Test report

REP010904-1R2TRFEMC

Date of issue: August 23, 2023

Applicant:

Ericsson AB

Product:

CBRS Domain Proxy

Model:

KRC 161 746/1

Variant(s):

N/A

FCC ID:

TA8AKRC161746-1

Specifications:

- WINNT-TS-0122 V1.0.2
  Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)
- WINNT-IN-00129 V1.0.0.0
  WinnForum CBSD/DP UUT Security Test Cases Tutorial

Nemko San Diego, a testing laboratory, is an authorized test lab (ATL) by the CBRS Alliance for standard WINNT-TS-0122.

Lab and test locations

Company name	Nemko USA Inc.
Address	2210 Faraday Ave, Suite 150
City	Carlsbad
State	California
Postal code	92008
Country	USA
Telephone	+1 760 444 3500
Website	www.nemko.com
FCC Site Number	Test Firm Registration Number: 392943; Designation Number: US5058
ISED Test Site	2040B-3

Tested by	James Cunningham, EMC/WL Manager
Reviewed by	Juan Manuel Gonzalez, CoE Director
Review date	August 23, 2023
Reviewer signature	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.
This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

This test report has been completed in accordance with the requirements of WINNF-TS-0122 [Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)]. Nemko San Diego has successfully completed the requirements to become a WinnForum CBRS Approved Lab and a CBRS Alliance Authorized Test Lab: https://cbrs.wirelessinnovation.org/cbsd-certification-program

Copyright notification

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Section 1 Report summary

1.1 Test specifications

WINNF-TS-0122 V1.0.2	Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)
WINNF-IN-00129 V1.0.0.0	WinnForum CBSD/DP UUT Security Test Cases Tutorial

1.2 Exclusions

None.

1.3 Statement of compliance

Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See “Section 2 Summary of test results” for full details.

1.4 Test report revision history

Table 1.4-1: *Test report revision history*

Revision #	Issue Date	Details of changes made to test report
REP010904-1TRFEMC	July 11, 2023	Original report issued
REP010904-1R2TRFEMC	July 25, 2023	Updated applicant and manufacturer details
REP010904-1R23TRFEMC	August 23, 2023	Updated model name

Section 2 Summary of test results

2.1 Sample information

Receipt date	07-Jun-23
Nemko sample ID number	REP010904

2.2 Testing period

Test start date	07-Jun-23
Test end date	08-Jun-23

2.3 Test results

Per customer declaration, the UUT supports the following features:

Table 2.3-1: *Supported features*

Feature	Supported
CBSD	---
Domain Proxy	X
Single-step registration without CPI-signed data in registration message	---
Single-step registration with CPI-signed data in registration message	---
Multi-step registration	X
UUT supports RECEIVED_POWER_WITHOUT_GRANT measurement report type	X
UUT supports RECEIVED_POWER_WITH_GRANT measurement report type	X
UUT supports parameter change being made at the UUT prior to sending a deregistration	X

Table 2.3-2: *Test applicability and verdicts*

Section	Test case ID	Test case title	Applicable	Verdict
6.1.4.1.1	WINNF.FT.C.REG.1	Multi-Step registration	N/A	N/A
6.1.4.1.2	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	M	PASS
6.1.4.1.3	WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	N/A	N/A
6.1.4.1.4	WINNF.FT.D.REG.4	Domain Proxy Single-Step registration for Cat A CBSD	N/A	N/A
6.1.4.1.5	WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	N/A	N/A
6.1.4.1.6	WINNF.FT.D.REG.6_waiver	Waiver for Domain Proxy Single-Step registration for CBSD with CPI signed data	N/A	N/A
6.1.4.1.6	WINNF.FT.D.REG.6	Domain Proxy Single-Step registration for CBSD with CPI signed data	N/A	N/A
6.1.4.1.7	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	M	PASS
6.1.4.2.1	WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	N/A	N/A
6.1.4.2.2	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	M	PASS
6.1.4.2.3	WINNF.FT.C.REG.10	Pending registration (responseCode 200)	N/A	N/A
6.1.4.2.4	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	M	PASS
6.1.4.2.5	WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	N/A	N/A
6.1.4.2.6	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	M	PASS
6.1.4.2.7	WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	N/A	N/A
6.1.4.2.8	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	M	PASS
6.1.4.2.9	WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	N/A	N/A
6.1.4.2.10	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version responseCode 100)	M	PASS
6.1.4.2.11	WINNF.FT.C.REG.18	Group Error (responseCode 201)	N/A	N/A
6.1.4.2.12	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	M	PASS
6.1.4.3.1	WINNF.FT.C.REG.20	Category A CBSD location update	N/A	N/A
6.3.4.2.1	WINNF.FT.C.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE	M	PASS
6.3.4.2.2	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401	M	PASS
6.4.4.1.1	WINNF.FT.C.HBT.1	Heartbeat Success Case (first Heartbeat Response)	N/A	N/A
6.4.4.1.2	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	M	PASS
6.4.4.2.1	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	M	PASS
6.4.4.2.2	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	N/A	N/A
6.4.4.2.3	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	M	PASS
6.4.4.2.4	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	M	PASS
6.4.4.2.5	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	M	PASS
6.4.4.2.6	WINNF.FT.D.HBT.8	Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)	M	PASS

Section	Test case ID	Test case title	Applicable	Verdict
6.4.4.3.1	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	M	PASS
6.4.4.3.2	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	M	PASS
6.4.4.4.1	WINNF.FT.C.HBT.11	Successful Grant Renewal in Heartbeat Test Case	O	PASS
6.5.4.2.1	WINNF.FT.C.MES.1	Registration Response contains measReportConfig	N/A	N/A
6.5.4.2.2	WINNF.FT.D.MES.2	Domain Proxy Registration Response contains measReportConfig	M	PASS
6.5.4.2.3	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	M	PASS
6.5.4.2.4	WINNF.FT.C.MES.4	WINNF.FT.C.MES.4	N/A	N/A
6.5.4.2.5	WINNF.FT.D.MES.5	WINNF.FT.D.MES.5	M	PASS
6.6.4.1.1	WINNF.FT.C.RLQ.1	Successful Relinquishment	N/A	N/A
6.6.4.1.2	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	M	PASS
6.6.4.2.1	WINNF.FT.C.RLQ.3	Unsuccessful Relinquishment, responseCode=102	O	PASS
6.6.4.2.2	WINNF.FT.D.RLQ.4	Domain Proxy Unsuccessful Relinquishment, responseCode=102	M	PASS
6.6.4.3.1	WINNF.FT.C.RLQ.5	Unsuccessful Relinquishment, responseCode=103	O	PASS
6.6.4.3.2	WINNF.FT.D.RLQ.6	Domain Proxy Unsuccessful Relinquishment, responseCode=103	M	PASS
6.7.4.1.1	WINNF.FT.C.DRG.1	Successful Deregistration	N/A	N/A
6.7.4.1.2	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	O	PASS
6.7.4.2.1	WINNF.FT.C.DRG.3	Deregistration responseCode=102	O	PASS
6.7.4.2.2	WINNF.FT.D.DRG.4	Domain Proxy Deregistration responseCode=102	O	PASS
6.7.4.3.1	WINNF.FT.C.DRG.5	Deregistration responseCode=103	M	PASS
6.8.4.1.1	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	M	PASS
6.8.4.2.1	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	M	PASS
6.8.4.2.2	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	M	PASS
6.8.4.2.3	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	M	PASS
6.8.4.2.4	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	M	PASS
7.1.4.1.1	PowerMeasTest	UUT RF Transmit Power Measurement	M	PASS

Notes: M = mandatory, O = optional, N/A = not applicable

Section 3 Equipment under test (EUT) details

3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

3.2 Applicant

Company name	Ericsson AB
Address	PEU Radio Torshamnsgatan 23
City	Stockholm
State	
Postal/Zip code	164 80
Country	Sweden

3.3 Manufacturer

Company name	Ericsson AB
Address	PEU Radio Torshamnsgatan 23
City	Stockholm
State	
Postal/Zip code	164 80
Country	Sweden

3.4 EUT information

Product name	CBRS Domain Proxy
Model	KRC 161 746/1
Variant(s)	N/A
Version	R4.2.5

CBSD Details:

Product name	Radio 4408 B48
Product number	KRC 161 746/1
FCC ID:	TA8AKRC161746-1
Serial number	CBSD A: CF8B779097 CBSD B: CF8B780685
Software details	CXP9024418/15_R69C29
Hardware details	KDU137974/11_R1C/A

3.5 Technical information

Frequency band	CBRS band: 3550 – 3700 MHz
Modulation type(s)	QPSK, 16QAM, 64QAM, 256QAM

3.6 Product description and theory of operation

The UUT is a Domain Proxy. EUT can be programmed as Category A or Category B equipment.

3.7 UUT exercise details

All testing was performed with WinnForum SAS test harness version 1.0.0.3.

3.8 EUT setup details

Table 3.8-1: *EUT sub assemblies and auxiliary equipment*

Description	Brand name	Model/Part number	Serial number
Wireless router	Netgear	R7800	4H45715D0039C
SAS harness laptop	Dell	Latitude E7470	NEM-HG38MC2/IT1203

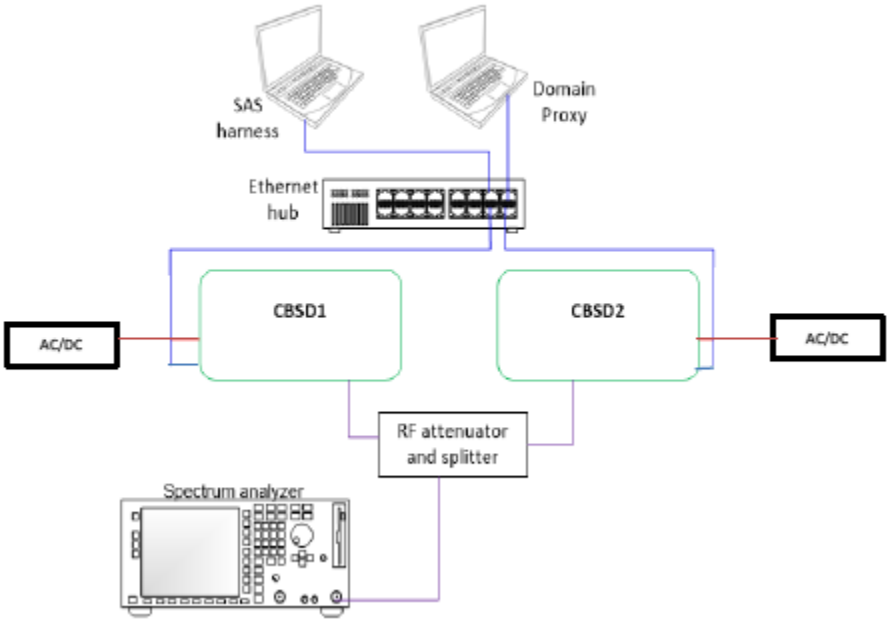


Figure 3.8-1: Test setup diagram

Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

None.

4.2 Technical judgement

None.

4.3 Deviations from laboratory test procedures

None.

Section 5 Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	86–106 kPa

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ±5 %, for which the equipment was designed.

Section 6 Measurement uncertainty

6.1 Uncertainty of measurement

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 “Uncertainty in EMC measurements.” Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

Table 6.1-1: *Measurement uncertainty*

Measurement	***Measurement uncertainty (dB)***
All antenna port measurements	0.55

Section 7 Test equipment

7.1 Test equipment list

Table 7.1-1: *Test equipment list*

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
Spectrum analyzer	Anritsu	MS2720T	N/A	1 year	11-Nov-2023
Wireless router	Netgear	R7800	N/A	NCR	NCR
SAS harness laptop	Dell	Latitude E7470	IT2303	NCR	NCR
Signal generator	Rohde & Schwarz	SMB100A	E1128	1 year	23-Dec-2023

Notes: N/A – not applicable
NCR – no calibration required
VOU – verify on use

Table 7.1-2: *Test software details*

Manufacturer of Software	Details
WinForum	SAS Test Harness Software V1.0.0.3

Notes: None

Section 8 Testing data

8.1 6.1.4.1.2, WINNF.FT.D.REG.2, Domain Proxy Multi-Step registration

8.1.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.1.2 Observations, settings, and special notes

None

8.1.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness • UUT is in the Unregistered state	-	-
2	DP with two DBSD sends correct Registration request information, as specified in [n.5]. in the form of one 2-element Array or as individual messages to the SAS Test Harness: • The required userId, fccId, and cbsdSerialNumber registration parameters shall be sent for each CBSD and conform to proper format and acceptable ranges. • Any REG-conditional or optional registration parameters that may be included in the message shall be verified that they conform to the proper format and are within acceptable ranges. Note: It is outside the scope of this document to test the Registration information that is supplied via other means.	☒	☐
3	• SAS Test Harness sends a CBSD Registration Response in the form or one 2-element Array or individual messages as follows: ○ *cbsdId* = Ci ○ *measReportConfig* shall not be included ○ *responseCode* = 0 for each CBSD	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode* = 0) to further request messages from the UUT.	-	-
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.2 6.1.4.1.7, WINNF.FT.C.REG.7, Registration due to change of an installation parameter

