Test Report

As per

FCC Part 96 SAS requirements (CBRS Test Plan)

Canada

Choose certainty.
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on the

FW-300i Intelligent LTE Base Station
(3550-3700MHz)

FCC ID: ROR00000005

Issued by:
TÜV SÜD Canada Inc.
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Testing produced for

Blinq Wireless

See Appendix A for full client & EUT details.

Scott Drysdale.
Test Personnel

Abderrahmane Ferhat
Report Reviewer

Testing Laboratory
Certificate #2955.02

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Report Scope

This report addresses the EMC verification testing and test results of **FW-300i Intelligent LTE Base Station (3550-3700 MHz)** herein referred to as EUT (Equipment Under Test). The EUT was tested for compliance against the following standards:

FCC Part 96 SAS requirements (CBRS Test Plan)

. Test procedures, results, justifications, and engineering considerations, if any, follow later in this report.

For a more detailed list of the standards and the revision used, see the "Applicable Standards, Specifications and Methods" section of this report.

This report does not imply product endorsement by any government, accreditation agency, or TÜV SÜD Canada Inc.

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Summary

The results contained in this report relate only to the item(s) tested.

Equipment Under Test (EUT)	**FW-300i Intelligent LTE Base Station (3550-3700 MHz)**
EUT passed all tests performed	Yes
Tests conducted by	Scott Drysdale

For testing dates, see 'Testing Environmental Conditions and Dates'.

Test Results Summary

Section	CBSD	DP	Required for Cert.	Test Case ID	Test Case Title	Test Status	
6.1.4.1.1	X	--	C1	WINNF.FT.C.REG.1	Multi-Step registration	PASS	Note
6.1.4.1.2	--	X	C1	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	PASS	
6.1.4.1.3	X	--	C2	WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	PASS With waiver	Waiver
6.1.4.1.4	--	X	C2	WINNF.FT.D.REG.4	Domain Proxy Single-Step registration for Cat A CBSD	PASS With waiver	Waiver
6.1.4.1.5	X	--	C3	WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	PASS With waiver	Waiver
6.1.4.1.6	--	X	C3	WINNF.FT.D.REG.6	Domain Proxy Single-Step registration for CBSD with CPI signed data	PASS With waiver	Waiver
6.1.4.1.7	X	X	C6	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	Not Support	Waiver
6.1.4.2.1	X	--	M	WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	PASS	
6.1.4.2.2	--	X	M	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	PASS	
6.1.4.2.3	X	--	M	WINNF.FT.C.REG.10	Pending registration (responseCode 200)	PASS	

6.1.4.2.4	--	X	M	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	PASS	
6.1.4.2.5	X	--	M	WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	PASS	
6.1.4.2.6	--	X	M	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	PASS	
6.1.4.2.7	X	--	M	WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	PASS	
6.1.4.2.8	--	X	M	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	PASS	
6.1.4.2.9	X	--	M	WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	PASS	
6.1.4.2.10	--	X	M	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version responseCode 100)	PASS	
6.1.4.2.11	X	--	M	WINNF.FT.C.REG.18	Group Error (responseCode 201)	PASS	
6.1.4.2.12	--	X	M	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	PASS	
6.1.4.3.1	X	X	C2	WINNF.FT.C.REG.20	Category A CBSD location update	Not Support	Waiver
6.3.4.2.1	X	X	M	WINNF.FT.D.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE)	PASS	
6.3.4.2.2	X	X	M	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	PASS	

6.4.4.1.1	X	--	M	WINNF.FT.C.HBT.1	Heartbeat Success Case (first Heartbeat Response)	PASS	
6.4.4.1.2	--	X	M	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	PASS	
6.4.4.2.1	X	X	M	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	PASS	
6.4.4.2.2	X	--	M	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	PASS	
6.4.4.2.3	X	X	M	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	PASS	
6.4.4.2.4	X	X	M	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	PASS	
6.4.4.2.5	X	X	M	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	PASS	
6.4.4.2.6	--	X	M	WINNF.FT.D.HBT.8	Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)	PASS	
6.4.4.3.1	X	X	M	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	PASS	
6.4.4.3.2	X	X	M	WINNF.FT.C.HBT.10	Heartbeat Response Absent	PASS	

					(Subsequent Heartbeat)		
6.4.4.4.1	X	X	O	WINNF.FT.C.HBT.11	Successful Grant Renewal in Heartbeat Test Case	Not Required	
6.5.4.2.1	X	--	C4	WINNF.FT.C.MES.1	Registration Response contains measReportConfig	Not Support	Waiver
6.5.4.2.2	--	X	C4	WINNF.FT.D.MES.2	Domain Proxy Registration Response contains measReportConfig	Not Support	Waiver
6.5.4.2.3	X	X	C5	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	Not Support	Waiver
6.5.4.2.4	X	--	C5	WINNF.FT.C.MES.4	Heartbeat Response contains measReportConfig	Not Support	Waiver
6.5.4.2.5	--	X	C5	WINNF.FT.D.MES.5	Domain Proxy Heartbeat Response contains measReportConfig	Not Support	Waiver
6.6.4.1.1	X	--	M	WINNF.FT.C.RLQ.1	Successful Relinquishment	PASS	
6.6.4.1.2	--	X	M	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	PASS	
6.6.4.2.1	X	--	O	WINNF.FT.C.RLQ.3	Unsuccessful Relinquishment, responseCode=102	Not Required	
6.6.4.2.2	--	X	O	WINNF.FT.D.RLQ.4	Domain Proxy Unsuccessful Relinquishment, responseCode=102	Not Required	
6.6.4.3.1	X	--	O	WINNF.FT.C.RLQ.5	Unsuccessful Relinquishment, responseCode=103	Not Required	
6.6.4.3.2	--	X	O	WINNF.FT.D.RLQ.6	Domain Proxy Unsuccessful Relinquishment, responseCode=103	Not Required	

6.7.4.1.1	X	--	M	WINNF.FT.C.DRG.1	Successful Deregistration	PASS	
6.7.4.1.2	--	X	M	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	PASS	
6.7.4.2.1	X	--	O	WINNF.FT.C.DRG.3	Deregistration responseCode=102	Not Required	
6.7.4.2.2	--	X	O	WINNF.FT.D.DRG.4	Domain Proxy Deregistration responseCode=102	Not Required	
6.7.4.3.1	X	X	O	WINNF.FT.C.DRG.5	Deregistration responseCode=103	Not Required	
6.8.4.1.1	X	X	M	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	PASS	
6.8.4.2.1	X	X	M	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	PASS	
6.8.4.2.2	X	X	M	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	PASS	
6.8.4.2.3	X	X	M	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	PASS	
6.8.4.2.4	X	X	M	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	PASS	
7.1.4.1.1	X	X	M	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	PASS	

Section as per Working Document WINNF-TS-0122 If the product as tested complies with the specification, the EUT is deemed to comply with the standard and is deemed a 'PASS' or ‘P’ grade. If not 'FAIL' grade is issued. Where ‘N/A’ is stated this means the test case is not applicable, and see Notes, Justifications or Deviations Section for details.

Notes, Justifications, or Deviations

The following notes, justifications for tests not performed or deviations from the above listed specifications apply:

A later revision of the standard may have been substituted in place of the previous dated referenced revision. The year of the specification used is listed under applicable standards. Using the later revision accomplishes the goal of ensuring compliance to the intent of the previous specification, while allowing the laboratory to incorporate the extensions and clarifications made available by a later revision.

For the conditional test cases, the following justifications apply:

- EUT is a CBSD with Domain Proxy
- EUT supports the following Conditional functionality FROM WINF-TS-0122-V1.0.0, Table 6-2: C1 – Multi-step registration (WINNF.FT.C.REG.1 and WINNF.FT.D.REG.2)
- Optional test cases were not performed

Note, where graph sweeps are incomplete, this was used to set the time stamp of when the events occurred. This can be accomplished by determining the time at which the graph was captured and subtracting the remaining time. For example if there was a 30 second sweep, and 9 out of 10 is complete, that means the end occurred at the 27 second market. If the time on the graph was 12:03:35, this means the graph started at 12:03:08. This allows us to co-ordinate graph with UTC in the logs.

Logs are kept on file.

Applicable Standards, Specifications and Methods

ANSI C63.4:2014	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
CFR47 FCC Part 96	Code of Federal Regulations – Citizens Broadband Radio Service
WINNF-TS-0122 Version V1.0.0 19 December 2017	Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT) Working Document
ISO/IEC 17025:2005	General requirements for the competence of testing and calibration laboratories

Document Revision Status

Revision 000: Nov 1, 2018 – First draft.

Revision 001: Nov 7, 2018 – Revisions as per customer request.

Definitions and Acronyms

The following definitions and acronyms are applicable in this report.
See also ANSI C63.14.

AE – Auxiliary Equipment. A digital accessory that feeds data into or receives data from another device (host) that in turn, controls its operation.

AM – Amplitude Modulation

Class A device – A device that is marketed for use in a commercial, industrial or business environment. A 'Class A' device should not be marketed for use by the general public and the instructions for use accompanying the product shall contain the following text:

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Class B device – A device that is marketed for use in a residential environment and may also be used in a commercial, business or industrial environments.

EMC – Electro-Magnetic Compatibility. The ability of an equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.

EMI – Electro-Magnetic Immunity. The ability to maintain a specified performance when the equipment is subjected to disturbance (unwanted) signals of specified levels.

Enclosure Port – Physical boundary of equipment through which electromagnetic fields may radiate or impinge.

EUT – Equipment Under Test. A device or system being evaluated for compliance that is representative of a product to be marketed.

LISN – Line Impedance Stabilization Network

NCR – No Calibration Required

NSA – Normalized Site Attenuation

RF – Radio Frequency

EMC Test Plan – An EMC test plan established prior to testing. See 'Appendix A – EUT & Client Provided Details'.

Testing Facility

Testing for EMC on the EUT was carried out at customer location as described in Appendix A.

Calibrations and Accreditations

TÜV SÜD Canada Inc is accredited to ISO/IEC 17025 by A2LA with Testing Certificate #2955.02. The laboratory's current scope of accreditation listing can be found as listed on the A2LA website. All measuring equipment is calibrated on an annual or bi-annual basis as listed for each respective test.

Testing Environmental Conditions and Dates

Following environmental conditions were recorded in the facility during time of testing

Date	Test	Initials	Temperature (ºC)	Humidity (%)	Pressure (kPa)
July 17-25, 2018	All	SD	20-23	40-55	96.106

Detailed Test Results Section

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.1		WINNF.FT.C.REG.1	Multi-Step registration	P

CBSD Log

#start 0
2018-07-17 15:05:30,285 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:05:30,285 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:05:30,285 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:05:30,286 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:05:30,286 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:05:30,286 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:05:30,288 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:05:30,288 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:05:30,288 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:05:30,290 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:05:30,314 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 15:05:30,314 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 15:05:30,314 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-07-17 15:05:30,315 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 15:05:30,315 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 15:05:30,315 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 15:05:30,315 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:05:30,317 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:05:30,317 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-07-17 15:05:30,317 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 15:05:30,321 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:05:30,338 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 0, ", rc 0
2018-07-17 15:05:30,354 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```


2018-07-17 15:05:30,354 [INFO] cbsd.cpp:238, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 15:05:30,355 [ERROR] cbsd.cpp:2718, cbsd#0, grant#0, channel is unavailable

