed ELSE TP failed ENDIF		
20	Verify whether an ADU payload transmitted to remote end	RemEnd	
21	IF verify OK THEN TP failed ELSE TP passed ENDIF		

TP/C	SP/API/BI/29	Ending ADU set once no instance is initialized					
TP O	Origin Specific						
Reference ISO/TS 17575-2, CI			Clause 7.3	3.3			
Initia	l Condition	FE Communication	ns API is i	nitial	ized		
Stim	ulus and Expected Be	ehaviour					
	Tester		Test Point		DUT		
1	SendADUSetEnd (Insta	ance = invalidInstance)					
2			AppEm		R: CEN175752Error		
3	Verify whether CEN17 ERBadState	5752Error equals to					
4	IF verify OK THEN TP passed ELSE TP failed ENDIF	I					

TP/C	SP/API/BI/30	Ending ADU set once no session is established						
TP Origin Specific								
Refe	rence	ISO/TS 17575-2, 0	Clause 7.3	3.3				
Initia	l Condition	A valid Instance in	stance1 h	as al	ready been created.			
		No session exists	lo session exists for instance1.					
Stim	ulus and Expected	Behaviour						
	Tester		Test Point		DUT			
1	SendADUSetEnd (In	stance = instance1)						
2			AppEm		R: CEN175752Er□r			
3	Verify whether CEN ERBadState	175752Error equals to						
4	IF verify OK THEN TP pass ELSE TP failed							

				sion	is in STStarting state
TP Origin Specific					
Reference ISO/TS 17575-2, C			Clause 7.3	3.3	
Initia	l Condition	A valid Instance i	nstance1 h	as a	Iready been created.
		No session exists	for instance	ce1.	
Stim	ulus and Expected B	ehaviour			
	Tester		Test Point		DUT
1	StartSession (Instanc Reason = any, S		AppEm		
2			AppEm		R: CEN175752Error
3	Verify whether CEN1 ERNoError	75752Error equals to			
4	IF verify NOT OK THEN TP failed ENDIF				
5	SendADUSetEnd (Ins	tance = instance1)			
6			AppEm		R: CEN175752Error
7	Verify whether CEN1 ERBadState	75752Error equals to			
8	IF verify OK THEN TP passe ELSE TP failed ENDIF	d			

TP/C	SP/API/BI/32	Ending ADU set of	nce ses	sion	is in STEnding state				
TP O	TP Origin Specific								
Reference ISO/TS 17575-2, C				3.3					
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.				
		Session exists for	instance1						
		Instance1 is in STS	SessionId	le sta	ate.				
				rization has already been done to establish session ss, port, url, protocol, PDP context, etc. are set).					
Stimu	ulus and Expected Be	haviour							
	Tester		Test Point		DUT				
1	EndSession (Instance = Reason = any)	= instance1,	AppEm						
2			AppEm		R: CEN175752Error				
3	Verify whether CEN179 ERNoError	5752Error equals to							
4	IF verify NOT OK THEN TP failed ENDIF								
5	SendADUSetEnd (Insta	nce = instance1)							
6			AppEm		R: CEN175752Error				
7	7 Verify whether CEN175752Error equals to ERBadState								
8	IF verify OK THEN TP passed ELSE TP failed ENDIF								

TP/C	SP/API/BI/33	Ending ADU set once session is in STErrored state					
TP Origin Specific							
Refer	ence	ISO/TS 17575-2, C	Clause 7.3	3.3			
Initial	Condition	Instance1 is in STE	Errored st	ate.			
Stimu	ılus and Expected Bel	naviour					
	Tester		Test Point		DUT		
1	SendADUSetEnd (Instat	nce = instance1)					
2			AppEm		R: CEN175752Error		
3	Verify whether CEN175 ERBadState	752Error equals to					
4	IF verify OK THEN TP passed ELSE TP failed ENDIF						

TP/C	SP/API/BI/34	Ending ADU set once session is in STSendingUnformattedADU state						
TP O	rigin	Specific						
Reference ISO/TS 17575-2, Cla				3.3				
Initia	Condition	A valid Instance in	stance1 h	as a	ready been created.			
		Session exists for	instance1					
		Instance1 is in STS	SessionId	le sta	ate.			
					already been done to establish session otocol, PDP context, etc. are set).			
Stim	ulus and Expected B	ehaviour						
	Tester				DUT			
1	SendUnformattedADU Instance = insta MessageLen = a	•	AppEm					
2			AppEm		R: CEN175752Error			
3	Verify whether CEN1 ERNoError	75752Error equals to						
4	IF verify NOT OK THEN TP fai □ec	ı						
	SendADUSetEnd (Inst	tance = instance1)						
6			AppEm		R: CEN175752Error			
7	Verify whether CEN1 ERBadState	75752Error equals to						
8	IF verify OK THEN TP passe ELSE TP failed ENDIF	d						

TP/C	SP/API/BI/35	Ending ADU set of	Ending ADU set once session is in STSendingADURequest state				
TP O	rigin	Specific					
Refer	ence	ISO/TS 17575-2, C	lause 7.3	.3			
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.		
		Session exists for i	nstance1				
		Instance1 is in STS	Instance1 is in STSessionIdle state.				
			Correct parameterization has already been done to establish session (example: ipAddress, port, url, protocol, PDP context, etc. are set).				
Stimu	ılus and Expected l	Behaviour					
	Tester				DUT		
1 SendADUSetStart (Instance = instance1)		AppEm					