8.2.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.2.2 Observations, settings, and special notes

None

8.2.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness	-	-
2	UUT has successfully registered with SAS Test Harness		-
3	Change an installation parameter at the UUT (time T). Tester needs to record the current time at which the parameter change is executed.	-	-
4	Monitor the SAS-CBSD interface. UUT sends a deregistrationRequest to the SAS Test Harness. The deregistration request shall be sent within (T + 60 seconds) from step 3.	☒	☐

8.3 6.1.4.2.2, WINNF.FT.D.REG.9, Domain Proxy Missing Required parameters (responseCode 102)

8.3.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.3.2 Observations, settings, and special notes

None

8.3.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: • SAS response does not include a cbsdId. • *responseCode* = Ri (102) for CBSD1 and CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.4 6.1.4.2.4, WINNF.FT.D.REG.11, Domain Proxy Pending registration (responseCode 200)

8.4.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.4.2 Observations, settings, and special notes

None

8.4.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: ○ SAS response does not include a *cbsdId*. ○ *responseCode* (Ri) = 200 for CBSD1 and CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.5 6.1.4.2.6, WINNF.FT.D.REG.13, Domain Proxy Invalid parameters (responseCode 103)

8.5.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.5.2 Observations, settings, and special notes

None

8.5.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: o SAS response does not include a *cbsdId*. o *responseCode* (R1) = 0 for CBSD1 o *responseCode* (R2) = 103 for CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.6 6.1.4.2.8, WINNF.FT.D.REG.15, Domain Proxy Blacklisted CBSD (responseCode 101)

8.6.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.6.2 Observations, settings, and special notes

None

8.6.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: o SAS response does not include a *cbsdId*. o *responseCode* (R1) = 0 for CBSD1 o *responseCode* (R2) = 101 for CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.7 6.1.4.2.10, WINNF.FT.D.REG.17, Domain Proxy Unsupported SAS protocol version responseCode 100)

8.7.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.7.2 Observations, settings, and special notes

None

8.7.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: • SAS response does not include a *cbsdId*. • *responseCode* = Ri (100) for CBSD1 and CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.8 6.1.4.2.12, WINNF.FT.D.REG.19, Domain Proxy Group Error (responseCode 201)

8.8.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.8.2 Observations, settings, and special notes

None

8.8.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	–	–
2	The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness.	–	–
3	SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: • SAS response does not include a *cbsdId*. • *responseCode* (R1) = 0 for CBSD1 • *responseCode* (R2) = 201 for CBSD2	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.9 6.3.4.2.1, WINNF.FT.C.GRA.1, Unsuccessful Grant responseCode=400 (INTERFERENCE)

8.9.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.9.2 Observations, settings, and special notes

None

8.9.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with *cbsdId* = C	–	–
2	UUT sends valid Grant Request.	–	–
3	SAS Test Harness sends a Grant Response message, including • *cbsdId*=C • *responseCode* (R) = 401	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.10 6.3.4.2.2, WINNF.FT.C.GRA.2, Unsuccessful Grant responseCode=401

8.10.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.10.2 Observations, settings, and special notes

None

8.10.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with *cbsdId* = C	–	–
2	UUT sends valid Grant Request.	–	–
3	SAS Test Harness sends a Grant Response message, including • *cbsdId*=C • *responseCode* (R) = 401	–	–
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	☒	☐

8.11 6.4.4.1.2, WINNF.FT.D.HBT.2, Domain Proxy Heartbeat Success Case (first Heartbeat Response)

8.11.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.11.2 Observations, settings, and special notes

None

8.11.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has two CBSD registered successfully with SAS Test Harness, with *cbsdId* = Ci, i = {1,2}	–	–
2	DP sends a message: • If message is a Spectrum Inquiry Request, go to step 3 • If message is a Grant Request, go to step 5	–	–
3	DP sends a Spectrum Inquiry Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Spectrum Inquiry Request message is formatted correctly for each CBSD, including for CBSDi, i = {1,2}: • *cbsdId* = Ci • List of frequencyRange objects sent by DP are within the CBRS frequency range	☒	☐
4	If a separate Spectrum Inquiry Request message was sent for each CBSD, the SAS Test Harness shall respond to each Spectrum Inquiry Request message with a separate Spectrum Inquiry Response message. If a single Spectrum Inquiry Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Spectrum Inquiry Response message containing a 2-object array. Verify parameters for each CBSD within the Spectrum Inquiry Response message are as follows, for CBSDi, i = {1,2}: • *cbsdId* = Ci • availableChannel is an array of availableChannel objects • *responseCode* = 0	–	–
5	DP sends a Grant Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Grant Request message is formatted correctly for each CBSD, including for CBSDi, i = {1,2}: • cbsdId = C • maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96 • operationFrequencyRange, Fi, sent by UUT is a valid range within the CBRS band	☒	☐
6	If a separate Grant Request message was sent for each CBSD, the SAS Test Harness shall respond to each Grant Request message with a separate Grant Response message. If a single Grant Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Grant Response message containing a 2-object array. Verify parameters for each CBSD within the Grant Response message are as follows, for CBSDi, i = {1,2}: • *cbsdId* = Ci • *grantId* = Gi = a valid grant Id • *grantExpireTime* = UTC time greater than the duration of the test • *responseCode* = 0	–	–
7	Ensure DP sends first Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Heartbeat Request message is formatted correctly for each CBSD, including, for CBSDi i = {1,2}: • *cbsdId* = Ci, i = {1,2}; • *grantId* = Gi, i = {1,2} • *operationState* = “GRANTED”	☒	☐

Step	Test Execution Steps	Pass	Fail
8	If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Verify parameters for each CBSD within the Heartbeat Response message are as follows, for CBSDi: • *cbsdId* = Ci • *grantId* = Gi • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0	–	–
9	For further Heartbeat Request messages sent from DP after completion of step 8, validate message is sent within latest specified heartbeatInterval for CBSDi: • *cbsdId* = Ci • *grantId* = Gi • *operationState* = "AUTHORIZED" and SAS Test Harness responds with a Heartbeat Response message including the following parameters, for CBSDi • *cbsdId* = Ci • *grantId* = Gi • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0	☒	☐
10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Monitor the RF output of the UUT from start of test until RF transmission commences. Verify: • UUT does not transmit at any time prior to completion of the first heartbeat response • UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range Fi.	☒	☐

8.12 6.4.4.2.1, WINNF.FT.C.HBT.3, Heartbeat responseCode=105 (DEREGISTER)

8.12.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.12.2 Observations, settings, and special notes

None

8.12.3 Test data

Step	Test Execution Steps	Pass	Fail

1	Ensure the following conditions are met for test entry:
	• UUT has registered successfully with SAS Test Harness
	• UUT has a valid single grant as follows:
	  ○ valid *cbsdId* = C
	  ○ valid *grantId* = G
	  ○ grant is for frequency range F, power P
	  ○ *grantExpireTime* = UTC time greater than duration of the test
	• UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface
		–	–

2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within Heartbeat Interval specified in the latest Heartbeat Response, and formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = T = Current UTC time • *responseCode* = 105 (DEREGISTER)	–	–
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.		
5	Monitor the RF output of the UUT. Verify: • UUT shall stop transmission within (T + 60 seconds) of completion of step 3	☒	☐

8.13 6.4.4.2.3, WINNF.FT.C.HBT.5, Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response

8.13.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.13.2 Observations, settings, and special notes

None

8.13.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness • UUT has a valid single grant as follows: ○ valid *cbsdId* = C ○ valid *grantId* = G ○ grant is for frequency range F, power P ○ *grantExpireTime* = UTC time greater than duration of the test • UUT is in GRANTED but not AUTHORIZED state (i.e., has not performed its first Heartbeat Request)	-	-
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId*=C • *grantId* = G • *transmitExpireTime* = T = Current UTC time • *responseCode* = 501 (SUSPENDED_GRANT)	-	-
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	-	-
5	Monitor the SAS-CBSD interface. Verify either A OR B occurs: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: • *cbsdId* = C • *grantId* = G Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT does not transmit at any time	☒	☐

8.14 6.4.4.2.4, WINNF.FT.C.HBT.6, Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response

8.14.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.14.2 Observations, settings, and special notes

None

8.14.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness • UUT has a valid single grant as follows: ○ valid *cbsdId* = C ○ valid *grantId* = G ○ grant is for frequency range F, power P ○ *grantExpireTime* = UTC time greater than duration of the test • UUT is in AUTHORIZED state and is transmitting within the grant bandwidth, power P	-	-
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId*=C • *grantId* = G • *transmitExpireTime* = T = current UTC time • *responseCode* = 501 (SUSPENDED_GRANT)	-	-
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	-	-
5	Monitor the SAS-CBSD interface. Verify either A OR B occurs: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: • *cbsdId* = C • *grantId* = G Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop transmission within (*T* + 60 seconds) of completion of step 3	☒	☐

8.15 6.4.4.2.5, WINNF.FT.C.HBT.7, Heartbeat responseCode=502 (UNSYNC_OP_PARAM)

8.15.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.15.2 Observations, settings, and special notes

None

8.15.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness • UUT has a valid single grant as follows: ○ valid *cbsdId* = C ○ valid *grantId* = G ○ grant is for frequency range F, power P ○ *grantExpireTime* = UTC time greater than duration of the test • UUT is in AUTHORIZED state and is transmitting within the grant bandwidth, power P	-	-
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId*=C • *grantId* = G • *transmitExpireTime* = T = current UTC time • *responseCode* = 502 (UNSYNC_OP_PARAM)	-	-
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	-	-
5	Monitor the SAS-CBSD interface. Verify: • UUT sends a Grant Relinquishment Request message. Verify message is correctly formatted with parameters: ○ *cbsdId* = C ○ *grantId* = G Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. • UUT shall stop transmission within (*T* + 60 seconds) of completion of step 3	☒	☐

8.16 6.4.4.2.6, WINNF.FT.D.HBT.8, Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)

8.16.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.16.2 Observations, settings, and special notes

None

8.16.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has two CBSD registered successfully with SAS Test Harness • Each CBSD {1,2} has a valid single grant as follows: ○ valid *cbsdId* = Ci, i = {1,2} ○ valid *grantId* = Gi, i = {1,2} ○ grant is for frequency range Fi, power Pi ○ *grantExpireTime* = UTC time greater than duration of the test • Both CBSD are in AUTHORIZED state and transmitting within their granted bandwidth on RF interface	–	–

Step	Test Execution Steps	Pass	Fail

2	DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of size 2. Verify Heartbeat Request message is sent within latest specified *heartbeatInterval*, and is formatted correctly for each CBSD, including, for CBSDi i = {1,2}: • *cbsdId* = Ci, i = {1,2} • *grantId* = Gi, i = {1,2} • *operationState* = "AUTHORIZED"	☒	☐

3	If separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message.
	
	If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array.
	
	Parameters for each CBSD within the Heartbeat Response message should be as follows, for CBSDi:
	• *cbsdId* = Ci
	• *grantId* = Gi
	• For CBSD1:
	  ○ *transmitExpireTime* = current UTC time + 200 seconds
	  ○ *responseCode* = 0
	• For CBSD2:
	  ○ *transmitExpireTime* = T = current UTC time
	  ○ *responseCode* = 500 (TERMINATED_GRANT)
		–	–

4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. If CBSD sends further Heartbeat Request messages for CBSD1, SAS Test Harness shall respond with a Heartbeat Response message with parameters: • *cbsdId* = C1 • *grantId* = G1 • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0 • Heartbeat Request message is within *heartbeatInterval* of previous Heartbeat Request message	-	-
5	Monitor the RF output of CBSD2. Verify: • CBSD2 shall stop transmission within bandwidth F2 within (T + 60 seconds) of completion of step 3	☒	☐

8.17 6.4.4.3.1, WINNF.FT.C.HBT.9, Heartbeat Response Absent (First Heartbeat)

8.17.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.17.2 Observations, settings, and special notes

None

8.17.3 Test data

Step	Test Execution Steps	Pass	Fail

1	Ensure the following conditions are met for test entry:
	• UUT has registered successfully with SAS Test Harness
	• UUT has a valid single grant as follows:
	  ○ valid *cbsdId* = C
	  ○ valid *grantId* = G
	  ○ grant is for frequency range F, power P
	  ○ *grantExpireTime* = UTC time greater than duration of the test
	• UUT is in GRANTED, but not AUTHORIZED state (i.e., has not performed its first Heartbeat Request)
		–	–

2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified *heartbeatInterval*, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED"	☐	☐

Step	Test Execution Steps	Pass	Fail

3	After completion of Step 2, SAS Test Harness does not respond to any further messages from UUT to simulate loss of network connection	–	–
4	Monitor the RF output of the UUT from start of test to 60 seconds after step 3. Verify: • At any time during the test, UUT shall not transmit on RF interface	☒	☐

8.18 6.4.4.3.2, WINNF.FT.C.HBT.10, Heartbeat Response Absent (Subsequent Heartbeat)

8.18.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.18.2 Observations, settings, and special notes