2018-07-17 15:05:30,355 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 15:05:30,355 [ERROR] cbsd.cpp:2107, cbsd#0, at least one requested grant channel is unavailable
2018-07-17 15:05:30,355 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code -100,
2018-07-17 15:05:30,355 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-07-17 15:05:30,356 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-07-17 15:05:30,356 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:05:30,356 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:05:30,387 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code -100, ", rc 0
2018-07-17 15:06:30,357 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:06:30,357 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-07-17 15:06:30,358 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 15:06:30,358 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:06:30,361 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
```

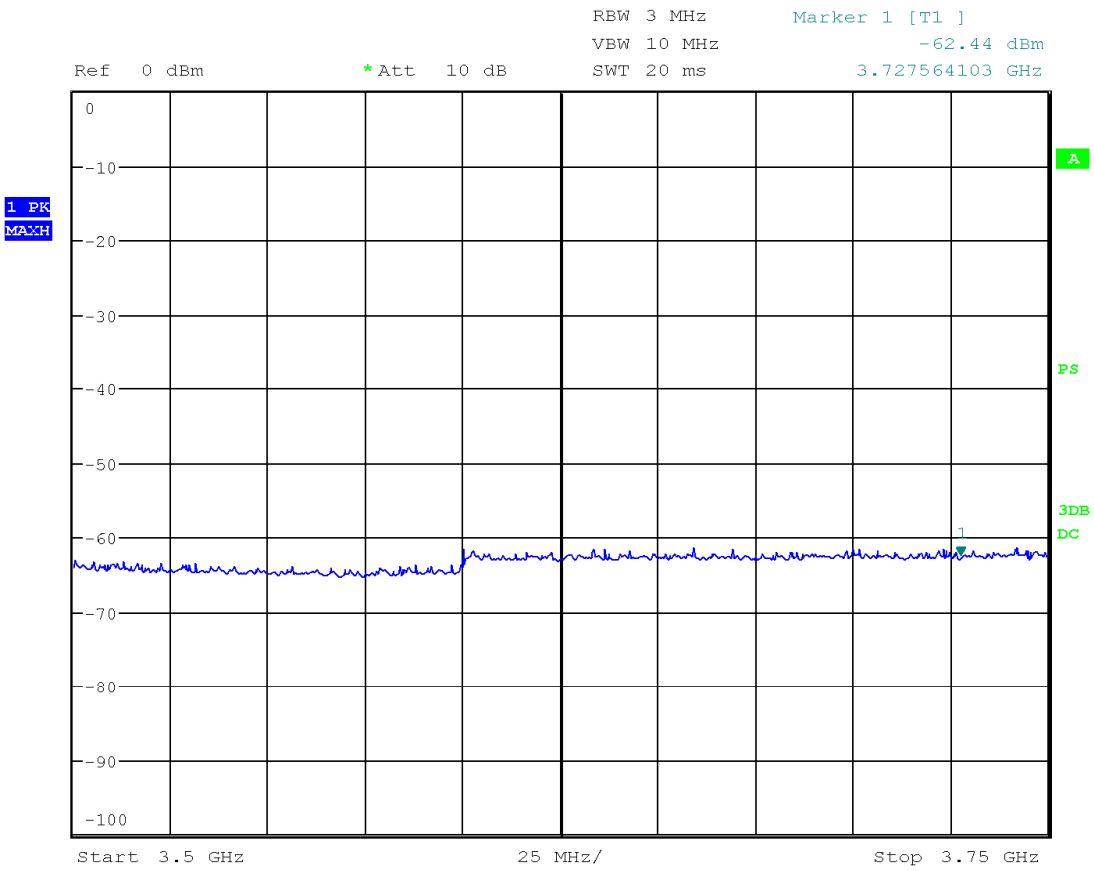
}
2018-07-17 15:06:30,362 [INFO] cbsd.cpp:238, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 15:06:30,362 [ERROR] cbsd.cpp:2718, cbsd#0, grant#0, channel is unavailable
2018-07-17 15:06:30,362 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 15:06:30,362 [ERROR] cbsd.cpp:2107, cbsd#0, at least one requested grant channel is unavailable
2018-07-17 15:06:30,363 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code -100,
2018-07-17 15:06:30,363 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-07-17 15:06:30,364 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-07-17 15:06:30,364 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:06:30,364 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:06:30,386 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code -100, ", rc 0
2018-07-17 15:06:30,408 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code -100, ", rc 0

SAS Test Harness Log

WINNF.FT.C.REG.1
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.1 is starting now
2018-07-17T15:05:31.002592Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:05:31Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.1 is - passed

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.2	X	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	P



Date: 17.JUL.2018 15:53:22

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.3		WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	P (Waiver)

CBSD

2018-11-02 19:50:14,480 [INFO] main.cpp:306, ##############################
2018-11-02 19:50:14,480 [INFO] main.cpp:307, cbrsd is running in foreground
2018-11-02 19:50:14,480 [INFO] main.cpp:308, ##############################
2018-11-02 19:50:14,480 [INFO] shmem.cpp:62, cbrsd version, Oct 29, 2018 (Rev 1)
2018-11-02 19:50:14,480 [INFO] shmem.cpp:63, initialize blinq shared memroy access
2018-11-02 19:50:14,481 [DEBUG] shmem.cpp:111, global shared memory info, board info 0x800000000f06a230, cell info 0x800000000f97af10, radio 0x800000000f97b270, confd 0x800000000f97b270, size 47312
2018-11-02 19:50:14,481 [DEBUG] shmem.cpp:115, cbsd shared memory info, cbsd init 0x800000000f97b380, cbsd common 0x800000000f97b380, cbsds 0x800000000f97b5c0
2018-11-02 19:50:14,481 [INFO] main.cpp:341, starting client ...
2018-11-02 19:50:14,482 [ERROR] main.cpp:347, failed to connect to server
2018-11-02 19:50:14,482 [NOTICE] main.cpp:348, cbrsd is running in debugging mode
2018-11-02 19:50:14,483 [INFO] main.cpp:52, creating PID file for cbrsd, PID 2334
2018-11-02 19:50:14,483 [INFO] main.cpp:78, waiting for radio initialization ...
2018-11-02 19:50:14,483 [INFO] main.cpp:91, radio params are ready
2018-11-02 19:50:14,483 [INFO] main.cpp:111, SAS URL is configured, cbrsd is running in CBSD mode and RF transmission is DISABLED at startup
2018-11-02 19:50:14,483 [INFO] shmem.cpp:2520, cell#0, RF transmission is disabled
2018-11-02 19:50:14,483 [INFO] shmem.cpp:2520, cell#1, RF transmission is disabled
2018-11-02 19:50:14,484 [INFO] shmem.cpp:2520, cell#2, RF transmission is disabled
2018-11-02 19:50:14,484 [ALERT] main.cpp:154, set debug option, use_local_crl = 1
2018-11-02 19:50:14,484 [ALERT] main.cpp:159, set soruce ip address, src_ip_addr = primary
2018-11-02 19:50:14,484 [ALERT] main.cpp:165, set frequency change support, enable_freq_change = 1
2018-11-02 19:50:14,484 [ALERT] main.cpp:171, set cbsd automatic start, enable_auto_start = 1
2018-11-02 19:50:14,484 [ALERT] main.cpp:182, set remote log host, remote_log_host = 10.40.0.157
2018-11-02 19:50:14,484 [ALERT] main.cpp:177, set remote log, enable_remote_log = 0
2018-11-02 19:50:14,484 [ALERT] main.cpp:194, set force multi-step registration, force_multi_step = 0
2018-11-02 19:50:14,485 [ALERT] main.cpp:200, set enable using empty string for no meas caps, empty_meas_caps = 0

2018-11-02 19:50:14,485 [ALERT] main.cpp:206, set meas report bandwidth, meas_report_bandwidth = 10
2018-11-02 19:50:14,485 [ALERT] main.cpp:212, set enable peer verification, tls_verify_peer = 1
2018-11-02 19:50:14,485 [ALERT] main.cpp:217, set cbrsd log level, cbrsd_log_level = debug
2018-11-02 19:50:14,485 [ALERT] main.cpp:223, set enable full spectrum inquiry, inquire_full_spectrum = 1
2018-11-02 19:50:14,485 [ALERT] main.cpp:242, debug options are loaded
2018-11-02 19:50:14,485 [INFO] core.cpp:76, create alarms thread
2018-11-02 19:50:14,485 [INFO] core.cpp:83, create worker threads pool, size 3
2018-11-02 19:50:14,486 [INFO] core.cpp:88, create timer thread
2018-11-02 19:50:14,486 [INFO] core.cpp:93, create tls thread
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:724, CA_PATH, /storage/cbsd/cert/
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:725, CA, sas.ca.pem
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:726, CRT, cbsd.cert.pem
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:727, KEY, cbsd.key.pem
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:728, CRL, sas.crl.pem
2018-11-02 19:50:14,486 [DEBUG] tls.cpp:729, CPI, cpi.key.pem
2018-11-02 19:50:14,486 [INFO] core.cpp:98, create config thread
2018-11-02 19:50:14,486 [INFO] core.cpp:105, initialize alarms thread
2018-11-02 19:50:14,486 [INFO] core.cpp:108, initialize worker threads pool
2018-11-02 19:50:14,487 [INFO] core.cpp:111, initialize timer thread
2018-11-02 19:50:14,487 [INFO] core.cpp:114, initialize tls thread
2018-11-02 19:50:14,497 [INFO] tls.cpp:85, mgmt ip address is 10.101.2.2
2018-11-02 19:50:14,497 [INFO] tls.cpp:748, sas server url, https://10.110.0.101:5000/v1.2
2018-11-02 19:50:14,497 [INFO] core.cpp:117, initialize config thread
2018-11-02 19:50:14,497 [INFO] core.cpp:122, start alarms thread
2018-11-02 19:50:14,497 [INFO] core.cpp:125, start worker threads pool
2018-11-02 19:50:14,497 [INFO] alarms.cpp:71, alarms thread is running, tid 2335
2018-11-02 19:50:14,497 [INFO] core.cpp:128, start timer thread
2018-11-02 19:50:14,498 [INFO] core.cpp:131, start tls thread
2018-11-02 19:50:14,498 [INFO] pool.cpp:105, worker thread#2 is running, tid 2338
2018-11-02 19:50:14,498 [INFO] core.cpp:134, start config thread
2018-11-02 19:50:14,498 [INFO] timer.cpp:203, timer thread is running, tid 2339
2018-11-02 19:50:14,498 [INFO] core.cpp:328, start cbrsd debugging command line
#2018-11-02 19:50:14,498 [INFO] tls.cpp:800, tls thread is running, tid 2340
2018-11-02 19:50:14,498 [INFO] pool.cpp:105, worker thread#0 is running, tid 2336
2018-11-02 19:50:14,499 [INFO] config.cpp:332, config thread is running, tid 2341
2018-11-02 19:50:14,499 [INFO] pool.cpp:105, worker thread#1 is running, tid 2337
2018-11-02 19:50:15,487 [INFO] config.cpp:102, configured cbsds 3, shm_cbsd_num 3

2018-11-02 19:50:15,487 [INFO] config.cpp:125, added cbsds 3, deleted cbsds 0, shared cbsds 0
2018-11-02 19:50:15,487 [DEBUG] shmem.cpp:160, cbsd#0, is enb cbsd, override the eirp capability with 30
2018-11-02 19:50:15,488 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#0, on sector#0
2018-11-02 19:50:15,488 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3640000000 ~ 3660000000
2018-11-02 19:50:15,489 [DEBUG] config.cpp:153, cbsd#0, sn enb_sector0 is added
2018-11-02 19:50:15,489 [DEBUG] shmem.cpp:160, cbsd#1, is enb cbsd, override the eirp capability with 30
2018-11-02 19:50:15,490 [WARN] shmem.cpp:222, cbsd#1, sector#1 is disabled
2018-11-02 19:50:15,490 [DEBUG] config.cpp:153, cbsd#1, sn enb_sector1 is added
2018-11-02 19:50:15,491 [DEBUG] shmem.cpp:160, cbsd#2, is enb cbsd, override the eirp capability with 30
2018-11-02 19:50:15,491 [WARN] shmem.cpp:222, cbsd#2, sector#2 is disabled
2018-11-02 19:50:15,492 [DEBUG] config.cpp:153, cbsd#2, sn enb_sector2 is added
2018-11-02 19:50:15,492 [DEBUG] config.cpp:219, cbsd#0, starting ...
2018-11-02 19:50:15,492 [INFO] cbsd.cpp:865, cbsd#0, schedule to start
2018-11-02 19:50:15,492 [INFO] cbsd.cpp:870, cbsd#0, start from current state max
2018-11-02 19:50:15,493 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 19:50:15,493 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-11-02 19:50:15,493 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, max to unregistered
2018-11-02 19:50:15,493 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 19:50:15,494 [DEBUG] config.cpp:219, cbsd#1, starting ...
2018-11-02 19:50:15,494 [WARN] cbsd.cpp:857, cbsd#1, skip disabled cbsd on sector#1
2018-11-02 19:50:15,494 [DEBUG] config.cpp:219, cbsd#2, starting ...
2018-11-02 19:50:15,494 [WARN] cbsd.cpp:857, cbsd#2, skip disabled cbsd on sector#2
2018-11-02 19:50:15,495 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 19:50:15,495 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration without CPI signed data
2018-11-02 19:50:15,496 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-11-02 19:50:15,496 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","cbsdInfo":{"vendor":"BLiNQ Networks","model":"RevC03","softwareVersion":"Oct 29, 2018 (Rev 1)","hardwareVersion":"SC03004243NALzzzzz","firmwareVersion":"1.2.5_33213"},"airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antenna

Beamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0
"}]}]}
2018-11-02 19:50:15,497 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 19:50:15,634 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-11-02 19:50:15,634 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, enb_sector0, error code 0
2018-11-02 19:50:15,634 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-11-02 19:50:15,634 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-11-02 19:50:15,634 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-11-02 19:50:15,634 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, unregistered to registered
2018-11-02 19:50:15,635 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 19:50:15,636 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 19:50:15,636 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-11-02 19:50:15,636 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}
2018-11-02 19:50:15,637 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 19:50:15,694 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",

"ruleApplied": "FCC_PART_96",
"frequencyRange": {
"lowFrequency": 3550000000,
"highFrequency": 3555000000
}
}
],
"cbsdId": "blinq77operationsMock-SASenb_sector0"
}
]
}

2018-11-02 19:50:15,694 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 19:50:15,694 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 19:50:15,695 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable
2018-11-02 19:50:15,695 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 19:50:15,695 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1
2018-11-02 19:50:15,695 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1
2018-11-02 19:50:15,695 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 19:50:15,695 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable
2018-11-02 19:50:15,695 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100
2018-11-02 19:50:15,695 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 19:50:15,696 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 19:50:15,697 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 19:50:15,697 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 19:50:15,716 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0
2018-11-02 19:51:15,697 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 19:51:15,698 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-11-02 19:51:15,698 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request,
{"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-

SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}
]}
2018-11-02 19:51:15,699 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 19:51:15,718 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```

2018-11-02 19:51:15,719 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 19:51:15,719 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 19:51:15,719 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable
2018-11-02 19:51:15,720 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 19:51:15,720 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1
2018-11-02 19:51:15,720 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1
2018-11-02 19:51:15,720 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 19:51:15,720 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable
2018-11-02 19:51:15,720 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100

2018-11-02 19:51:15,720 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 19:51:15,721 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 19:51:15,721 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 19:51:15,721 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 19:51:15,751 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0
2018-11-02 19:51:15,771 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0

SAS Test Harness Log

WINNF.FT.C.REG.3_waiver
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.3_waiver is starting now
2018-11-02T19:50:27.764644Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T19:50:27Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.3_waiver is - passed

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.4	X	WINNF.FT.D.REG.4	Domain Proxy Single-Step registration for Cat A CBSD	P (Waiver)

CBSD

2018-11-02 20:20:12,479 [INFO] main.cpp:306, ################################
2018-11-02 20:20:12,479 [INFO] main.cpp:307, cbrsd is running in foreground
2018-11-02 20:20:12,479 [INFO] main.cpp:308, ################################
2018-11-02 20:20:12,480 [INFO] shmem.cpp:62, cbrsd version, Oct 29, 2018 (Rev 1)
2018-11-02 20:20:12,480 [INFO] shmem.cpp:63, initialize blinq shared memroy access
2018-11-02 20:20:12,481 [DEBUG] shmem.cpp:111, global shared memory info, board info 0x800000000f06a230, cell info 0x800000000f97af10, radio 0x800000000f97b270, confd 0x800000000f97b270, size 47312
2018-11-02 20:20:12,481 [DEBUG] shmem.cpp:115, cbsd shared memory info, cbsd init 0x800000000f97b380, cbsd common 0x800000000f97b380, cbsds 0x800000000f97b5c0
2018-11-02 20:20:12,481 [INFO] main.cpp:341, starting client ...
2018-11-02 20:20:12,482 [ERROR] main.cpp:347, failed to connect to server
2018-11-02 20:20:12,483 [NOTICE] main.cpp:348, cbrsd is running in debugging mode
2018-11-02 20:20:12,483 [INFO] main.cpp:52, creating PID file for cbrsd, PID 1765
2018-11-02 20:20:12,483 [INFO] main.cpp:78, waiting for radio initialization ...
2018-11-02 20:20:12,484 [INFO] main.cpp:91, radio params are ready
2018-11-02 20:20:12,484 [INFO] main.cpp:111, SAS URL is configured, cbrsd is running in CBSD mode and RF transmission is DISABLED at startup
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#0, RF transmission is disabled
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#1, RF transmission is disabled
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#2, RF transmission is disabled
2018-11-02 20:20:12,485 [ALERT] main.cpp:154, set debug option, use_local_crl = 1
2018-11-02 20:20:12,485 [ALERT] main.cpp:159, set soruce ip address, src_ip_addr = primary
2018-11-02 20:20:12,485 [ALERT] main.cpp:165, set frequency change support, enable_freq_change = 1
2018-11-02 20:20:12,485 [ALERT] main.cpp:171, set cbsd automatic start, enable_auto_start = 1
2018-11-02 20:20:12,486 [ALERT] main.cpp:182, set remote log host, remote_log_host = 10.40.0.157
2018-11-02 20:20:12,486 [ALERT] main.cpp:177, set remote log, enable_remote_log = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:194, set force multi-step registration, force_multi_step = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:200, set enable using empty string for no meas caps, empty_meas_caps = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:206, set meas report bandwidth, meas_report_bandwidth = 10

2018-11-02 20:20:12,486 [ALERT] main.cpp:212, set enable peer verification, tls_verify_peer = 1
2018-11-02 20:20:12,487 [ALERT] main.cpp:217, set cbrsd log level, cbrsd_log_level = debug
2018-11-02 20:20:12,487 [ALERT] main.cpp:223, set enable full spectrum inquiry, inquire_full_spectrum = 1
2018-11-02 20:20:12,487 [ALERT] main.cpp:242, debug options are loaded
2018-11-02 20:20:12,487 [INFO] core.cpp:76, create alarms thread
2018-11-02 20:20:12,487 [INFO] core.cpp:83, create worker threads pool, size 3
2018-11-02 20:20:12,488 [INFO] core.cpp:88, create timer thread
2018-11-02 20:20:12,488 [INFO] core.cpp:93, create tls thread
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:724, CA_PATH, /storage/cbsd/cert/
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:725, CA, sas.ca.pem
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:726, CRT, cbsd.cert.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:727, KEY, cbsd.key.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:728, CRL, sas.crl.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:729, CPI, cpi.key.pem
2018-11-02 20:20:12,489 [INFO] core.cpp:98, create config thread
2018-11-02 20:20:12,489 [INFO] core.cpp:105, initialize alarms thread
2018-11-02 20:20:12,489 [INFO] core.cpp:108, initialize worker threads pool
2018-11-02 20:20:12,490 [INFO] core.cpp:111, initialize timer thread
2018-11-02 20:20:12,490 [INFO] core.cpp:114, initialize tls thread
2018-11-02 20:20:12,500 [INFO] tls.cpp:85, mgmt ip address is 10.101.2.2
2018-11-02 20:20:12,501 [INFO] tls.cpp:748, sas server url, https://10.110.0.101:5000/v1.2
2018-11-02 20:20:12,501 [INFO] core.cpp:117, initialize config thread
2018-11-02 20:20:12,501 [INFO] core.cpp:122, start alarms thread
2018-11-02 20:20:12,501 [INFO] core.cpp:125, start worker threads pool
2018-11-02 20:20:12,501 [INFO] alarms.cpp:71, alarms thread is running, tid 1766
2018-11-02 20:20:12,502 [INFO] core.cpp:128, start timer thread
2018-11-02 20:20:12,502 [INFO] pool.cpp:105, worker thread#2 is running, tid 1769
2018-11-02 20:20:12,502 [INFO] timer.cpp:203, timer thread is running, tid 1770
2018-11-02 20:20:12,502 [INFO] core.cpp:131, start tls thread
2018-11-02 20:20:12,502 [INFO] pool.cpp:105, worker thread#0 is running, tid 1767
2018-11-02 20:20:12,503 [INFO] core.cpp:134, start config thread
2018-11-02 20:20:12,503 [INFO] tls.cpp:800, tls thread is running, tid 1771
2018-11-02 20:20:12,503 [INFO] core.cpp:328, start cbrsd debugging command line
#2018-11-02 20:20:12,503 [INFO] config.cpp:332, config thread is running, tid 1772
2018-11-02 20:20:12,504 [INFO] pool.cpp:105, worker thread#1 is running, tid 1768
2018-11-02 20:20:13,490 [INFO] config.cpp:102, configured cbsds 3, shm_cbsd_num 3
2018-11-02 20:20:13,490 [INFO] config.cpp:125, added cbsds 3, deleted cbsds 0, shared cbsds 0

2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:160, cbsd#0, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#0, on sector#0
2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3640000000 ~ 3660000000
2018-11-02 20:20:13,492 [DEBUG] config.cpp:153, cbsd#0, sn enb_sector0 is added
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:160, cbsd#1, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#1, on sector#1
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3590000000 ~ 3610000000
2018-11-02 20:20:13,493 [DEBUG] config.cpp:153, cbsd#1, sn enb_sector1 is added
2018-11-02 20:20:13,493 [DEBUG] shmem.cpp:160, cbsd#2, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,493 [WARN] shmem.cpp:222, cbsd#2, sector#2 is disabled
2018-11-02 20:20:13,494 [DEBUG] config.cpp:153, cbsd#2, sn enb_sector2 is added
2018-11-02 20:20:13,494 [DEBUG] config.cpp:219, cbsd#0, starting ...
2018-11-02 20:20:13,494 [INFO] cbsd.cpp:865, cbsd#0, schedule to start
2018-11-02 20:20:13,494 [INFO] cbsd.cpp:870, cbsd#0, start from current state max
2018-11-02 20:20:13,494 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,494 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-11-02 20:20:13,494 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, max to unregistered
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,495 [DEBUG] config.cpp:219, cbsd#1, starting ...
2018-11-02 20:20:13,495 [INFO] cbsd.cpp:865, cbsd#1, schedule to start
2018-11-02 20:20:13,495 [INFO] cbsd.cpp:870, cbsd#1, start from current state max
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,495 [INFO] state.cpp:52, cbsd#1, grant#-1, switched to unregistered state
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, max to unregistered
2018-11-02 20:20:13,496 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,496 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,496 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration without CPI signed data
2018-11-02 20:20:13,496 [DEBUG] config.cpp:219, cbsd#2, starting ...
2018-11-02 20:20:13,496 [WARN] cbsd.cpp:857, cbsd#2, skip disabled cbsd on sector#2
2018-11-02 20:20:13,497 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ

2018-11-02 20:20:13,497 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","cbsdInfo":{"vendor":"BLiNQ Networks","model":"RevC03","softwareVersion":"Oct 29, 2018 (Rev 1)","hardwareVersion":"SC03004243NALzzzzz","firmwareVersion":"1.2.5_33213"},"airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}

2018-11-02 20:20:13,497 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:20:13,497 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration without CPI signed data

2018-11-02 20:20:13,498 [INFO] state.cpp:81, cbsd#1, grant#-1, send REG-REQ

2018-11-02 20:20:13,498 [DEBUG] state.cpp:82, cbsd#1, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector1","cbsdCategory":"A","cbsdInfo":{"vendor":"BLiNQ Networks","model":"RevC03","softwareVersion":"Oct 29, 2018 (Rev 1)","hardwareVersion":"SC03004243NALzzzzz","firmwareVersion":"1.2.5_33213"},"airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#1"}]}]}

2018-11-02 20:20:13,498 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:20:13,500 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:20:13,637 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, enb_sector0, error code 0

2018-11-02 20:20:13,638 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,638 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, unregistered to registered
2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,639 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,640 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-11-02 20:20:13,640 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}
2018-11-02 20:20:13,641 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:20:13,675 [DEBUG] state.cpp:118, cbsd#1, grant#-1, receive response[0], {
"registrationResponse": [
{
"cbsdId": "blinq77operationsMock-SASenb_sector1",
"response": {
"responseCode": 0
}
}
]
}
2018-11-02 20:20:13,675 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, CLR, CRIT, enb_sector1, error code 0
2018-11-02 20:20:13,675 [ERROR] state.cpp:152, cbsd#1, grant#-1, REG-RSP, SUCCESS, code 0
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,676 [INFO] state.cpp:214, cbsd#1, grant#-1, switched into registered state
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, unregistered to registered
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,677 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,677 [INFO] state.cpp:232, cbsd#1, grant#-1, send INQ-REQ
2018-11-02 20:20:13,678 [DEBUG] state.cpp:233, cbsd#1, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-

SASenb_sector1","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}

2018-11-02 20:20:13,678 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:20:13,696 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```

2018-11-02 20:20:13,697 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel

2018-11-02 20:20:13,697 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x

2018-11-02 20:20:13,697 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable

2018-11-02 20:20:13,698 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x

2018-11-02 20:20:13,698 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1

2018-11-02 20:20:13,698 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1

2018-11-02 20:20:13,698 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x

2018-11-02 20:20:13,698 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable

2018-11-02 20:20:13,698 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100

2018-11-02 20:20:13,698 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:20:13,699 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:20:13,699 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:20:13,699 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:20:13,724 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0
2018-11-02 20:20:13,735 [DEBUG] state.cpp:277, cbsd#1, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector1"
  }
 ]
}
```


