Title: Certification of Rail POST Equipment

Source of document: **ITSO**
ITSO – Head of Compliance

Change Control Details

Version	Date	Comment
Draft 1	July2008	Initial Draft based on SSW Proposal
V2	July 2008	Following Exec review
V3	December 2010	RSP Tech Group produced for ITSO

Document type: ITSO Certification and Testing
Document subtype: POST Category

Contents

Certification of Rail Validation Equipment (POSTs)

1 Introduction

This document defines the ITSO certification requirements for UK Rail Validation Equipment that are Fixed Devices or can be Portable Devices (such as Revenue Protection equipment carried on train when used in check in/check out mode) and are to be used within a Closed System and with the functionality of an ITSO POST. This specifically relates to devices that are to be used on, or in conjunction with, devices on the UK National Rail Network.

It is up to the Supplier and/or Scheme Operator to determine if functionality over and above that specified here is required but this certification document has been drafted to ensure that the certified POST will meet the requirements of RSP Accreditation. It is intended by RSP that evidence of ITSO Certification to these requirements will also be sufficient to meet the RSP Accreditation requirements, thus removing the need for any separate RSP Rail Accreditation. The Rail Validation equipment described encompasses validators and gates; it does not encompass the requirements for retailing POST equipment performing the sale of Shells or IPEs.

Acronyms, Abbreviations and Definitions

TOC	Train Operating Company
ATOC	Association of Train Operating Companies
RSP	Rail Settlement Plan
LENNON	RSP System: *Latest Earnings Networked Nationally Over Night*
Closed System	A system where your ticket must be presented at the start and end of your journey.
Fixed Device	A device that is permanently mounted. Typically used on Station Platforms.
Portable Device	A device that acts as an ITSO POST in the rail environment to inspect and in relation to this document undertakes check in and/or check out processes.

2 ITSO Rail Validation Equipment POST Certification Requirements

These requirements have been developed by the ITSO Technical Working Party of the ATOC Future Ticketing Steering Group to ensure that ITSO Certification to this standard also satisfies the UK National Rail Requirements for interoperable ITSO ticketing throughout the rail network.

Rail Validation Equipment shall be considered compliant against the latest version of the ITSO Specification if it meets or exceeds the following requirements:

3.1 Rail Validation Equipment shall be capable of recognising and processing ITSO Shells loaded onto all CMD.

3.2 Rail Validation Equipment shall not be required to be able to create or delete ITSO shells, except where the Rail Validation Equipment is being used as a personalisation POST.

3.3 Rail Validation Equipment shall be capable of recognising and identifying all IPEs from their directory entry.

3.4 Rail Validation Equipment shall be capable of recognising the following IPEs and where appropriate processing usage by amending the IPE, as required by the Specification:

- Stored Travel Rights IPE TYP2
- Ticket IPEs: TYP22, 23 and 24
- All ID and Entitlement IPEs: TYP14,16 (where applicable to Rail usage).
- All other IPEs shall be recognised but do not need to be processed.

3.5 Additionally, Rail Validation Equipment performing the ITSO Operating License function of Product Retailing shall be capable of creating, and where appropriate deleting, the following IPEs:

- Stored Travel Rights IPE TYP2
- Ticket IPEs TYP22, 23 and 24

3.6 For the avoidance of doubt, Rail Validation Equipment shall be capable of recognising all other IPEs but shall not be required to be capable of processing (i.e. create, update and delete), as required by the Specification.

3.7 For the avoidance of doubt, Rail Validation Equipment shall be capable of recognising and processing Action Lists and Hot Lists as required by the ITSO Specification.

3.8 For the avoidance of doubt, Rail Validation Equipment shall contain a minimum of one ISAM as defined by the ITSO Specification.

3.9 For the avoidance of doubt, Rail Validation equipment shall be capable of correctly processing and utilising the Log and generating Transient Tickets according to the requirements of the latest version of the ITSO Specification relating to UK Rail Processing. In addition, the Rail Validation Equipment must also conform to the published processing requirements for a UK Rail Validation Device as set out in the RSP Specifications as follows:-

- RSPS 3002 ITSO on Rail Specification
- RSPS 3016 TIS Accreditation Requirements ITSO Validation Equipment

3.10 Rail Validation equipment shall not be required to be capable of generating and sending back-office query messages.

3.11 Rail Validation Equipment, performing the ITSO Operating License function of Product Retailing, shall be capable of recognising and processing the Auto Top Up requests, including the [initial] setting up of Auto Top Up. For the avoidance of doubt, the device shall support the instruction to setup or modify Auto TopUp. No User Interface is required as this request is constructed elsewhere in the Rail retail chain and delivered by Action List.

3.12 Rail Validation Equipment, performing the ITSO Operating License function of Product Retailing, shall be capable of recognising and processing Auto Renew requests, including the [initial] setting up of Auto Renew functions. For the avoidance of doubt, the device shall support the instruction to setup or modify Auto Renew. No User Interface is required as this request is constructed elsewhere in the Rail retail chain and delivered by Action List.

3.13 Rail Validation Equipment shall be compliant with all other requirements of the version of the Specification current at the time of submission for Certification.

3.14 Rail Validation Equipment shall be considered suitable for certification if it transacts the benchmark transactions as described in the Specification Part 10 as follows:

- For each CMD that meets or exceeds the target requirements (i.e. the transaction time is less than or equal to the target time for the CMD) in the Specification that CMD shall be certificated with no endorsement.
- For each CMD that fails to meet the target requirements but by less than a factor of two times the target transaction time (i.e. the transaction time fails to meet the requirements in (a) above but is less than two times the target time for that CMD) in the Specification shall be granted a certificate but that certificate will be endorsed with the transaction times.
- For the avoidance of doubt, equipment that fails to meet the target requirements by more than a factor of two times the benchmark transaction timing targets in the Specification for any CMD shall not be granted a certificate.