	i estel	Point	D01
1	SendADUSetStart (Instance = instance1)	AppEm	
2		AppEm	R: CEN175752Error
3	Verify whether CEN175752Error equals to ERNoError		
4	IF verify NOT OK THEN TP failed ENDIF		
5	SendADUSetEnd (Instance = instance1)		
6		AppEm	R: CEN175752Error
7	Verify whether CEN175752Error equals to ERBadState		
8	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/C	SP/API/BI/36	Ending ADU set	once sess	ion	is in STAwaitingADUConfirm state				
TP O	rigin	Specific							
Refe	rence	ISO/TS 17575-2, 0	lause 7.3.3						
			stance1 has already been created.						
	Session exists for i								
		Instance1 is in ST	SessionId	SessionIdle state.					
					already been done to establish session otocol, PDP context, etc. are set).				
Stimu	ulus and Expected Beh	aviour							
	Tester		Test Point		DUT				
1	SendADUSetStart (Instance = instance1)		AppEm						
2			AppEm		R: CEN175752Error				
3	Verify whether CEN175752Error equals to ERNoError								
4	IF verify NOT OK THEN TP failed ENDIF								
5	Remote End indicates its abili□y toreceive elements		RemEnd						
6					C: ADUSendOK(instance, CanSend)				
7	IF (Instance equals to instance1 AND CanSend equals to TRUE) THEN GOTO STEP8 ELSE TP failed ENDIF								
8	SendADU (Instance = in: ElementLen = any, Element = any)		AppEm						
9			AppEm		R: WORD				
10	Verify whether returned 0	value is greater than							
11	IF verify NOT OK THEN TP failed ENDIF								
12	SendADUSetEnd (Instan	ce = instance1)							
13			AppEm		R: CEN175752Error				
14	Verify whether CEN1757 ERNoError	752Error equals to							

15	IF verify NOT OK THEN TP failed ENDIF		
16	SendADUSetEnd (Instance = instance1)		
17		AppEm	R: CEN175752Error
18	Verify whether CEN175752Error equals to ERBadState		
19	IF verify OK THEN TP passed ELSE TP failed ENDIF		

TP/CSP/API/BI/37 Ending ADU set		nce sess	ion 1	failed				
TP Or	igin	Specific						
TP Origin Specific Reference ISO/TS 17575-2, CI			lause 7.3.3					
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.			
	Session exists for	instance1.						
		Instance1 is in STS	SessionIdl	e sta	te.			
					already been done to establish session otocol, PDP context, etc. are set).			
Stimu	lus and Expected Bel	naviour						
Tester		Test Point		DUT				
1	SendADUSetStart (Instance = instance1)		AppEm					
2			AppEm		D. CENTZEZEZE			
3	N 15 1 11 051147	-7505	Appem		R: CEN175752Error			
3	Verify whether CEN175752Error equals to ERNoError							
4	IF verify NOT OK THEN TP failed ENDIF							
5	Remote End indicates its ability to receive elements		RemEnd					
6					C: ADUSendOK(instance, CanSend)			
7	IF (Instance equals to CanSend equals THEN GOTO STE ELSE TP failed ENDIF	to TRUE)						
8	SendADU (Instance = in ElementLen = any Element = any)		AppEm					
9			AppEm		R: WORD			
10	Verify whether returne 0	d value is greater than						
11	I verify NOT OK THEN TP failed ENDIF							
12a	SendADUSetEnd (Insta	nce = instance1)						
12b			RemEnd		In parallel to STEP12a terminate a session at remote end			
13			AppEm		R: CEN175752Error			
14	Verify whether CEN175 ERSessionFailed	5752Error equals to						

1□	IF verify OK		
	THEN TP passed		
	ELSE TP failed		
	ENDIF		

A.5 State Transition

These Test Purposes apply to state transitions as claimed in ISO/TS 17575-2 Clause B.2 with respect to following PICS proforma entries:

—	API supports	InstanceStateChange	Event;
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- API supports CommsQuery;
- API supports SessionRequest Event.

A.5.1 BV test purposes

Test subgroup objective:

- to test DUT behaviour with respect to state transition by
 - querying DUT about old visible state;
 - triggering DUT to change its visible state;
 - checking whether DUT provides InstanceStateChange upon visible state change;
 - querying DUT about new visible state.

TP/S	ST/API/BV/01	State transition fr	rom STUr	ıkno	wnInstance to STNoSession				
TP C	rigin	Specific							
Refe	rence	ISO/TS 17575-2, 0	Clause 7.2	2					
cor			Front End Communications API must handle at least one underlying communications stack which StackID equals to stack1.						
		Set of Callback ins	stances is	insta	antiated.				
Stim	ulus and Expected Be	haviour							
	Tester		Test Point		DUT				
1	CommsQuery (Instance = instance1)		AppEm						
2			AppEm		R: CEN175752StateE				
3	Verify whether CEN175752StateE equals to STUnknownInstance								
4	IF verify NOT OK THEN TP failed ENDIF								
5	InitialiseInstance (StackID = stack1, Callbacks = cb1)		AppEm						
6			AppEm		R: Instance				
7	Verify whether Instance is valid								
8	IF verify OK THEN TP passed ELSE TP failed ENDIF	THEN TP passed ELSE TP failed							
9	Assign received Instan	ce as instance1		<u> </u>					
10			AppEm		C: InstanceStateChange (Instance, OldState, NewState)				
11	AND	to instance1 AND to STUnknownInstance to STNoSession)							
12	IF verify NOT OK THEN TP failed ENDIF								
13	CommsQuery (Instance	= instance1)	AppEm						
14			AppEm		R: CEN175752StateE				
15	Verify whether CEN175	5752StateE equals to							
16	IF verify OK THEN TP passed ELSE TP failed ENDIF								

Specific

ISO/TS 17575-2, Clause 7.2

TP/ST/API/BV/02

TP Origin

Reference

15

Initial Condition

	No session exists for instance1.						
Stimu	llus and Expected Beha	viour					
	Teste	Test Point		DUT			
1	CommsQuery (Instance =	instance1)	AppEm				
2			AppEm		R: CEN175752StateE		
3	Verify whether CEN17575 STNoSession	2StateE equals to					
4	IF verify NOT OK THEN TP failed ENDIF						
5	DropInstance (Instance = instance1, Severity = anyl)		AppEm				
6			AppEm		R: CEN175752Error		
7	Verify whether CEN175752Error equals to ERNoError						
8	IF verify NOT OK THEN TP failed ENDIF						
9			AppEm		C: InstanceStateChange (Instance, OldState, NewState)		
10	Verify whether Instance equals to ir OldState equals to S AND NewState□equals to STUnknownInstance)	TNoSession					
11	IF verify NOT OK THEN TP failed ENDIF						
12	CommsQuery (Instance =	instance1)	AppEm				
13			AppEm		R: CEN175752StateE		
14	Verify whether CEN17575 STUnknownInstance	2StateE equals to					

State transition from STNoSession to STUnknownInstance

A valid Instance instance1 has already been created.