2018-11-02 20:20:13,736 [INFO] cbsd.cpp:251, cbsd#1, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:20:13,736 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:20:13,737 [ERROR] cbsd.cpp:2916, cbsd#1, grant#0, channel is unavailable
2018-11-02 20:20:13,737 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,737 [WARN] cbsd.cpp:2932, cbsd#1, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:20:13,737 [WARN] cbsd.cpp:3006, cbsd#1, after re-configuring grants, unavailable grant num 1

2018-11-02 20:20:13,737 [INFO] cbsd.cpp:3008, available channels, .|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,737 [ERROR] cbsd.cpp:2283, cbsd#1, at least one requested grant channel is unavailable
2018-11-02 20:20:13,738 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, SET, CRIT, enb_sector1, error code -100
2018-11-02 20:20:13,739 [ERROR] state.cpp:325, cbsd#1, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:20:13,739 [INFO] state.cpp:342, cbsd#1, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:20:13,739 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:20:13,739 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:20:13,771 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#1, grant#-1" CRIT 11001 "enb_sector1, error code -100", rc 0

SAS Test Harness Log

WINNF.FT.D.REG.4_waiver
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.D.REG.4_waiver is starting now
2018-11-02T20:21:14.786208Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:21:14Z: validation passed successfully, the engine sent registration Response
2018-11-02T20:21:14.825744Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:21:14Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
y
n
n

for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n the additional comments for the current test are :

The final result of the test : WINNF.FT.D.REG.4_waiver is - passed
CBSD

2018-11-02 20:20:12,479 [INFO] main.cpp:306, ##############################
2018-11-02 20:20:12,479 [INFO] main.cpp:307, cbrsd is running in foreground
2018-11-02 20:20:12,479 [INFO] main.cpp:308, ##############################
2018-11-02 20:20:12,480 [INFO] shmem.cpp:62, cbrsd version, Oct 29, 2018 (Rev 1)
2018-11-02 20:20:12,480 [INFO] shmem.cpp:63, initialize blinq shared memroy access
2018-11-02 20:20:12,481 [DEBUG] shmem.cpp:111, global shared memory info, board info 0x800000000f06a230, cell info 0x800000000f97af10, radio 0x800000000f97b270, confd 0x800000000f97b270, size 47312
2018-11-02 20:20:12,481 [DEBUG] shmem.cpp:115, cbsd shared memory info, cbsd init 0x800000000f97b380, cbsd common 0x800000000f97b380, cbsds 0x800000000f97b5c0
2018-11-02 20:20:12,481 [INFO] main.cpp:341, starting client ...
2018-11-02 20:20:12,482 [ERROR] main.cpp:347, failed to connect to server
2018-11-02 20:20:12,483 [NOTICE] main.cpp:348, cbrsd is running in debugging mode
2018-11-02 20:20:12,483 [INFO] main.cpp:52, creating PID file for cbrsd, PID 1765
2018-11-02 20:20:12,483 [INFO] main.cpp:78, waiting for radio initialization ...
2018-11-02 20:20:12,484 [INFO] main.cpp:91, radio params are ready
2018-11-02 20:20:12,484 [INFO] main.cpp:111, SAS URL is configured, cbrsd is running in CBSD mode and RF transmission is DISABLED at startup
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#0, RF transmission is disabled
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#1, RF transmission is disabled
2018-11-02 20:20:12,484 [INFO] shmem.cpp:2520, cell#2, RF transmission is disabled
2018-11-02 20:20:12,485 [ALERT] main.cpp:154, set debug option, use_local_crl = 1
2018-11-02 20:20:12,485 [ALERT] main.cpp:159, set soruce ip address, src_ip_addr = primary
2018-11-02 20:20:12,485 [ALERT] main.cpp:165, set frequency change support, enable_freq_change = 1
2018-11-02 20:20:12,485 [ALERT] main.cpp:171, set cbsd automatic start, enable_auto_start = 1
2018-11-02 20:20:12,486 [ALERT] main.cpp:182, set remote log host, remote_log_host = 10.40.0.157
2018-11-02 20:20:12,486 [ALERT] main.cpp:177, set remote log, enable_remote_log = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:194, set force multi-step registration, force_multi_step = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:200, set enable using empty string for no meas caps, empty_meas_caps = 0
2018-11-02 20:20:12,486 [ALERT] main.cpp:206, set meas report bandwidth, meas_report_bandwidth = 10

2018-11-02 20:20:12,486 [ALERT] main.cpp:212, set enable peer verification, tls_verify_peer = 1
2018-11-02 20:20:12,487 [ALERT] main.cpp:217, set cbrsd log level, cbrsd_log_level = debug
2018-11-02 20:20:12,487 [ALERT] main.cpp:223, set enable full spectrum inquiry, inquire_full_spectrum = 1
2018-11-02 20:20:12,487 [ALERT] main.cpp:242, debug options are loaded
2018-11-02 20:20:12,487 [INFO] core.cpp:76, create alarms thread
2018-11-02 20:20:12,487 [INFO] core.cpp:83, create worker threads pool, size 3
2018-11-02 20:20:12,488 [INFO] core.cpp:88, create timer thread
2018-11-02 20:20:12,488 [INFO] core.cpp:93, create tls thread
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:724, CA_PATH, /storage/cbsd/cert/
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:725, CA, sas.ca.pem
2018-11-02 20:20:12,488 [DEBUG] tls.cpp:726, CRT, cbsd.cert.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:727, KEY, cbsd.key.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:728, CRL, sas.crl.pem
2018-11-02 20:20:12,489 [DEBUG] tls.cpp:729, CPI, cpi.key.pem
2018-11-02 20:20:12,489 [INFO] core.cpp:98, create config thread
2018-11-02 20:20:12,489 [INFO] core.cpp:105, initialize alarms thread
2018-11-02 20:20:12,489 [INFO] core.cpp:108, initialize worker threads pool
2018-11-02 20:20:12,490 [INFO] core.cpp:111, initialize timer thread
2018-11-02 20:20:12,490 [INFO] core.cpp:114, initialize tls thread
2018-11-02 20:20:12,500 [INFO] tls.cpp:85, mgmt ip address is 10.101.2.2
2018-11-02 20:20:12,501 [INFO] tls.cpp:748, sas server url, https://10.110.0.101:5000/v1.2
2018-11-02 20:20:12,501 [INFO] core.cpp:117, initialize config thread
2018-11-02 20:20:12,501 [INFO] core.cpp:122, start alarms thread
2018-11-02 20:20:12,501 [INFO] core.cpp:125, start worker threads pool
2018-11-02 20:20:12,501 [INFO] alarms.cpp:71, alarms thread is running, tid 1766
2018-11-02 20:20:12,502 [INFO] core.cpp:128, start timer thread
2018-11-02 20:20:12,502 [INFO] pool.cpp:105, worker thread#2 is running, tid 1769
2018-11-02 20:20:12,502 [INFO] timer.cpp:203, timer thread is running, tid 1770
2018-11-02 20:20:12,502 [INFO] core.cpp:131, start tls thread
2018-11-02 20:20:12,502 [INFO] pool.cpp:105, worker thread#0 is running, tid 1767
2018-11-02 20:20:12,503 [INFO] core.cpp:134, start config thread
2018-11-02 20:20:12,503 [INFO] tls.cpp:800, tls thread is running, tid 1771
2018-11-02 20:20:12,503 [INFO] core.cpp:328, start cbrsd debugging command line
#2018-11-02 20:20:12,503 [INFO] config.cpp:332, config thread is running, tid 1772
2018-11-02 20:20:12,504 [INFO] pool.cpp:105, worker thread#1 is running, tid 1768
2018-11-02 20:20:13,490 [INFO] config.cpp:102, configured cbsds 3, shm_cbsd_num 3
2018-11-02 20:20:13,490 [INFO] config.cpp:125, added cbsds 3, deleted cbsds 0, shared cbsds 0

2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:160, cbsd#0, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#0, on sector#0
2018-11-02 20:20:13,490 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3640000000 ~ 3660000000
2018-11-02 20:20:13,492 [DEBUG] config.cpp:153, cbsd#0, sn enb_sector0 is added
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:160, cbsd#1, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#1, on sector#1
2018-11-02 20:20:13,492 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3590000000 ~ 3610000000
2018-11-02 20:20:13,493 [DEBUG] config.cpp:153, cbsd#1, sn enb_sector1 is added
2018-11-02 20:20:13,493 [DEBUG] shmem.cpp:160, cbsd#2, is enb cbsd, override the eirp capability with 30
2018-11-02 20:20:13,493 [WARN] shmem.cpp:222, cbsd#2, sector#2 is disabled
2018-11-02 20:20:13,494 [DEBUG] config.cpp:153, cbsd#2, sn enb_sector2 is added
2018-11-02 20:20:13,494 [DEBUG] config.cpp:219, cbsd#0, starting ...
2018-11-02 20:20:13,494 [INFO] cbsd.cpp:865, cbsd#0, schedule to start
2018-11-02 20:20:13,494 [INFO] cbsd.cpp:870, cbsd#0, start from current state max
2018-11-02 20:20:13,494 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,494 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-11-02 20:20:13,494 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, max to unregistered
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,495 [DEBUG] config.cpp:219, cbsd#1, starting ...
2018-11-02 20:20:13,495 [INFO] cbsd.cpp:865, cbsd#1, schedule to start
2018-11-02 20:20:13,495 [INFO] cbsd.cpp:870, cbsd#1, start from current state max
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,495 [INFO] state.cpp:52, cbsd#1, grant#-1, switched to unregistered state
2018-11-02 20:20:13,495 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, max to unregistered
2018-11-02 20:20:13,496 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,496 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,496 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration without CPI signed data
2018-11-02 20:20:13,496 [DEBUG] config.cpp:219, cbsd#2, starting ...
2018-11-02 20:20:13,496 [WARN] cbsd.cpp:857, cbsd#2, skip disabled cbsd on sector#2
2018-11-02 20:20:13,497 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ

2018-11-02 20:20:13,497 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","cbsdInfo":{"vendor":"BLiNQ Networks","model":"RevC03","softwareVersion":"Oct 29, 2018 (Rev 1)","hardwareVersion":"SC03004243NALzzzzz","firmwareVersion":"1.2.5_33213"},"airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-11-02 20:20:13,497 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,497 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration without CPI signed data
2018-11-02 20:20:13,498 [INFO] state.cpp:81, cbsd#1, grant#-1, send REG-REQ
2018-11-02 20:20:13,498 [DEBUG] state.cpp:82, cbsd#1, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector1","cbsdCategory":"A","cbsdInfo":{"vendor":"BLiNQ Networks","model":"RevC03","softwareVersion":"Oct 29, 2018 (Rev 1)","hardwareVersion":"SC03004243NALzzzzz","firmwareVersion":"1.2.5_33213"},"airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#1"}]}]}
2018-11-02 20:20:13,498 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:20:13,500 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:20:13,637 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, enb_sector0, error code 0
2018-11-02 20:20:13,638 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,638 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, unregistered to registered
2018-11-02 20:20:13,638 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,639 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,640 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-11-02 20:20:13,640 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}
2018-11-02 20:20:13,641 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:20:13,675 [DEBUG] state.cpp:118, cbsd#1, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector1",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-11-02 20:20:13,675 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, CLR, CRIT, enb_sector1, error code 0
2018-11-02 20:20:13,675 [ERROR] state.cpp:152, cbsd#1, grant#-1, REG-RSP, SUCCESS, code 0
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-11-02 20:20:13,676 [INFO] state.cpp:214, cbsd#1, grant#-1, switched into registered state
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, unregistered to registered
2018-11-02 20:20:13,676 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,677 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:20:13,677 [INFO] state.cpp:232, cbsd#1, grant#-1, send INQ-REQ
2018-11-02 20:20:13,678 [DEBUG] state.cpp:233, cbsd#1, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-

SASenb_sector1","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}
]}
2018-11-02 20:20:13,678 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:20:13,696 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```

2018-11-02 20:20:13,697 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:20:13,697 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:20:13,697 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable
2018-11-02 20:20:13,698 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,698 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:20:13,698 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1
2018-11-02 20:20:13,698 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,698 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable
2018-11-02 20:20:13,698 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100