Detail is provided in Appendices 1 and 2.

Appendix 1: ITSO – Full Certification Requirements: Detail

In addition to the ITSO Certification Requirements noted above, changes referenced from the ITSO specification are noted below.

With reference to Part 3 of the ITSO specification, the UK Rail Validator is required to support or otherwise the following:

#	Section	Description	Support Required
20.	2.1	Media	Full
21.	2.2	Platform	Full
22.	2.3	AFI	Full
23.	2.5	Data Entity Support	Full
24.	2.6	IPE Support	Only, 2, 14, 16, 22, 23, 24
25.	3.2	Mandated message set	Full
26.	3.3	Transmission methods and data formats	Extended. Required support for Full tag set XML and Transmission format as defined in ITSO TS 1000-9 using HTTPS.
27.	3.4	Loss Less data transmission	Extended. Full support. Non-Mobile POSTs performing Validation Operations are required to be permanently connected to the HOPS network. Off-Line support is required in the event of network failure. The POST should operate for a minimum of 2 days without connectivity.
28.	4.	POST to ISAM Interface	Full
29.	5	Human Interface	Partial. Optional no Keyboard Support. Optional Varying Audio Indicator for Check-in , Check-out and error Indication.
30.	6.1	Media Handling	Partial. Supported as specified except the noted sub-sections below.
31.	6.1.1.1	Compact ITSO Shell Processing	Compact ITSO Shells are required to be recognised however they are not required to be processed.
32.	6.1.6.2	Throughput	Rail Validation Equipment is to have a minimum throughput of 1 transaction per second.
33.	6.2	IPE handling	Partial. Supported as specified except the noted sub-sections below.
34.	6.2.2	IPE Instance Creation	Extended. Rail Validation Equipment is required to support IPE instance creation via Actionlist.
35.	6.2.5	Auto-Renew	Extended. Rail Validation Equipment is required to support Auto-Renew.
36.	6.2.6	Stored Travel Rights Processing	Required.
37.	6.3	Message generation and	Extended. Transaction Session batches are to

#	Section	Description	Support Required
		processing	remain open no longer than 30 hours
38.	6.4	Configuration Handling	Extended. Hotlist or Actionlist storage shall cater for a minimum of 15,000 records each. POST Operator Notifications are not required for unattended validation devices but may be required for hand held units used for on-train validation by an operator
39.	Annex A	Product selection by Customer Media holder	Not supported

Appendix 2: ITSO – Full Certification Requirements – Additional Certification Tests to be Applied during ITSO certification relating specifically to the operation of an ITSO POST on UK Rail

RSP Test cases

1. OP1 CHECK-IN

Test 1 Check in with 1 candidate product

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **1 product valid for travel: IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • No transient ticket records present **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - ORGN: LocDefType 203

		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2=0
		  - IPEID3=0
		  - IPEID4=0
		- ENTRY_OID
		- Transactiontype = 11
		
		Directory log entry:
		- LPF = 1 (normal mode)
		- EEI = 0
		- DTS set to check in time

4	Import the transaction messages generated into the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 2 Check in with 2 candidate products

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **2 products valid for travel: IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • No transient ticket records present **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= Directory Entry ID that identifies the second candidate IPE.
		  - IPEID3=0
		  - IPEID4=0
		- ENTRY_OID
		- Transactiontype = 11
		
		Directory log entry:

		- LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - CIPE2_ISAMID: Identifies IPE instance of the second candidate IPE - CIPE2_ISAMSequenceNumber: Identifies IPE instance of the second candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 3 Check In with 3 candidate products

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **3 products valid for travel: IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • No transient ticket records present **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= Directory Entry ID that identifies the second candidate IPE.
		  - IPEID3= Directory Entry ID that identifies the third candidate IPE.
		  - IPEID4=0
		- ENTRY_OID
		- Transactiontype = 11
		
		Directory log entry:

		- LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - CIPE2_ISAMID: Identifies IPE instance of the second candidate IPE - CIPE2_ISAMSequenceNumber: Identifies IPE instance of the second candidate IPE - CIPE3_ISAMID: Identifies IPE instance of the third candidate IPE - CIPE3_ISAMSequenceNumber: Identifies IPE instance of the third candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 4 Check in with 4 candidate products

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **4 products valid for travel: IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • No transient ticket records present **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= Directory Entry ID that identifies the second candidate IPE.
		  - IPEID3= Directory Entry ID that identifies the third candidate IPE.
		  - IPEID4= Directory Entry ID that identifies the fourth candidate IPE.
		- ENTRY_OID
		- Transactiontype = 11
		
		Directory log entry:
		
		- LPF = 1 (normal mode)

		- EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - CIPE2_ISAMID: Identifies IPE instance of the second candidate IPE - CIPE2_ISAMSequenceNumber: Identifies IPE instance of the second candidate IPE - CIPE3_ISAMID: Identifies IPE instance of the third candidate IPE - CIPE3_ISAMSequenceNumber: Identifies IPE instance of the third candidate IPE - CIPE4_ISAMID: Identifies IPE instance of the fourth candidate IPE - CIPE4_ISAMSequenceNumber: Identifies IPE instance of the fourth candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 5 Check In with 5 candidate products