IF verify OK

ENDIF

THEN TP□assed **ELSE TP failed**

TP/S	T/API/BV/03	Verify that there is no state change upon receipt of SessionRequest						
TP O	rigin	Specific						
Refer	ence	ISO/TS 17575-2, Clause 7.2						
Initial	Condition	A valid Instance in	stance1 h	as al	ready been created.			
		No session exists	for instance	e1.				
Stimu	llus and Expected Bel	naviour						
	Tes	ter	Test		DUT			
			Point					
1	CommsQuery (Instance	= instance1)	AppEm					
2			AppEm		R: CEN175752StateE			
3	Verify whether CEN175	752StateE equals to						
	STNoSession							
4	IF verify NOT OK THEN TP failed							
	ENDIF							
5	Session request from remote end		RemEnd					
	corresponding to insta	nce1						
6			AppEm		C: SessionRequest(Instance, Ha□dle)			
7	Verify whether Instance	e equals to instance1						
8	IF verify NOT OK							
	THEN TP failed ENDIF							
9	CommsQuery (Instance	= instance1)	AppEm					
	Commisquery (mistance	- mstance ij	Appeni					
10			AppEm	П	D. CENIA75752State5			
11	Vanificon bath and OF MAZE	7500tataE a	Appen		R: CEN175752StateE			
' '	Verify whether CEN175 STNoSession	752StateE equals to						
12	IF verify K							
	THEN TP passed ELSE TP failed							

TP/S	T/API/BV/04	State transition f	rom STN	Ses	sion to STStarting		
TP Origin Specific							
Refe	ISO/TS 17575-2,	Clause 7.2					
Initia	l Condition	A valid Instance in	stance1 h	as a	Iready been created.		
		No session exists	for instan	ce1.			
Stimi	ulus and Expected B	 ehaviour					
		ester	Test	1	DUT		
		55(6)	Point		501		
1	CommsQuery (Instance = instance1)		AppEm				
	CommsQuery (Instance = instance1)						
2			AppEm		R: CEN175752StateE		
3	Verify whether CEN17	75752StateE equals to					
	Verify whether CEN175752StateE equals to STNoSession						
4	IF verify NOT OK						
	THEN TP failed ENDIF						
5	StartSession (Instance	a = inotonoo1	AnnEm				
3	Reason = any, S		AppEm				
6			AppEm		R: CEN175752Error		
7	Verify whether CEN1	75752Error equals to					
	ERNoError						
8	IF verify NOT OK						
	THEN TP failed ENDIF						
9			AppEm		C: InstanceStateChange (Instance, OldState,		
			4.4		NewState)		
10	Verify whether						
	_	to instance1 AND					
		to STNoSession equals to STStarting)					
	7 III BROWGIAN	oqualo to o rotaring)					
11	IF verify NOT OK						
	THEN TP failed ENDIF						
12	CommsQuery (Instance	ce = instance1)	AppEm				
	John Howard (matane	,	ZANEIII				
13			Anstra		D. CCN47575204445		
	V 16 1 11 5=1111	7575001 1 5 5 5	AppEm		R: CEN175752StateE		
14	Verify whether CEN13 STStarting	75752StateE equals to					
15	IF verify OK						
	THEN TP passd	□ ELSE TP failed					
	ENDIF			1			

			rom STSt	artin	g to STSessionIdle			
TP Origin Specific		Specific						
Reference ISO/TS 17575-2, C			Clause 7.2					
Initial	Condition	A valid Instance in	stance1 h	as a	ready been created.			
		Session for instan	ce1 is beir	ng es	stablished.			
Stimu	ulus and Expected Bel	naviour						
	Tester		Test Point		DUT			
1	CommsQuery (Instance = instance1)		AppEm					
2			AppEm		R: CEN175752StateE			
3	Verify whether CEN175752StateE equals to STStarting							
4	IF verify NOT OK THEN TP failed ENDIF							
5			AppEm		C: InstanceStateChange (Instance, OldState, NewState)			
6	Verify whether Instance equals to OldState equals to NewState equals to	STNoSession AND						
7	IF verify NOT OK THEN TP failed ENDIF							
8	CommsQuery (Instance	= instance1)	AppEm					
9			AppEm		R: CEN175752StateE			
10	Verify whether CEN175 STSess□onIdle	752StateE equals to						
11	IF verify OK THEN TP passed ELSE TP failed ENDIF							

Verify whether CEN175752StateE equals to

STSendingUnformattedADU

14

R: CE1 572StateE

AppEm

15	IF verify OK THEN TP passed ELSE TP failed		
	ENDIF		

TP/S	T/API/BV/07	State transition f	rom STSe	ndir	ngUnformattedADU to STSessionIdle		
TP Origin Specific							
Refe	ISO/TS 17575-2,	Clause 7.2	Clause 7.2				
Initial Condition A valid Instance instance instance Session exists for in Session is in STSer			nstance1 h	as a	lready been created.		
			instance1				
			endingUnf	orma	attedADU state.		
			erization has already been done to establish sessionss, port, url, protocol, PDP context, etc. are set).				
Stimu	ulus and Expected Be	ehaviour					
Tester		Test Point		DUT			
1	CommsQuery (Instance	e = instance1)	AppEm				
2			AppEm		R: CEN175752StateE		
3	Verify whether CEN17 STSendingUnformatte						
4	IF verify NOT OK THEN TP failed ENDIF						
5			AppEm		C: ADUSent (Instance)		
6	Verify whether Instance equals to instance1						
7	IF verify NOT OK THEN TP failed ENDIF						
8	LNOII		AppEm		InstanceStateChange (Instance, OldState, NewState)		
9	Verif□ whether Instance equals to instance1 AND OldState equals to STSendingUnformattedADU AND NewState equals to STSessionIdle)						
10	IF verify NOT OK THEN TP failed ENDIF						
11	CommsQuery (Instance	e = instance1)	AppEm				
12			AppEm		R: CEN1772S □ateE		
13	Verify whether CEN17 STSessionIdle	5752StateE equals to					
14	IF verify OK THEN TP passed ELSE TP failed	I					