2018-11-02 20:20:13,698 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:20:13,699 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:20:13,699 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:20:13,699 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:20:13,724 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0
2018-11-02 20:20:13,735 [DEBUG] state.cpp:277, cbsd#1, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector1"
  }
 ]
}
```

2018-11-02 20:20:13,736 [INFO] cbsd.cpp:251, cbsd#1, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:20:13,736 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:20:13,737 [ERROR] cbsd.cpp:2916, cbsd#1, grant#0, channel is unavailable
2018-11-02 20:20:13,737 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,737 [WARN] cbsd.cpp:2932, cbsd#1, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:20:13,737 [WARN] cbsd.cpp:3006, cbsd#1, after re-configuring grants, unavailable grant num 1

2018-11-02 20:20:13,737 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:20:13,737 [ERROR] cbsd.cpp:2283, cbsd#1, at least one requested grant channel is unavailable
2018-11-02 20:20:13,738 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, SET, CRIT, enb_sector1, error code -100
2018-11-02 20:20:13,739 [ERROR] state.cpp:325, cbsd#1, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:20:13,739 [INFO] state.cpp:342, cbsd#1, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:20:13,739 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:20:13,739 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:20:13,771 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#1, grant#-1" CRIT 11001 "enb_sector1, error code -100", rc 0

SAS Test Harness Log

WINNF.FT.D.REG.4_waiver
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.D.REG.4_waiver is starting now
2018-11-02T20:21:14.786208Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:21:14Z: validation passed successfully, the engine sent registration Response
2018-11-02T20:21:14.825744Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:21:14Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
y
n
n

for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n the additional comments for the current test are :

The final result of the test : WINNF.FT.D.REG.4_waiver is - passed

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.5		WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	P (Waiver)

CBSD

2018-11-02 20:10:29,057 [INFO] main.cpp:306, ##############################
2018-11-02 20:10:29,057 [INFO] main.cpp:307, cbrsd is running in foreground
2018-11-02 20:10:29,057 [INFO] main.cpp:308, ##############################
2018-11-02 20:10:29,057 [INFO] shmem.cpp:62, cbrsd version, Oct 29, 2018 (Rev 1)
2018-11-02 20:10:29,057 [INFO] shmem.cpp:63, initialize blinq shared memroy access
2018-11-02 20:10:29,058 [DEBUG] shmem.cpp:111, global shared memory info, board info 0x800000000f06a230, cell info 0x800000000f97af10, radio 0x800000000f97b270, confd 0x800000000f97b270, size 47312
2018-11-02 20:10:29,059 [DEBUG] shmem.cpp:115, cbsd shared memory info, cbsd init 0x800000000f97b380, cbsd common 0x800000000f97b380, cbsds 0x800000000f97b5c0
2018-11-02 20:10:29,059 [INFO] main.cpp:341, starting client ...
2018-11-02 20:10:29,060 [ERROR] main.cpp:347, failed to connect to server
2018-11-02 20:10:29,060 [NOTICE] main.cpp:348, cbrsd is running in debugging mode
2018-11-02 20:10:29,060 [INFO] main.cpp:52, creating PID file for cbrsd, PID 1637
2018-11-02 20:10:29,060 [INFO] main.cpp:78, waiting for radio initialization ...
2018-11-02 20:10:29,060 [INFO] main.cpp:91, radio params are ready
2018-11-02 20:10:29,061 [INFO] main.cpp:111, SAS URL is configured, cbrsd is running in CBSD mode and RF transmission is DISABLED at startup
2018-11-02 20:10:29,061 [INFO] shmem.cpp:2520, cell#0, RF transmission is disabled
2018-11-02 20:10:29,061 [INFO] shmem.cpp:2520, cell#1, RF transmission is disabled
2018-11-02 20:10:29,061 [INFO] shmem.cpp:2520, cell#2, RF transmission is disabled
2018-11-02 20:10:29,061 [ALERT] main.cpp:154, set debug option, use_local_crl = 1
2018-11-02 20:10:29,061 [ALERT] main.cpp:159, set soruce ip address, src_ip_addr = primary
2018-11-02 20:10:29,061 [ALERT] main.cpp:165, set frequency change support, enable_freq_change = 1
2018-11-02 20:10:29,062 [ALERT] main.cpp:171, set cbsd automatic start, enable_auto_start = 1
2018-11-02 20:10:29,062 [ALERT] main.cpp:182, set remote log host, remote_log_host = 10.40.0.157
2018-11-02 20:10:29,062 [ALERT] main.cpp:177, set remote log, enable_remote_log = 0
2018-11-02 20:10:29,062 [ALERT] main.cpp:194, set force multi-step registration, force_multi_step = 0
2018-11-02 20:10:29,062 [ALERT] main.cpp:200, set enable using empty string for no meas caps, empty_meas_caps = 0

2018-11-02 20:10:29,062 [ALERT] main.cpp:206, set meas report bandwidth, meas_report_bandwidth = 10
2018-11-02 20:10:29,062 [ALERT] main.cpp:212, set enable peer verification, tls_verify_peer = 1
2018-11-02 20:10:29,062 [ALERT] main.cpp:217, set cbrsd log level, cbrsd_log_level = debug
2018-11-02 20:10:29,062 [ALERT] main.cpp:223, set enable full spectrum inquiry, inquire_full_spectrum = 1
2018-11-02 20:10:29,063 [ALERT] main.cpp:242, debug options are loaded
2018-11-02 20:10:29,063 [INFO] core.cpp:76, create alarms thread
2018-11-02 20:10:29,063 [INFO] core.cpp:83, create worker threads pool, size 3
2018-11-02 20:10:29,063 [INFO] core.cpp:88, create timer thread
2018-11-02 20:10:29,063 [INFO] core.cpp:93, create tls thread
2018-11-02 20:10:29,063 [DEBUG] tls.cpp:724, CA_PATH, /storage/cbsd/cert/
2018-11-02 20:10:29,063 [DEBUG] tls.cpp:725, CA, sas.ca.pem
2018-11-02 20:10:29,063 [DEBUG] tls.cpp:726, CRT, cbsd.cert.pem
2018-11-02 20:10:29,064 [DEBUG] tls.cpp:727, KEY, cbsd.key.pem
2018-11-02 20:10:29,064 [DEBUG] tls.cpp:728, CRL, sas.crl.pem
2018-11-02 20:10:29,064 [DEBUG] tls.cpp:729, CPI, cpi.key.pem
2018-11-02 20:10:29,064 [INFO] core.cpp:98, create config thread
2018-11-02 20:10:29,064 [INFO] core.cpp:105, initialize alarms thread
2018-11-02 20:10:29,064 [INFO] core.cpp:108, initialize worker threads pool
2018-11-02 20:10:29,064 [INFO] core.cpp:111, initialize timer thread
2018-11-02 20:10:29,064 [INFO] core.cpp:114, initialize tls thread
2018-11-02 20:10:29,075 [INFO] tls.cpp:85, mgmt ip address is 10.101.2.2
2018-11-02 20:10:29,075 [INFO] tls.cpp:748, sas server url, https://10.110.0.101:5000/v1.2
2018-11-02 20:10:29,075 [INFO] core.cpp:117, initialize config thread
2018-11-02 20:10:29,075 [INFO] core.cpp:122, start alarms thread
2018-11-02 20:10:29,075 [INFO] core.cpp:125, start worker threads pool
2018-11-02 20:10:29,076 [INFO] alarms.cpp:71, alarms thread is running, tid 1638
2018-11-02 20:10:29,076 [INFO] core.cpp:128, start timer thread
2018-11-02 20:10:29,076 [INFO] pool.cpp:105, worker thread#1 is running, tid 1640
2018-11-02 20:10:29,076 [INFO] core.cpp:131, start tls thread
2018-11-02 20:10:29,076 [INFO] timer.cpp:203, timer thread is running, tid 1642
2018-11-02 20:10:29,076 [INFO] core.cpp:134, start config thread
2018-11-02 20:10:29,076 [INFO] tls.cpp:800, tls thread is running, tid 1643
2018-11-02 20:10:29,077 [INFO] core.cpp:328, start cbrsd debugging command line
#2018-11-02 20:10:29,077 [INFO] config.cpp:332, config thread is running, tid 1644
2018-11-02 20:10:29,077 [INFO] pool.cpp:105, worker thread#0 is running, tid 1639
2018-11-02 20:10:29,078 [INFO] pool.cpp:105, worker thread#2 is running, tid 1641
2018-11-02 20:10:30,065 [INFO] config.cpp:102, configured cbsds 3, shm_cbsd_num 3

2018-11-02 20:10:30,065 [INFO] config.cpp:125, added cbsds 3, deleted cbsds 0, shared cbsds 0
2018-11-02 20:10:30,065 [DEBUG] shmem.cpp:160, cbsd#0, is enb cbsd, override the eirp capability with 30
2018-11-02 20:10:30,065 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#0, on sector#0
2018-11-02 20:10:30,065 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3640000000 ~ 3660000000
2018-11-02 20:10:30,067 [DEBUG] config.cpp:153, cbsd#0, sn enb_sector0 is added
2018-11-02 20:10:30,067 [DEBUG] shmem.cpp:160, cbsd#1, is enb cbsd, override the eirp capability with 30
2018-11-02 20:10:30,067 [WARN] shmem.cpp:222, cbsd#1, sector#1 is disabled
2018-11-02 20:10:30,068 [DEBUG] config.cpp:153, cbsd#1, sn enb_sector1 is added
2018-11-02 20:10:30,068 [DEBUG] shmem.cpp:160, cbsd#2, is enb cbsd, override the eirp capability with 30
2018-11-02 20:10:30,068 [WARN] shmem.cpp:222, cbsd#2, sector#2 is disabled
2018-11-02 20:10:30,069 [DEBUG] config.cpp:153, cbsd#2, sn enb_sector2 is added
2018-11-02 20:10:30,069 [DEBUG] config.cpp:219, cbsd#0, starting ...
2018-11-02 20:10:30,069 [INFO] cbsd.cpp:865, cbsd#0, schedule to start
2018-11-02 20:10:30,069 [INFO] cbsd.cpp:870, cbsd#0, start from current state max
2018-11-02 20:10:30,069 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:10:30,069 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-11-02 20:10:30,069 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, max to unregistered
2018-11-02 20:10:30,070 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:10:30,070 [DEBUG] config.cpp:219, cbsd#1, starting ...
2018-11-02 20:10:30,070 [WARN] cbsd.cpp:857, cbsd#1, skip disabled cbsd on sector#1
2018-11-02 20:10:30,070 [DEBUG] config.cpp:219, cbsd#2, starting ...
2018-11-02 20:10:30,070 [WARN] cbsd.cpp:857, cbsd#2, skip disabled cbsd on sector#2
2018-11-02 20:10:30,071 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:10:30,071 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration with CPI signed data
2018-11-02 20:10:30,072 [DEBUG] cbsd.cpp:1613, cbsd#0, signing CPI data with RSA key
2018-11-02 20:10:30,073 [DEBUG] cbsd.cpp:1645, cpiSignedData,
{"fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"professionalInstallerData":{"cpiId":"0001","cpiName":"tester","installCertificationTime":"2018-11-02T20:10:30Z"}}
2018-11-02 20:10:30,094 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ

2018-11-02 20:10:30,095 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"cpiSignatureData":{"protectedHeader":"eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9","encodedCpiSignedData":"eyJmY2NJZCI6ImJsaW5xNzdvcGVyYXRpb25zIiwiY2JzZFNlcmlhbE51bWJlciI6ImVuYl9zZWN0b3IwIiwiaW5zdGFsbGF0aW9uUGFyYW0iOnsibGF0aXR1ZGUiOjM1LjE3MiwibG9uZ2l0dWRlIjotODUuNzg2LCJoZWlnaHQiOjYsImhlaWdodFR5cGUiOiJBR0wiLCJob3Jpem9udGFsQWNjdXJhY3kiOjEsInZlcnRpY2FsQWNjdXJhY3kiOjEsImluZG9vckRlcGxveW1lbnQiOmZhbHNlLCJhbnRlbm5hQXppbXV0aCI6MTgwLCJhbnRlbm5hRG93bnRpbHQiOjUsImFudGVubmFHYWluIjoxNSwiZWlycENhcGFiaWxpdHkiOjMwLCJhbnRlbm5hQmVhbXdpZHRoIjoyMH0sInByb2Zlc3Npb25hbEluc3RhbGxlckRhdGEiOnsiY3BpSWQiOiIwMDAxIiwiY3BpTmFtZSI6InRlc3RlciIsImluc3RhbGxDZXJ0aWZpY2F0aW9uVGltZSI6IjIwMTgtMTEtMDJUMjA6MTA6MzBaIn19","digitalSignature":"uXPsmIZq8gSgH5XYSBkMcnC3MDsu2-Dgz7V6km_OJ1HJziepIM3O_KNIfyjlxFRfHyL7AoIvK7TCRMXS9jpD9_In1UWX1P6FKymN8Bd9AIDfZpw_Be018ZReod1EHim6Jq4uZR5w5umxFEuDohd0GMUSKYud_hx2BeTj-YLaNK8kheYDiILewKZ-8hJGxNcjY8nxL6eRmlfswOm4BjMGdnj2qreiYjGcoranUHuBY2XvCrofpH9SZZtTjru6RCshUPQMUuDrSajiYxxDtFvTMf1kUhyB8Vt51lMvmO0a-MjeHC1slg9fJSdzoyH5SwI3APzIlyxEW_nLAPTfKxJLiA=="}]}

2018-11-02 20:10:30,100 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:10:30,259 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-11-02 20:10:30,261 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, enb_sector0, error code 0

2018-11-02 20:10:30,261 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-11-02 20:10:30,262 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max

2018-11-02 20:10:30,262 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state

2018-11-02 20:10:30,262 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, unregistered to registered

2018-11-02 20:10:30,263 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:10:30,264 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:10:30,264 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-11-02 20:10:30,264 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}
2018-11-02 20:10:30,265 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:10:30,319 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3550000000,
      "highFrequency": 3555000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
2018-11-02 20:10:30,320 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:10:30,320 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:10:30,320 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable
2018-11-02 20:10:30,321 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:10:30,321 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:10:30,321 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1
2018-11-02 20:10:30,321 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:10:30,321 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable

2018-11-02 20:10:30,321 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100
2018-11-02 20:10:30,322 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:10:30,323 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:10:30,323 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:10:30,323 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:10:30,353 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0

SAS Test Harness Log

WINNF.FT.C.REG.5_waiver
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.5_waiver is starting now
2018-11-02T20:11:32.096886Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:11:32Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.5_waiver is - passed

Section	DP	Test Case ID	Test Case Title	Pass / Fail
6.1.4.1.6	X	WINNF.FT.D.REG.6	Domain Proxy Single-Step registration for CBSD with CPI signed data	P (Waiver)

CBSD

2018-11-02 20:24:32,695 [INFO] main.cpp:306, ##############################
2018-11-02 20:24:32,695 [INFO] main.cpp:307, cbrsd is running in foreground
2018-11-02 20:24:32,695 [INFO] main.cpp:308, ##############################
2018-11-02 20:24:32,695 [INFO] shmem.cpp:62, cbrsd version, Oct 29, 2018 (Rev 1)
2018-11-02 20:24:32,695 [INFO] shmem.cpp:63, initialize blinq shared memroy access
2018-11-02 20:24:32,696 [DEBUG] shmem.cpp:111, global shared memory info, board info 0x800000000f06a230, cell info 0x800000000f97af10, radio 0x800000000f97b270, confd 0x800000000f97b270, size 47312
2018-11-02 20:24:32,696 [DEBUG] shmem.cpp:115, cbsd shared memory info, cbsd init 0x800000000f97b380, cbsd common 0x800000000f97b380, cbsds 0x800000000f97b5c0
2018-11-02 20:24:32,697 [INFO] main.cpp:341, starting client ...
2018-11-02 20:24:32,698 [ERROR] main.cpp:347, failed to connect to server
2018-11-02 20:24:32,698 [NOTICE] main.cpp:348, cbrsd is running in debugging mode
2018-11-02 20:24:32,698 [INFO] main.cpp:52, creating PID file for cbrsd, PID 1619
2018-11-02 20:24:32,698 [INFO] main.cpp:78, waiting for radio initialization ...
2018-11-02 20:24:32,698 [INFO] main.cpp:91, radio params are ready
2018-11-02 20:24:32,699 [INFO] main.cpp:111, SAS URL is configured, cbrsd is running in CBSD mode and RF transmission is DISABLED at startup
2018-11-02 20:24:32,699 [INFO] shmem.cpp:2520, cell#0, RF transmission is disabled
2018-11-02 20:24:32,699 [INFO] shmem.cpp:2520, cell#1, RF transmission is disabled
2018-11-02 20:24:32,699 [INFO] shmem.cpp:2520, cell#2, RF transmission is disabled
2018-11-02 20:24:32,700 [ALERT] main.cpp:154, set debug option, use_local_crl = 1
2018-11-02 20:24:32,700 [ALERT] main.cpp:159, set soruce ip address, src_ip_addr = primary
2018-11-02 20:24:32,700 [ALERT] main.cpp:165, set frequency change support, enable_freq_change = 1
2018-11-02 20:24:32,700 [ALERT] main.cpp:171, set cbsd automatic start, enable_auto_start = 1
2018-11-02 20:24:32,700 [ALERT] main.cpp:182, set remote log host, remote_log_host = 10.40.0.157
2018-11-02 20:24:32,700 [ALERT] main.cpp:177, set remote log, enable_remote_log = 0
2018-11-02 20:24:32,700 [ALERT] main.cpp:194, set force multi-step registration, force_multi_step = 0

2018-11-02 20:24:32,701 [ALERT] main.cpp:200, set enable using empty string for no meas caps, empty_meas_caps = 0
2018-11-02 20:24:32,701 [ALERT] main.cpp:206, set meas report bandwidth, meas_report_bandwidth = 10
2018-11-02 20:24:32,701 [ALERT] main.cpp:212, set enable peer verification, tls_verify_peer = 1
2018-11-02 20:24:32,701 [ALERT] main.cpp:217, set cbrsd log level, cbrsd_log_level = debug
2018-11-02 20:24:32,701 [ALERT] main.cpp:223, set enable full spectrum inquiry, inquire_full_spectrum = 1
2018-11-02 20:24:32,701 [ALERT] main.cpp:242, debug options are loaded
2018-11-02 20:24:32,701 [INFO] core.cpp:76, create alarms thread
2018-11-02 20:24:32,701 [INFO] core.cpp:83, create worker threads pool, size 3
2018-11-02 20:24:32,702 [INFO] core.cpp:88, create timer thread
2018-11-02 20:24:32,702 [INFO] core.cpp:93, create tls thread
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:724, CA_PATH, /storage/cbsd/cert/
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:725, CA, sas.ca.pem
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:726, CRT, cbsd.cert.pem
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:727, KEY, cbsd.key.pem
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:728, CRL, sas.crl.pem
2018-11-02 20:24:32,702 [DEBUG] tls.cpp:729, CPI, cpi.key.pem
2018-11-02 20:24:32,702 [INFO] core.cpp:98, create config thread
2018-11-02 20:24:32,702 [INFO] core.cpp:105, initialize alarms thread
2018-11-02 20:24:32,703 [INFO] core.cpp:108, initialize worker threads pool
2018-11-02 20:24:32,703 [INFO] core.cpp:111, initialize timer thread
2018-11-02 20:24:32,703 [INFO] core.cpp:114, initialize tls thread
2018-11-02 20:24:32,713 [INFO] tls.cpp:85, mgmt ip address is 10.101.2.2
2018-11-02 20:24:32,714 [INFO] tls.cpp:748, sas server url, https://10.110.0.101:5000/v1.2
2018-11-02 20:24:32,714 [INFO] core.cpp:117, initialize config thread
2018-11-02 20:24:32,714 [INFO] core.cpp:122, start alarms thread
2018-11-02 20:24:32,714 [INFO] core.cpp:125, start worker threads pool
2018-11-02 20:24:32,715 [INFO] alarms.cpp:71, alarms thread is running, tid 1620
2018-11-02 20:24:32,715 [INFO] core.cpp:128, start timer thread
2018-11-02 20:24:32,715 [INFO] pool.cpp:105, worker thread#2 is running, tid 1623
2018-11-02 20:24:32,715 [INFO] core.cpp:131, start tls thread
2018-11-02 20:24:32,715 [INFO] timer.cpp:203, timer thread is running, tid 1624
2018-11-02 20:24:32,715 [INFO] core.cpp:134, start config thread
2018-11-02 20:24:32,715 [INFO] pool.cpp:105, worker thread#0 is running, tid 1621
2018-11-02 20:24:32,716 [INFO] tls.cpp:800, tls thread is running, tid 1625
2018-11-02 20:24:32,715 [INFO] core.cpp:328, start cbrsd debugging command line
#2018-11-02 20:24:32,716 [INFO] config.cpp:332, config thread is running, tid 1626

2018-11-02 20:24:32,717 [INFO] pool.cpp:105, worker thread#1 is running, tid 1622
2018-11-02 20:24:33,703 [INFO] config.cpp:102, configured cbsds 3, shm_cbsd_num 3
2018-11-02 20:24:33,703 [INFO] config.cpp:125, added cbsds 3, deleted cbsds 0, shared cbsds 0
2018-11-02 20:24:33,704 [DEBUG] shmem.cpp:160, cbsd#0, is enb cbsd, override the eirp capability with 30
2018-11-02 20:24:33,704 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#0, on sector#0
2018-11-02 20:24:33,704 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3640000000 ~ 3660000000
2018-11-02 20:24:33,705 [DEBUG] config.cpp:153, cbsd#0, sn enb_sector0 is added
2018-11-02 20:24:33,705 [DEBUG] shmem.cpp:160, cbsd#1, is enb cbsd, override the eirp capability with 30
2018-11-02 20:24:33,705 [DEBUG] shmem.cpp:205, configure 1 grant(s) for cbsd#1, on sector#1
2018-11-02 20:24:33,705 [DEBUG] shmem.cpp:218, add grant#0, max eirp 20, freq 3590000000 ~ 3610000000
2018-11-02 20:24:33,706 [DEBUG] config.cpp:153, cbsd#1, sn enb_sector1 is added
2018-11-02 20:24:33,706 [DEBUG] shmem.cpp:160, cbsd#2, is enb cbsd, override the eirp capability with 30
2018-11-02 20:24:33,707 [WARN] shmem.cpp:222, cbsd#2, sector#2 is disabled
2018-11-02 20:24:33,707 [DEBUG] config.cpp:153, cbsd#2, sn enb_sector2 is added
2018-11-02 20:24:33,707 [DEBUG] config.cpp:219, cbsd#0, starting ...
2018-11-02 20:24:33,707 [INFO] cbsd.cpp:865, cbsd#0, schedule to start
2018-11-02 20:24:33,708 [INFO] cbsd.cpp:870, cbsd#0, start from current state max
2018-11-02 20:24:33,708 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:24:33,708 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-11-02 20:24:33,708 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, max to unregistered
2018-11-02 20:24:33,708 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:24:33,708 [DEBUG] config.cpp:219, cbsd#1, starting ...
2018-11-02 20:24:33,708 [INFO] cbsd.cpp:865, cbsd#1, schedule to start
2018-11-02 20:24:33,709 [INFO] cbsd.cpp:870, cbsd#1, start from current state max
2018-11-02 20:24:33,709 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, max -> unregistered, schedule after 0s, next req max, next rsp max
2018-11-02 20:24:33,709 [INFO] state.cpp:52, cbsd#1, grant#-1, switched to unregistered state
2018-11-02 20:24:33,709 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, max to unregistered
2018-11-02 20:24:33,709 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:24:33,709 [DEBUG] config.cpp:219, cbsd#2, starting ...
2018-11-02 20:24:33,709 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:24:33,709 [WARN] cbsd.cpp:857, cbsd#2, skip disabled cbsd on sector#2

2018-11-02 20:24:33,709 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration with CPI signed data
2018-11-02 20:24:33,710 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max
2018-11-02 20:24:33,711 [DEBUG] cbsd.cpp:1576, generating reg-req for single-step registration with CPI signed data
2018-11-02 20:24:33,711 [DEBUG] cbsd.cpp:1613, cbsd#0, signing CPI data with RSA key
2018-11-02 20:24:33,711 [DEBUG] cbsd.cpp:1613, cbsd#1, signing CPI data with RSA key
2018-11-02 20:24:33,712 [DEBUG] cbsd.cpp:1645, cpiSignedData,
{"fccId":"blinq77operations","cbsdSerialNumber":"enb_sector1","installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"professionalInstallerData":{"cpiId":"0001","cpiName":"tester","installCertificationTime":"2018-11-02T20:24:33Z"}}
2018-11-02 20:24:33,712 [DEBUG] cbsd.cpp:1645, cpiSignedData,
{"fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"professionalInstallerData":{"cpiId":"0001","cpiName":"tester","installCertificationTime":"2018-11-02T20:24:33Z"}}
2018-11-02 20:24:33,732 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-11-02 20:24:33,732 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request,
{"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"cpiSignatureData":{"protectedHeader":"eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9","encodedCpiSignedData":"eyJmY2NJZCI6ImJsaW5xNzdvcGVyYXRpb25zIiwiY2JzZFNlcmlhbE51bWJlciI6ImVuYl9zZWN0b3IwIiwiaW5zdGFsbGF0aW9uUGFyYW0iOnsibGF0aXR1ZGUiOjM1LjE3MiwibG9uZ2l0dWRlIjotODUuNzg2LCJoZWlnaHQiOjYsImhlaWdodFR5cGUiOiJBR0wiLCJob3Jpem9udGFsQWNjdXJhY3kiOjEsInZlcnRpY2FsQWNjdXJhY3kiOjEsImluZG9vckRlcGxveW1lbnQiOmZhbHNlLCJhbnRlbm5hQXppbXV0aCI6MTgwLCJhbnRlbm5hRG93bnRpbHQiOjUsImFudGVubmFHYWluIjoxNSwiZWlycENhcGFiaWxpdHkiOjMwLCJhbnRlbm5hQmVhbXdpZHRoIjoyMH0sInByb2Zlc3Npb25hbEluc3RhbGxlckRhdGEiOnsiY3BpSWQiOiIwMDAxIiwiY3BpTmFtZSI6InRlc3RlciIsImluc3RhbGxDZXJ0aWZpY2F0aW9uVGltZSI6IjIwMTgtMTEtMDJUMjA6MjQ6MzNaIn19","digitalSignature":"zhVQxf3YZGd7_K9rkBLw7Ya2mjjIupX9l1wTNH_x1lbFT8PH0hYVZK0S-0rtsPJcCyFIWOn8fEDHaenpiBJQybPuZewQN7fUpZJkMa5vcG-U7uF9bXVgmxxD31nxUdax3VOX6lXKqTirgVYjWL2TpZDhWXkOTWylV9iyfBTj3vUJ1t7Xfi2Pf7LHVurO-BMAHZfwGxXj7d6CGeDfLUfmGNL3G01Ihy0hTvGdaE5CV0A2RyDIymLKVW0aXhcKOscO2plWT5qb5OJFSMRAsWdHgaoOMuDh3909N2M1btCZnIs9v28Fjjshpd1V5Kks5TFcgWE6vRqLxOd6RHj_af4D0A=="}]}
2018-11-02 20:24:33,734 [DEBUG] tls.cpp:685, no tls crl configured
2018-11-02 20:24:33,735 [INFO] state.cpp:81, cbsd#1, grant#-1, send REG-REQ

2018-11-02 20:24:33,735 [DEBUG] state.cpp:82, cbsd#1, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector1","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"cpiSignatureData":{"protectedHeader":"eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9","encodedCpiSignedData":"eyJmY2NJZCI6ImJsaW5xNzdvcGVyYXRpb25zIiwiY2JzZFNlcmlhbE51bWJlciI6ImVuYl9zZWN0b3IxIiwiaW5zdGFsbGF0aW9uUGFyYW0iOnsibGF0aXR1ZGUiOjM1LjE3MiwibG9uZ2l0dWRlIjotODUuNzg2LCJoZWlnaHQiOjYsImhlaWdodFR5cGUiOiJBR0wiLCJob3Jpem9udGFsQWNjdXJhY3kiOjEsInZlcnRpY2FsQWNjdXJhY3kiOjEsImluZG9vckRlcGxveW1lbnQiOmZhbHNlLCJhbnRlbm5hQXppbXV0aCI6MTgwLCJhbnRlbm5hRG93bnRpbHQiOjUsImFudGVubmFHYWluIjoxNSwiZWlycENhcGFiaWxpdHkiOjMwLCJhbnRlbm5hQmVhbXdpZHRoIjoyMH0sInByb2Zlc3Npb25hbEluc3RhbGxlckRhdGEiOnsiY3BpSWQiOiIwMDAxIiwiY3BpTmFtZSI6InRlc3RlciIsImluc3RhbGxDZXJ0aWZpY2F0aW9uVGltZSI6IjIwMTgtMTEtMDJUMjA6MjQ6MzNaIn19","digitalSignature":"ydcnN-QR2CtoSOQL-q0AKn2bc-dKDn0_hxqukzs6x4Q7mm5hFGPLFZ0JnS-fJWSrk8hH-vFHGtlBFYvWqQk9TrjSfBp545EyKUjJ16wwh__xMrq9ggmB4c-rlg90hazoPpY_qJ4RjkNp75rXnIT3B5niCN5RJLZICMBEpH8I6QPw8-MP9f88NzYHfZ0A2V59H7oqmtby8lIuDqRuJi6nR2WuzP9DeXvvKsvk0KPMbdGRhVD60DqqirViWpGk-QPSLmlre9JMTlTA4iSeq1nQWyw5Rpit2scIvMqvYbMldQKS9TDMV5sxLtS5Y_hz1N-Z_ci4UEZBMNyWhobquPRyyA==""}]}

2018-11-02 20:24:33,736 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:24:33,912 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {


```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-11-02 20:24:33,912 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, enb_sector0, error code 0

2018-11-02 20:24:33,912 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-11-02 20:24:33,913 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max

2018-11-02 20:24:33,913 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state

2018-11-02 20:24:33,913 [DEBUG] cbsd.cpp:1367, cbsd#0, grant#-1, transit, unregistered to registered

2018-11-02 20:24:33,913 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:24:33,914 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:24:33,914 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-11-02 20:24:33,915 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}

2018-11-02 20:24:33,915 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:24:33,921 [DEBUG] state.cpp:118, cbsd#1, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector1",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-11-02 20:24:33,922 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, CLR, CRIT, enb_sector1, error code 0

2018-11-02 20:24:33,922 [ERROR] state.cpp:152, cbsd#1, grant#-1, REG-RSP, SUCCESS, code 0

2018-11-02 20:24:33,922 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max

2018-11-02 20:24:33,922 [INFO] state.cpp:214, cbsd#1, grant#-1, switched into registered state

2018-11-02 20:24:33,922 [DEBUG] cbsd.cpp:1367, cbsd#1, grant#-1, transit, unregistered to registered

2018-11-02 20:24:33,922 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:24:33,923 [DEBUG] timer.cpp:78, cbsd#1, grant#-1, timer req, expire in 0 seconds, for max

2018-11-02 20:24:33,924 [INFO] state.cpp:232, cbsd#1, grant#-1, send INQ-REQ

2018-11-02 20:24:33,924 [DEBUG] state.cpp:233, cbsd#1, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector1","inquiredSpectrum":[{"lowFrequency":3550000000,"highFrequency":3700000000}]}]}