None

8.18.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness • UUT has a valid single grant as follows: ○ valid *cbsdId* = C ○ valid *grantId* = G ○ grant is for frequency range F, power P ○ *grantExpireTime* = UTC time greater than duration of the test • UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	–	–
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within the latest specified *heartbeatInterval*, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, with the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0	–	–
4	After completion of Step 3, SAS Test Harness does not respond to any further messages from UUT	–	–
5	Monitor the RF output of the UUT. Verify: • UUT shall stop all transmission on RF interface within (*transmitExpireTime* + 60 seconds), using the transmitExpireTime sent in Step 3.	☒	☐

8.19 6.4.4.4.1, WINNF.FT.C.HBT.11, Successful Grant Renewal in Heartbeat Test Case

8.19.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.19.2 Observations, settings, and special notes

None

8.19.3 Test data

#	Test Execution Steps	Pass	Fail

1	Ensure the following conditions are met for test entry:
	• UUT has registered successfully with SAS Test Harness
	• UUT has a valid single grant as follows:
	  ○ valid *cbsdId* = C
	  ○ valid *grantId* = G
	  ○ grant is for frequency range F, power P
	• UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface.
	• Grant has the following parameters at the start of the test:
	  ○ *grantExpireTime* =UTC time equal to time at start of test + 300 seconds = Tgrant_expire
	  ○ *transmitExpireTime* = UTC time equal to time at start of test + 200 seconds
	  ○ *heartbeatInterval* = 60 seconds
		-	-

2	UUT sends a Heartbeat Request message. If Heartbeat Request message contains grantRenew = TRUE, go to Step 6, else go to Step 3.	-	-
3	Verify Heartbeat Request message is sent within the latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	☒	☐
4	SAS Test Harness sends a Heartbeat Response message, with the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = current UTC + 200 seconds • *grantExpireTime* = same as Step 1 • *responseCode* = 0	-	-
5	Go to Step 2		
6	Verify Heartbeat Request message is sent within the latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED" • *grantRenew* = TRUE	☒	☐
7	SAS Test Harness sends a Heartbeat Response message, with the following parameters: • *cbsdId* = C • *grantId* = G • *grantExpireTime* = UTC time set far in the future • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0	☒	☐
8	Continue to respond to any subsequent Heartbeat Request from CBSD with Heartbeat Response with the following parameters: • *cbsdId*=C • *grantId*=G • *transmitExpireTime*=same as Step 7	-	-
9	Monitor RF transmission of UUT from start of test until Tgrant_expire + 60 seconds and ensure UUT continues to transmit throughout the time period.	☒	☐

8.20 6.5.4.2.2, WINNF.FT.D.MES.2, Domain Proxy Registration Response contains measReportConfig

8.20.1 Test summary

Verdict	Pass

Test date	June 7, 2023

8.20.2 Observations, settings, and special notes

None

8.20.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness	-	-
2	DP sends a Registration Request message for each of two CBSD. This may occur in a separate Request message per CBSD, or together in a single Request message with array of 2. Verify Registration Request message contains all required parameters properly formatted for CBSDi, i = {1,2}, and specifically: • *userId* is present and correct • *fccId* is present and correct • *cbsdSerialNumber* is present and correct • *measCapability* = "RECEIVED_POWER_WITHOUT_GRANT"	☒	☐
3	If a separate Registration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Registration Request message with a separate Registration Response message. If a single Registration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Registration Response message containing a 2-object array. Parameters for each CBSD within the Registration Response message should be as follows, for CBSDi: • *cbsdId* = Ci • *measReportConfig*= "RECEIVED_POWER_WITHOUT_GRANT" • *responseCode* = 0	–	–
4	UUT sends a message: • If message is type Spectrum Inquiry Request, go to step 5, or • If message is type Grant Request, go to step 7	–	–
5	UUT sends message type Spectrum Inquiry Request. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Spectrum Inquiry Request message contains all required parameters properly formatted for CBSDi, i= {1,2}, and specifically: • *cbsdId* = Ci • *measReport* is present and is a properly formatted *rcvdPowerMeasReport*.	☒	☐
6	If a separate Spectrum Inquiry Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Spectrum Inquiry Request message with a separate Spectrum Inquiry Response message. If a single Spectrum Inquiry Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Spectrum Inquiry Response message containing a 2-object array. Parameters for each CBSD within the Spectrum Inquiry Response message should be as follows: • *cbsdId* = Ci • *availableChannel* is an array of availableChannel objects • *responseCode* = 0 UUT sends message type Grant Request message. This may occur in a separate message per CBSD, or together in a single message with array of 2.	–	–
7	Verify the Grant Request message contains all required parameters properly formatted for CBSDi, i= {1,2}, and specifically: • *cbsdId* = Ci • *measReport* is present and is a properly formatted *rcvdPowerMeasReport*.	☒	☐

8.21 6.5.4.2.3, WINNF.FT.C.MES.3, Grant Response contains measReportConfig

8.21.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.21.2 Observations, settings, and special notes

None

8.21.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, with *cbsdId*=C and *measCapability* = "RECEIVED_POWER_WITH_GRANT"	-	-
2	UUT sends a Grant Request message. Verify Grant Request message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *operationParam* is present and format is valid	☒	☐
3	SAS Test Harness sends a Grant Response message, with the following parameters: • *cbsdId* = C • *grantId* = G = valid grant ID • *grantExpireTime* = UTC time in the future • *heartbeatInterval* = 60 seconds • *measReportConfig*= "RECEIVED_POWER_WITH_GRANT" • *channelType* = "GAA" • *responseCode* = 0	-	-
4	UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED"	☒	☐
5	If Heartbeat Request message (step 4) contains *measReport* object, then: • verify *measReport* is properly formatted as object *rcvdPowerMeasReport* • end test, with PASS result else, if Heartbeat Request message (step 4) does not contain *measReport* object, then: If number of Heartbeat Requests sent by UUT after Step 3 is = 5, then stop test with result of FAIL	☒	☐
6	SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = current UTC time + 200 seconds • *responseCode* = 0 Go to Step 4, above	-	-

8.22 6.5.4.2.5, WINNF.FT.D.MES.5, Domain Proxy Heartbeat Response contains measReportConfig

8.22.1 Test summary

Verdict	Pass
Test date	June 7, 2023

8.22.2 Observations, settings, and special notes

None

8.22.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness, each with *cbsdId*=Ci, i = {1,2} and *measCapability* = "RECEIVED_POWER_WITH_GRANT" • DP has received a valid grant with *grantId* = Gi, i = {1,2} for each CBSD • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. • Grants have *heartbeatInterval* =60 seconds	-	-
2	Verify DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Heartbeat Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci • *grantId* = Gi • *operationState* = "AUTHORIZED	☒	☐
3	If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Parameters for each CBSD within the Heartbeat Response message containing all required parameters properly formatted, and specifically: • *cbsdId* = Ci • *grantId* = Gi • *measReportConfig*= "RECEIVED_POWER_WITH_GRANT" • *responseCode* = 0	-	-
4	Verify DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Heartbeat Request message contains all required parameters properly formatted for each CBSD, and specifically, for CBSDi, i = {1,2}: • *cbsdId* = Ci • *grantId* = Gi • *operationState* = "AUTHORIZED" • Check whether *measReport* is present, and if present, ensure it is a properly formatted *rcvdPowerMeasReport* object, and record its reception for each CBSDi, i = {1,2}.	☒	☐
5	If Heartbeat Request message (step 4) contains *measReport* object, then: • Verify *measReport* is properly formatted as object *rcvdPowerMeasReport* • record which CBSD have successfully sent a *measReport* object If all CBSDi, i = {1,2} have successfully sent a *measReport* object, then • end test, with PASS result else, if the number of Heartbeat Requests sent per CBSD is 5 or more, then stop test with result of FAIL	☒	☐

#	Test Execution Steps	Pass	Fail
6	If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Parameters for each CBSD within the Heartbeat Response message containing all required parameters properly formatted, and specifically: • *cbsdId* = Ci • *grantId* = Gi • *responseCode* = 0 Go to Step 4, above	-	-

8.23 6.6.4.1.2, WINNF.FT.D.RLQ.2, Domain Proxy Successful Relinquishment

8.23.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.23.2 Observations, settings, and special notes

None

8.23.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness, each with *cbsdId*=Ci, i = {1,2} • DP has received a valid grant with *grantId* = Gi, i = {1,2} for each CBSD • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to relinquish each UUT Grant from the SAS Test Harness	–	–
2	Verify DP sends a Relinquishment Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci • *grantId* = Gi	☒	☐
3	If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message. If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array. Parameters for each CBSD within the Relinquishment Response shall be as follows: • *cbsdId* = Ci • *grantId* = Gi • *responseCode* = 0	–	–
4	After completion of step 3, SAS Test Harness will not provide any additional positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop RF transmission at any time between triggering the relinquishments and UUT sending the relinquishment requests for each CBSD.	☒	☐

8.24 6.6.4.2.1, WINNF.FT.C.RLQ.3, Unsuccessful Relinquishment, responseCode=102

8.24.1 Test summary

Verdict	Pass

Test date	June 8, 2023

8.24.2 Observations, settings, and special notes

None

8.24.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, each with *cbsdId*=C • UUT has received a valid grant with *grantId* = G • UUT is in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	-	-
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G	☒	☐
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: • *cbsdId* = C • *grantId* = G • *responseCode* = R (102)	–	–
4	After completion of step 3, SAS Test Harness will not provide any additional positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒	☐

8.25 6.6.4.2.2, WINNF.FT.D.RLQ.4, Domain Proxy Unsuccessful Relinquishment, responseCode=102

8.25.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.25.2 Observations, settings, and special notes

None

8.25.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness, each with *cbsdId*=Ci, i = {1,2} • DP has received a valid grant with *grantId* = Gi, i = {1,2} for each CBSD • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger on UUT to Relinquish Grant from the SAS Test Harness	-	-

#	Test Execution Steps	Pass	Fail
2	DP with two CBSDs sends Relinquishment Request with two objects to the SAS Test Harness. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify DP sends a Relinquishment Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci • *grantId* = Gi	-	-
3	If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message. If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array. Parameters for each CBSD within the Relinquishment Response Message shall be as follows: • *cbsdId* = Ci • No *grantId* • *responseCode* = Ri	-	-
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	-	-
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: A. UUT stopped RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒	☐

8.26 6.6.4.3.1, WINNF.FT.C.RLQ.5, Unsuccessful Relinquishment, responseCode=103

8.26.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.26.2 Observations, settings, and special notes

None

8.26.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, each with *cbsdId*=C • UUT has received a valid grant with *grantId* = G • UUT is in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	-	-
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G	☒	☐
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: • *cbsdId* = C • *grantId* = G • *responseCode* = R (103)	–	–
4	After completion of step 3, SAS Test Harness will not provide any additional positive response (*responseCode*=0) to further request messages from the UUT.	–	–
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒	☐

8.27 6.6.4.3.2, WINNF.FT.D.RLQ.6, Domain Proxy Unsuccessful Relinquishment, responseCode=103

8.27.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.27.2 Observations, settings, and special notes

None

8.27.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness, each with *cbsdId*=Ci, i = {1,2} • DP has received a valid grant with *grantId* = Gi, i = {1,2} for each CBSD • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger on UUT to Relinquish Grant from the SAS Test Harness	-	-
2	DP with two CBSDs sends Relinquishment Request with two objects to the SAS Test Harness. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify DP sends a Relinquishment Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci • *grantId* = Gi	-	-
3	If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message. If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array. Parameters for each CBSD within the Relinquishment Response Message shall be as follows: • *cbsdId* = Ci • No *grantId* • *responseCode* = Ri	-	-
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=0) to further request messages from the UUT.	-	-
5	Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: A. UUT stopped RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒	☐

8.28 6.7.4.1.2, WINNF.FT.D.DRG.2, Domain Proxy Successful Deregistration

8.28.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.28.2 Observations, settings, and special notes

None

8.28.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • Each UUT has successfully registered with SAS Test Harness • Each UUT is in the authorized state • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness with *cbsdId*=Ci, i = {1,2} • DP has received a valid grant with *grantId* = Gi, i = {1,2} • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to deregister each UUT from the SAS Test Harness	-	-
2	UUT may send a Relinquishment request and receives Relinquishment response with *responseCode* = 0	-	-
3	Verify DP sends Deregistration Request for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Deregistration Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci	☒	☐
4	If a separate Deregistration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message. If a single Deregistration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array. Parameters for each CBSD within the Deregistration Response shall be as follows: • *cbsdId = Ci* • *responseCode* = 0	-	-
5	After completion of step 4, SAS Test Harness will not provide any additional positive response (*responseCode* = 0) to further request messages from the UUT.	-	-
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the deregistration and either A or B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	☒	☐

8.29 6.7.4.2.1, WINNF.FT.C.DRG.3, Deregistration responseCode=102

8.29.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.29.2 Observations, settings, and special notes

None

8.29.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness with *cbsdId*=C • UUT has received a valid grant with *grantId* = G • UUT is in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to deregister UUT from the SAS Test Harness	-	-
2	UUT may send a Relinquishment request and receives Relinquishment response with *responseCode* = 0	-	-
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C	☒	☐
4	SAS Test harness shall approve the request with Deregistration Response message with parameters: • *cbsdId* = C • *responseCode* =102	-	-
5	After completion of step 3, SAS Test Harness will not provide any additional positive response (*responseCode* = 0) to further request messages from the UUT.	-	-
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the deregistration and either A or B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	☒	☐