TP/S	T/API/BV/08	Verify that there i	is no state	e cha	ange upon receipt of ADURequest				
TP Origin Specific									
Reference ISO/TS 17575-: Initial Condition A valid Instance		ISO/TS 17575-2, (Clause 7.2						
Initial Condition A valid Instance ins		stance1 h	stance1 has already been created.						
		Session exists for	instance1						
		essionIdle	state	e.					
				already been done to establish session otocol, PDP context, etc. are set).					
Stimu	haviour								
Tester		Test Point		DUT					
1	CommsQuery (Instance	= instance1)	AppEm						
2			AppEm		R: CEN175752StateE				
3	3 Verify whether CEN175752StateE equals to STSessionIdle 4 IF verify NOT OK								
4									
5			RemEnd						
6			AppEm		C: ADURequest (Instance, Elements)				
7	7 Verify whether: Instance equals to instance1 AND Elements corresponds to E								
8	IF verify NOT OK □THEN TPfailed ENDIF								
9	CommsQuery (Instance	= instance1)	AppEm						
10			AppEm		R: CEN175752StateE				
11	Verify whether CEN175 STSessionIdle	752StateE equals to							
12	IF verify OK THEN TP passed ELSE TP failed								

TP/S		Verify that there JnformattedADU			ange upon receipt of		
TP Origin Specific							
Refer	rence I	SO/TS 17575-2,	Clause 7.2				
·			stance1 h	as al	ready been created.		
			instance1				
			essionIdle	state	9.		
			erization has already been done to establish sessions, port, url, protocol, PDP context, etc. are set).				
Stimu	ulus and Expected Beha	viour					
Tester		Test Point		DUT			
1	CommsQuery (Instance =	instance1)	AppEm				
2			AppEm		R: CEN175752StateE		
3	Verify whether CEN175752StateE equals to STSessionIdle						
4	IF verify NOT OK THEN TP failed ENDIF						
5	Unformatted ADU is sent from the remote end, consisting of certain payload P of length L, using a session related to instance1.		RemEnd				
6			AppEm		C: UnformattedADUReceived (Instance, UnformattedMessageLen, UnformattedMessage)		
7	Verify whether: Instance equals to in UnformattedMessag AND UnformattedMessag	eLen equals to L					
8	IF verify NOT OK THEN TP failed ENDIF						
9	CommsQuery (Instance =	instance1)	AppEm				
10			AppEm		R: CEN175752StateE		
11	Verify whether CEN17575 STSessionIdle	2StateE equals to					
12	IF verify OK THEN TP passed ELSE TP failed ENDIF						

TP/S	Γ/API/BV/10	Verify that there i	s no state	e cha	ange upon receipt of ADU Received				
9		Specific							
Reference ISO/TS 17575-2, Cla			Clause 7.2						
·			stance1 h	as al	ready been created.				
Session exists for ir									
Session is in STSes			essionIdle	state) .				
					already been done to establish session otocol, PDP context, etc. are set).				
Stimu	lus and Expected Be	haviour							
Tester			Test Point		DUT				
1	CommsQuery (Instance	= instance1)	AppEm						
2			AppEm		R: CEN175752StateE				
3	Verify whether CEN175 STSessionIdle	752StateE equals to							
4	IF verify NOT OK THEN TP failed ENDIF								
5	Structured ADU is sent from the remote end using a session related to instance1.		RemEnd						
6			AppEm		C: ADUReceived (Instance, Element)				
7	Verify whether: Instance equals to Element correspo								
8	IF verify NOT OK THEN TP failed ENDIF								
9	CommsQuery (Instance	= instance1)	AppEm						
10			AppEm		R: CEN175752StateE				
11	Verify whether CEN175 STSessionIdle	752StateE equals to							
12	IF verify OK THEN TP passed ELSE TP failed ENDIF								

TP/S	T/API/BV/11 S	tate transition f	rom STSe	essio	onIdle to STSendingADURequest
TP Origin Specific					
Reference ISO/TS 17575-2, C		Clause 7.2	2		
· ·			stance1 h	as a	lready been created.
			instance1		
			essionIdle	state	Э.
					already been done to establish sessi- rotocol, PDP context, etc. are set).
Stimu	ulus and Expected Behav	iour			
	Tester		Test		DUT
			Point		
1	CommsQuery (Instance = i	nstance1)	AppEm		
2			AppEm		R: CEN175752StateE
3	Verify whether CEN175752StateE equals to STSessionIdle				
4	IF verify NOT OK THEN TP failed ENDIF				
5	SendADUSetStart (Instance = instance1)		AppEm		
6			AppEm		R: CEN175752Error
7	Verify whether CEN175752Error equals to ERNoError				
8	IF verify NOT OK THEN TP failed ENDIF				
9			AppEm		C: InstanceStateChange (Instance, OldState, NewState)
10	Verify wether Instance equals to instance1 AND OldState equals to STSessionIdle AND NewState equals to STSendingADURequest)				
11	IF verify NOT OK THEN TP failed ENDIF				
12	CommsQuery (Instance = in	nstance1)	AppEm		
13			AppEm		R: CEN175752St□teE
14	Verify whether CEN175752	StateE equals to			