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **5 products valid for travel: IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • No transient ticket records present **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= Directory Entry ID that identifies the second candidate IPE.
		  - IPEID3= Directory Entry ID that identifies the third candidate IPE.
		  - IPEID4= Directory Entry ID that identifies the fourth candidate IPE.
		- ENTRY_OID
		- Transactiontype = 11

		Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - CIPE2_ISAMID: Identifies IPE instance of the second candidate IPE - CIPE2_ISAMSequenceNumber: Identifies IPE instance of the second candidate IPE - CIPE3_ISAMID: Identifies IPE instance of the third candidate IPE - CIPE3_ISAMSequenceNumber: Identifies IPE instance of the third candidate IPE - CIPE4_ISAMID: Identifies IPE instance of the fourth candidate IPE - CIPE4_ISAMSequenceNumber: Identifies IPE instance of the fourth candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 6 Check In with erroneous Transient Ticket

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • Transient Ticket record present with: - FormatRevision <> 4 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= 0
		  - IPEID3= 0
		  - IPEID4= 0
		- ENTRY_OID

		- Transactiontype = 11 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.2

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 7 Check In with TTR present with transactiontype 'Check Out'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • Transient Ticket Record present with - TransactionType = 0C - STD - DEST - IPEID - ORGN **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) DTS = Timestamp in the past	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= 0.
		  - IPEID3= 0
		  - IPEID4= 0
		- ENTRY_OID
		- Transactiontype = 11

		Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 8 Check In with TTR present with transactiontype 'undo previous event without refund'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • Transient Ticket Record present with - TransactionType = 03 - STD - ORGN: LocDefType 203 - IPEID's - ENTRY_OID - ENTRY_IIN_Index **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail) DTS = Timestamp in the past	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= 0.
		  - IPEID3= 0
		  - IPEID4= 0

		- ENTRY_OID - Transactiontype = 11 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3002 ITSO in National Rail - specification, Ref MU5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 9 Check In with TTR present with transactiontype ‘undo previous event without refund’ within zig zag time

Step	Description	Expected
Req	POST is configured as an Entry gate. Zigzag time is configured.	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • Transient Ticket Record present with - TransactionType = 03 - STD - ORGN: LocDefType 203 - IPEID's - ENTRY_OID - ENTRY_IIN_Index **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail) DTS > NOW - zigzagtime	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	POST displays 'Seek Assistance'.
3	Read the CM using the CM tool.	There are no updates performed to the CM.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.7

Test 10 Check In with TTR present with transactiontype 'undo previous event without refund' with zigzagtime = 0

Step	Description	Expected
Req	POST is configured as an Entry gate. Zigzag time is set to 0.	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24** • ValidIPEScheme **Normal Log** • Transient Ticket Record present with - TransactionType = 03 - STD - ORGN: LocDefType 203 - IPEID's - ENTRY_OID - ENTRY_IIN_Index **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail) DTS = Timestamp in the past	CM is created successfully.
2	Perform a Check In with the CM generated in the Init step.	Check In is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID that identifies the first candidate IPE. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The

		DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.6

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

2. OP2 CHECK-OUT – NO DECREMENT

Test 11 Check Out with TTR present with transactiontype 'Check In'

Step	Description	Expected

Init (CM)	Create a CM with following fields set:
	IPE2
	• ValidIPE2Scheme
	IPE22 or IPE24 without Valuegroups
	• ValidIPEScheme
	Normal Log
	• Transient Ticket present with:
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/24.
	  - PEID2= 0.
	  - IPEID3= 0
		CM is created successfully.

	- IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of IPE used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location

		- Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 12 Check Out with multiple candidate products

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **4 valid IPE22 or IPE24 without Valuegroups**	CM is created successfully.

	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of first valid IPE 22/24.
	  - IPEID2= Directory Entry ID of second valid IPE 22/24.
	  - IPEID3= Directory Entry ID of third valid IPE 22/24
	  - IPEID4= Directory Entry ID of fourth valid IPE 22/24
	- ENTRY_OID
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always 0 for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer = Directory Entry ID of product used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel

4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 13 Check Out with multiple candidate products but only one valid at Check Out

Step	Description	Expected

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	4 IPE22 or IPE24 without Valuegroups but only the last one is valid at Check Out
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of First candidate IPE 22/24, not valid at Check Out.
	  - IPEID2= Directory Entry ID of Second candidate IPE 22/24, not valid at Check out.
	  - IPEID3= Directory Entry ID of third candidate IPE 22/24, not valid at Check Out
	  - IPEID4= Directory Entry ID of Fourth candidate IPE 22/24, valid at Check Out
	- ENTRY_OID
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always 0 for Rail)
		CM is created successfully.

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4

		- STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of fourth candidate product - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system.

		- ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 14 Check Out with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 22/24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0	CM is created successfully.

	Active Directory • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) PTR = Directory Entry ID of product used for travel	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4

		- Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 15 Check Out with TTR present with transactiontype 'unspecified' - previous operation inspection without product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme	CM is created successfully.

	IPE22 or IPE24 without Valuegroups
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDeftype 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_TT_IPE_ISAMID
	- ENTRY_TT_IPE_SAMSequenceNumber
	- ENTRY_DateTimeStamp
	- ENTRY_OID
	- Transactiontype = 0
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always 0 for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of

		product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 16 Check Out with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDeftype 203 - IPEPointer: Directory Entry ID of IPE 22/24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	CM is created successfully.
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203

		- IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media

		entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 17 Check Out – Maximum Journey Time Exceeded (Direction unaware device)

Step	Description	Expected
Req	POST device is direction unaware.	