2018-11-02 20:24:33,925 [DEBUG] tls.cpp:685, no tls crl configured

2018-11-02 20:24:33,971 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
```

      {
        "channelType": "GAA",
        "ruleApplied": "FCC_PART_96",
        "frequencyRange": {
          "lowFrequency": 3550000000,
          "highFrequency": 3555000000
        }
      }
    ],
    "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
2018-11-02 20:24:33,972 [INFO] cbsd.cpp:251, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:24:33,972 [INFO] cbsd.cpp:2857, guard channels, x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:24:33,972 [ERROR] cbsd.cpp:2916, cbsd#0, grant#0, channel is unavailable
2018-11-02 20:24:33,972 [INFO] cbsd.cpp:2929, available channels, .|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:24:33,972 [WARN] cbsd.cpp:2932, cbsd#0, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:24:33,973 [WARN] cbsd.cpp:3006, cbsd#0, after re-configuring grants, unavailable grant num 1
2018-11-02 20:24:33,973 [INFO] cbsd.cpp:3008, available channels, .|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:24:33,973 [ERROR] cbsd.cpp:2283, cbsd#0, at least one requested grant channel is unavailable
2018-11-02 20:24:33,973 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, enb_sector0, error code -100
2018-11-02 20:24:33,973 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:24:33,974 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:24:33,974 [DEBUG] cbsd.cpp:1261, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:24:33,974 [DEBUG] cbsd.cpp:1392, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:24:33,986 [DEBUG] state.cpp:277, cbsd#1, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0

      },
      "availableChannel": [
        {
          "channelType": "GAA",
          "ruleApplied": "FCC_PART_96",
          "frequencyRange": {
            "lowFrequency": 3550000000,
            "highFrequency": 3555000000
          }
        }
      ],
      "cbsdId": "blinq77operationsMock-SASenb_sector1"
    }
  ]
}
2018-11-02 20:24:33,987 [INFO] cbsd.cpp:251, cbsd#1, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-11-02 20:24:33,987 [INFO] cbsd.cpp:2857, guard channels,
x|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|x
2018-11-02 20:24:33,987 [ERROR] cbsd.cpp:2916, cbsd#1, grant#0, channel is unavailable
2018-11-02 20:24:33,988 [INFO] cbsd.cpp:2929, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:24:33,988 [WARN] cbsd.cpp:2932, cbsd#1, before re-configuring all grants, unavailable grant num 1
2018-11-02 20:24:33,988 [WARN] cbsd.cpp:3006, cbsd#1, after re-configuring grants, unavailable grant num 1
2018-11-02 20:24:33,988 [INFO] cbsd.cpp:3008, available channels,
.|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x|x
2018-11-02 20:24:33,988 [ERROR] cbsd.cpp:2283, cbsd#1, at least one requested grant channel is unavailable
2018-11-02 20:24:33,988 [DEBUG] cbsd.cpp:1044, post alarm, cbsd#1, grant#-1, sector#1, REG alarm, SET, CRIT, enb_sector1, error code -100
2018-11-02 20:24:33,989 [ERROR] state.cpp:325, cbsd#1, grant#-1, INQ-RSP, RETRY, code -100
2018-11-02 20:24:33,989 [INFO] state.cpp:342, cbsd#1, grant#-1 retry spectrum inquiry after 60s
2018-11-02 20:24:33,989 [DEBUG] cbsd.cpp:1261, cbsd#1, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-11-02 20:24:33,989 [DEBUG] cbsd.cpp:1392, cbsd#1, grant#-1, schedule, cbsd#1, grant#-1, timer req, expire in 60 seconds, for max
2018-11-02 20:24:34,006 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "enb_sector0, error code -100", rc 0

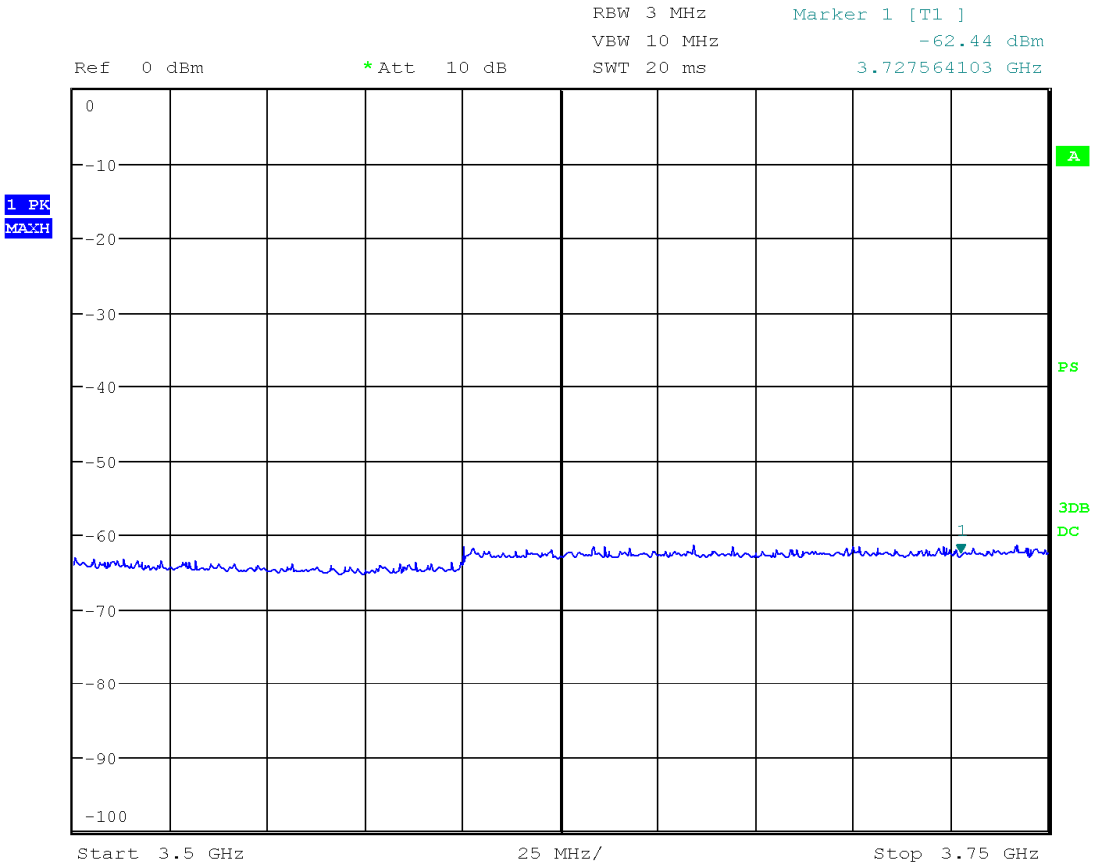
2018-11-02 20:24:34,029 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#1, grant#-1" CRIT 11001 "enb_sector1, error code -100", rc 0

SAS Test Harness Log

WINNF.FT.D.REG.6_waiver
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.D.REG.6_waiver is starting now
2018-11-02T20:25:31.465378Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:25:31.508460Z: CBSD sent registration Request from the address : 10.101.2.2
2018-11-02T20:25:31Z: validation passed successfully, the engine sent registration Response
2018-11-02T20:25:31Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.D.REG.6_waiver is - passed

6.1.4.1.7	X	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	P



Date: 17.JUL.2018 15:53:22

6.1.4.2.1		WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	P

CBSD Log

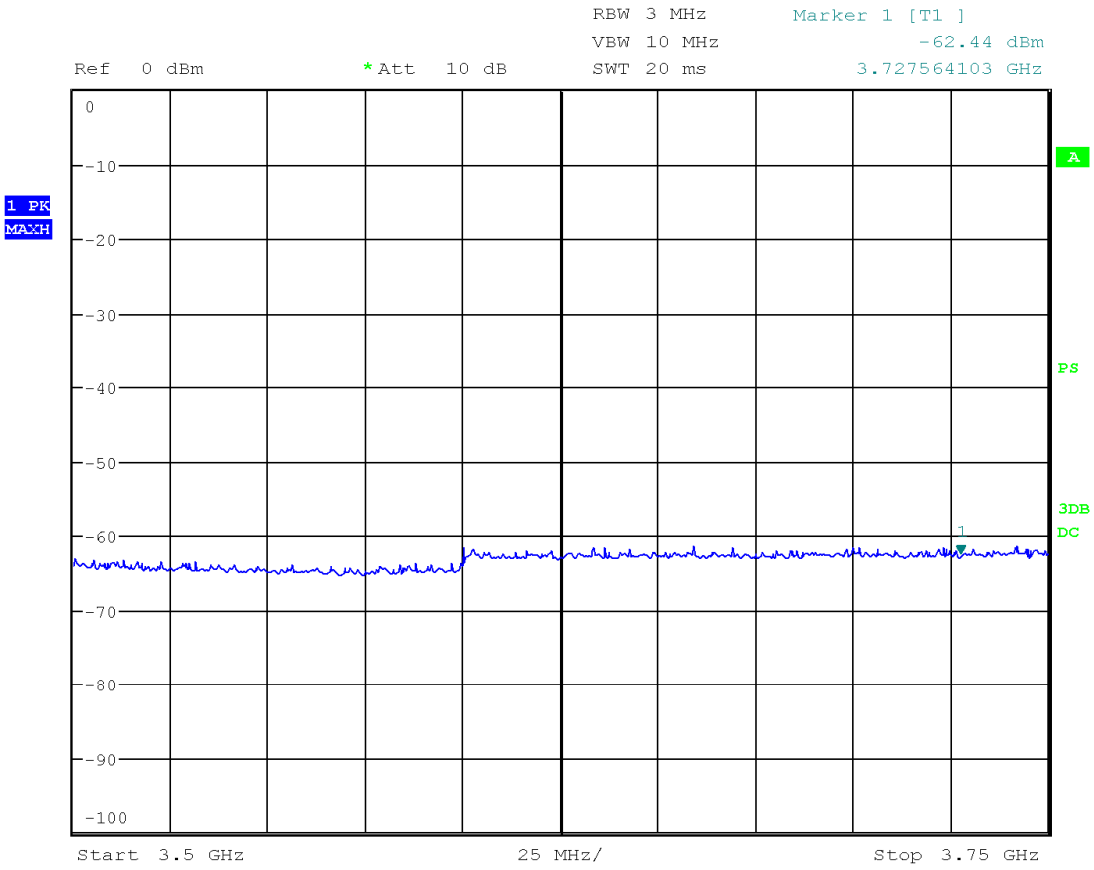
#start 0
2018-07-17 15:09:10,530 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:09:10,530 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:09:10,530 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:09:10,530 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:09:10,530 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:09:10,530 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:09:10,532 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:09:10,532 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:09:10,532 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:09:10,533 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:09:10,573 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 102
   }
  }
 ]
}
2018-07-17 15:09:10,573 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 102,
2018-07-17 15:09:10,573 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, MISSING_PARAM, code 102
2018-07-17 15:09:10,574 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s

2018-07-17 15:09:10,574 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:09:10,575 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:09:10,597 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 102, ", rc 0
2018-07-17 15:09:10,618 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 102, ", rc 0

WINNF.FT.C.REG.8
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.8 is starting now
2018-07-17T15:09:11.245567Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:09:11Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.8 is - passed

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



Date: 17.JUL.2018 15:53:22

6.1.4.2.3		WINNF.FT.C.REG.10	Pending registration (responseCode 200)	P

CBSD log

#start 0
2018-07-17 15:11:15,505 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:11:15,505 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:11:15,505 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:11:15,505 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:11:15,505 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:11:15,505 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:11:15,506 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:11:15,507 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:11:15,507 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:11:15,509 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:11:15,546 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 200
   }
  }
 ]
}
2018-07-17 15:11:15,547 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 200,
2018-07-17 15:11:15,547 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, REG_PENDING, code 200
2018-07-17 15:11:15,547 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s

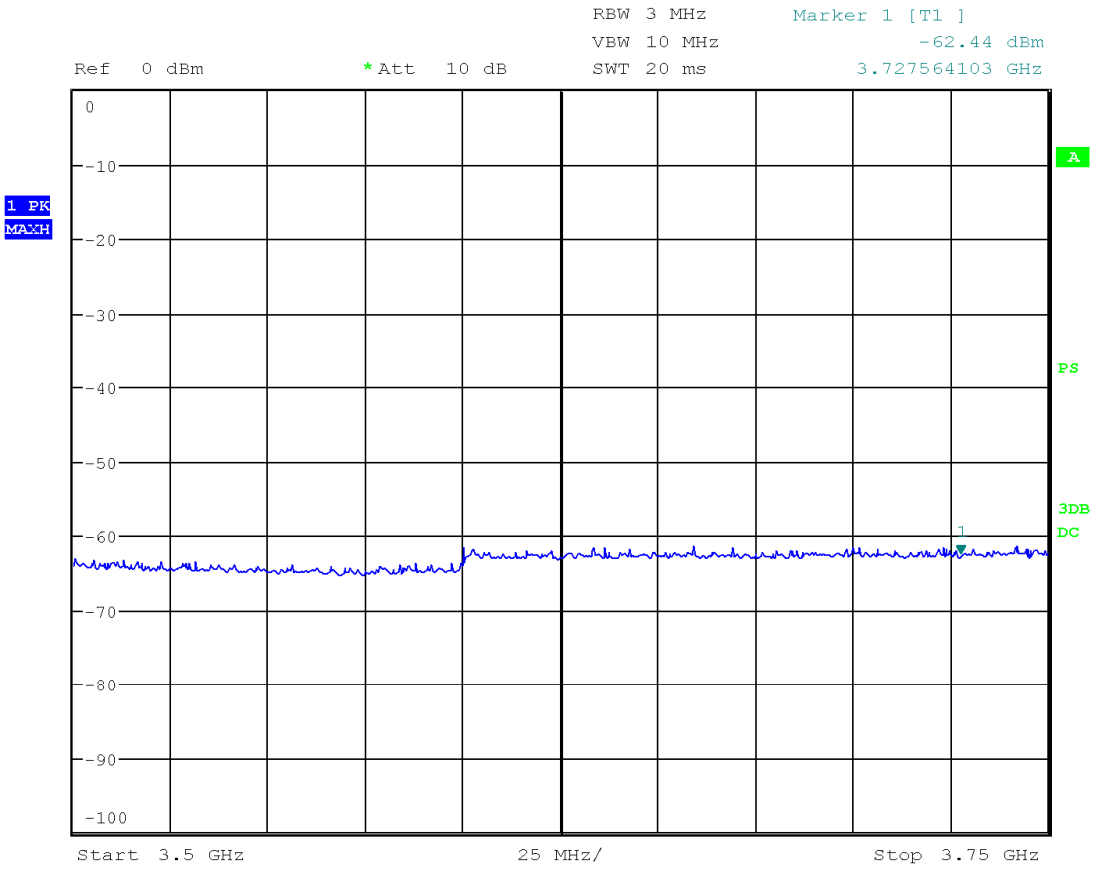
2018-07-17 15:11:15,547 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:11:15,547 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:11:15,570 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 200, ", rc 0
2018-07-17 15:11:15,591 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 200, ", rc 0

SAS Log

WINNF.FT.C.REG.10
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.10 is starting now
2018-07-17T15:11:16.220703Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:11:16Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.10 is - passed

6.1.4.2.4	X	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	P



Date: 17.JUL.2018 15:53:22

6.1.4.2.5		WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	P

CBSD Log

#start 0
2018-07-17 15:13:35,612 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:13:35,612 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:13:35,613 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:13:35,613 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:13:35,613 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:13:35,613 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:13:35,614 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:13:35,615 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:13:35,615 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:13:35,616 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:13:35,656 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 103
   }
  }
 ]
}
2018-07-17 15:13:35,657 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 103,
2018-07-17 15:13:35,657 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, INVALID_VALUE, code 103
2018-07-17 15:13:35,657 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s

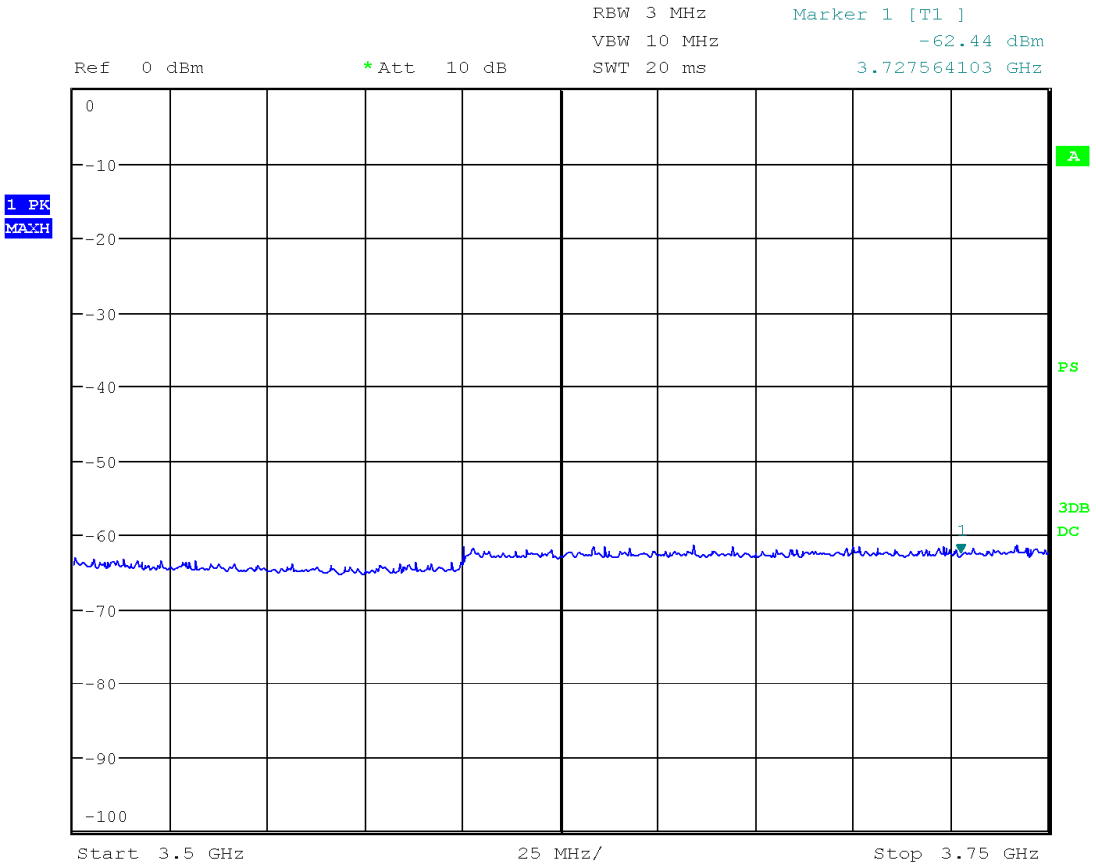
2018-07-17 15:13:35,657 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:13:35,657 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:13:35,680 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 103, ", rc 0
2018-07-17 15:13:35,702 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 103, ", rc 0

SAS Log

WINNF.FT.C.REG.12
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.12 is starting now
2018-07-17T15:13:36.327752Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:13:36Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.12 is - passed

6.1.4.2.6	X	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	P



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6.1.4.2.7		WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	P

CBSD

#start 0
2018-07-17 15:15:56,839 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:15:56,839 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:15:56,839 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:15:56,840 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:15:56,841 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:15:56,841 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:15:56,842 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:15:56,880 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 101
   }
  }
 ]
}
2018-07-17 15:15:56,881 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 101,
2018-07-17 15:15:56,881 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, BLACKLISTED, code 101
2018-07-17 15:15:56,882 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s

2018-07-17 15:15:56,882 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:15:56,882 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:15:56,915 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 101, ", rc 0
2018-07-17 15:15:56,937 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 101, ", rc 0

SAS

WINNF.FT.C.REG.14
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.14 is starting now
2018-07-17T15:15:57.553606Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:15:57Z: validation passed successfully, the engine sent registration Response arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.14 is - passed
CBSD

#start 0
2018-07-17 15:15:56,839 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:15:56,839 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:15:56,839 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered

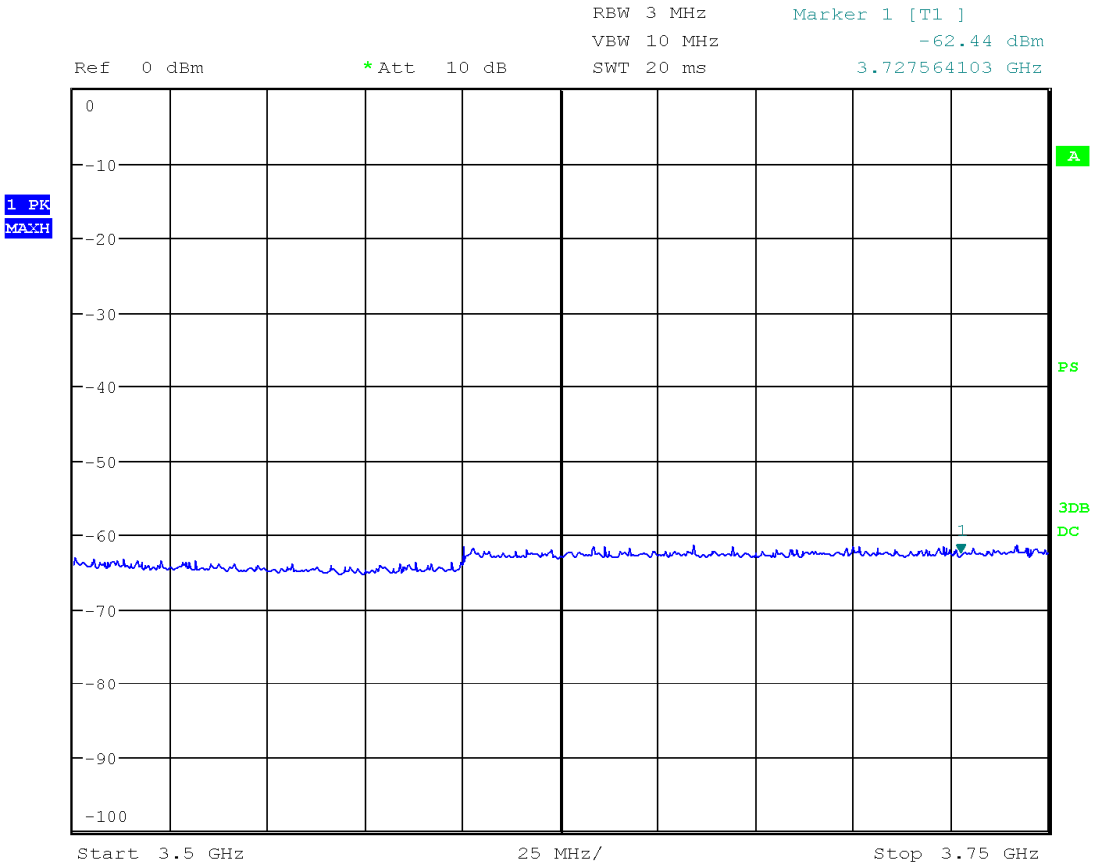
2018-07-17 15:15:56,839 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:15:56,840 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:15:56,841 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:15:56,841 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:15:56,842 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:15:56,880 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 101
   }
  }
 ]
}
2018-07-17 15:15:56,881 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 101,
2018-07-17 15:15:56,881 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, BLACKLISTED, code 101
2018-07-17 15:15:56,882 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s
2018-07-17 15:15:56,882 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:15:56,882 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:15:56,915 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 101, ", rc 0
2018-07-17 15:15:56,937 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 101, ", rc 0

SAS

WINNF.FT.C.REG.14
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.14 is starting now
2018-07-17T15:15:57.553606Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:15:57Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.14 is - passed

6.1.4.2.8	X	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	P



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6.1.4.2.9		WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	P

CBSD

#start 0
2018-07-17 15:17:28,286 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:17:28,286 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:17:28,286 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:17:28,287 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:17:28,287 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:17:28,287 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:17:28,288 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:17:28,289 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:17:28,289 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:17:28,290 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:17:28,329 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 100
   }
  }
 ]
}
2018-07-17 15:17:28,329 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 100,
2018-07-17 15:17:28,329 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, VERSION, code 100
2018-07-17 15:17:28,329 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s

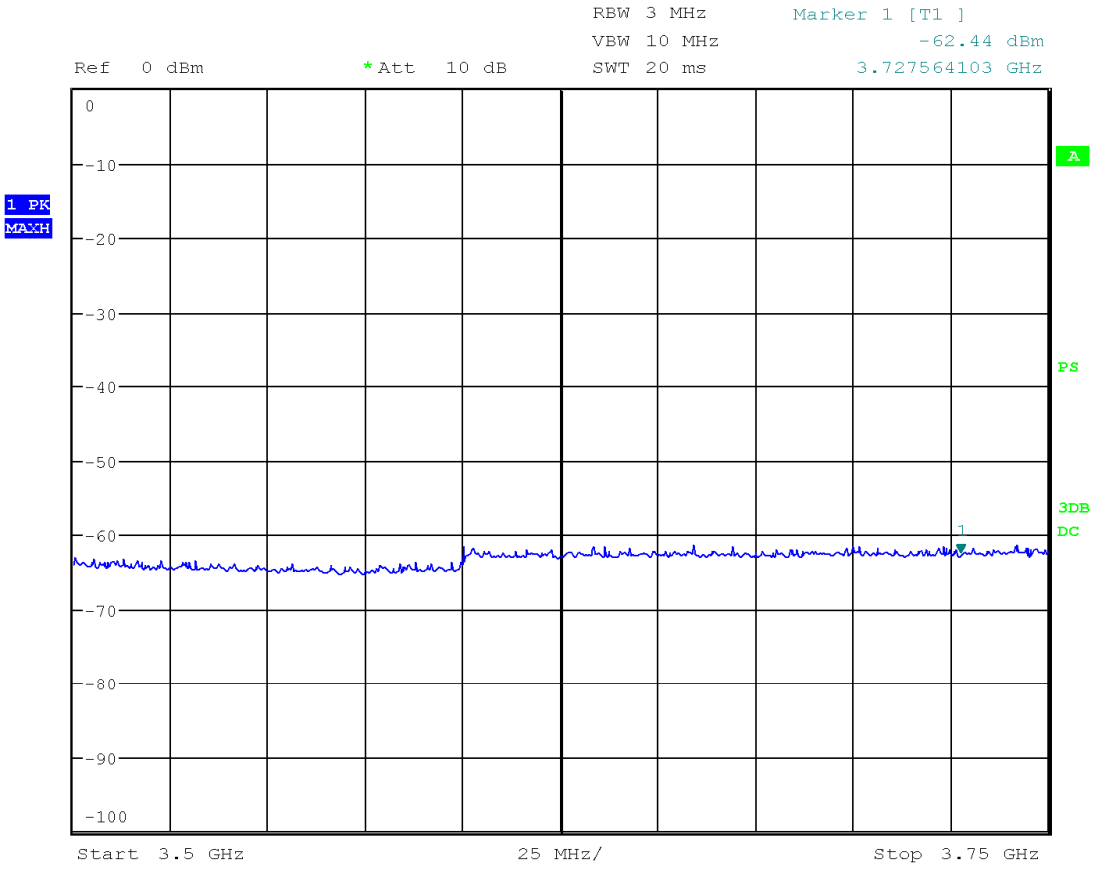
2018-07-17 15:17:28,329 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:17:28,330 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:17:28,352 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 100, ", rc 0
2018-07-17 15:17:28,374 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 100, ", rc 0

SAS log

WINNF.FT.C.REG.16
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.16 is starting now
2018-07-17T15:17:29.001268Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:17:29Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.16 is - passed

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



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6.1.4.2.11		WINNF.FT.C.REG.18	Group Error (responseCode 201)	P

CBSD

#start 0
2018-07-17 15:19:26,741 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 15:19:26,741 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 15:19:26,741 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 15:19:26,741 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 15:19:26,741 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 15:19:26,741 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
#2018-07-17 15:19:26,743 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 15:19:26,743 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 15:19:26,743 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 15:19:26,745 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 15:19:26,781 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "response": {
    "responseCode": 201
   }
  }
 ]
}
2018-07-17 15:19:26,782 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code 201,
2018-07-17 15:19:26,782 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, GROUP_ERROR, code 201

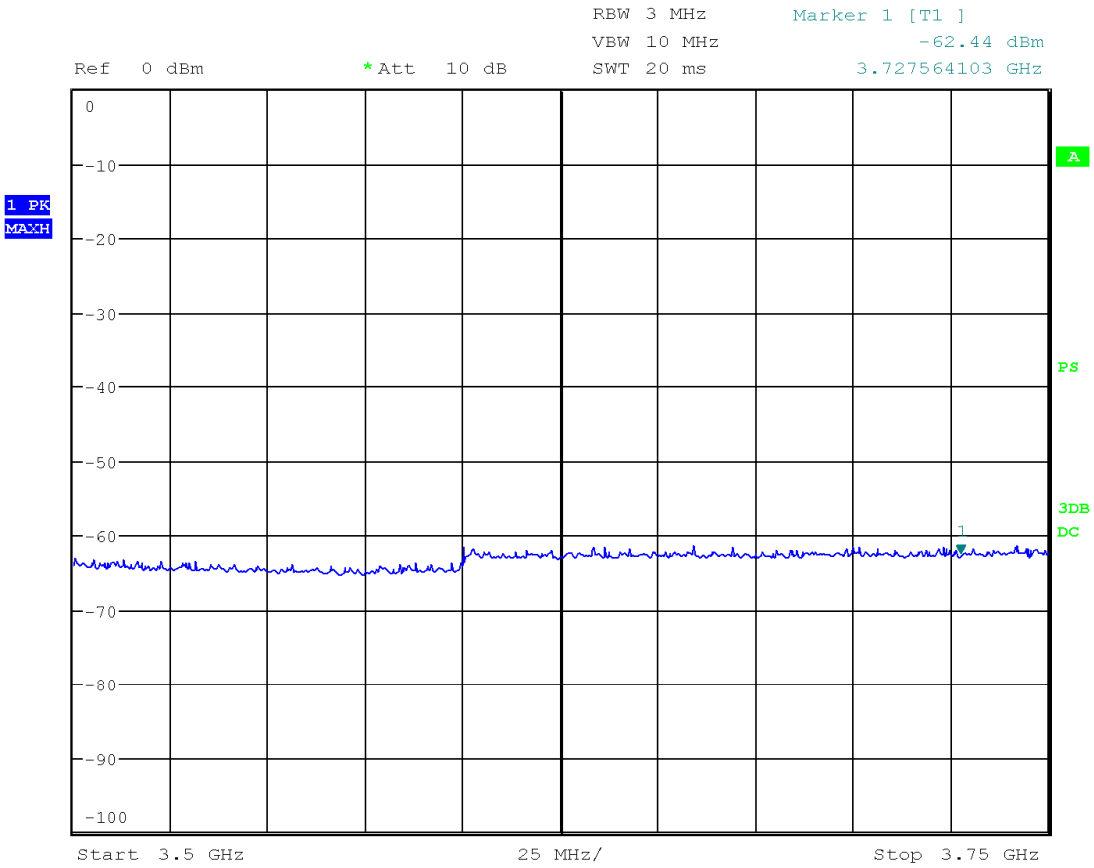
2018-07-17 15:19:26,782 [INFO] state.cpp:173, cbsd#0, grant#-1 retry registration after 60s
2018-07-17 15:19:26,782 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 15:19:26,783 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 15:19:26,804 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 201, ", rc 0
2018-07-17 15:19:26,826 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code 201, ", rc 0

SAS

WINNF.FT.C.REG.18
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.REG.18 is starting now
2018-07-17T15:19:27.455569Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T15:19:27Z: validation passed successfully, the engine sent registration Response
arrived to nstep starting question answer session with the technician
the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
y
n
n
for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.REG.18 is - passed

6.1.4.2.12	X	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	P



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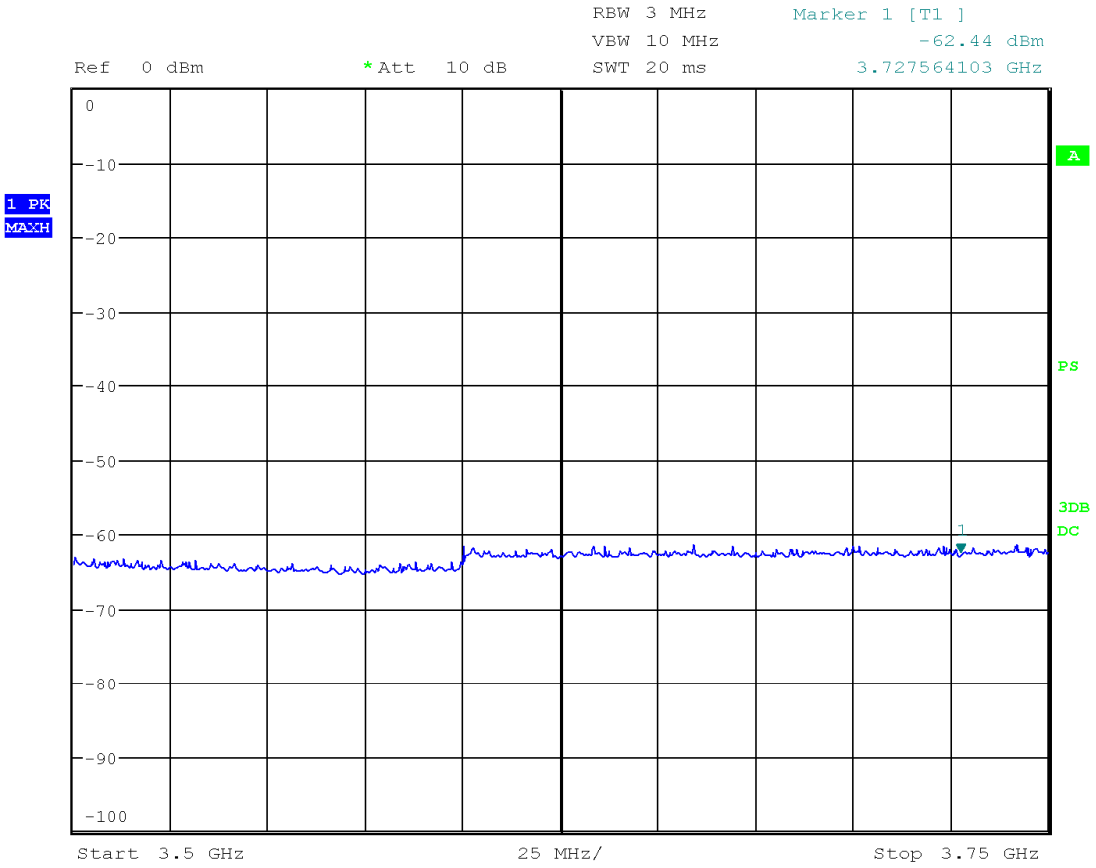
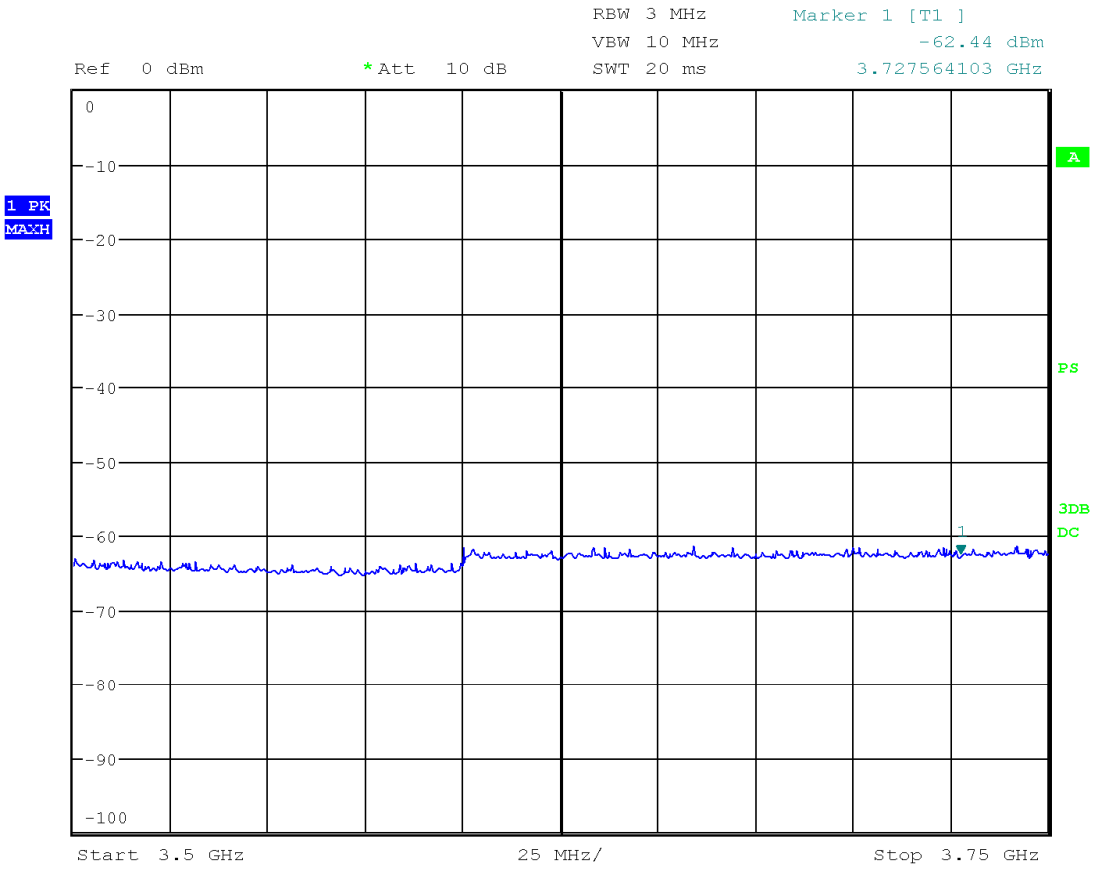
Check the device registration and authorization with the SAS, Confirm that the device changes its operating power and/or channel in response to a command from the SAS and Confirm that the device correctly configures based on the different license classes.

6.3.4.2.1	WINNF.FT.C.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE)	Monitor for 60 seconds after REG message sent. No transmission during test.	P



Date: 17.JUL.2018 15:53:22

6.3.4.2.2	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	Monitor for 60 seconds after REG message sent. No transmission during test.	P



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6.4.4.1.1	WINNF.FT.C.HBT.1	Heartbeat Success Case (first Heartbeat Response)	Monitor RF from start of test. Ensure that: • Transmission does not start until time of first heartbeat response or after. • After transmission starts, measure that transmission is within the granted channel (frequencyLow, frequencyHigh)

Test log

CBSD

2018-07-25 19:47:55,584 [DEBUG] config.cpp:215, cbsd#0, starting ...
2018-07-25 19:47:55,584 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-25 19:47:55,584 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-25 19:47:55,585 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-25 19:47:55,585 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-25 19:47:55,585 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-25 19:47:55,585 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-25 19:47:55,585 [DEBUG] config.cpp:215, cbsd#1, starting ...
2018-07-25 19:47:55,585 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-25 19:47:55,585 [DEBUG] config.cpp:215, cbsd#2, starting ...
2018-07-25 19:47:55,585 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
2018-07-25 19:47:55,586 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-25 19:47:55,587 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-25 19:47:55,587 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"B","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":20,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":47,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-25 19:47:55,588 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:47:55,707 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
"registrationResponse": [