 ${\bf STS ending ADUR equest}$

15	IF verify OK THEN TP passed ELSE TP failed		
	ENDIF		

not able to receive					STSessionIdle state once remote end is	
TP Origin Specific						
Reference ISO/TS 17575-2, C		Clause 7.2				
Initial	Condition A	valid Instance in	nstance1 h	as a	lready been created.	
	s	ession exists for	instance1			
	s	ession is in STS	essionIdle	state	9.	
					already been done to establish session otocol, PDP context, etc. are set).	
Stimu	ulus and Expected Behav	iour				
	Tester		Test		DUT	
			Point			
1	CommsQuery (Instance = in	nstance1)	AppEm			
2			AppEm		R: CEN175752StateE	
3	Verify whether CEN175752 STS□ssionIdle	StateE equals to				
4	IF verify NOT OK THEN TP failed ENDIF					
5	SendADUSetStart (Instance = instance1)		AppEm			
6			AppEm		R: CEN175752Error	
7	Verify whether CEN175752 ERNoError	Error equals to				
8	IF verify NOT OK THEN TP failed ENDIF					
9	Remote E⊡d indicates no a elements	ability to receive	RemEnd			
10			AppEm		C: ADUSendOK(Instance, CanSend)	
11	Verify whether Instance eq AND CanSend equals to F	•				
12	IF verify NOT OK THEN TP failed ENDIF					
13	CommsQuery (Instance = in	nstance1)	AppEm			
14			AppEm		R: CEN175752StateE	
15	Verify whether CEN175752 STSessionIdle	StateE equals to				
16	IF verify OK THEN TP passed ELSE TP failed ENDIF					

STSending DU

ENDIF

		om STSe	endin	gADU to STAwaitingADUConfirm				
TP Origin Specific		ecific						
Reference ISO/TS 17575-2, CI		Clause 7.2	lause 7.2					
Initial	Condition A	valid Instance in	stance1 h	as al	ready been created.			
	Se	ssion exists for	instance1					
	Se	ssion is in STSe	endingAD	U sta	te.			
					already been done to establish sess otocol, PDP context, etc. are set).			
Stimu	ulus and Expected Behavio	our						
Tester			Test Point		DUT			
1	CommsQuery (Instance = instance1)		AppEm					
2			AppEm		R: CEN175752StateE			
3	Verify whether CEN175752StateE equals to STSendingADU							
4	IF verify NOT OK THEN TP failed ENDIF							
5	SendADU (Instance = instance1, ElementLen = any, Element = any)		AppEm					
6			AppEm		R: WORD			
7	Verify whether returned value	ue is greater than						
8	IF verify NOT OK THEN TP failed ENDIF							
9	SendADUSetEnd(Instance =	instance1)	AppEm					
10			AppEm		R: CEN175752Error			
11	Verify whether CEN175752Error equals to ERNoError							
12	IF verify NOT OK THEN TP failed ENDIF							
13			AppEm		C: InstanceStateChange (Instance, OldState, NewState)			
14	Verify whether Instance equals to inst OldState equals to STS NewState equls⊡t STAwaitingADUConfirm)							

15	IF verify NOT OK THEN TP failed ENDIF		
16	CommsQuery (Instance = instance1)	AppEm	
17		AppEm	R: CEN175752StateE
18	Verify whether CEN175752StateE equals to STAwaitingADUConfirm		
19	IF verify OK THEN TP pa⊡sed ELSE TP failed ENDIF		

TP/S	T/API/BV/16	State transition f	rom STEr	rore	d to STNoSession				
TP Origin Specific									
Reference ISO/TS 17575-2, C			Clause 7.2	lause 7.2					
Initial	Condition	A valid Instance in	stance1 h	as a	Iready been created.				
		Session is in STE	rrored stat	e.					
Stimu	ulus and Expected Bel	ı naviour							
	Tes		Test		DUT				
			Point						
1	CommsQuery (Instance = instance1)		AppEm						
2			AppEm		R: CEN175752StateE				
3	Verify whether CEN175 STErrored	752StateE equals to							
4	IF verify NOT OK THEN TP failed ENDIF								
5	EndSession (Instance = instance1, Reason = any)		AppEm						
6			AppEm		R: CEN175752Error				
7	Verify whether CEN175752Error equals to ERNoError								
8	IF verify NOT OK THEN TP failed ENDIF								
9			AppEm		C: InstanceStateChange (Instance, OldState, NewState)				
10	Verify whether Instance equals to OldState equals to NewState equals	STErrored AND							
11	IF verify NOT OK THEN TP failed ENDIF								
12	CommsQuery (Instance	= instance1)	AppEm						
13			AppEm		R: CEN175752StateE				
14	Verify whether CEN175 STNoSession	752StateE equals to							
15	IF verify OK THEN TP passed ELSE TP failed EN□F								

Annex B

(normative)

Annex ATP for Front End Application

B.1 Introduction

This annex contains the Test Purposes (TP) for the conformity evaluation of *Front End application* to ISO/TS 17575-2.

B.1.1 TP symbols conventions

A special notation and symbol convention is used, as defined in what follows.

Symbols are used in the description of the TPs, with meanings according Table B.1 below.

Table B.1 — Description of TP Symbols

SYMBOL	DESCRIPTION
R:ReturnedType = value1	The tester returns a variable of type ReturnedType with value1.
	Value1 shall be stored in tester's memory for further TP processing.
C:CallbackName (Type1=value1) □	The tester provides a callback CallbackName providing argument of type Type1 with value1.
	Value1 shall be stored in tester's memory for further TP processing.
□XXX(Type1=value1)	The DUT executes an XXX method of Front End Communications API with argument of Type1 having value value1.
Type ISO/TS 17575-2	Anytime Type defined in ISO/TS 17575-2 is used, it means a variable of Type.
$A \rightarrow B$	A "is transformed" into B
Ø	Means "empty" or "not set".
A B	A OR B
A != B	A is not equal B

Testing Front End application it is sufficient to have a single test point. Application emulation test point is linked directly with DUT and emulates the Front End Communications API. It is identified in the following test purposes by AppEm discriminator. For more details see Figure B.1.

Suba Servician (** a.S.)

Figure B.1 — Test Purpose configuration

B.2 Session Handling

These Test Purposes apply to session establishment/re-establishment upon *Back End* session request as claimed in ISO/TS 17575-2 Clause 7.2.2 and 7.5.

