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Server test procedures for enhanced reporting

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1 INTRODUCTION

Tissue #453 resolves several tissues on (buffered) reporting. Server test procedures version 2.2 was approved before this tissue was resolved and as such does not include test cases to verify these additional requirements.

This document describes the additional PIXIT and server test procedures for testing tissue #453.

A device with this tissue implemented will have a “6+” on the certificate when the mandatory test cases are passed.

The following table specifies which test procedures are mandatory/conditional for the conformance block.

Conformance Block	**Mandatory**	**Conditional**
6+: Enhanced buffered reporting	BrE1, BrE2, BrE3, BrE6, BrE7, BrE8, BrE9, BrE10, BrE11	BrE4, BrE5: ResvTms BrE12: DatSet is dynamic

2 PIXIT FOR ENHANCED REPORTING

Is ResvTms implemented	Y/N
<additional items>	

3 TEST PROCEDURES FOR ENHANCED REPORTING

A4.6+ Enhanced Buffered Reporting

Abstract test cases for tissue: 49, 190, 191, 275, 278, 297, 300, 322, 329, 335, 349 as specified in annex “Reporting Version7.zip” of tissue #453

BrE1	Verify that integrity reports are buffered
BrE2	Verify that the first report after RptEna is set to true always has SqNum=0
BrE3	Verify that BufOvl flag is set at the first report after the BRCB is enabled and reset at the following reports
BrE4	Verify succesfull ResvTms behavior • On ResvTms = -1 the BRCB can be used by the configured client • On ResvTms = 0 a client can reserve the BRCB by writing a value and configure the BRCB • On lost association the reserved BRCB is released after the ResvTms number of seconds
BrE5	Verify that a SetBRCBValues request, for setting ResvTms, shall: • Generate a negative response if the BRCB’s ResvTms value is -1. • Generate a negative response if the BRCB’s ResvTms value is non-zero and if the SetBRCBValues request is being issued by another client for whom the BRCB is not reserved. • Generate a negative response if the ResvTms value to be set is negative.
BrE6	Verify that TimeOfEntry and EntryID pair are consistent after restoring a lost association by setting the EntryID to zero to transmit the whole buffer again
BrE7	Verify that a change of one of the following BRCB parameters purges the buffer: RptID, BufTm, TrgOps, IntgPd, DatSet. A change of OptFlds should not purge the buffer
BrE8	Verify that after setting an invalid or non-existing EntryID the DUT sends all reports in the buffer
BrE9	Verify that without the GI trigger condition the DUT does not send GI reports
BrE10	Verify that when the BRCB state is RptEna=FALSE a GetBRCBValues shall return the EntryID value that represents the last (newest) entry that has been entered into the buffer. And when the BRCB RptEna=TRUE: The value of EntryID, returned in a GetBRCBValues response, shall be the EntryID of the last EntryID formatted and queued for transmission.
BrE11	Verify that only the last buffered GI report is transmitted after restoring a lost association
BrE12	Verify the DUT increments ConfRev when the BRCB datset is changed using SetBRCBValues()

BrE1 BrE2 BrE3	Buffer integrity reports First report has Sequence number 0 BufOvl flag is set only at first report	PASSED
TISSUE 453		
Expected result 1 to 6: Integrity reports are buffered after the association is released and reporting is disabled 3. and 7. First report after BRCB is enabled has sequence number 0 8. First report after BRCB is enabled has sequence number 0 and BufOvl=True, following reports have BufOvl=False		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and integrity with a valid integrity period 2. Client enables the BRCB (set RptEna to True) 3. EQUIPMENT SIMULATOR forces several data changes of different status data set members in the data set within BufTm 4. Client requests Release 5. EQUIPMENT SIMULATOR forces several more data changes 6. Client re-establishes the association and requests GetBRCBValues() 7. Client enables the BRCB 8. Repeat step 3 to 7 and but force a buffer overflow at step 5		
Comment		

BrE4	Successfull BRCB reservation	PASSED
TISSUE 453		
Expected result 1. DUT accepts configuration and send reports as configured 2. DUT accepts configuration and send reports as configured 4. DUT responds ResvTms = 0		
Test description 1. The pre-assigned client (compare ClientLN in SCL) configures and enables a pre-configured BRCB with ResvTms = -1 2. Client configures and enables a BRCB with ResvTms = 0 (no ClientLN in SCL) after it has set the ResvTms to a positive value 3. Client requests Release and wait 2 seconds longer then the ResvTms period 4. Client re-establishes the association and requests GetBRCBValues()		
Comment		

BrE5	Failed BRCB reservation	PASSED
TISSUE 453		
Expected result 1. DUT sends SetBRCBValues repond- 2. DUT sends SetBRCBValues repond- to Client2 3. DUT sends SetBRCBValues repond-		
Test description 1. A non pre-assigned client configures a BRCB which is assigned to another client (ResvTms = -1) 2. Client1 reserves a BRCB with ResvTms = 0 by setting the ResvTms to a positive value. Client2 configures the same BRCB 3. Client set ResvTms=-1 on a BRCB with ResvTms = 0		
Comment		