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	IPE22 or IPE24 without Valuegroups
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDeftype 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID
	- Transactiontype = 11
		CM is created successfully.

	- DateTimeStamp = NOW – Maximum Journey Time **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Since the Maximum Journey Time has passed a forced check out is performed. Current validation is now assumed to be for Entry.

3	Read the CM using the CM Tool.	On the CM 2 TTR's are created with:
		1rst TTR
		- FormatRevision = 4
		- STD
		- DEST: LocDeftype 255
		- IPEPointer: Directory Entry ID of IPE used for travel
		- ORGN: LocDefType 203
		- Transactiontype = 12
		2nd TTR
		- FormatRevision = 4
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= 0.
		  - IPEID3= 0
		  - IPEID4= 0
		- ENTRY_OID
		- Transactiontype = 11
		Directory log entry:
		- LPF = 1 (normal mode)
		- EEI = 0
		- DTS set to check in time

4	Import the transaction messages generated in the POST/HOPS Tool.	Transaction messages related to Forced Check Out

		0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: LocDeftype 255 - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. Transaction messages related to Check In 0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5

		- CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 18 Check Out – Maximum Journey Time Exceeded (Direction aware device)

Step	Description	Expected
Req	Make sure the POST is configured as a Closed System exit point	
Init (CM)	Create a CM with following fields set:	CM is created successfully.

	IPE2 • ValidIPE2Scheme **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDeftype 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 22/24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 - DateTimeStamp = NOW – Maximum Journey Time **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Since the Maximum Journey Time has passed then must assume previous journey has completed so must first force a check out on that journey and then review the product set as if this is a new journey without a transient ticket so assume Entry Point for current unknown.
3	Read the CM using the CM Tool.	On the CM 2 TTR's are created with: 1rst TTR

		- FormatRevision = 4 - STD - DEST: LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 2nd TTR - FormatRevision = 4 - STD - DEST: LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 255 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	Transaction messages related to Forced Check Out 0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 255 - IPEPointer: Directory Entry ID of

		IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: LocDeftype 255 - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. Transaction messages related to second check out 0210 - Sent to: Exit Service Operator.

		- RecordFormatRevision = 5 - DestinationTT: LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDeftype 255 - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: 0 - ENTRY_TT_IPESAMSequenceNumber: 0 - ENTRY_DateTimeStamp: 0 - ENTRY_OID: 0 - ENTRY_IIN_Index: 0

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 19 Check Out – Maximum Journey Time = 0

Step	Description	Expected

Req	On the POST device make sure the Maximum Journey Time = 0	

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	IPE22 or IPE24 without Valuegroups
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID
	- Transactiontype = 11
	- DateTimeStamp = NOW – 90min
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)
		CM is created successfully.

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry:

		- LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. -

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.4

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 20 Check Out different OID from Check In

Step	Description	Expected

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	IPE22 or IPE24 without Valuegroups
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID <> OID of Check Out ISAM
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)
		CM is created successfully.

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator (ENTRY_OID), Exit Service Operator (OID Check Out ISAM), Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system.

		- ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 21 Check Out – product used for travel not in CIPE list

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme - Destination <> NLC code of POST **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme - Destination = NLC code of POST **Normal Log**	CM is created successfully.

	• Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDeftype 203 - CIPE: - IPEID1 = Directory Entry ID of First IPE 22/24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of second IPE 22/24 - ORGN: LocDefType 203 - Transactiontype = 12

		Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory Entry ID of second IPE 22/24 - DTS set to check out time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system.

		- ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

3. OP3 CHECK-OUT – PRODUCT DECREMENT

Test 22 Check Out with TTR present with transactiontype 'Check In'

Step	Description	Expected

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	IPE22 or IPE23 or IPE24 with Valuegroups containing passes
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
		CM is created successfully.

	- IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location

		0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 23 Check Out with multiple candidate products

Step	Description	Expected

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	4 valid IPE22 or IPE23 or IPE24 with Valuegroups containing passes
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of first valid IPE 22/23/24.
	  - IPEID2= Directory Entry ID of second valid IPE 22/23/24.
	  - IPEID3= Directory Entry ID of third valid IPE 22/23/24.
	  - IPEID4= Directory Entry ID of fourth valid IPE 22/23/24.
	- ENTRY_OID
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)
		CM is created successfully.

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer : Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier

		of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 24 Check Out with multiple candidate products but only one valid at Check Out

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2**	CM is created successfully.

	• ValidIPE2Scheme
	
	4 IPE22 or IPE23 or IPE24 with Valuegroups containing passes but only last one is valid at Check Out
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of first candidate IPE 22/23/24, not valid at Check Out.
	  - IPEID2= Directory Entry ID of second candidate IPE 22/23/24, not valid at Check Out.
	  - IPEID3= Directory Entry ID of third candidate IPE 22/23/24, not valid at Check Out.
	  - IPEID4= Directory Entry ID of fourth valid IPE 22/23/24.
	- ENTRY_OID
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer : Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry:

		- LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system.

		- ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 25 Check Out with TTR present with transactiontype 'unspecified' - previous operation inspection without product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD	CM is created successfully.

	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_TT_IPE_ISAMID
	- ENTRY_TT_IPE_SAMSequenceNumber
	- ENTRY_DateTimeStamp
	- ENTRY_OID
	- Transactiontype = 0
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1

4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 26 Check Out with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 22/23/24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail) PTR = Directory Entry ID of IPE	CM is created successfully.