B.2.1 BV test purposes

Test subgroup objective:

- to test DUT behaviour with respect to session establishment having received session request from Front End Communications API;
- to test DUT behaviour with respect to session re-establishment upon session, that was requested by Back End, failed.

TP/S	P/SH/APPL/BV/01 Incoming session		request	(BE	to FE Application)
TP O	rigin	Specific			
Refer	rence	ISO/TS 17575-2, C	Clause 7.2	2.2	
Initial	Condition	FE Application is in	nitialized a	and c	an receive Session Request callback.
Stimu	ılus and Expected Beh	aviour			
	Tes	ter	Test Point		DUT
1	C: SessionRequest(Instance = instance1, Handle = sessionHandle1)		AppEm		
2			AppEm		StartSession (Instance, Reason, e□sinHandle)
3	Verify whether Instance equals to instance1 AND SessionHandle equals to sessionHandle1		AppEm		
4	IF verify NOT OK THEN TP failed ENDIF				
5	R: CEN175752Error = ErNoError		AppEm		
6	C: InstanceStateChange instance1, oldState = S' STSessionIdle)		AppEm		
7	TP Passed				

TP/S	H/APPL/BV/02 Se	ession re-establ	ishment	by F	ront End application upon session failure		
TP O	rigin Sp	Specific					
Refer	rence	ISO/TS 17575-2, Clause 7.5					
Initial	Condition FE	Application is in	nitialized a	and c	can receive Session Request callback.		
Stimu	ılus and Expected Behavi	our					
	Tester		Test Point		DUT		
1	C: SessionRequest(Instance Handle = sessionHandle1)	= instance1,	AppEm				
2			AppEm		StartSession (Instance, Reason, SessionHandle)		
3	Verify w⊟ether Instance eq AND SessionHandle equals sessionHandle1						
4	IF verify NOT OK THEN TP failed ENDIF						
5	R: CEN175752Error = ErNoE	rror	AppEm				
6	C: InstanceStateChange (Instance = instance1, oldState = STStarting, newState = STSessionIdle)		AppEm				
7	C: InstanceStateChange (Ins instance1, oldState = STSes newState = STErrored)		AppEm				
8			AppEm		EndSession (Instance, Reason)		
9	Verify whether Instance equ	uals to instance1					
10	IF verify NOT OK THEN TP ail□ ENDIF						
11	R: CEN175752Error = ErNoE	irror	AppEm				
12			AppEm		StartSession (Instance, Reason, SessionHandle)		
13	Verify whether Instance equ AND SessionHandle equals sessionHandle1						
14	IF verify NOT OK THEN TP failed ENDF						
15	R: CEN175752Error = ErNoE	Error	AppEm				
16	C: InstanceStateChange (Ins instance1, oldState = STSta STSessionIdle)		AppEm				
17	TP passed						

Annex C (informative)

PCTR Proforma for Front End Communications API

C.1 Introduction

The protocol conformance test report (PCTR) proforma is based on ISO/IEC 9646-6, which can be consulted for any necessary additional information.

C.2 Identification summary

C.2.1 Protocol conformance test report

Table C.1 — Protocol conformance test report

PCTR Number:	
PCTR Date:	
Corresponding SCTR Number:	
Corresponding SCTR Date:	
Test Laboratory Identification:	
Test Laboratory Manager:	
Signature	

C.2.2 DUT identification

Table C.2 — DUT identification

Name:	
Version:	
Protocol specification:	
	ver en
PICS:	
Previous PCTR if any:	

C.2.3 Testing environment

Table C.3 — Testing environment

PIXIT Number:	
ATS Specification:	
Abstract Test Method:	
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	
	<u> </u>
C.2.4 Limits and reservation	
	nts or further use of the test report, or the rights and be given here. Such information may include restriction
C.2.5 Comments	
Additional comments may be given by either the clief PCTR, for example, to note disagreement between the	

C.3 DUT Conformance status

This DUT has or has not been shown by conformance assessment to be none conforming to the specified protocol specification.

Strike the appropriate words in this sentence. If the PICS for this DUT is consistent with the static conformance requirements (as specified in Clause C.3 in the present document) and there are no "FAIL" verdicts to be recorded (in Clause C.6 in the present document) strike the words "has or", otherwise strike the words "or has not".

C.4 Static conformance summary

The PICS for this DUT is or is not consistent with the static conformance requirements in the specified protocol.

Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded (in Clause C.6 of

the present document) strike the words "did or" otherwise strike the words "or did not".

Strike the appropriate words in this sentence.

C.5 Dynamic conformance summary

The test campaign did or did not reveal errors in the DUT.

C.6 Static conformance review report

If Clause C.3 indicates non-conformance, this clause itemises the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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C.7 Test campaign report