BrE6	TimeOfEntry and EntryID	PASSED
TISSUE 453		
Expected result 8. The matching EntryID's in the reports send at step 3 and 8 have the same TimeOfEntry		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and integrity with a valid integrity period 2. Client enables the BRCB (set RptEna to True) 3. EQUIPMENT SIMULATOR forces several data changes of different status data set members in the data set within BufTm 4. Client requests Release 5. EQUIPMENT SIMULATOR forces several more data changes 6. Client re-establishes the association and requests GetBRCBValues() 7. Client sets the EntryID=0 8. Client enables the BRCB		
Comment		

BrE7	Purge buffer	PASSED
TISSUE 453		
Expected result 8..12. The buffer is purged, buffered reports are not transmitted 13. The buffer is NOT purged, buffered reports are transmitted		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and Integrity with a valid Integrity period 2. Client enables the BRCB (set RptEna to True) 3. EQUIPMENT SIMULATOR forces several data changes of different status data set members in the data set within BufTm 4. Client requests Release 5. EQUIPMENT SIMULATOR forces several more data changes 6. Client re-establishes the association and requests GetBRCBValues() 7. Client changes the RptID 8. Client enables the BRCB 9. Repeat step 3 to 8 and at step 7 client changes the BufTm 10. Repeat step 3 to 8 and at step 7 client changes the TrgOps 11. Repeat step 3 to 8 and at step 7 client changes the IntgPd 12. Repeat step 3 to 8 and at step 7 client changes the DatSet 13. Repeat step 3 to 8 and at step 7 client changes the OptFlds		
Comment		

BrE8	Invalid EntryID	PASSED
TISSUE 453		
Expected result 8. DUT responds with the EntryID value of the last Entry entered in the buffer 9. All reports in the buffer are transmitted (the BRCB transits from disabled to enabled state)		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and integrity with a valid integrity period 2. Client enables the BRCB (set RptEna to True) 3. EQUIPMENT SIMULATOR forces several data changes of different status data set members in the data set within BufTm 4. Client requests Release 5. EQUIPMENT SIMULATOR forces several more data changes 6. Client re-establishes the association and requests GetBRCBValues() 7. Client sets an invalid or unknown EntryID value 8. Client requests GetBRCBValues() 9. Client enables the BRCB		
Comment		

BrE9	GI without GI triggercondition	PASSED
TISSUE 453		
Expected result 3. DUT does not send the GI report 4. DUT responds GI=false		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and Integrity with a valid Integrity period, without GI 2. Client enables the BRCB (set RptEna to True) 3. Client sets GI=true 4. Client requests GetBRCBValue()		
Comment		

BrE10	GetBRCBValues and EntryID	PASSED
TISSUE 453		
Expected result 7. DUT responds the EntryID of the last entry that has been entered into the buffer (this value is different from the EntryID received in the last report) 8. DUT transmits the reports in the buffer (not transmitted before) 9. DUT responds the EntryID of last entry that has been formatted and queued for transmission 11. DUT responds the EntryID of the last entry that has been entered into the buffer 13. DUT responds the EntryID of the last entry that has been entered into the buffer 14. DUT transmits all reports in the buffer (including the reports transmitted before) 15. DUT responds the EntryID of last entry that has been formatted and queued for transmission		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and integrity with a valid integrity period 2. Client enables the BRCB (set RptEna to True) 3. EQUIPMENT SIMULATOR forces several data changes 4. Client requests Release 5. EQUIPMENT SIMULATOR forces several more data changes 6. Client re-establishes the association 7. Client request GetBRCBValues 8. Client enables the BRCB 9. Client request GetBRCBValues while DUT is sending buffered reports 10. Client disables the BRCB 11. Client request GetBRCBValues 12. Client sets EntryID = 0 13. Client request GetBRCBValues 14. Client enables the BRCB 15. Client request GetBRCBValues while DUT is sending buffered reports		
Comment		

BrE11	GI reports not transmitted	PASSED
TISSUE 453		
Expected result 3. DUT transmits the integrity reports and the GI reports 8. DUT transmits the old and new integrity reports and only the last GI report		
Test description 1. Client configures a BRCB with all supported optional fields with the trigger condition data change and integrity with a valid integrity period 2. Client enables the BRCB (set RptEna to True) 3. Client requests GI report 3 times 4. Client requests Release and waits several integrity periods 5. Client re-establishes the association 6. Client sets EntryID to 0 7. Client request GetBRCBValues 8. Client enables the BRCB		
Comment		

BrE12	DUT increments ConfRev when datset changes	PASSED
TISSUE 453		
Expected result 4. DUT has incremented the ConfRev value in the BRCB 5. DUT transmits reports with the new ConfRev		
Test description 1. Client request a GetBRCBValues() of a valid BRCB 2. Client disables the BRCB 3. Client changes the data set 4. Client request a GetBRCBValues() 5. Client enables the BRCB with optional field ConRev		
Comment		