	22/23/24	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on

		the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 27 Check Out with TTR present with transactiontype 'Break Of Journey OUT'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 2 - TransactionType = 8 - JourneysRemaining = 1 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = NOW – 10 min - LocationOfLastValidation = NLC code of POST on which BOJ OUT took place **Normal Log** • - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203	CM is created successfully.

	- Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel

		IPE 22/23/24 - TransactionSequenceNumber = 3 - DateTimeStamp: Check Out Time - JourneysRemaining = 0 - TransfersRemaining = 510 - JourneyPartUsedFlag = 0 - DTSOfLastValidation = current POST's time - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to

		a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP3

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 28 Check Out with TTR present with transactiontype 'Break Of Journey IN'

Step	Description	Expected
Init	Create a CM with following fields	CM is created successfully.

(CM)	set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 2 - TransactionType = 8 - JourneysRemaining = 1 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = NOW – 10 min - LocationOfLastValidation = NLC code of POST on which BOJ OUT took place **Normal Log** - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 14 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNum	

	ber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber = 3 - DateTimeStamp: Check Out Time

		- JourneysRemaining = 0 - TransfersRemaining = 510 - JourneyPartUsedFlag = 0 - DTSOfLastValidation = current POST's time - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed

		system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP3

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 29 Check Out – Maximum Journey Time Exceeded (Direction unaware Device)

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme **Normal Log**	CM is created successfully.

	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID
	- Transactiontype = 11
	- DateTimeStamp = NOW – Maximum Journey Time
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Since the Maximum Journey Time has passed a forced check out is performed. Current validation is now assumed to be for Entry

3	Read the CM using the CM Tool.	On the CM 2 TTR's are created with:
		
		1rst TTR
		
		- FormatRevision = 4
		- STD
		- DEST: LocDefType 255
		- IPEPointer
		- ORGN: LocDefType 203
		- Transactiontype = 12
		
		2nd TTR
		
		- FormatRevision = 4
		- STD
		- ORGN
		- CIPE:
		  - IPEID1 = Directory Entry ID that identifies the first candidate IPE.
		  - IPEID2= 0.
		  - IPEID3= 0
		  - IPEID4= 0
		- ENTRY_OID
		- Transactiontype = 11

		Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	Transaction messages related to Forced Check Out 0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: LocDefType 255 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: LocDefType 255 - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the

		original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner Transaction messages related to Check In 0210 - Sent to: Entry Service Operator. - RecordFormatRevision = 5 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 30 Check Out – Maximum Journey Time Exceeded (Direction aware device)

Step	Description	Expected
Req	Make sure the POST is configured as a Closed System exit point	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDeftype 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 22/24. - IPEID2= 0.	CM is created successfully.

	- IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 - DateTimeStamp = NOW – Maximum Journey Time **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Since the Maximum Journey Time has passed then must assume previous journey has completed so must first force a check out on that journey and then review the product set as if this is a new journey without a transient ticket so assume Entry Point for current unknown.
3	Read the CM using the CM Tool.	On the CM 2 TTR's are created with: 1rst TTR - FormatRevision = 4 - STD - DEST: LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 2nd TTR - FormatRevision = 4 - STD - DEST: LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel

		- ORGN: LocDefType 255 - Transactiontype = 12 IPE 22/23/24 2 valuerecords are updated. - TransactionSequenceNumber: incremented by 1 (i.e. final valuerecord = TransactionSequenceNumber of Init step + 2) - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1 (i.e. final valuerecord = Remainingpasses of Init step - 2) Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check in time - PTR = Directory Entry ID of IPE used for travel
4	Import the transaction messages generated in the POST/HOPS Tool.	Transaction messages related to Forced Check Out 0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209

		- Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: LocDeftype 255 - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner Transaction messages related to second check out 0210

		- Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDeftype 255 - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID: 0 - ENTRY_TT_IPESAMSequenceNumber: 0 - ENTRY_DateTimeStamp: 0 - ENTRY_OID: 0 - ENTRY_IIN_Index: 0 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 31 Check Out – Maximum Journey Time = 0

Step	Description	Expected
Req	On the POST device make sure the Maximum Journey Time = 0	

Init (CM)	Create a CM with following fields set:
	
	IPE2
	
	• ValidIPE2Scheme
	
	IPE22 or IPE23 or IPE24 with Valuegroups containing passes
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID
	- Transactiontype = 11
	- DateTimeStamp = NOW – 90min
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)
		CM is created successfully.

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD

		- DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system.

		- ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.5

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 32 Check Out different OID than Check In

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with**	CM is created successfully.

	Valuegroups containing passes
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID <> OID of Check Out ISAM
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)	

2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber:

		incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator (ENTRY_OID), Exit Service Operator (OID of Check Out ISAM), Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system.

		0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Test 33 Check Out – product used for travel not in CIPE list

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme - Destination <> NLC code of the POST **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme - Destination = NLC code of the POST **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD	CM is created successfully.

	- ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of first IPE 22/23/24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer: Directory Entry ID of second IPE 22/23/24 - ORGN: LocDefType 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0

		- DTS set to check out time - PTR = Directory Entry ID of product used for travel IPE 22/23/24 - TransactionSequenceNumber: incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in POST/HOPS Tool	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: Check In location 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: Check In location - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system.

		- ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

4. OP4 UNDO CHECK-IN

Test 34 Undo Check In - Journey less than Minimum Journey time

Step	Description	Expected
Init (CM)	Create a CM with following fields set:	CM is created successfully.