8.30 6.7.4.2.2, WINNF.FT.D.DRG.4, Domain Proxy Deregistration responseCode=102

8.30.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.30.2 Observations, settings, and special notes

None

8.30.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • Each UUT has successfully registered with SAS Test Harness • Each UUT is in the authorized state • DP has successfully completed SAS Discovery and Authentication with SAS Test Harness • DP has successfully registered 2 CBSD with SAS Test Harness with *cbsdId*=Ci, i = {1,2} • DP has received a valid grant with *grantId* = Gi, i = {1,2} • Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. Invoke trigger to deregister each UUT from the SAS Test Harness	-	-
2	UUT may send a Relinquishment request and receives Relinquishment response with *responseCode* = 0	-	-

#	Test Execution Steps	Pass	Fail
3	Verify DP sends Deregistration Request for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Deregistration Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi: • *cbsdId* = Ci	☒	☐
4	If a separate Deregistration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message. If a single Deregistration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array. Parameters for each CBSD within the Deregistration Response shall be as follows: • *cbsdId = Ci* • *responseCode* = Ri (102)	-	-
5	After completion of step 4, SAS Test Harness will not provide any additional positive response (*responseCode* = 0) to further request messages from the UUT.	-	-
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the deregistration and either A or B occurs: C. UUT sending a Registration Request message, as this is not mandatory D. UUT sending a Deregistration Request message	☒	☐

8.31 6.7.4.3.1, WINNF.FT.C.DRG.5, Deregistration responseCode=103

8.31.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.31.2 Observations, settings, and special notes

None

8.31.3 Test data

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, with *cbsdId*=C • UUT has received a valid grant with *grantId* = G • UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to deregister UUT from the SAS Test Harness	-	-
2	UUT sends a Relinquishment request and receives Relinquishment response with *responseCode*=0	-	-
3	UUT sends Deregistration Request to SAS Test Harness with *cbsdId* = C.	-	-
4	The SAS Test Harness sends the Deregistration Response Message to UUT with: • No *cbsdId* • *responseCode* = 103 • *responseData* = “cbsdId”	-	-
5	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	-	-
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	☒	☐

8.32 6.8.4.1.1, WINNF.FT.C.SCS.1, Successful TLS connection between UUT and SAS Test Harness

8.32.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.32.2 Observations, settings, and special notes

None

8.32.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: 1. Wireshark "Protocol" column shows "TLSv1.2" 2. CBSD/DP UUT sends "Client Hello" message to WinnForum SAS Test Harness WinnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. • The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. • Verify the "Cipher Suite" shown in Wireshark is one of the following: TLS_RSA_WITH_AES_128_GCM_SHA256, TLS_RSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256, TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 3. "Application Data" messages are exchanged between WinnForum SAS Test Harness and CBSD/DP UUT.	☒	☐
2	Verify that WinnForum SAS Test Harness Command Prompt shows Registration Request Message from CBSD/DP UUT	☒	☐

8.33 6.8.4.2.1, WINNF.FT.C.SCS.2, TLS failure due to revoked certificate

8.33.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.33.2 Observations, settings, and special notes

None

8.33.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: 1. Wireshark "Protocol" column shows "TLSv1.2" 2. CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness 3. WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. • The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. • Verify the "Cipher Suite" shown in Wireshark is one of the following: TLS_RSA_WITH_AES_128_GCM_SHA256, TLS_RSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256, TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 4. CBSD/DP UUT performs DNS resolution for the FQDN of the CRL server, or OCSP server, or both listed in the X.509v3 extensions described above for the X.509 certificate of SAS Test Harness. 5. CBSD/DP UUT: • Download the CRL file according to the full URI listed in X.509v3 extension of "CRL Distribution Points" described above. OR • Send to the OCSP server an OCSP "Request" message containing the certificate serial number, and OCSP server replies. OR • Both CRL file download and OCSP transaction as described above. 6. "Application Data" messages are not seen between WInnForum SAS Test Harness and CBSD/DP UUT. 7. CBSD/DP UUT may send a TLS "Alert" message to WInnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.34 6.8.4.2.2, WINNF.FT.C.SCS.3, TLS failure due to expired server certificate

8.34.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.34.2 Observations, settings, and special notes

None

8.34.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: 1. Wireshark "Protocol" column shows "TLSv1.2" 2. CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness 3. WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. • The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. • Verify the "Cipher Suite" shown in Wireshark is one of the following: TLS_RSA_WITH_AES_128_GCM_SHA256, TLS_RSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256, TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 4. "Application Data" messages are exchanged between WInnForum SAS Test Harness and CBSD/DP UUT.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.35 6.8.4.2.3, WINNF.FT.C.SCS.4, TLS failure when SAS Test Harness certificate is issue by unknown CA

8.35.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.35.2 Observations, settings, and special notes

None

8.35.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: 1. Wireshark "Protocol" column shows "TLSv1.2" 2. CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness 3. WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. • The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. • Verify the "Cipher Suite" shown in Wireshark is one of the following: TLS_RSA_WITH_AES_128_GCM_SHA256, TLS_RSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256, TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 4. "Application Data" messages are not seen between WInnForum SAS Test Harness and CBSD/DP UUT. 5. CBSD/DP UUT may send a TLS "Alert" message to WInnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.36 6.8.4.2.4, WINNF.FT.C.SCS.5, TLS failure when certificate at the SAS Test Harness is corrupted

8.36.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.36.2 Observations, settings, and special notes

None

8.36.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: 1. Wireshark "Protocol" column shows "TLSv1.2" 2. CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness 3. WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. • The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. • Verify the "Cipher Suite" shown in Wireshark is one of the following: TLS_RSA_WITH_AES_128_GCM_SHA256, TLS_RSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256, TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384, TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 4. "Application Data" messages are not seen between WInnForum SAS Test Harness and CBSD/DP UUT. 5. CBSD/DP UUT may send a TLS "Alert" message to WInnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.37 7.1.4.1.1, PowerMeasTest, UUT RF Transmit Power Measurement

8.37.1 Test summary

Verdict	Pass
Test date	June 8, 2023

8.37.2 Observations, settings, and special notes

All four antenna ports of each CBSD were measured with the worst case (highest power) data being reported here.

8.37.3 Test data

To demonstrate compliance, the following parameters shall be chosen:

- lowFrequency, highFrequency of the grant. These values should correspond to the bandwidth of operation for the test, appropriate to the OBW of signal under test. Where a UUT is capable of multiple bandwidth operation modes, a single bandwidth operation mode shall be chosen for this test.

The test case below shall be performed for each of the maxEirp values: {P1, P2, ... PN}, determining a pass or fail for each. The UUT must comply with the grant maxEirp parameter for each test. Choice of maxEirp values {P1, P2, ... PN} should be made with knowledge of any limitations on UUT power control steps.

The UUT should be configured during the test to apply the maxEirp values to the entire occupied bandwidth and is implicitly expected to not exceed the dBm/MHz grant requirement.

The test execution steps below will yield a single measurement case. The test steps are to be repeated for each power measurement step, Pi, i = {1...N}.

#	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness • UUT has registered with the SAS, with CBSD ID = C • UUT has a single valid grant G with parameters {lowFrequency = FL, highFrequency = FH, maxEirp = Pi}, with grant in AUTHORIZED state, and grantExpireTime set to a value far past the duration of this test case *Note: in order for the UUT to request a grant with the parameters {lowFrequency, highFrequency, maxEirp), the SAS Test Harness may need to provide appropriate guidance in the availableChannel object of the spectrumInquiry response message, and the operationParam object of the grant response message. Alternately, the UUT vendor may provide the ability to set those parameters on the UUT so that the UUT will request a grant with those parameters.*	-	-
2	UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows: • UUT sends Heartbeat Request, including: o cbsdId = C o grantId = G • SAS Test Harness responds with Heartbeat Response, including: o cbsdId = C o grantId = G o transmitExpireTime = current UTC time + 200 seconds o responseCode = 0	-	-
3	Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfil the requirements of the power measurement method. Note: it may be required for the vendor to provide a method or configuration to bring the UUT to a mode which is required by the measurement methodology. Any such mode is vendor-specific and depends upon UUT behavior and the measurement methodology.	☒	☐

Power measurement results
Requested power in grant request: 20 dBm/MHz
Frequency=3625 MHz

Serial Number	Measured power (dBm)	Cable/Attenuator loss (dB)	Antenna gain (dBi)	MIMO gain (dB)	EIRP (dBm/MHz)	EIRP (mW)
CF8B779097	-43.20	32.75	12.50	10Log(4) = 6.02	8.07	6.41
CF8B780685	-33.09	32.75	12.50	10Log(4) = 6.02	18.18	65.77

Measured power density's from both CBRS are less than the granted power density of 20 dBm/MHz.

Figure 8.37-1: Transmit power measurement, CF8B779097 (worst case)

Figure 8.37-2: Transmit power measurement, CF8B780685 (worst case)

Section 9 Testing logs

9.1 Log file for test case ID: WINNF.FT.D.REG.2

```
2023-06-07T17:42:27.016Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T17:42:27.017Z - INFO - the selected test from the user : WINNF.FT.D.REG.2 is starting now
2023-06-07T17:42:31.457Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T17:42:31.492Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:42:34.415Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T17:42:34.421Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3555000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
```

```
            }
        }
    ]
}
2023-06-07T17:42:34.500Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.510Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.586Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.589Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.664Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.667Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.746Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.750Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.825Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.828Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.897Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.898Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:34.971Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-07T17:42:34.976Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.062Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.068Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
```

```
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.167Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.171Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.249Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.252Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.323Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.326Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.407Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3660000000,
                    "lowFrequency": 3650000000
                }
            }
        }
    ]
}
```

```
2023-06-07T17:42:35.407Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.486Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3670000000,
                    "lowFrequency": 3660000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.493Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.598Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3680000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.601Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:35.677Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3680000000
                }
            }
        }
    ]
}
2023-06-07T17:42:35.681Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T17:42:36.017Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
```

```
            "softwareVersion": "CXP9024418/15_R69C29",
            "vendor": "Ericsson"
        },
        "cbsdSerialNumber": "CF8B780685",
        "fccId": "def456",
        "groupingParam": [
            {
                "groupId": "test",
                "groupType": "INTERFERENCE_COORDINATION"
            }
        ],
        "installationParam": {
            "antennaAzimuth": 0,
            "antennaBeamwidth": 0,
            "antennaDowntilt": 0,
            "antennaGain": -127,
            "antennaModel": "test",
            "height": 10.0,
            "heightType": "AMSL",
            "horizontalAccuracy": 10,
            "indoorDeployment": false,
            "latitude": 33.0,
            "longitude": -96.8,
            "verticalAccuracy": 1
        },
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "TestCBSD2"
    }
]
}
2023-06-07T17:42:36.082Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:42:37.141Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T17:42:37.142Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T17:42:43.950Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T17:42:43.951Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T17:42:45.684Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T17:42:48.279Z - INFO - The final result of the test : WINNF.FT.D.REG.2 is - passed and :the additional comments for the current
test are : None
```


9.2 Log file for test case ID: WINNF.FT.C.REG.7


```
2023-06-07T17:50:42.081Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T17:50:42.082Z - INFO - the selected test from the user : WINNF.FT.C.REG.7 is starting now
2023-06-07T17:51:17.269Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
```

```
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T17:51:17.361Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:51:20.289Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T17:51:20.332Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:51:20.410Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T17:51:20.453Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T17:51:20Z",
            "grantId": "606583883",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:51:21.095Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "606583883",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T17:51:21.140Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "606583883",
```

```
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T17:54:41Z"
        }
    ]
}
2023-06-07T17:51:52.227Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097"
        }
    ]
}
2023-06-07T17:51:52.276Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T17:51:53.763Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T17:51:53.769Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-07T17:53:17.065Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-07T17:53:22.089Z - INFO - The final result of the test : WINNF.FT.C.REG.7 is - passed and :the additional comments for the current
test are : None
```


9.3 Log file for test case ID: WINNF.FT.D.REG.9


```
2023-06-07T17:54:50.062Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T17:54:50.063Z - INFO - the selected test from the user : WINNF.FT.D.REG.9 is starting now
2023-06-07T17:55:03.381Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T17:55:03.473Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 102
            }
        }
    ]
}
2023-06-07T17:55:04.164Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
```

```
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        },
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T17:55:04.221Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 200
            }
        },
        {
            "response": {
                "responseCode": 102
            }
```

```
        }
    ]
}
2023-06-07T17:55:06.229Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T17:55:06.233Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T17:55:17.740Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T17:55:17.740Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T17:55:21.663Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T17:55:25.200Z - INFO - The final result of the test : WINNF.FT.D.REG.9 is - passed and :the additional comments for the current
test are : None
```

9.4 Log file for test case ID: WINNF.FT.D.REG.11

```
2023-06-07T17:57:11.948Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T17:57:11.950Z - INFO - the selected test from the user : WINNF.FT.D.REG.11 is starting now
2023-06-07T17:59:23.032Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T17:59:23.076Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 200
            }
        }
    ]
}
2023-06-07T17:59:23.765Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
```

```
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        },
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T17:59:23.819Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 200
            }
        },
        {
            "response": {
                "responseCode": 200
            }
        }
    ]
}
2023-06-07T17:59:25.200Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T17:59:25.200Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T17:59:32.855Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T17:59:32.855Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T17:59:36.645Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T17:59:39.657Z - INFO - The final result of the test : WINNF.FT.D.REG.11 is - passed and :the additional comments for the current
test are : None
```