Table C.4 — Test campaign report

ATS Reference	Selected?	Run?	Verdict	Observations
				(Reference to any observations
				made in clause C.7)
TP/IH/API/BV/01	Yes/No	Yes/No		
TP/IH/API/BV/02	Yes/No	Yes/No		
TP/IH/API/BV/03	Yes/No	Yes/No		
TP/IH/API/BV/04	Yes/No	Yes/No		
TP/IH/API/BV/05	Yes/No	Yes/No		
TP/IH/API/BV/06	Yes/No	Yes/No		
TP/IH/API/BV/07	Yes/No	Yes/No		
TP/IH/API/BV/08	Yes/No	Yes/No		
TP/IH/API/BV/09	Yes/No	Yes/No		
TP/IH/API/BV/10	Yes/No	Yes/No		
TP/IH/API/BV/11	Yes/No	Yes/No		
TP/IH/API/BV/12	Yes/No	Yes/No		
TP/IH/API/BV/13	Yes/No	Yes/No		
TP/IH/API/BV/14	Yes/No	Yes/No		
TP/IH/API/BV/15	Yes/No	Yes/No		
TP/IH/API/BV/16	Yes/No	Yes/No		
TP/IH/API/BV/17	Yes/No	Yes/No		
TP/IH/API/BV/18	Yes/No	Yes/No		
TP/IH/API/BV/19	Yes/No	Yes/No		
TP/IH/API/BV/20	Yes/No	Yes/No		
TP/IH/API/BV/21	Yes/No	Yes/No		
TP/IH/API/BV/22	Yes/No	Yes/No		
TP/IH/API/BV/23	Yes/No	Yes/No		
TP/IH/API/BV/24	Yes/No	Yes/No		
TP/IH/API/BV/25	Yes/No	Yes/No		
TP/IH/API/BV/26	Yes/No	Yes/No		
TP/IH/API/BV/27	Yes/No	Yes/No		
TP/IH/API/BI/01	Yes/No	Yes/No		
TP/IH/API/BI/02	Yes/No	Yes/No		
TP/IH/API/BI/03	Yes/No	Yes/No		
TP/IH/API/BI/04	Yes/No	Yes/No		
TP/IH/API/BI/05	Yes/No	Yes/No		
TP/IH/API/BI/06	Yes/No	Yes/No		
TP/IH/API/BI/07	Yes/No	Yes/No		
TP/IH/API/BI/08	Yes/No	Yes/No		
TP/IH/API/BI/09	Yes/No	Yes/No		
TP/IH/API/BI/10	Yes/No	Yes/No		
TP/IH/API/BI/11	Yes/No	Yes/No		
TP/IH/API/BI/12	Yes/No	Yes/No		
TP/IH/API/BI/13	Yes/No	Yes/No		
TP/IH/API/BI/14	Yes/No	Yes/No		
TP/IH/API/BI/15	Yes/No	Yes/No		
TP/IH/API/BI/16	Yes/No	Yes/No		
TP/IH/API/BI/17	Yes/No	Yes/No		
TP/IH/API/BI/18	Yes/No	Yes/No		
TP/IH/API/BI/19	Yes/No	Yes/No		
TP/IH/API/BI/20	Yes/No	Yes/No		
TP/IH/API/BI/21	Yes/No	Yes/No		
TP/IH/API/BI/22	Yes/No	Yes/No		
TP/IH/API/BI/23	Yes/No	Yes/No		
TP/IH/API/BI/24	Yes/No	Yes/No		
TP/IH/API/BI/25	Yes/No	Yes/No		
	\/ /N -	Yes/No	1	
TP/IH/API/BI/26	Yes/No		-	
TP/IH/API/BI/27	Yes/No	Yes/No		

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TP/SH/API/BV/01	Yes/No	Yes/No	
TP/SH/API/BV/02	Yes/No	Yes/No	
TP/SH/API/BV/03	Yes/No	Yes/No	
TP/SH/API/BV/04	Yes/No	Yes/No	
TP/SH/API/BI/01	Yes/No	Yes/No	
TP/SH/API/BI/02	Yes/No	Yes/No	
TP/SH/API/BI/03	Yes/No	Yes/No	
TP/SH/API/BI/04	Yes/No	Yes/No	
TP/SH/API/BI/05	Yes/No	Yes/No	
TP/SH/API/BI/06	Yes/No	Yes/No	
TP/SH/API/BI/07	Yes/No	Yes/No	
TP/SH/API/BI/08	Yes/No	Yes/No	
TP/SH/API/BI/09	Yes/No	Yes/No	
TP/CSP/API/BV/01	Yes/No	Yes/No	
TP/CSP/API/BV/02	Yes/No	Yes/No	
TP/CSP/API/BV/03	Yes/No	Yes/No	
TP/CSP/API/BV/04	Yes/No	Yes/No	
TP/CSP/API/BV/05	Yes/No	Yes/No	
TP/CSP/API/BV/06	Yes/No	Yes/No	
TP/CSP/API/BV/07	Yes/No	Yes/No	
TP/CSP/API/BV/08	Yes/No	Yes/No	
TP/CSP/API/BV/09	Yes/No	Yes/No	
TP/CSP/API/BV/10	Yes/No	Yes/No	
TP/CSP/API/BI/01	Yes/No	Yes/No	
TP/CSP/API/BI/02	Yes/No	Yes/No	
TP/CSP/API/BI/03	Yes/No	Yes/No	
TP/CSP/API/BI/04	Yes/No	Yes/No	
TP/CSP/API/BI/05	Yes/No	Yes/No	
TP/CSP/API/BI/06	Yes/No	Yes/No	
TP/CSP/API/BI/07	Yes/No	Yes/No	
TP/CSP/API/BI/08	Yes/No	Yes/No	
TP/CSP/API/BI/09	Yes/No	Yes/No	
TP/CSP/API/BI/10			
	Yes/No	Yes/No	
TP/CSP/API/BI/11	Yes/No	Yes/No	
TP/CSP/API/BI/12	Yes/No	Yes/No	
TP/CSP/API/BI/13	Yes/No	Yes/No	
TP/CSP/API/BI/14	Yes/No	Yes/No	
TP/CSP/API/BI/15	Yes/No	Yes/No	
TP/CSP/API/BI/16	Yes/No	Yes/No	
TP/CSP/API/BI/17	Yes/No	Yes/No	
		27 (21	
TP/CSP/API/BI/18	Yes/No	Yes/No	
TP/CSP/API/BI/19	Yes/No	Yes/No	
TP/CSP/API/BI/20	Yes/No	Yes/No	
TP/CSP/API/BI/21	Yes/No	Yes/No	
TP/CSP/API/BI/22	Yes/No	Yes/No	
TP/CSP/API/BI/23	Yes/No	Yes/No	
TP/CSP/API/BI/24	Yes/No	Yes/No	
TP/CSP/API/BI/25	Yes/No	Yes/No	
TP/CSP/API/BI/26	Yes/No	Yes/No	
TP/CSP/API/BI/27	Yes/No	Yes/No	
TP/CSP/API/BI/28	Yes/No	Yes/No	
TP/CSP/API/BI/29	Yes/No	Yes/No	
TP/CSP/API/BI/30	Yes/No	Yes/No	
TP/CSP/API/BI/31	Yes/No	Yes/No	
TP/CSP/API/BI/32	Yes/No	Yes/No	
TP/CSP/API/BI/33	Yes/No	Yes/No	
TP/CSP/API/BI/34	Yes/No	Yes/No	
TP/CSP/API/BI/35	Yes/No	Yes/No	
TP/CSP/API/BI/36	Yes/No	Yes/No	
TP/CSP/API/BI/37	Yes/No	Yes/No	
TP/ST/API/BV/01	Yes/No	Yes/No	
TP/ST/API/BV/02	Yes/No	Yes/No	
TP/ST/API/BV/03	Yes/No	Yes/No	
TP/ST/API/BV/04	Yes/No	Yes/No	
1 1F/S1/AFI/DV/U4			