	IPE2
	
	• ValidIPE2Scheme
	
	IPE22/IPE23/IPE24
	
	• ValidIPEScheme
	
	Normal Log
	
	• Transient Ticket present with:
	
	- FormatRevision = 4
	- STD
	- ORGN: LocDefType 203: Same location as POST under test
	- CIPE:
	  - IPEID1 = Directory Entry ID of IPE 22/23/24.
	  - IPEID2= 0.
	  - IPEID3= 0
	  - IPEID4= 0
	- ENTRY_OID
	- Transactiontype = 11
	Active Directory
	
	• For Last Directory Entry
	
	LPF = 1 (normal mode)
	
	EEI = 0 (always zero for Rail)	

2	Present the CM generated in Init Step to the POST within the minimum journey time.	The Check In is undone.

3	Read the CM using the CM Tool.	On the CM a TTR is created with:
		
		- FormatRevision = 4
		- STD
		- ORGN: LocDefType 203
		- CIPE:
		  - IPEID1 = Directory Entry ID of IPE 22/23/24.
		  - IPEID2= 0.
		  - IPEID3= 0
		  - IPEID4= 0
		- ENTRY_OID
		- Transactiontype = 3
		
		Directory log entry:
		
		- LPF = 1 (normal mode)
		
		- EEI = 0

		- DTS set to check out time
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Entry Service Operator, Exit Service Operator. - RecordFormatRevision = 5 - TransactionType = 3 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_IPEISAMID: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_IPESAMSequenceNumber: Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (checked in) to the closed system - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered checked in) to the closed system

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.3

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

5. OP9 CHECK-OUT WITH FORCED CHECK-IN – NO DECREMENT

Test 35 Check Out with no valid Rail Transient Ticket present

Step	Description	Expected
Req	Make sure the POST is configured as a Closed System exit point	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE24 without Valuegroups** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision <> 4 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	CM is created successfully.
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST: LocDefType 203 - IPEPointer - ORGN: LocDefType 255 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time

4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDefType 203 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: LocDefType 255 0209 - Sent to: Exit Service Operator (OID of Check Out ISAM), Product owner - RecordFormatRevision = 4 - Location: LocDefType 255 - Destination: Check Out location - TransactionSequenceNumber = 0 - RemainingUses = 0 - TransactionType = 12 - ENTRY_TT_IPEISAMID = 0 - ENTRY_TT_IPESAMSequenceNumber= 0 - ENTRY_DateTimeStamp = 0 - ENTRY_OID = 0 - ENTRY_IIN_Index = 0

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

6. *OP10 CHECK-OUT WITH FORCED CHECK-IN – PRODUCT DECREMENT*

Test 36 Check Out with no valid Rail Transient Ticket present

Step	Description	Expected

Req	Make sure the POST is configured as a Closed System exit point	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE22 or IPE23 or IPE24 with Valuegroups containing passes** • ValidIPEScheme **Normal Log** • Transient Ticket present with: - FormatRevision <> 4 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	CM is created successfully.
2	Perform a Check Out with the CM generated in the Init step.	Check Out is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - DEST = Check Out location LocDefType 203 - IPEPointer - ORGN = LocDefType 255 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - DTS set to check out time IPE 22/23/24 - TransactionSequenceNumber:

		incremented by 1 - DateTimeStamp: Check Out Time - RemainingPasses: decremented by 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - OriginLocation: LocDefType 255 0209 - Sent to: Exit Service Operator (OID of Check Out ISAM), Product owner - RecordFormatRevision = 4 - Location: LocDefType 255 - Destination: Check Out location - TransactionSequenceNumber = TransactionSequenceNumber on the CM - RemainingUses = RemainingPasses on the CM - TransactionType = 12 - ENTRY_TT_IPEISAMID = 0 - ENTRY_TT_IPESAMSequenceNumber= 0 - ENTRY_DateTimeStamp = 0 - ENTRY_OID = 0 - ENTRY_IIN_Index = 0 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3016 TIS Accreditation Requirements ITSO Ticket Control Equipment, Ref 2.2.1

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.26

Reference4: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.26

Reference5: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference6: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

7. OP11 BREAK OF JOURNEY OUT

Test 37 Break of Journey OUT with TTR present with transactiontype 'Check In'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD	CM is created successfully.

	- ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform a Break of Journey OUT with the CM generated in the Init step.	Break of Journey OUT is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE

		24 - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2 - TransactionType = 8 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = DateTimeStamp of Break Of Journey - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator and product owner. - RecordFormatRevision = 5 - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: LocDeftype 203 - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system

		0209 - Sent to: Product owner - RecordFormatRevision = 4 - Location: LocDefType 203 - Destination: LocDeftype 255 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 8 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Product Owner, Break Of Journey Service operator.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP11

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 38 Break of Journey OUT with TTR present with transactiontype 'unspecified' - previous operation inspection without product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0	CM is created successfully.

	- IPEID4= 0 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Break of Journey OUT with the CM generated in the Init step.	Break of Journey OUT is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DateTimeStamp of Break Of

		Journey IPE24: - TransactionSequenceNumber = 2 - TransactionType = 8 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = DateTimeStamp of Break Of Journey - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator and product owner. - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system 0209

		- Sent to: Product owner - RecordFormatRevision = 4 - Location: LocDefType 203 - Destination: LocDeftype 255 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 8 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Product Owner, Break Of Journey Service operator.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP11

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 39 Break of Journey OUT with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 • Transient Ticket present with: Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber	CM is created successfully.

	- ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always zero for Rail)	
2	Perform a Break of Journey OUT with the CM generated in the Init step.	Break of Journey OUT is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2

		- TransactionType = 8 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = current POST's time - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator and product owner. - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system 0209 - Sent to: Product owner - RecordFormatRevision = 4 - Location: LocDeftype 203 - Destination: LocDeftype 255 - TransactionSequenceNumber = 2

		- RemainingUses = 1 - TransactionType = 8 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Product Owner, Break Of Journey Service operator.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP11

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 40 Break of Journey OUT – TransfersRemaining = 0

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2**	CM is created successfully.

	• ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 0 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode)	

	EEI = 0 (always 0 for Rail)	
2	Perform a Break of Journey OUT with the CM generated in the Init step.	The POST displays 'seek assistance'.
3	Read the CM using the CM Tool.	No updates have been performed to the CM.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP11

8. OP12 BREAK OF JOURNEY IN

Test 41 Break of Journey IN with TTR present with transactiontype 'Break of Journey OUT'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of 24	CM is created successfully.

	- ORGN: LocDefType 203 - Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) PTR = Directory Entry ID of IPE 24	
2	Perform a Break of Journey IN with the CM generated in the Init step.	Break of Journey IN is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 14 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24

		- DTS set to current POST's time IPE24: - No updates have been performed to the product
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - IPEPointer: Directory Entry ID of IPE used for travel - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP12

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 42 Break of Journey IN with TTR present with transactiontype 'Check In'

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - PEID2= 0.	CM is created successfully.

	- IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform a Break of Journey IN with the CM generated in the Init step.	Break of Journey IN is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - Transactiontype = 14 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0

		- PTR = 0 - DTS set to current POST's time IPE24: - No updates have been performed to the product
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP12

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 43 Break of Journey IN with TTR present with transactiontype 'unspecified' - previous operation inspection without product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203	CM is created successfully.

	- CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) PTR = Directory Entry ID of IPE 24	
2	Perform a Break of Journey IN with the CM generated in the Init step.	Break of Journey IN is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - Transactiontype = 14

		- ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = 0 - DTS set to current POST's time IPE24: - No updates have been performed to the product
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - CIPE1_ISAMID: Identifies IPE instance of the first candidate IPE - CIPE1_ISAMSequenceNumber: Identifies IPE instance of the first candidate IPE - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator

		OID where the customer media entered (checked in) to the closed system

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP12

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 44 Break of Journey IN with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1	CM is created successfully.

	- JourneysRemaining = 1 - TransfersRemaining = 511 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) PTR = Directory Entry ID of IPE 24	
2	Perform a Break of Journey IN with the CM generated in the Init step.	Break of Journey IN is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24 - Transactiontype = 14

		- ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = 0 - DTS set to current POST's time IPE24: - No updates have been performed to the product
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service Operator - RecordFormatRevision = 5 - OriginLocation = LocDeftype 203 - IPEPointer = Directory Entry ID of IPE 24 - ENTRY_ IPE_ISAMID = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_ IPE_SAMSequenceNumber = Identifies the TTR (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp = The DateTime where the customer media checked in to the closed system. - ENTRY_OID = The service operator OID where the customer media entered (checked in) to the closed system

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP12

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 45 Break of Journey IN – Maximum JourneyTime exceeded

Step	Description	Expected
Req	Maximum Journey time is configured on the POST.	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1	CM is created successfully.

	- TransfersRemaining = 510 - JourneyPartUsedFlag = 1 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Transactiontype = 8 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp = NOW – Maximum Journey Time - ENTRY_OID **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail) PTR = Directory Entry ID of IPE 24	
2	Perform a Break of Journey IN with the CM generated in the Init step.	POST displays 'Seek Assistance'.
3	Read the CM using the CM Tool.	No updates are performed to the CM.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP12

9. OP13 BREAK OF JOURNEY OUT WITH FORCED CHECK IN WHERE DECREMENT IS REQUIRED

Test 46 Break of Journey Out with no valid Rail TTR present

Step	Description	Expected
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of transfer entitlements present with: - TransferEntitlementType = 2 - NumberOfTransfers = 511 - ExtendedValidityPeriod = 0 - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - TransfersRemaining = 510 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision <> 4 **Active Directory** • For Last Directory Entry	CM is created successfully.

	LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform a Break of Journey OUT with the CM generated in the Init step.	Break of Journey OUT is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 255 - Transactiontype = 8 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE used for travel - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2 - TransactionType = 8 - TransfersRemaining = 510 - JourneyPartUsedFlag = 1 - DTSOfLastValidation = Break Of Journey Time - LocationOfLastValidation = NLC code of POST
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Break of Journey Service

		Operator - RecordFormatRevision = 5 - OriginLocation = LocDeftype 255 - IPEPointer: Directory Entry ID of IPE used for travel 0209 - Sent to: Product owner and Break of Journey Service Operator - RecordFormatRevision = 4 - Location: LocDeftype 255 - Destination: LocDeftype 255 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 8 - ENTRY_TT_IPEISAMID: 0 - ENTRY_TT_IPESAMSequenceNumber: 0 - ENTRY_DateTimeStamp: 0 - ENTRY_OID: 0 - ENTRY_IIN_Index: 0 0208 - Sent to: Product Owner, Break Of Journey Service operator.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP13

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

10. OP14 CHECK OUT WHERE PART USED UPDATE REQUIRED

Test 47 Interchange with TTR present with transactiontype 'Check In'

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit = NLC of POST - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of	CM is created successfully.