9.5 Log file for test case ID: WINNF.FT.D.REG.13

```
2023-06-07T18:00:52.874Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:00:52.875Z - INFO - the selected test from the user : WINNF.FT.D.REG.13 is starting now
2023-06-07T18:01:17.927Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:01:17.963Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:01:20.878Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:01:20.882Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3555000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:01:20.957Z - INFO - grant request from CBRS  : {
```

```
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:01:20.961Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.046Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.049Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.131Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.134Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.217Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.219Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
```

```
}
2023-06-07T18:01:21.359Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.364Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.440Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.444Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.526Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.529Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.602Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.607Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
```

```
        }
    ]
}
2023-06-07T18:01:21.696Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.698Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.775Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.778Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.864Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3660000000,
                    "lowFrequency": 3650000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.867Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:21.941Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3670000000,
                    "lowFrequency": 3660000000
                }
            }
        }
    ]
}
2023-06-07T18:01:21.944Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
```

```
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:22.016Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3680000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
2023-06-07T18:01:22.019Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:22.094Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3680000000
                }
            }
        }
    ]
}
2023-06-07T18:01:22.096Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:22.178Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-07T18:01:22.180Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:01:22.502Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
```

```
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:01:22.571Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 103
            }
        }
    ]
}
2023-06-07T18:01:24.167Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:01:24.168Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:01:31.065Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:01:31.065Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T18:01:32.614Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T18:01:35.128Z - INFO - The final result of the test : WINNF.FT.D.REG.13 is - passed and :the additional comments for the current
test are : None
```


9.6 Log file for test case ID: WINNF.FT.D.REG.15


```
2023-06-07T18:02:37.559Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:02:37.561Z - INFO - the selected test from the user : WINNF.FT.D.REG.15 is starting now
2023-06-07T18:02:39.371Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
```

```
        }
    ]
}
2023-06-07T18:02:39.400Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:02:42.322Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:02:42.326Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3555000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:02:42.430Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.434Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:42.510Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.512Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
```

```
2023-06-07T18:02:42.582Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.584Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:42.660Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.663Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:42.740Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.743Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:42.822Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.825Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
```

```
    ]
}
2023-06-07T18:02:42.901Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.903Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:42.982Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-07T18:02:42.986Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.062Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.063Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.132Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.135Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
```

```
            }
        }
    ]
}
2023-06-07T18:02:43.207Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3660000000,
                    "lowFrequency": 3650000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.210Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.282Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3670000000,
                    "lowFrequency": 3660000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.286Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.365Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3680000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.368Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.441Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3680000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.446Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.525Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-07T18:02:43.529Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:02:43.858Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:02:43.934Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 101
            }
        }
    ]
}
2023-06-07T18:02:45.644Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:02:45.644Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:02:49.822Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:02:49.825Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T18:02:50.986Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T18:02:54.275Z - INFO - The final result of the test : WINNF.FT.D.REG.15 is - passed and :the additional comments for the current
test are : None
```

9.7 Log file for test case ID: WINNF.FT.D.REG.17

```
2023-06-07T18:06:51.413Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:06:51.414Z - INFO - the selected test from the user : WINNF.FT.D.REG.17 is starting now
2023-06-07T18:07:06.634Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:07:06.706Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 100
            }
        }
    ]
}
2023-06-07T18:07:07.392Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
```

```
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        },
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:07:07.433Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 200
            }
        },
        {
            "response": {
                "responseCode": 100
            }
        }
    ]
}
2023-06-07T18:07:08.565Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:07:08.569Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:07:16.529Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:07:16.529Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T18:07:19.296Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T18:07:22.190Z - INFO - The final result of the test : WINNF.FT.D.REG.17 is - passed and :the additional comments for the current
test are : None
```


9.8 Log file for test case ID: WINNF.FT.D.REG.19


```
2023-06-07T18:08:24.022Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:08:24.023Z - INFO - the selected test from the user : WINNF.FT.D.REG.19 is starting now
2023-06-07T18:08:29.026Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
```

```
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:08:29.069Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:08:31.996Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:08:32.000Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3555000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:08:32.084Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.086Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
```

```
            }
        }
    ]
}
2023-06-07T18:08:32.163Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.165Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.250Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.255Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.332Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.335Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.414Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.417Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.493Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.496Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.573Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.578Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.650Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.651Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.723Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.724Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
```

```
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.795Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.796Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.868Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3660000000,
                    "lowFrequency": 3650000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.868Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:32.937Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3670000000,
                    "lowFrequency": 3660000000
                }
            }
        }
    ]
}
2023-06-07T18:08:32.938Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:33.009Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3680000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
```

```
2023-06-07T18:08:33.010Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:33.084Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3680000000
                }
            }
        }
    ]
}
2023-06-07T18:08:33.086Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:33.165Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-07T18:08:33.170Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:08:33.497Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
```

```
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:08:33.552Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "response": {
                "responseCode": 201
            }
        }
    ]
}
2023-06-07T18:08:35.105Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:08:35.108Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:08:39.209Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:08:39.210Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the
answers :
2023-06-07T18:08:41.930Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2023-06-07T18:08:45.085Z - INFO - The final result of the test : WINNF.FT.D.REG.19 is - passed and :the additional comments for the current
test are : None
```


9.9 Log file for test case ID: WINNF.FT.C.GRA.1


```
2023-06-07T18:10:47.236Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:10:47.237Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
2023-06-07T18:10:57.088Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:10:57.140Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:11:00.069Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
```

```
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:11:00.086Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:11:00.160Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:11:00.174Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T18:11:01.371Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:11:01.375Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:11:07.351Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:11:10.717Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current
test are : None
```


9.10 Log file for test case ID: WINNF.FT.C.GRA.2


```
2023-06-07T18:12:15.003Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:12:15.003Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now
2023-06-07T18:12:17.321Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
```

```
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:12:17.365Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:12:20.148Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:12:20.176Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:12:20.253Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:12:20.276Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 401
            }
        }
    ]
}
2023-06-07T18:12:22.062Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:12:22.063Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the
answers :
2023-06-07T18:12:40.492Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2023-06-07T18:12:43.099Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current
test are : None
```

9.11 Log file for test case ID: WINNF.FT.D.HBT.2

```
2023-06-07T18:13:28.832Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:13:28.832Z - INFO - the selected test from the user : WINNF.FT.D.HBT.2 is starting now
2023-06-07T18:13:41.706Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:13:41.773Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:44.687Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:13:44.711Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:44.792Z - INFO - grant request from CBRS  : {
```

```
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:13:44.812Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:13:44Z",
            "grantId": "332670505",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:45.446Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:13:45.484Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:17:05Z"
        }
    ]
}
2023-06-07T18:13:46.065Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:13:46.142Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
```

```
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:49.042Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:13:49.066Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:49.144Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:13:49.157Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:13:49Z",
            "grantId": "294233262",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:13:49.799Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:13:49.823Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:17:09Z"
        }
    ]
}
2023-06-07T18:14:50.051Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "grantId": "332670505",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:14:50.055Z - INFO - Time interval between two heartbeat request messages is: 64.604, limit is: 65.0
2023-06-07T18:14:50.069Z - INFO - Time interval between two heartbeat request messages is: 60.25, limit is: 65.0
2023-06-07T18:14:50.079Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:18:10Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:18:10Z"
        }
    ]
}
2023-06-07T18:15:50.085Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:15:50.089Z - INFO - Time interval between two heartbeat request messages is: 60.035, limit is: 65.0
2023-06-07T18:15:50.111Z - INFO - Time interval between two heartbeat request messages is: 60.035, limit is: 65.0
2023-06-07T18:15:50.124Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:19:10Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:19:10Z"
        }
    ]
}
2023-06-07T18:16:50.085Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:16:50.088Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2023-06-07T18:16:50.098Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2023-06-07T18:16:50.107Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:20:10Z"
        },
```

```
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:20:10Z"
        }
    ]
}
2023-06-07T18:17:50.063Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:17:50.069Z - INFO - Time interval between two heartbeat request messages is: 59.98, limit is: 65.0
2023-06-07T18:17:50.088Z - INFO - Time interval between two heartbeat request messages is: 59.98, limit is: 65.0
2023-06-07T18:17:50.101Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:21:10Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:21:10Z"
        }
    ]
}
2023-06-07T18:18:50.082Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:18:50.098Z - INFO - Time interval between two heartbeat request messages is: 60.019, limit is: 65.0
2023-06-07T18:18:50.132Z - INFO - Time interval between two heartbeat request messages is: 60.019, limit is: 65.0
2023-06-07T18:18:50.138Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "332670505",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:22:10Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "294233262",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:22:10Z"
        }
    ]
}
2023-06-07T18:18:51.766Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:18:51.770Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)?
please choose one of the answers :
2023-06-07T18:19:01.674Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? ,
the user choose n
2023-06-07T18:19:01.677Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message?
please choose one of the answers :
2023-06-07T18:19:09.517Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest
message? , the user choose y
2023-06-07T18:19:09.519Z - INFO - the question is : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)?
please choose one of the answers :
```

```
2023-06-07T18:19:13.223Z - INFO - for the question : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)? ,
the user choose n
2023-06-07T18:19:13.224Z - INFO - the question is : Did CBSD2 transmit only within the frequency range specified in its grantRequest message?
please choose one of the answers :
2023-06-07T18:19:15.625Z - INFO - for the question : Did CBSD2 transmit only within the frequency range specified in its grantRequest
message? , the user choose y
2023-06-07T18:19:25.424Z - INFO - The final result of the test : WINNF.FT.D.HBT.2 is - passed and :the additional comments for the current
test are : None
```

9.12 Log file for test case ID: WINNF.FT.C.HBT.3

```
2023-06-07T18:23:27.145Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:23:27.148Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now
2023-06-07T18:23:48.086Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:23:48.206Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:23:51.131Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:23:51.173Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
```

```
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:23:51.253Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:23:51.299Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:23:51Z",
            "grantId": "716286791",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:23:51.947Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:23:51.967Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:27:11Z"
        }
    ]
}
2023-06-07T18:24:52.234Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:24:52.240Z - INFO - Time interval between two heartbeat request messages is: 60.287, limit is: 65.0
2023-06-07T18:24:52.255Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:28:12Z"
        }
    ]
}
2023-06-07T18:25:52.181Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:25:52.184Z - INFO - Time interval between two heartbeat request messages is: 59.948, limit is: 65.0
2023-06-07T18:25:52.194Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "grantId": "716286791",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:29:12Z"
        }
    ]
}
2023-06-07T18:26:52.217Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:26:52.223Z - INFO - Time interval between two heartbeat request messages is: 60.036, limit is: 65.0
2023-06-07T18:26:52.240Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "716286791",
            "response": {
                "responseCode": 105
            },
            "transmitExpireTime": "2023-06-07T18:26:52Z"
        }
    ]
}
2023-06-07T18:26:54.158Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:26:54.163Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 105? please choose one of the answers :
2023-06-07T18:27:06.542Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 105? , the user choose y
2023-06-07T18:27:10.994Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current
test are : None
```


9.13 Log file for test case ID: WINNF.FT.C.HBT.5


```
2023-06-07T18:31:44.891Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:31:44.891Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now
2023-06-07T18:31:55.937Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:31:55.983Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
```

```
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:31:58.907Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:31:58.933Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:31:59.012Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:31:59.032Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:31:59Z",
            "grantId": "336566832",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:31:59.674Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "336566832",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:31:59.694Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "336566832",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2023-06-07T18:31:59Z"
        }
    ]
}
2023-06-07T18:32:00.243Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "336566832"
        }
    ]
```

```
}
2023-06-07T18:32:00.288Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "336566832",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:32:02.058Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:32:02.061Z - INFO - the question is : Did the CBSD transmit at any time during the test? please choose one of the answers :
2023-06-07T18:32:18.992Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n
2023-06-07T18:32:23.035Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed and :the additional comments for the current
test are : None
```

9.14 Log file for test case ID: WINNF.FT.C.HBT.6

```
2023-06-07T18:36:41.214Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:36:41.216Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now
2023-06-07T18:36:50.260Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:36:50.362Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:36:53.279Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:36:53.329Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
```

```
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:36:53.405Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:36:53.418Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:36:53Z",
            "grantId": "488645650",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:36:54.056Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:36:54.069Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:40:14Z"
        }
    ]
}
2023-06-07T18:37:54.335Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:37:54.341Z - INFO - Time interval between two heartbeat request messages is: 60.28, limit is: 65.0
2023-06-07T18:37:54.359Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:41:14Z"
        }
    ]
}
2023-06-07T18:38:54.299Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
```

```
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:38:54.303Z - INFO - Time interval between two heartbeat request messages is: 59.963, limit is: 65.0
2023-06-07T18:38:54.319Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:42:14Z"
        }
    ]
}
2023-06-07T18:39:54.355Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:39:54.355Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2023-06-07T18:39:54.361Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2023-06-07T18:39:54Z"
        }
    ]
}
2023-06-07T18:39:55.233Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650"
        }
    ]
}
2023-06-07T18:39:55.249Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "488645650",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:39:57.038Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:39:57.042Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 501? please choose one of the answers :
2023-06-07T18:40:08.009Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 501? , the user choose y
2023-06-07T18:40:12.121Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current
test are : None
```