TP/ST/API/BV/05	Yes/No	Yes/No	
TP/ST/API/BV/06	Yes/No	Yes/No	
TP/ST/API/BV/07	Yes/No	Yes/No	
TP/ST/API/BV/08	Yes/No	Yes/No	
TP/ST/API/BV/09	Yes/No	Yes/No	
TP/ST/API/BV/10	Yes/No	Yes/No	
TP/ST/API/BV/11	Yes/No	Yes/No	
TP/ST/API/BV/12	Yes/No	Yes/No	
TP/ST/API/BV/13	Yes/No	Yes/No	
TP/ST/API/BV/14	Yes/No	Yes/No	
TP/ST/API/BV/15	Yes/No	Yes/No	
TP/ST/API/BV/16	Yes/No	Yes/No	

C.8 Observations

Additional information relevant to the technical content of the PCTR is given here.				

Annex D (informative)

PCTR Proforma for Front End Application

D.1 Introduction

The protocol conformance test report (PCTR) proforma is based on ISO/IEC 9646-6, which can be consulted for any necessary additional information.

D.2 Identification summary

D.2.1 Protocol conformance test report

Table D.1 — Protocol conformance test report

PCTR Number:	
PCTR Date:	
Corresponding SCTR Number:	
Corresponding SCTR Date:	
Test Laboratory Identification:	
Test Laboratory Manager:	
Signature	

D.2.2 DUT identification

Table D.2 — DUT identification

Name:	
Version:	
Protocol specification:	
PICS:	
Previous PCTR if any:	

D.2.3 Testing environment

Table D.3 — Testing environment

PIXIT Number:	
ATS Specification:	
Abstract Test Method:	
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	
D.2.4 Limits and reservation	
	nts or further use of the test report, or the rights and be given here. Such information may include restriction
D.2.5 Comments	
Additional comments may be given by either the client PCTR, for example, to note disagreement between the	nt or the test laboratory on any of the contents of the two parties.

D.3 DUT Conformance status

This DUT has or has not been shown by conformance assessment to be none conforming to the specified protocol specification.

Strike the appropriate words in this sentence. If the PICS for this DUT is consistent with the static conformance requirements (as specified in Clause D.3 in the present document) and there are no "FAIL" verdicts to be recorded (in Clause D.6 in the present document) strike the words "has or", otherwise strike the words "or has not".

D.4 Static conformance summary

The PICS for this DUT is or is not consistent with the static conformance requirements in the specified protocol.

Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded (in Clause D.6 of

the present document) strike the words "did or" otherwise strike the words "or did not".

Strike the appropriate words in this sentence.

D.5 Dynamic conformance summary

The test campaign did or did not reveal errors in the DUT.

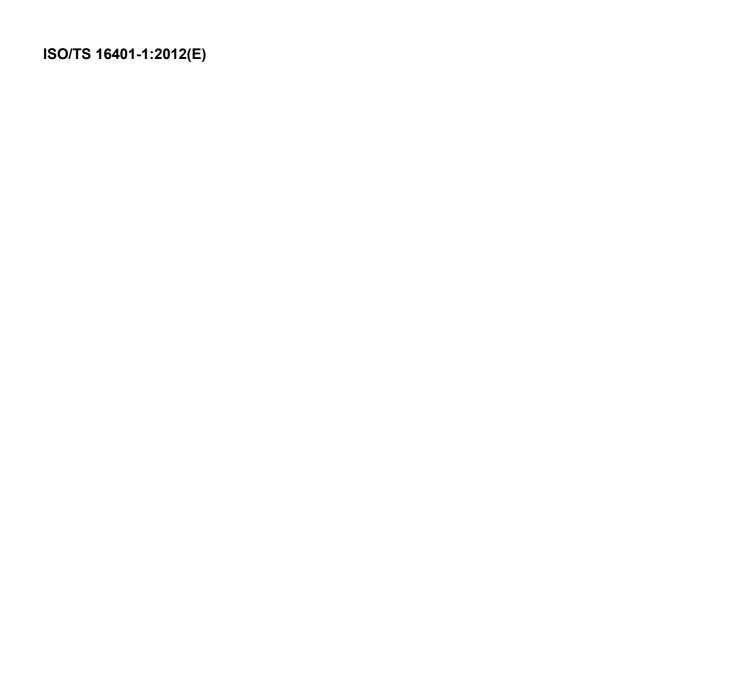
D.6 Static conformance review report

If Clause D.3 indicates non-conformance, this clause itemises the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

D.7 Test campaign report						
	٦	Гable D.4 —	 Test campa 	ign report		
ATS Reference			Verdict			
ATS Reference	Selected?	Fable D.4 — Run?	· Test campa Verdict	Observations (Reference to any observations		
TP/SH/APPL/BV/01	Selected? Yes/No	Run? Yes/No		Observations		
	Selected?	Run?		Observations (Reference to any observations		
TP/SH/APPL/BV/01	Yes/No Yes/No	Run? Yes/No Yes/No	Verdict	Observations (Reference to any observations made in clause D.7)		
TP/SH/APPL/BV/01 TP/SH/APPL/BV/02 D.8 Observations	Yes/No Yes/No	Run? Yes/No Yes/No	Verdict	Observations (Reference to any observations made in clause D.7)		

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- ISO 14906, Electronic fee collection Application interface definition for dedicated short-range [10] communication
- ISO 17573, Electronic fee collection Systems architecture for vehicle-related tolling [11]



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