	IPE 24. - PEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform an Interchange with the CM generated in the Init step.	Interchange is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Destination: LocDeftype 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DTS set to current POST's time IPE24:

		- TransactionSequenceNumber = 2 - JourneyPartUsedFlag = 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: LocDefType 203 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDefType 203 - Destination: LocDefType 203 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for

		the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP14

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 48 Interchange with TTR present with transactiontype ''unspecified' - previous operation inspection without product selection

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit = NLC of POST - ValueGroups present with: - TransactionSequenceNumber =	CM is created successfully.

	1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - IPEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform an Interchange with the CM generated in the Init step.	Interchange is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24

		- ORGN: LocDefType 203 - Destination: LocDeftype 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2 - JourneyPartUsedFlag = 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: LocDefType 203 0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDefType 203 - Destination: LocDefType 203

		- TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP14

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 49 Interchange with TTR present with transactiontype 'unspecified' - previous operation inspection with product selection

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location	
Init	Create a CM with following fields	CM is created successfully.

(CM)	set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit = NLC of POST - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - Formatrevision = 4 - STD - ORGN: LocDefType 203 - IPEPointer: Directory Entry ID of IPE 24. - ENTRY_TT_IPE_ISAMID - ENTRY_TT_IPE_SAMSequenceNumber - ENTRY_DateTimeStamp - ENTRY_OID - Transactiontype = 0 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	

2	Perform an Interchange with the CM generated in the Init step.	Interchange is performed successfully.
3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 203 - Destination: LocDeftype 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2 - JourneyPartUsedFlag = 1
4	Import the transaction messages generated in the POST/HOPS Tool	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: LocDefType 203

		0209 - Sent to: Entry Service Operator, Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDefType 203 - Destination: LocDefType 203 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 12 - ENTRY_TT_IPEISAMID: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_TT_IPESAMSequenceNumber: Identifier of the Transient Ticket (IPE) instance of the original TTR created for check in to a closed system. - ENTRY_DateTimeStamp: The DateTime where the customer media checked in to the closed system. - ENTRY_OID: The service operator OID where the customer media entered (check in) to the closed system. - ENTRY_IIN_Index: The IIN Index for the service operator where the customer media entered (checked in) to the closed system. 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP14

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

Test 50 Interchange – Interchange location not setup in the product

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit <> NLC of POST - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - PEID2= 0.	CM is created successfully.

	- IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform an Interchange with the CM generated in the Init step.	The POST displays 'seek assistance'.
3	Read the CM using the CM Tool.	No updates are performed to the CM.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP14

Test 51 Interchange – Interchange time exceeded

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location. Interchange time is configured in the POST.	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit	CM is created successfully.

	= NLC of POST - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision = 4 - STD - ORGN: LocDefType 203 - CIPE: - IPEID1 = Directory Entry ID of IPE 24. - PEID2= 0. - IPEID3= 0 - IPEID4= 0 - ENTRY_OID - Transactiontype = 11 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	
2	Perform an Interchange with the CM generated in the Init step.	The POST displays 'seek assistance'.
3	Read the CM using the CM Tool.	No updates are performed to the CM.

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP14

11. OP15 CHECK OUT WITH FORCED CHECK IN WHERE PART USED UPDATE REQUIRED

Test 52 Interchange with forced Check In

Step	Description	Expected
Req	POST is configured as an Out of Station Interchange (OSI) location	
Init (CM)	Create a CM with following fields set: **IPE2** • ValidIPE2Scheme **IPE24 without Valuegroups** • ValidIPEScheme - NumberOfTransferTypes = 1 - 1 Datagroup of interchanges present with: - OutOfLocationInterchangeExit = NLC of POST - ValueGroups present with: - TransactionSequenceNumber = 1 - JourneysRemaining = 1 - JourneyPartUsedFlag = 0 **Normal Log** • Transient Ticket present with: - FormatRevision <> 4 **Active Directory** • For Last Directory Entry LPF = 1 (normal mode) EEI = 0 (always 0 for Rail)	CM is created successfully.
2	Perform an Interchange with the CM generated in the Init step.	Interchange is performed successfully.

3	Read the CM using the CM Tool.	On the CM a TTR is created with: - FormatRevision = 4 - STD - IPEPointer: Directory Entry ID of IPE 24 - ORGN: LocDefType 255 - Destination: LocDeftype 203 - Transactiontype = 12 Directory log entry: - LPF = 1 (normal mode) - EEI = 0 - PTR = Directory ENTRY ID of IPE 24 - DTS set to current POST's time IPE24: - TransactionSequenceNumber = 2 - JourneyPartUsedFlag = 1
4	Import the transaction messages generated in the POST/HOPS Tool.	0210 - Sent to: Exit Service Operator. - RecordFormatRevision = 5 - DestinationTT: Check Out location. - IPEPointer: Directory Entry ID of IPE 24 - OriginLocation: LocDefType 255 0209

		- Sent to: Exit Service Operator, Product owner - RecordFormatRevision = 4 - Location: LocDefType 255 - Destination: LocDefType 203 - TransactionSequenceNumber = 2 - RemainingUses = 1 - TransactionType = 12 - ENTRY_TT_IPEISAMID: 0 - ENTRY_TT_IPESAMSequenceNumber: 0. - ENTRY_DateTimeStamp: 0 - ENTRY_OID: 0 - ENTRY_IIN_Index: 0 0208 - Sent to: Exit Service Operator, Product owner

Reference1: RSPS3002 ITSO in National Rail – specification, Ref OP15

Reference2: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.7.28

Reference3: ITSO_TS_1000-6_V2_1_4_2010-02_COR_2, section 4.6.27

Reference4: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 3.1.4

Reference5: ITSO_TS_1000-5_V2_1_4_2010-02_COR_2, section 2.11.1

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