9.15 Log file for test case ID: WINNF.FT.C.HBT.7


```
2023-06-07T18:41:08.049Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:41:08.051Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now
2023-06-07T18:41:10.822Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
```

```
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:41:10.875Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:41:13.825Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:41:13.848Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:41:13.933Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:41:13.957Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:41:13Z",
            "grantId": "323550536",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
```

```
2023-06-07T18:41:14.609Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:41:14.630Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:44:34Z"
        }
    ]
}
2023-06-07T18:42:14.924Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:42:14.926Z - INFO - Time interval between two heartbeat request messages is: 60.313, limit is: 65.0
2023-06-07T18:42:14.946Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:45:34Z"
        }
    ]
}
2023-06-07T18:43:14.914Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:43:14.918Z - INFO - Time interval between two heartbeat request messages is: 59.991, limit is: 65.0
2023-06-07T18:43:14.933Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:46:34Z"
        }
    ]
}
2023-06-07T18:44:14.910Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:44:14.911Z - INFO - Time interval between two heartbeat request messages is: 59.995, limit is: 65.0
2023-06-07T18:44:14.917Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "response": {
                "responseCode": 502
            },
            "transmitExpireTime": "2023-06-07T18:44:14Z"
        }
    ]
}
2023-06-07T18:44:16.039Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536"
        }
    ]
```

```
}
2023-06-07T18:44:16.045Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "323550536",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:44:17.786Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:44:17.790Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 502? please choose one of the answers :
2023-06-07T18:44:44.493Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 502? , the user choose y
2023-06-07T18:44:47.832Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current
test are : None
```


9.16 Log file for test case ID: WINNF.FT.D.HBT.8


```
2023-06-07T18:48:00.411Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T18:48:00.411Z - INFO - the selected test from the user : WINNF.FT.D.HBT.8 is starting now
2023-06-07T18:48:09.890Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T18:48:09.940Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:12.890Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
```

```
2023-06-07T18:48:12.911Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:13.000Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:48:13.019Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:48:13Z",
            "grantId": "733611726",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:13.657Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:48:13.663Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:51:33Z"
        }
    ]
}
2023-06-07T18:48:14.190Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
```

```
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T18:48:14.276Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:17.177Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T18:48:17.207Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:17.290Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T18:48:17.311Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T18:48:17Z",
            "grantId": "190752232",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T18:48:17.944Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
```

```
            "grantId": "190752232",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T18:48:17.966Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:51:37Z"
        }
    ]
}
2023-06-07T18:49:18.243Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:49:18.272Z - INFO - Time interval between two heartbeat request messages is: 64.588, limit is: 65.0
2023-06-07T18:49:18.335Z - INFO - Time interval between two heartbeat request messages is: 60.299, limit is: 65.0
2023-06-07T18:49:18.351Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:52:38Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:52:38Z"
        }
    ]
}
2023-06-07T18:50:18.184Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:50:18.186Z - INFO - Time interval between two heartbeat request messages is: 59.939, limit is: 65.0
2023-06-07T18:50:18.193Z - INFO - Time interval between two heartbeat request messages is: 59.939, limit is: 65.0
2023-06-07T18:50:18.198Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:53:38Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:53:38Z"
        }
    ]
}
2023-06-07T18:51:18.239Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
```

```
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T18:51:18.246Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2023-06-07T18:51:18.253Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2023-06-07T18:51:18.259Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "190752232",
            "response": {
                "responseCode": 500
            },
            "transmitExpireTime": "2023-06-07T18:51:18Z"
        },
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "733611726",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T18:54:38Z"
        }
    ]
}
2023-06-07T18:51:20.269Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T18:51:20.278Z - INFO - the question is : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)?
please choose one of the answers :
2023-06-07T18:51:34.381Z - INFO - for the question : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)?
, the user choose n
2023-06-07T18:51:34.381Z - INFO - the question is : Did the CBSD2 stop RF transmission within 60 seconds of receiving Heartbeat response with
responseCode = 500? please choose one of the answers :
2023-06-07T18:51:36.703Z - INFO - for the question : Did the CBSD2 stop RF transmission within 60 seconds of receiving Heartbeat response
with responseCode = 500? , the user choose y
2023-06-07T18:51:39.092Z - INFO - The final result of the test : WINNF.FT.D.HBT.8 is - passed and :the additional comments for the current
test are : None
```


9.17 Log file for test case ID: WINNF.FT.C.HBT.9


```
2023-06-07T19:21:00.095Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T19:21:00.095Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now
2023-06-07T19:21:01.319Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
```

```
2023-06-07T19:21:01.407Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:21:04.194Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T19:21:04.243Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:21:04.319Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:21:04.332Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T19:21:04Z",
            "grantId": "287006331",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:21:04.982Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "287006331",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T19:24:25.038Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "287006331",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2023-06-07T19:24:25Z"
        }
    ]
}
2023-06-07T19:24:26.155Z - INFO - arrived to nstep starting question answer session with the technician
```

```
2023-06-07T19:24:26.157Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the
answers :
2023-06-07T19:24:31.549Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n
2023-06-07T19:24:33.647Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed and :the additional comments for the current
test are : None
```

9.18 Log file for test case ID: WINNF.FT.C.HBT.10

```
2023-06-07T19:30:58.220Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T19:30:58.220Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now
2023-06-07T19:31:01.101Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T19:31:01.157Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:31:04.085Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T19:31:04.107Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:31:04.187Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:31:04.196Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T19:31:04Z",
            "grantId": "740006711",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:31:04.825Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T19:31:04.836Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:34:24Z"
        }
    ]
}
2023-06-07T19:32:05.132Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:32:05.138Z - INFO - Time interval between two heartbeat request messages is: 60.308, limit is: 65.0
2023-06-07T19:32:05.151Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:35:25Z"
        }
    ]
}
2023-06-07T19:33:05.072Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:33:05.073Z - INFO - Time interval between two heartbeat request messages is: 59.938, limit is: 65.0
2023-06-07T19:33:05.078Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT:  2023-06-07 19:32:05.134000
2023-06-07T19:33:36.482Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711"
        }
```

```
    ]
}
2023-06-07T19:33:36.483Z - INFO - request message received while HBT is absent, sleep 173 sec before responding
2023-06-07T19:36:25.118Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "740006711",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2023-06-07T19:36:25Z"
        }
    ]
}
2023-06-07T19:36:26.648Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T19:36:26.653Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid
heartbeat response? please choose one of the answers :
2023-06-07T19:36:29.499Z - INFO - engine sent successfully, the response to CBRS  : "list index out of range"
2023-06-07T19:36:35.046Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid
heartbeat response? , the user choose y
2023-06-07T19:36:38.198Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current
test are : None
```


9.19 Log file for test case ID: WINNF.FT.C.HBT.11


```
2023-06-07T19:38:25.910Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T19:38:25.911Z - INFO - the selected test from the user : WINNF.FT.C.HBT.11 is starting now
2023-06-07T19:38:32.447Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T19:38:32.540Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:38:35.483Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
```

```
            ]
        }
    ]
}
2023-06-07T19:38:35.525Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:38:35.601Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:38:35.631Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-07T19:44:35Z",
            "grantId": "877229942",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:38:36.273Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T19:38:36.290Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:41:56Z"
        }
    ]
}
2023-06-07T19:39:36.533Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:39:36.540Z - INFO - Time interval between two heartbeat request messages is: 60.261, limit is: 65.0
2023-06-07T19:39:36.559Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:42:56Z"
        }
    ]
```

```
}
2023-06-07T19:40:36.517Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:40:36.520Z - INFO - Time interval between two heartbeat request messages is: 59.983, limit is: 65.0
2023-06-07T19:40:36.529Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:43:56Z"
        }
    ]
}
2023-06-07T19:41:36.556Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:41:36.561Z - INFO - Time interval between two heartbeat request messages is: 60.04, limit is: 65.0
2023-06-07T19:41:36.582Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:44:35Z"
        }
    ]
}
2023-06-07T19:42:36.519Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:42:36.525Z - INFO - Time interval between two heartbeat request messages is: 59.963, limit is: 65.0
2023-06-07T19:42:36.540Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:44:35Z"
        }
    ]
}
2023-06-07T19:43:36.546Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:43:36.552Z - INFO - Time interval between two heartbeat request messages is: 60.026, limit is: 65.0
2023-06-07T19:43:36.565Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:44:35Z"
        }
    ]
}
2023-06-07T19:44:36.522Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
```

```
            "grantRenew": true,
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:44:36.525Z - INFO - Time interval between two heartbeat request messages is: 59.975, limit is: 65.0
2023-06-07T19:44:36.535Z - INFO - grantRenew received in HBT request message
2023-06-07T19:44:36.536Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantExpireTime": "2023-06-07T19:50:36Z",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:47:56Z"
        }
    ]
}
2023-06-07T19:45:36.573Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "877229942",
            "grantRenew": true,
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:45:36.581Z - INFO - Time interval between two heartbeat request messages is: 60.053, limit is: 65.0
2023-06-07T19:45:36.596Z - INFO - grantRenew received in HBT request message
2023-06-07T19:45:36.601Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantExpireTime": "2023-06-07T19:51:36Z",
            "grantId": "877229942",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:48:56Z"
        }
    ]
}
2023-06-07T19:45:38.571Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T19:45:38.573Z - INFO - the question is : Did the CBSD renew its grant successfully? please choose one of the answers :
2023-06-07T19:45:55.117Z - INFO - for the question : Did the CBSD renew its grant successfully? , the user choose y
2023-06-07T19:45:58.505Z - INFO - The final result of the test : WINNF.FT.C.HBT.11 is - passed and :the additional comments for the current
test are : None
```


9.20 Log file for test case ID: WINNF.FT.D.MES.2


```
2023-06-07T19:48:50.091Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T19:48:50.091Z - INFO - the selected test from the user : WINNF.FT.D.MES.2 is starting now
2023-06-07T19:49:10.878Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
```

```
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T19:49:10.946Z - INFO - Response message contains measReportConfig
2023-06-07T19:49:10.947Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "measReportConfig": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:13.867Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ],
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -96
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
```

```
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -99
                    }
                ]
            }
        }
    ]
}
2023-06-07T19:49:13.882Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:13.969Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -96
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
```

```
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -99
                    }
                ]
            },
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:49:14.000Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T19:49:13Z",
            "grantId": "364135126",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:14.638Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "364135126",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T19:49:14.642Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "364135126",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2023-06-07T19:49:14Z"
        }
    ]
}
2023-06-07T19:49:15.193Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "364135126"
        }
    ]
}
2023-06-07T19:49:15.196Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "364135126",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:15.204Z - INFO - grant request from CBRS  : {
```

```
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 0,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.207Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.325Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.325Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.400Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.403Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.480Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.480Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
```

```
}
2023-06-07T19:49:15.553Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.556Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.634Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.637Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.716Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.717Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.793Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.795Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
```

```
        }
    ]
}
2023-06-07T19:49:15.865Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.868Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:15.954Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-07T19:49:15.960Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.033Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3660000000,
                    "lowFrequency": 3650000000
                }
            }
        }
    ]
}
2023-06-07T19:49:16.035Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.108Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3670000000,
                    "lowFrequency": 3660000000
                }
            }
        }
    ]
}
2023-06-07T19:49:16.109Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
```

```
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.193Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3680000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
2023-06-07T19:49:16.196Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.273Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3680000000
                }
            }
        }
    ]
}
2023-06-07T19:49:16.276Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.351Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-07T19:49:16.354Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-07T19:49:16.674Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
```

```
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T19:49:16.786Z - INFO - Response message contains measReportConfig
2023-06-07T19:49:16.789Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "measReportConfig": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:19.671Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ],
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -97
                    },
                    {
```

```
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -96
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -98
                    }
                ]
            }
        }
    ]
}
2023-06-07T19:49:19.687Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:19.851Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -97
```

```
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -96
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -98
                    }
                ]
            },
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:49:19.880Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T19:49:19Z",
            "grantId": "1605496",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:49:21.426Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T19:49:42.276Z - INFO - The final result of the test : WINNF.FT.D.MES.2 is - passed and :the additional comments for the current
test are : No transmissions observed from CBSD1 or CBSD2
```


9.21 Log file for test case ID: WINNF.FT.C.MES.3


```
2023-06-07T19:51:43.674Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T19:51:43.676Z - INFO - the selected test from the user : WINNF.FT.C.MES.3 is starting now
2023-06-07T19:51:45.918Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
```

```
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T19:51:45.993Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:51:48.917Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T19:51:48.947Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:51:49.029Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T19:51:49.036Z - INFO - Response message contains measReportConfig
2023-06-07T19:51:49.036Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
```

```
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T19:51:49Z",
            "grantId": "505790130",
            "heartbeatInterval": 60,
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T19:51:49.665Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
```

```
                        "measRcvdPower": -99
                    }
                ]
            },
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T19:51:49.674Z - INFO - measReport received in heartbeat message
2023-06-07T19:51:49.711Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:55:09Z"
        }
    ]
}
2023-06-07T19:52:49.980Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:52:49.986Z - INFO - Time interval between two heartbeat request messages is: 60.316, limit is: 65.0
2023-06-07T19:52:50.007Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:56:10Z"
        }
    ]
}
2023-06-07T19:53:49.947Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:53:49.950Z - INFO - Time interval between two heartbeat request messages is: 59.966, limit is: 65.0
2023-06-07T19:53:49.970Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:57:09Z"
        }
    ]
}
2023-06-07T19:54:50.005Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T19:54:50.012Z - INFO - Time interval between two heartbeat request messages is: 60.057, limit is: 65.0
2023-06-07T19:54:50.032Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:58:10Z"
        }
    ]
}
2023-06-07T19:55:49.947Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "operationState": "AUTHORIZED"
        }
```

```
    ]
}
2023-06-07T19:55:49.953Z - INFO - Time interval between two heartbeat request messages is: 59.943, limit is: 65.0
2023-06-07T19:55:49.971Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "505790130",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T19:59:09Z"
        }
    ]
}
2023-06-07T19:55:51.167Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T19:55:58.602Z - INFO - The final result of the test : WINNF.FT.C.MES.3 is - passed and :the additional comments for the current
test are : None
```

9.22 Log file for test case ID: WINNF.FT.D.MES.5

```
2023-06-07T20:03:20.378Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-07T20:03:20.380Z - INFO - the selected test from the user : WINNF.FT.D.MES.5 is starting now
2023-06-07T20:03:24.584Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-07T20:03:24.654Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:27.569Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T20:03:27.585Z - INFO - engine sent successfully, the response to CBRS  : {
```

```
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:27.667Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-07T20:03:27.674Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T20:03:27Z",
            "grantId": "805748294",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:28.302Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T20:03:28.315Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:06:48Z"
        }
    ]
}
2023-06-07T20:03:28.835Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
```

```
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-07T20:03:28.897Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:31.775Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-07T20:03:31.783Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:31.851Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 33,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-07T20:03:31.859Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-14T20:03:31Z",
            "grantId": "964058213",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-07T20:03:32.509Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
```

```
            "operationState": "GRANTED"
        }
    ]
}
2023-06-07T20:03:32.516Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:06:52Z"
        }
    ]
}
2023-06-07T20:04:32.733Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:04:32.760Z - INFO - Time interval between two heartbeat request messages is: 64.432, limit is: 65.0
2023-06-07T20:04:32.809Z - INFO - Time interval between two heartbeat request messages is: 60.226, limit is: 65.0
2023-06-07T20:04:32.815Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:07:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:07:52Z"
        }
    ]
}
2023-06-07T20:05:32.789Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:05:32.819Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2023-06-07T20:05:32.828Z - INFO - Response message contains measReportConfig
2023-06-07T20:05:32.832Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2023-06-07T20:05:32.838Z - INFO - Response message contains measReportConfig
2023-06-07T20:05:32.841Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:08:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:08:52Z"
        }
```

```
    ]
}
2023-06-07T20:06:32.767Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -99
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -96
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -99
                    }
                ]
            },
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
```

```
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -91
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -94
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3590000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3600000000,
                        "measRcvdPower": -94
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3610000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3620000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3630000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3640000000,
                        "measRcvdPower": -94
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -98
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -94
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -97
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -99
                    }
                ]
            },
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:06:32.792Z - INFO - Time interval between two heartbeat request messages is: 59.979, limit is: 65.0
2023-06-07T20:06:32.799Z - INFO - measReport received in heartbeat message
2023-06-07T20:06:32.832Z - INFO - Time interval between two heartbeat request messages is: 59.979, limit is: 65.0
2023-06-07T20:06:32.835Z - INFO - measReport received in heartbeat message
2023-06-07T20:06:32.842Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:09:52Z"
        },
```

```
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:09:52Z"
        }
    ]
}
2023-06-07T20:07:32.747Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:07:32.753Z - INFO - Time interval between two heartbeat request messages is: 59.98, limit is: 65.0
2023-06-07T20:07:32.776Z - INFO - Time interval between two heartbeat request messages is: 59.98, limit is: 65.0
2023-06-07T20:07:32.786Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:10:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:10:52Z"
        }
    ]
}
2023-06-07T20:08:32.746Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:08:32.753Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2023-06-07T20:08:32.776Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2023-06-07T20:08:32.782Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:11:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:11:52Z"
        }
    ]
}
2023-06-07T20:09:32.733Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
```

```
    ]
}
2023-06-07T20:09:32.740Z - INFO - Time interval between two heartbeat request messages is: 59.986, limit is: 65.0
2023-06-07T20:09:32.760Z - INFO - Time interval between two heartbeat request messages is: 59.986, limit is: 65.0
2023-06-07T20:09:32.776Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:12:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:12:52Z"
        }
    ]
}
2023-06-07T20:10:32.782Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-07T20:10:32.788Z - INFO - Time interval between two heartbeat request messages is: 60.048, limit is: 65.0
2023-06-07T20:10:32.812Z - INFO - Time interval between two heartbeat request messages is: 60.048, limit is: 65.0
2023-06-07T20:10:32.822Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "805748294",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:13:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "964058213",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-07T20:13:52Z"
        }
    ]
}
2023-06-07T20:10:34.836Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-07T20:11:01.717Z - INFO - The final result of the test : WINNF.FT.D.MES.5 is - passed and :the additional comments for the current
test are : None
```


9.23 Log file for test case ID: WINNF.FT.D.RLQ.2


```
2023-06-08T15:38:50.029Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:38:50.030Z - INFO - the selected test from the user : WINNF.FT.D.RLQ.2 is starting now
2023-06-08T15:38:58.213Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
```

```
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:38:58.243Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:01.028Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:39:01.052Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:01.128Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:39:01.140Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:39:01Z",
            "grantId": "911047733",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:01.924Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
```

```
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:39:01.931Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:42:21Z"
        }
    ]
}
2023-06-08T15:39:02.467Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-08T15:39:02.506Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:05.390Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:39:05.424Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
```

```
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:05.500Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:39:05.525Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:39:05Z",
            "grantId": "799331602",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:39:06.299Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:39:06.321Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:42:26Z"
        }
    ]
}
2023-06-08T15:40:06.609Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-08T15:40:06.645Z - INFO - Time interval between two heartbeat request messages is: 64.686, limit is: 65.0
2023-06-08T15:40:06.663Z - INFO - Time interval between two heartbeat request messages is: 60.312, limit is: 65.0
2023-06-08T15:40:06.674Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:43:26Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:43:26Z"
```

```
        }
    ]
}
2023-06-08T15:40:07.516Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733"
        }
    ]
}
2023-06-08T15:40:07.535Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B780685",
            "grantId": "911047733",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:40:07.819Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602"
        }
    ]
}
2023-06-08T15:40:07.846Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B779097",
            "grantId": "799331602",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:40:09.867Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:40:09.921Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:40:14.959Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:40:14.961Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:40:20.516Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:40:28.122Z - INFO - The final result of the test : WINNF.FT.D.RLQ.2 is - passed and :the additional comments for the current
test are : None
```


9.24 Log file for test case ID: WINNF.FT.C.RLQ.3


```
2023-06-08T15:45:33.878Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:45:33.880Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.3 is starting now
2023-06-08T15:45:48.210Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
```

```
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:45:48.262Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:45:51.194Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:45:51.213Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:45:51.296Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:45:51.319Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:45:51Z",
            "grantId": "969166498",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:45:52.105Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "969166498",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:45:52.128Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
```

```
            "grantId": "969166498",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:49:12Z"
        }
    ]
}
2023-06-08T15:46:52.411Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "969166498",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-08T15:46:52.417Z - INFO - Time interval between two heartbeat request messages is: 60.307, limit is: 65.0
2023-06-08T15:46:52.437Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "969166498",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:50:12Z"
        }
    ]
}
2023-06-08T15:46:53.163Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "969166498"
        }
    ]
}
2023-06-08T15:46:53.170Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 102,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:46:54.671Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:46:54.674Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:46:59.480Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:47:05.996Z - INFO - The final result of the test : WINNF.FT.C.RLQ.3 is - passed and :the additional comments for the current
test are : None
```


9.25 Log file for test case ID: WINNF.FT.D.RLQ.4


```
2023-06-08T15:47:42.651Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:47:42.653Z - INFO - the selected test from the user : WINNF.FT.D.RLQ.4 is starting now
2023-06-08T15:47:45.990Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
```

```
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:47:46.036Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:48.959Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:47:48.986Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:49.063Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:47:49.082Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:47:49Z",
            "grantId": "787589988",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:49.878Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "787589988",
            "operationState": "GRANTED"
        }
```

```
    ]
}
2023-06-08T15:47:49.884Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "787589988",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:51:09Z"
        }
    ]
}
2023-06-08T15:47:50.423Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-08T15:47:50.460Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:53.332Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:47:53.354Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
```

```
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:53.431Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:47:53.443Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:47:53Z",
            "grantId": "561635985",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:47:54.233Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "561635985",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:47:54.260Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "561635985",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:51:14Z"
        }
    ]
}
2023-06-08T15:48:54.529Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "787589988",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "561635985",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-08T15:48:54.535Z - INFO - Time interval between two heartbeat request messages is: 64.653, limit is: 65.0
2023-06-08T15:48:54.552Z - INFO - Time interval between two heartbeat request messages is: 60.297, limit is: 65.0
2023-06-08T15:48:54.568Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "787589988",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:52:14Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "561635985",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:52:14Z"
        }
    ]
}
2023-06-08T15:48:55.447Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
```

```
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "787589988"
        }
    ]
}
2023-06-08T15:48:55.453Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 102,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:48:55.734Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "561635985"
        }
    ]
}
2023-06-08T15:48:55.765Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 102,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:48:57.433Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:48:57.436Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:49:01.859Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:49:01.861Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:49:03.121Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:49:05.342Z - INFO - The final result of the test : WINNF.FT.D.RLQ.4 is - passed and :the additional comments for the current
test are : None
```


9.26 Log file for test case ID: WINNF.FT.C.RLQ.5


```
2023-06-08T15:49:25.790Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:49:25.792Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.5 is starting now
2023-06-08T15:49:30.538Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
```

```
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:49:30.589Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:49:33.506Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:49:33.516Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:49:33.596Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:49:33.619Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:49:33Z",
            "grantId": "23407786",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:49:34.398Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "23407786",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:49:34.418Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "23407786",
```

```
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:52:54Z"
        }
    ]
}
2023-06-08T15:50:34.686Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "23407786",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-08T15:50:34.690Z - INFO - Time interval between two heartbeat request messages is: 60.288, limit is: 65.0
2023-06-08T15:50:34.709Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "23407786",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:53:54Z"
        }
    ]
}
2023-06-08T15:50:35.533Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "23407786"
        }
    ]
}
2023-06-08T15:50:35.542Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 103,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:50:37.526Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:50:37.529Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:50:41.555Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:50:45.167Z - INFO - The final result of the test : WINNF.FT.C.RLQ.5 is - passed and :the additional comments for the current
test are : None
```


9.27 Log file for test case ID: WINNF.FT.D.RLQ.6


```
2023-06-08T15:51:18.934Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:51:18.936Z - INFO - the selected test from the user : WINNF.FT.D.RLQ.6 is starting now
2023-06-08T15:51:23.997Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
```

```
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:51:24.029Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:26.980Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:51:27.017Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:27.094Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:51:27.104Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:51:27Z",
            "grantId": "518768503",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:27.891Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "518768503",
            "operationState": "GRANTED"
        }
    ]
```

```
}
2023-06-08T15:51:27.914Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "518768503",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:54:47Z"
        }
    ]
}
2023-06-08T15:51:28.440Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-08T15:51:28.493Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:31.385Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:51:31.398Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
```

```
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:31.483Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:51:31.500Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:51:31Z",
            "grantId": "128239444",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:51:32.361Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "128239444",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:51:32.384Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "128239444",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:54:52Z"
        }
    ]
}
2023-06-08T15:52:32.690Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "518768503",
            "operationState": "AUTHORIZED"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "128239444",
            "operationState": "AUTHORIZED"
        }
    ]
}
2023-06-08T15:52:32.694Z - INFO - Time interval between two heartbeat request messages is: 64.798, limit is: 65.0
2023-06-08T15:52:32.711Z - INFO - Time interval between two heartbeat request messages is: 60.328, limit is: 65.0
2023-06-08T15:52:32.729Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "518768503",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:55:52Z"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "128239444",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:55:52Z"
        }
    ]
}
2023-06-08T15:52:33.469Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
```

```
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "518768503"
        }
    ]
}
2023-06-08T15:52:33.476Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 103,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:52:33.755Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "128239444"
        }
    ]
}
2023-06-08T15:52:33.772Z - INFO - engine sent successfully, the response to CBRS  : {
    "relinquishmentResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 103,
                "responseData": [
                    "grantId"
                ]
            }
        }
    ]
}
2023-06-08T15:52:35.756Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:52:35.760Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:52:39.023Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:52:39.025Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness?
please choose one of the answers :
2023-06-08T15:52:42.114Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test
Harness? , the user choose y
2023-06-08T15:52:44.525Z - INFO - The final result of the test : WINNF.FT.D.RLQ.6 is - passed and :the additional comments for the current
test are : None
```


9.28 Log file for test case ID: WINNF.FT.D.DRG.2


```
2023-06-08T15:53:29.365Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:53:29.367Z - INFO - the selected test from the user : WINNF.FT.D.DRG.2 is starting now
2023-06-08T15:53:42.338Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
```

```
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:53:42.381Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:45.164Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:53:45.174Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:45.253Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:53:45.282Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:53:45Z",
            "grantId": "219925420",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:46.085Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "219925420",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:53:46.107Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "219925420",
            "response": {
```

```
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:57:06Z"
        }
    ]
}
2023-06-08T15:53:46.635Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-08T15:53:46.711Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:49.605Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:53:49.627Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:49.713Z - INFO - grant request from CBRS  : {
```

```
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:53:49.737Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:53:49Z",
            "grantId": "917757226",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:53:50.532Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "917757226",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:53:50.536Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "917757226",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:57:10Z"
        }
    ]
}
2023-06-08T15:54:21.670Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685"
        }
    ]
}
2023-06-08T15:54:21.721Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:54:22.880Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:54:22.884Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:54:30.937Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:54:30.938Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:54:33.260Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:54:35.592Z - INFO - The final result of the test : WINNF.FT.D.DRG.2 is - passed and :the additional comments for the current
test are : None
```

9.29 Log file for test case ID: WINNF.FT.C.DRG.3

```
2023-06-08T15:55:03.489Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:55:03.490Z - INFO - the selected test from the user : WINNF.FT.C.DRG.3 is starting now
2023-06-08T15:55:07.927Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:55:08.010Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:55:10.928Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:55:10.966Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:55:11.043Z - INFO - grant request from CBRS  : {
```

```
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:55:11.092Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:55:11Z",
            "grantId": "760071689",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:55:11.878Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "760071689",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:55:11.910Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "760071689",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:58:31Z"
        }
    ]
}
2023-06-08T15:55:42.867Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097"
        }
    ]
}
2023-06-08T15:55:42.888Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "response": {
                "responseCode": 102
            }
        }
    ]
}
2023-06-08T15:55:43.914Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:55:43.917Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:55:49.401Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:55:53.217Z - INFO - The final result of the test : WINNF.FT.C.DRG.3 is - passed and :the additional comments for the current
test are : None
```


9.30 Log file for test case ID: WINNF.FT.D.DRG.4


```
2023-06-08T15:56:21.641Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:56:21.642Z - INFO - the selected test from the user : WINNF.FT.D.DRG.4 is starting now
2023-06-08T15:56:24.556Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
```

```
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:56:24.615Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:27.539Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:56:27.565Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:27.642Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:56:27.661Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:56:27Z",
            "grantId": "980094516",
            "heartbeatInterval": 60,
```

```
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:28.448Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "980094516",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:56:28.463Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "980094516",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:59:48Z"
        }
    ]
}
2023-06-08T15:56:29.020Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB988",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B780685",
            "fccId": "def456",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": -127,
                "antennaModel": "test",
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD2"
        }
    ]
}
2023-06-08T15:56:29.078Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:31.969Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
```

```
2023-06-08T15:56:31.980Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "def456Mock-SASCF8B780685",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:32.056Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:56:32.063Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:56:32Z",
            "grantId": "974598776",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:56:32.848Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "974598776",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:56:32.855Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "974598776",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T15:59:52Z"
        }
    ]
}
2023-06-08T15:57:04.068Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685"
        }
    ]
}
2023-06-08T15:57:04.109Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "response": {
                "responseCode": 102
            }
        },
        {
            "response": {
                "responseCode": 102
            }
        }
    ]
}
2023-06-08T15:57:06.099Z - INFO - arrived to nstep starting question answer session with the technician
```

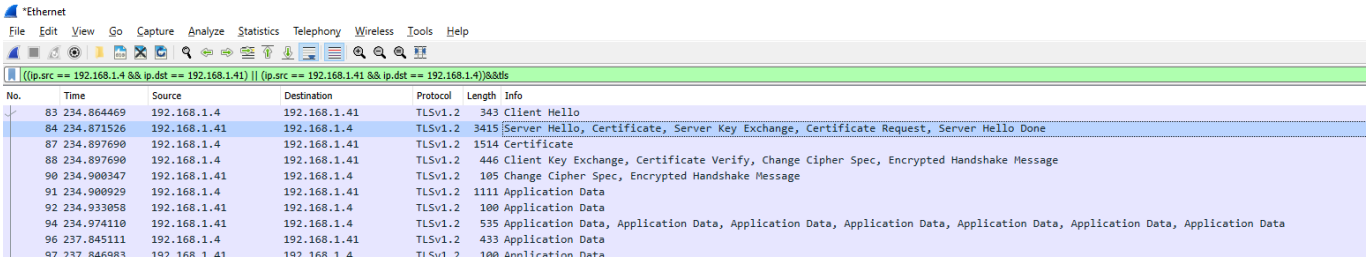
```
2023-06-08T15:57:06.105Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:57:09.380Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:57:09.382Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:57:12.191Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:57:14.164Z - INFO - The final result of the test : WINNF.FT.D.DRG.4 is - passed and :the additional comments for the current
test are : None
```

9.31 Log file for test case ID: WINNF.FT.C.DRG.5

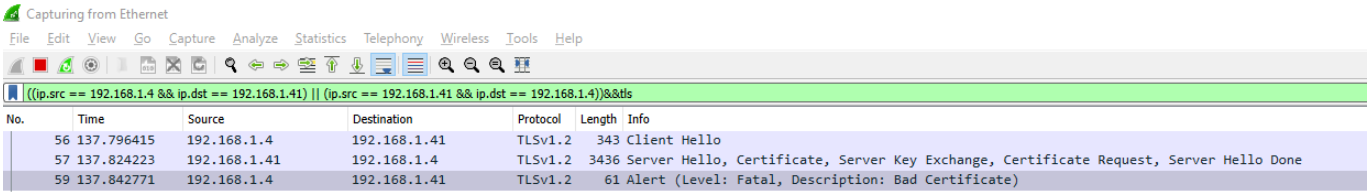
```
2023-06-08T15:57:33.842Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T15:57:33.845Z - INFO - the selected test from the user : WINNF.FT.C.DRG.5 is starting now
2023-06-08T15:57:40.427Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T15:57:40.480Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:57:43.405Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T15:57:43.417Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3695000000,
                        "lowFrequency": 3555000000
```

```
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:57:43.493Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T15:57:43.519Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "channelType": "GAA",
            "grantExpireTime": "2023-06-15T15:57:43Z",
            "grantId": "788423298",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T15:57:44.334Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "788423298",
            "operationState": "GRANTED"
        }
    ]
}
2023-06-08T15:57:44.338Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "788423298",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2023-06-08T16:01:04Z"
        }
    ]
}
2023-06-08T15:58:15.388Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097"
        }
    ]
}
2023-06-08T15:58:15.394Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "response": {
                "responseCode": 103,
                "responseData": [
                    "cbsdId"
                ]
            }
        }
    ]
}
2023-06-08T15:58:17.260Z - INFO - arrived to nstep starting question answer session with the technician
2023-06-08T15:58:17.266Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? please choose one of the answers :
2023-06-08T15:58:22.224Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or
Deregistration request at Test Harness? , the user choose y
2023-06-08T15:58:24.967Z - INFO - The final result of the test : WINNF.FT.C.DRG.5 is - passed and :the additional comments for the current
test are : None
```

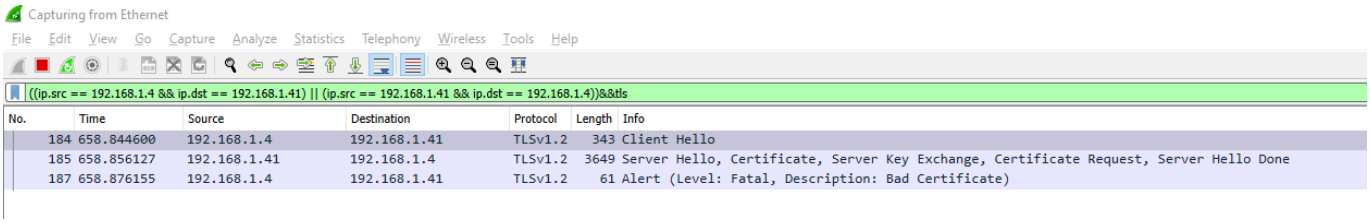
9.32 Wireshark capture for test case ID: WINNF.FT.C.SCS.1



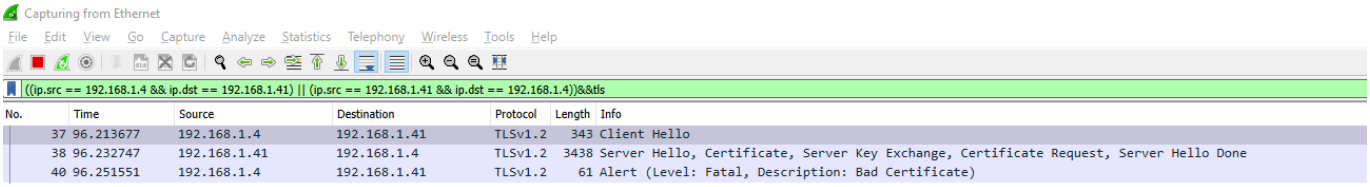
9.33 Wireshark capture for test case ID: WINNF.FT.C.SCS.2



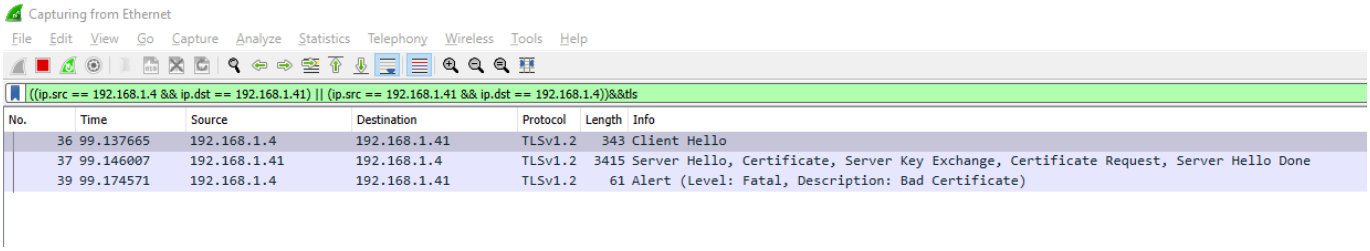
9.34 Wireshark capture for test case ID: WINNF.FT.C.SCS.3



9.35 Wireshark capture for test case ID: WINNF.FT.C.SCS.4



9.36 Wireshark capture for test case ID: WINNF.FT.C.SCS.5



9.37 Log file for test case ID: WINNF.PT.C.HBT.1

Extract only: Entire log repeats same messaging and is available upon request.

```
2023-06-08T17:49:08.923Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2023-06-08T17:49:08.926Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2023-06-08T17:49:08.927Z - INFO - Granted Spectrum Max Eirp = 20dBm/MHz
2023-06-08T17:49:08.928Z - INFO - the selected test from the user : PowerMeasTest is starting now
2023-06-08T18:14:44.947Z - INFO - relinquishment request from CBRS  : {
    "relinquishmentRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "grantId": "135842596"
        },
        {
            "cbsdId": "def456Mock-SASCF8B780685",
            "grantId": "843646265"
        }
    ]
}
2023-06-08T18:14:44.948Z - INFO - ERROR - there is no cbrs obj registered with the cbsdSerialNumber :  CF8B779097
2023-06-08T18:15:01.407Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "CB987",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "CXP9024418/15_R69C29",
                "hardwareVersion": "KDU137974/11_R1C/A",
                "model": "Baseband",
                "softwareVersion": "CXP9024418/15_R69C29",
                "vendor": "Ericsson"
            },
            "cbsdSerialNumber": "CF8B779097",
            "fccId": "abc123",
            "groupingParam": [
                {
                    "groupId": "test",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ],
            "installationParam": {
                "antennaAzimuth": 0,
                "antennaBeamwidth": 0,
                "antennaDowntilt": 0,
                "antennaGain": 0,
                "antennaModel": "test",
                "eirpCapability": 43,
                "height": 10.0,
                "heightType": "AMSL",
                "horizontalAccuracy": 10,
                "indoorDeployment": false,
                "latitude": 33.0,
                "longitude": -96.8,
                "verticalAccuracy": 1
            },
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "userId": "TestCBSD1"
        }
    ]
}
2023-06-08T18:15:01.453Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T18:15:04.391Z - INFO - spectrumInquiry request from CBRS  : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3695000000,
                    "lowFrequency": 3555000000
                }
            ]
        }
    ]
}
2023-06-08T18:15:04.457Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2023-06-08T18:15:04.459Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
```

```
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 20,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "abc123Mock-SASCF8B779097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2023-06-08T18:15:04.539Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3560000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2023-06-08T18:15:04.582Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:04.584Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:04.585Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:04.663Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3690000000
                }
            }
        }
    ]
}
2023-06-08T18:15:04.668Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:04.670Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:04.671Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:04.743Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3560000000
                }
```

```
            }
        }
    ]
}
2023-06-08T18:15:04.752Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:04.753Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:04.756Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:04.829Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3590000000,
                    "lowFrequency": 3580000000
                }
            }
        }
    ]
}
2023-06-08T18:15:04.842Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:04.844Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:04.848Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:04.921Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3610000000,
                    "lowFrequency": 3600000000
                }
            }
        }
    ]
}
2023-06-08T18:15:04.933Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:04.936Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:04.937Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:05.015Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
```

```
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3620000000,
                    "lowFrequency": 3610000000
                }
            }
        }
    ]
}
2023-06-08T18:15:05.030Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:05.033Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:05.038Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:05.109Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3640000000,
                    "lowFrequency": 3630000000
                }
            }
        }
    ]
}
2023-06-08T18:15:05.115Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:05.115Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:05.115Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:05.200Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3650000000,
                    "lowFrequency": 3640000000
                }
            }
        }
    ]
}
2023-06-08T18:15:05.203Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:05.204Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:05.206Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
```

```
2023-06-08T18:15:05.295Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3580000000,
                    "lowFrequency": 3570000000
                }
            }
        }
    ]
}
2023-06-08T18:15:05.299Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:05.299Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:05.301Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2023-06-08T18:15:05.375Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3600000000,
                    "lowFrequency": 3590000000
                }
            }
        }
    ]
}
2023-06-08T18:15:05.380Z - INFO - The requested frequency is not in the available spectrum range
2023-06-08T18:15:05.381Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2023-06-08T18:15:05.381Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "abc123Mock-SASCF8B779097",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
```


End of test report