```
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-25 19:47:55,708 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,

2018-07-25 19:47:55,708 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-07-25 19:47:55,709 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max

2018-07-25 19:47:55,709 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state

2018-07-25 19:47:55,709 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered

2018-07-25 19:47:55,709 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-25 19:47:55,710 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-25 19:47:55,710 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-07-25 19:47:55,710 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3595000000,"highFrequency":3605000000}]}]}

2018-07-25 19:47:55,711 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-25 19:47:55,727 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "SAS" CRIT 11001 "No error, https://20.0.0.1:5000/v1.2/registration", rc 0

2018-07-25 19:47:55,757 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "availableChannel": [
    {
     "maxEirp": 37,
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3595000000,
      "highFrequency": 3605000000
```

```
      }
     }
    ],
    "cbsdId": "blinq77operationsMock-SASenb_sector0",
    "response": {
     "responseCode": 0
    }
   }
 ]
}
```


2018-07-25 19:47:55,757 [INFO] cbsd.cpp:238, cbsd#0, available chnl#9, 3595 MHz, GAA, FCC_PART_96, 37 dBm
2018-07-25 19:47:55,757 [INFO] cbsd.cpp:238, cbsd#0, available chnl#10, 3600 MHz, GAA, FCC_PART_96, 37 dBm
2018-07-25 19:47:55,758 [WARN] cbsd.cpp:2707, cbsd#0, grant#0, configured max eirp is as same as the returned 37
2018-07-25 19:47:55,758 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-25 19:47:55,758 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-25 19:47:55,758 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0
2018-07-25 19:47:55,758 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle, schedule after 0s, next req max, next rsp max
2018-07-25 19:47:55,758 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-25 19:47:55,758 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-25 19:47:55,758 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-25 19:47:55,760 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-25 19:47:55,760 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-25 19:47:55,760 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":37,"operationFrequencyRange":{"lowFrequency":3595000000,"highFrequency":3605000000}}}]}
2018-07-25 19:47:55,761 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:47:55,807 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {


```
 "grantResponse": [
  {
   "channelType": "GAA",
   "grantExpireTime": "2018-08-01T19:48:12Z",
   "heartbeatInterval": 60,
```

```
    "grantId": "847889540",
    "cbsdId": "blinq77operationsMock-SASenb_sector0",
    "response": {
     "responseCode": 0
    }
   }
 ]
}
```


2018-07-25 19:47:55,807 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-25 19:47:55,807 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0

2018-07-25 19:47:55,808 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max

2018-07-25 19:47:55,808 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state

2018-07-25 19:47:55,808 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted

2018-07-25 19:47:55,808 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-25 19:47:55,809 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-25 19:47:55,809 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)

2018-07-25 19:47:55,810 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"847889540","operationState":"GRANTED"}]}

2018-07-25 19:47:55,810 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-25 19:47:55,857 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "transmitExpireTime": "2018-07-25T19:51:32Z",
   "grantId": "847889540",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-25 19:47:55,858 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-25 19:47:55,858 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0

2018-07-25 19:47:55,858 [INFO] cbsd.cpp:978, cbsd#0, ===== RF max EIRP is set to 37dBm/MHz =====
2018-07-25 19:47:55,858 [INFO] shmem.cpp:2281, cell#0, RF max EIRP is set to 37
2018-07-25 19:47:55,858 [INFO] cbsd.cpp:999, cbsd#0, ===== RF frequency is set to 3600MHz =====
2018-07-25 19:47:55,859 [INFO] shmem.cpp:2300, cell#0, RF frequency is set to 3600
2018-07-25 19:47:55,859 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====
2018-07-25 19:47:55,859 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled
2018-07-25 19:47:55,859 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max
2018-07-25 19:47:55,859 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state
2018-07-25 19:47:55,859 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized
2018-07-25 19:47:55,859 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-25 19:48:55,860 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-25 19:48:55,861 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-25 19:48:55,861 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"847889540","operationState":"AUTHORIZED"}]}
2018-07-25 19:48:55,861 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:48:55,870 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "transmitExpireTime": "2018-07-25T19:52:32Z",
   "grantId": "847889540",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-25 19:48:55,871 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-25 19:48:55,871 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-25 19:48:55,871 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-25 19:48:55,871 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-25 19:49:55,872 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-25 19:49:55,872 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-25 19:49:55,873 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"847889540","operationState":"AUTHORIZED"}]}
2018-07-25 19:49:55,873 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:49:55,883 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "transmitExpireTime": "2018-07-25T19:53:32Z",
   "grantId": "847889540",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-25 19:49:55,883 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-25 19:49:55,884 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-25 19:49:55,884 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-25 19:49:55,884 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-25 19:50:55,885 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-25 19:50:55,886 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-25 19:50:55,886 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"847889540","operationState":"AUTHORIZED"}]}
2018-07-25 19:50:55,887 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:50:55,898 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "transmitExpireTime": "2018-07-25T19:54:32Z",
   "grantId": "847889540",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }

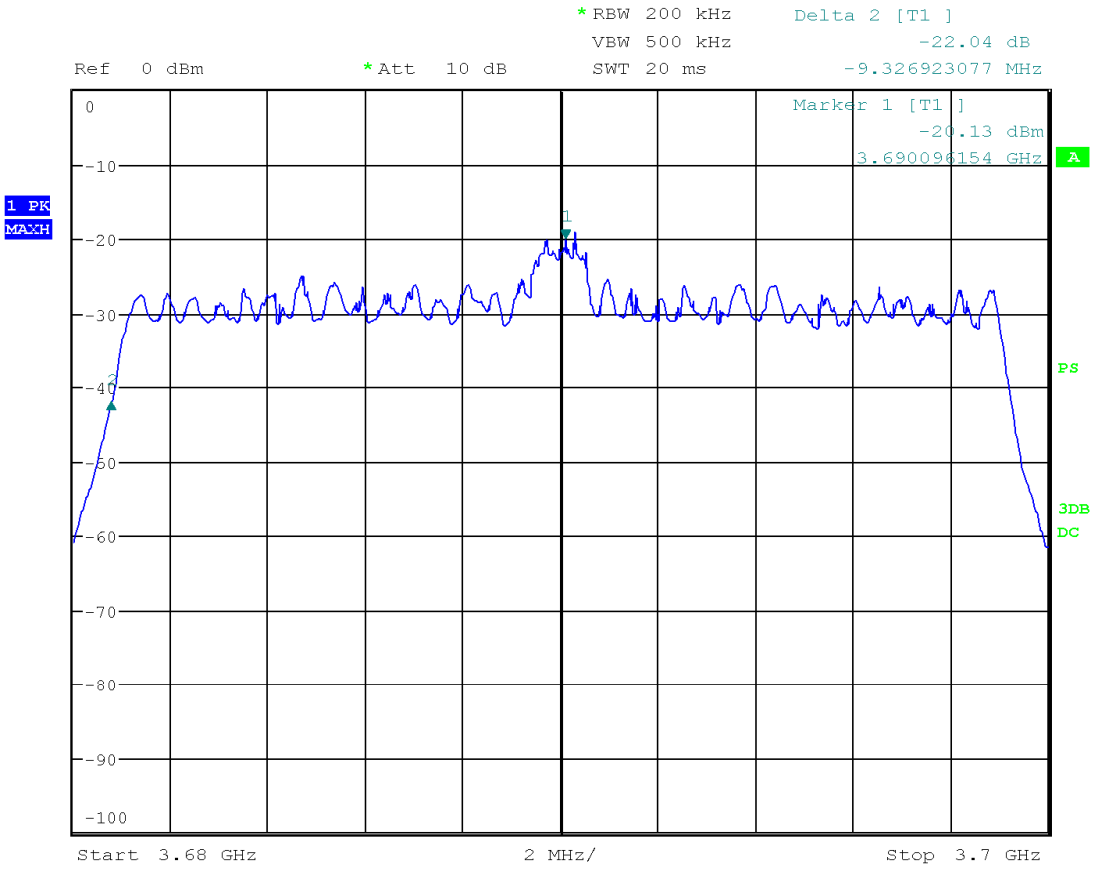
```
   }
  ]
}
2018-07-25 19:50:55,899 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT
alarm, CLR, CRIT, Got error response, code 0,
2018-07-25 19:50:55,899 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-25 19:50:55,899 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max,
schedule after 60s, next req max, next rsp max
2018-07-25 19:50:55,899 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer
req, expire in 60 seconds, for max
2018-07-25 19:51:55,900 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for
max
2018-07-25 19:51:55,901 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-25 19:51:55,901 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request,
{"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-
SASenb_sector0","grantId":"847889540","operationState":"AUTHORIZED"}]}
2018-07-25 19:51:55,902 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-25 19:51:55,911 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
  "heartbeatResponse": [
   {
```

SAS

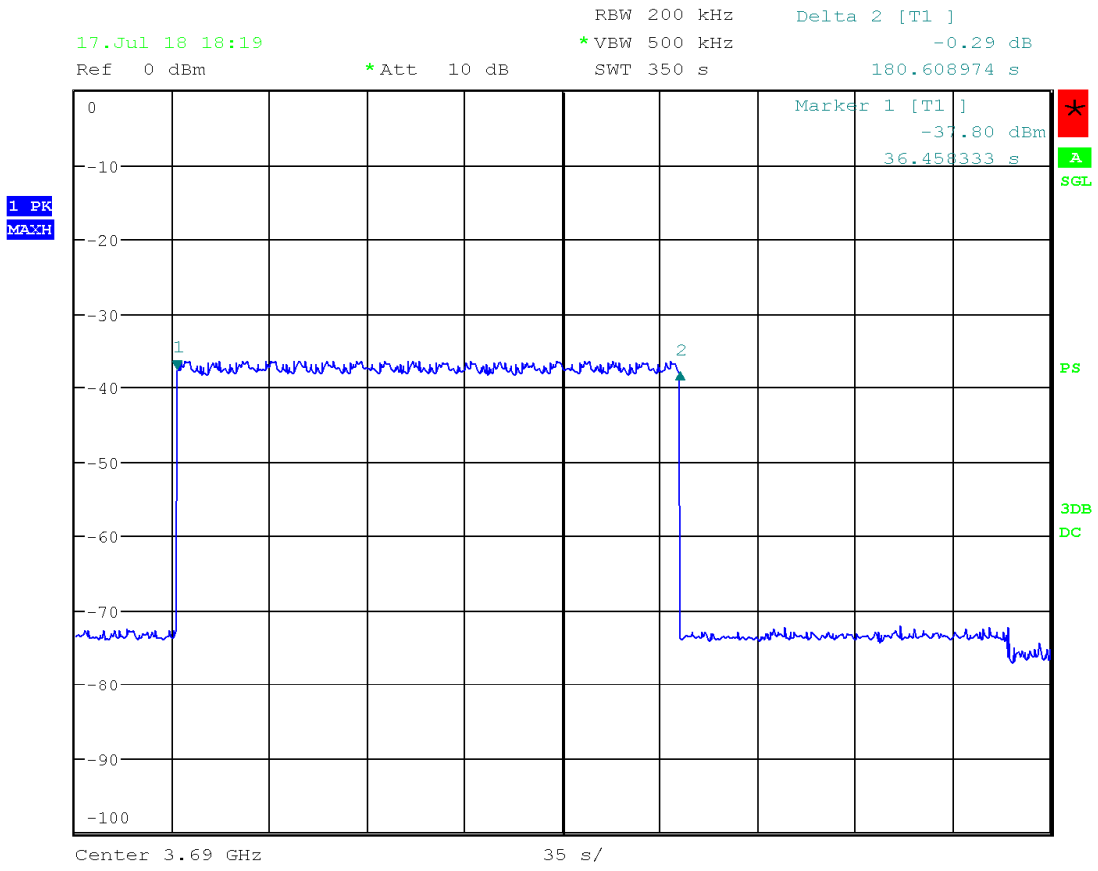
```
blinq@quortus11:~/winnf/cbrsPython-master/cbrsPython$ python controllers/StartPowerMeas.py
please input the start frequency of Cbrs spectrum to be granted (with unit of Mhz): 3685
The selected start frequency is 3685MHz.
please input the bandwidth of Cbrs spectrum to be granted (with unit of Mhz): 10
Select spectrum frequency is {'lowFrequency': 3685000000, 'highFrequency': 3695000000}
The selection of spectrum configuration is done
please input the MaxEirp of Cbrs spectrum to be granted (with unit of dBm/MHz): 37
The selected maxEirp is 37dBm/MHz.
To stop the test session please enter "stop", to get approved spectrum information type "get".
To stop the test session please enter "stop", to get approved spectrum information type "get".
WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
Selected spectrum frequency is {'lowFrequency': 3685000000, 'highFrequency': 3695000000}
Granted Spectrum Max Eirp = 37dBm/MHz
The Mock-SAS has been started please enabling CBSD for the power measurement test, the Mock-SAS
will keep running during the test
the selected test from the user : PowerMeasTest is starting now
```

2018-07-25T21:17:07.152385Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-25T21:17:07Z: validation passed successfully, the engine sent registration Response
2018-07-25T21:17:07.229215Z: CBSD sent spectrumInquiry Request from the address : 192.168.26.100
The requested spectrum is in the range, SpectrumInquiry response code is 0
2018-07-25T21:17:07Z: validation passed successfully, the engine sent spectrumInquiry Response
2018-07-25T21:17:07.283534Z: CBSD sent grant Request from the address : 192.168.26.100
2018-07-25T21:17:07Z: validation passed successfully, the engine sent grant Response
2018-07-25T21:17:07.324582Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:17:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:18:07.374851Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:18:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:19:07.388134Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:19:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:20:07.402750Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:20:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:21:07.416559Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:21:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:22:07.430190Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:22:07Z: validation passed successfully, the engine sent heartbeat Response
2018-07-25T21:23:07.444433Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-25T21:23:07Z: validation passed successfully, the engine sent heartbeat Response

6.4.4.1.2	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	Monitor RF from start of test. Ensure that: • Transmission does not start until time of first heartbeat response or after. • After transmission starts, measure that transmission is within the granted channel (frequencyLow, frequencyHigh)	P

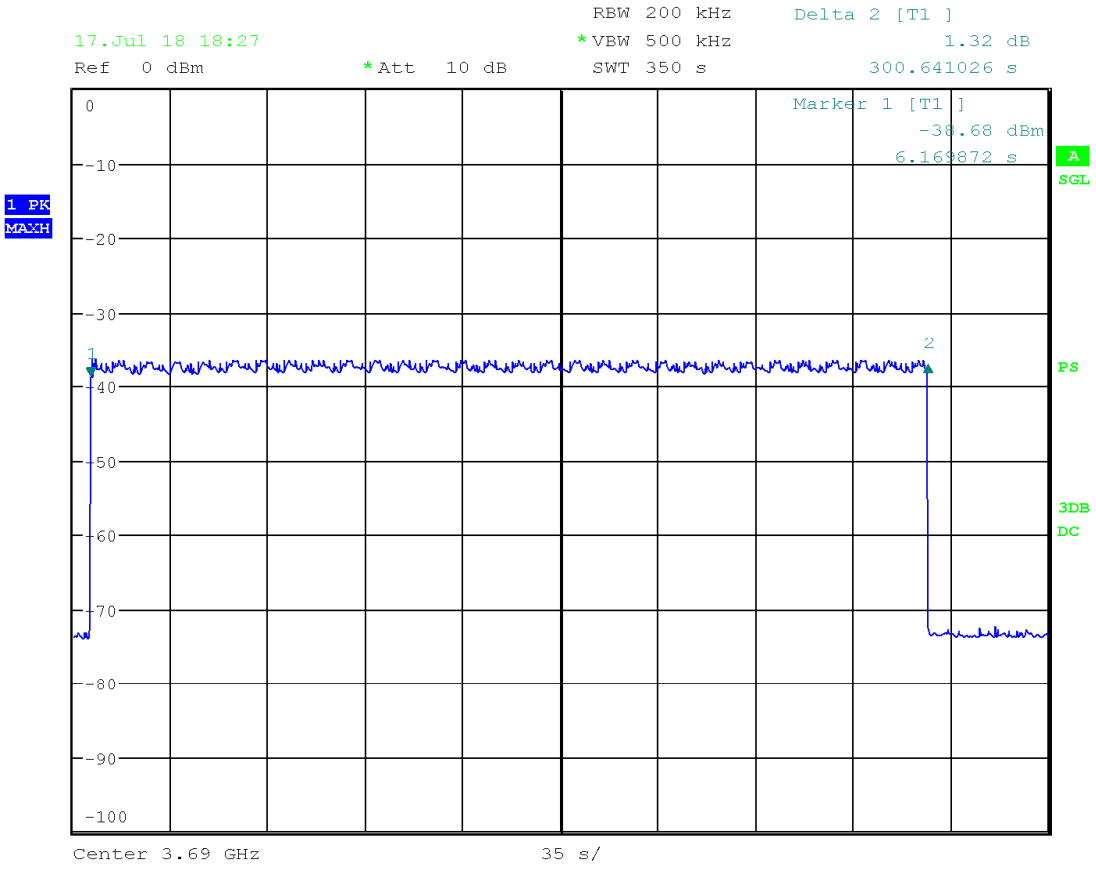


6.4.4.2.1	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	Monitor RF transmission. Ensure that: • CBSD stops transmission within 60 seconds of the heartbeatResponse which contains responseCode = 105	P



Date: 17.JUL.2018 18:19:28

6.4.4.2.2	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	Monitor RF transmission from start of test. Ensure that transmission turns off.	P



Date: 17.JUL.2018 18:27:27

CBSD

#start

2018-07-17 21:14:06,627 [INFO] cbsd.cpp:782, cbsd#0, schedule to start

2018-07-17 21:14:06,627 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered

2018-07-17 21:14:06,627 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max

2018-07-17 21:14:06,627 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state

2018-07-17 21:14:06,627 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 21:14:06,627 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,627 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 21:14:06,627 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 21:14:06,628 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,629 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 21:14:06,629 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 21:14:06,631 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:14:06,679 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:14:06,680 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:14:06,680 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-07-17 21:14:06,680 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 21:14:06,680 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 21:14:06,680 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 21:14:06,680 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,681 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,682 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-07-17 21:14:06,682 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}

2018-07-17 21:14:06,682 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:14:06,730 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3680000000,
      "highFrequency": 3700000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:14:06,730 [INFO] cbsd.cpp:238, cbsd#0, available chnl#26, 3680 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel

2018-07-17 21:14:06,730 [INFO] cbsd.cpp:238, cbsd#0, available chnl#27, 3685 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel

2018-07-17 21:14:06,731 [INFO] cbsd.cpp:238, cbsd#0, available chnl#28, 3690 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel

2018-07-17 21:14:06,731 [INFO] cbsd.cpp:238, cbsd#0, available chnl#29, 3695 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel

2018-07-17 21:14:06,731 [INFO] cbsd.cpp:2697, cbsd#0, grant#0, keep using configured max eirp 20

2018-07-17 21:14:06,731 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency

2018-07-17 21:14:06,731 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:14:06,731 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0

2018-07-17 21:14:06,731 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle, schedule after 0s, next req max, next rsp max

2018-07-17 21:14:06,732 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:14:06,732 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-17 21:14:06,732 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,733 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,733 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 21:14:06,733 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 21:14:06,734 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:14:06,780 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {

```
 "grantResponse": [
  {
   "grantExpireTime": "2018-07-24T21:14:06Z",
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   },
   "channelType": "GAA",
   "heartbeatInterval": 60
  }
 ]
}
```

2018-07-17 21:14:06,780 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:14:06,780 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0
2018-07-17 21:14:06,781 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max
2018-07-17 21:14:06,781 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state
2018-07-17 21:14:06,781 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted
2018-07-17 21:14:06,781 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,782 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:14:06,783 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)

2018-07-17 21:14:06,783 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"894960763","operationState":"GRANTED"}]}

2018-07-17 21:14:06,783 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:14:06,830 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:17:26Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:14:06,830 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:14:06,830 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0

2018-07-17 21:14:06,831 [WARN] cbsd.cpp:982, cbsd#0, RF max EIRP is unchanged, 20dBm/MHz

2018-07-17 21:14:06,831 [WARN] cbsd.cpp:1003, cbsd#0, RF frequency is unchanged, 3690MHz

2018-07-17 21:14:06,831 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====

2018-07-17 21:14:06,831 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled

2018-07-17 21:14:06,831 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max

2018-07-17 21:14:06,831 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state

2018-07-17 21:14:06,832 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized

2018-07-17 21:14:06,832 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

2018-07-17 21:15:06,833 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:15:06,833 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request

2018-07-17 21:15:06,833 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"894960763","operationState":"AUTHORIZED"}]}

2018-07-17 21:15:06,834 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:15:06,843 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
```

```
  {
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:18:26Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:15:06,843 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:15:06,843 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0

2018-07-17 21:15:06,843 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max

2018-07-17 21:15:06,843 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

2018-07-17 21:16:06,844 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:16:06,845 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request

2018-07-17 21:16:06,845 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"894960763","operationState":"AUTHORIZED"}]}

2018-07-17 21:16:06,846 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:16:06,855 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:19:26Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:16:06,855 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:16:06,856 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:16:06,856 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:16:06,856 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:17:06,857 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:17:06,857 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:17:06,857 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"894960763","operationState":"AUTHORIZED"}]}
2018-07-17 21:17:06,858 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:17:06,867 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:17:06Z",
   "response": {
    "responseCode": 105
   }
  }
 ]
}
```


2018-07-17 21:17:06,868 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 105,
2018-07-17 21:17:06,868 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, DEREGISTER, code 105
2018-07-17 21:17:06,868 [DEBUG] cbsd.cpp:1048, cbsd#0, is stopping right after received response
2018-07-17 21:17:06,868 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 0s, next req deregistration, next rsp max
2018-07-17 21:17:06,868 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for deregistration
2018-07-17 21:17:06,873 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for deregistration
2018-07-17 21:17:06,874 [WARN] state.cpp:1092, cbsd#0, grant#0, relinquish grant before deregistration
2018-07-17 21:17:06,874 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is disabled =====
2018-07-17 21:17:06,874 [INFO] shmem.cpp:2318, cell#0, RF transmission is disabled
2018-07-17 21:17:06,874 [INFO] state.cpp:1097, cbsd#0, grant#0, send RELINQ-REQ request

2018-07-17 21:17:06,874 [DEBUG] state.cpp:1098, cbsd#0, grant#0, send request, {"relinquishmentRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"894960763"}]}
2018-07-17 21:17:06,875 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:17:06,897 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 105, ", rc 0
2018-07-17 21:17:06,910 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "relinquishmentResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "grantId": "894960763",
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
2018-07-17 21:17:06,910 [ERROR] state.cpp:1258, cbsd#0, grant#0, RELINQ-RSP, SUCCESS, code 0
2018-07-17 21:17:06,911 [INFO] state.cpp:1267, cbsd#0, grant#0, stopping, go to idle state and send deregistration request
2018-07-17 21:17:06,911 [DEBUG] cbsd.cpp:1048, cbsd#0, is stopping right after received response
2018-07-17 21:17:06,911 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> idle, schedule after 0s, next req deregistration, next rsp max
2018-07-17 21:17:06,911 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:17:06,911 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, authorized to idle
2018-07-17 21:17:06,911 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 21:17:06,912 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 21:17:06,913 [INFO] state.cpp:251, cbsd#0, grant#-1, send DEREG-REQ
2018-07-17 21:17:06,913 [DEBUG] state.cpp:252, cbsd#0, grant#-1, send request, {"deregistrationRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0"}]}
2018-07-17 21:17:06,913 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:17:06,950 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "deregistrationResponse": [
  {
   "response": {
    "responseCode": 0
   },

"cbsdId": "blinq77operationsMock-SASenb_sector0"
}
]
}

2018-07-17 21:17:06,950 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:17:06,950 [ERROR] state.cpp:348, cbsd#0, grant#-1, DEREG-RSP, SUCCESS, code 0

2018-07-17 21:17:06,950 [DEBUG] cbsd.cpp:1048, cbsd#0, is stopping right after received response

2018-07-17 21:17:06,951 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> unregistered, schedule after 0s, next req deregistration, next rsp max

2018-07-17 21:17:06,951 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state

2018-07-17 21:17:06,951 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, registered to unregistered

2018-07-17 21:17:06,951 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration

2018-07-17 21:17:06,952 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration

2018-07-17 21:17:06,952 [INFO] state.cpp:103, cbsd#0, grant#-1, is stopped

#

#stop

2018-07-17 21:19:47,509 [ERROR] cbsd.cpp:876, cbsd#0, is already stopped, ignore stop command

2018-07-17 21:19:47,509 [WARN] cbsd.cpp:805, cbsd#1, skip disabled cbsd on sector#1

2018-07-17 21:19:47,509 [WARN] cbsd.cpp:805, cbsd#2, skip disabled cbsd on sector#2

#

#

#start

2018-07-17 21:20:08,333 [INFO] cbsd.cpp:782, cbsd#0, schedule to start

2018-07-17 21:20:08,333 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered

2018-07-17 21:20:08,333 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max

2018-07-17 21:20:08,333 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state

2018-07-17 21:20:08,333 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered

2018-07-17 21:20:08,333 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-17 21:20:08,333 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1

2018-07-17 21:20:08,333 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2

#2018-07-17 21:20:08,334 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-17 21:20:08,335 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 21:20:08,335 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 21:20:08,336 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:20:08,394 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:20:08,394 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:20:08,394 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-07-17 21:20:08,395 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 21:20:08,395 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 21:20:08,395 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 21:20:08,395 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:20:08,396 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:20:08,396 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-07-17 21:20:08,396 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 21:20:08,397 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:20:08,440 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "availableChannel": [

```
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3680000000,
      "highFrequency": 3700000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:20:08,440 [INFO] cbsd.cpp:238, cbsd#0, available chnl#26, 3680 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:20:08,440 [INFO] cbsd.cpp:238, cbsd#0, available chnl#27, 3685 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:20:08,441 [INFO] cbsd.cpp:238, cbsd#0, available chnl#28, 3690 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:20:08,441 [INFO] cbsd.cpp:238, cbsd#0, available chnl#29, 3695 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:20:08,441 [INFO] cbsd.cpp:2697, cbsd#0, grant#0, keep using configured max eirp 20
2018-07-17 21:20:08,441 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 21:20:08,441 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:20:08,441 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0
2018-07-17 21:20:08,441 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle, schedule after 0s, next req max, next rsp max
2018-07-17 21:20:08,442 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:20:08,442 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-17 21:20:08,442 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:20:08,443 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:20:08,443 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ

2018-07-17 21:20:08,443 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}

2018-07-17 21:20:08,444 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:20:08,490 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {
 "grantResponse": [
  {
   "grantExpireTime": "2018-07-24T21:20:08Z",
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   },
   "channelType": "GAA",
   "heartbeatInterval": 60
  }
 ]
}

2018-07-17 21:20:08,490 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:20:08,490 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0

2018-07-17 21:20:08,494 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max

2018-07-17 21:20:08,494 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state

2018-07-17 21:20:08,495 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted

2018-07-17 21:20:08,495 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:20:08,496 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:20:08,496 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)

2018-07-17 21:20:08,496 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"GRANTED"}]}

2018-07-17 21:20:08,499 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:20:08,520 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 0, ", rc 0

2018-07-17 21:20:08,540 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [

```
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:23:28Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:20:08,540 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:20:08,541 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0

2018-07-17 21:20:08,541 [WARN] cbsd.cpp:982, cbsd#0, RF max EIRP is unchanged, 20dBm/MHz

2018-07-17 21:20:08,541 [WARN] cbsd.cpp:1003, cbsd#0, RF frequency is unchanged, 3690MHz

2018-07-17 21:20:08,541 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====

2018-07-17 21:20:08,541 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled

2018-07-17 21:20:08,541 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max

2018-07-17 21:20:08,541 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state

2018-07-17 21:20:08,542 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized

2018-07-17 21:20:08,542 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

2018-07-17 21:21:08,543 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:21:08,543 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request

2018-07-17 21:21:08,543 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"AUTHORIZED"}]}

2018-07-17 21:21:08,544 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:21:08,553 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:24:28Z",
   "response": {
    "responseCode": 0
```

```
    }
   }
  ]
}
2018-07-17 21:21:08,553 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:21:08,553 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:21:08,553 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:21:08,553 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:22:08,554 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:22:08,555 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:22:08,555 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"AUTHORIZED"}]}
2018-07-17 21:22:08,556 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:22:08,564 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:25:28Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:22:08,565 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:22:08,565 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:22:08,565 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:22:08,565 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:23:08,566 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
```

2018-07-17 21:23:08,566 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:23:08,567 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"AUTHORIZED"}]}
2018-07-17 21:23:08,568 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:23:08,576 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:26:28Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-17 21:23:08,577 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:23:08,577 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:23:08,577 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:23:08,577 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:24:08,578 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:24:08,579 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:24:08,579 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"AUTHORIZED"}]}
2018-07-17 21:24:08,579 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:24:08,588 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:27:28Z",
   "response": {
```

```
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 21:24:08,588 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 21:24:08,588 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0

2018-07-17 21:24:08,589 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max

2018-07-17 21:24:08,589 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

2018-07-17 21:25:08,590 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max

2018-07-17 21:25:08,591 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request

2018-07-17 21:25:08,591 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287","operationState":"AUTHORIZED"}]}

2018-07-17 21:25:08,591 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:25:08,601 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "heartbeatResponse": [
  {
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:25:08Z",
   "response": {
    "responseCode": 500
   }
  }
 ]
}
```


2018-07-17 21:25:08,601 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 500,

2018-07-17 21:25:08,602 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, TERMINATED_GRANT, code 500

2018-07-17 21:25:08,604 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 0s, next req relinquishment, next rsp max

2018-07-17 21:25:08,604 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for relinquishment

2018-07-17 21:25:08,607 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for relinquishment

2018-07-17 21:25:08,608 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is disabled =====

2018-07-17 21:25:08,608 [INFO] shmem.cpp:2318, cell#0, RF transmission is disabled

2018-07-17 21:25:08,608 [INFO] state.cpp:1097, cbsd#0, grant#0, send RELINQ-REQ request

2018-07-17 21:25:08,609 [DEBUG] state.cpp:1098, cbsd#0, grant#0, send request, {"relinquishmentRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"589004287"}]}

2018-07-17 21:25:08,609 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 21:25:08,628 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 500, ", rc 0

2018-07-17 21:25:08,650 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "relinquishmentResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "grantId": "589004287",
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```


2018-07-17 21:25:08,650 [ERROR] state.cpp:1258, cbsd#0, grant#0, RELINQ-RSP, SUCCESS, code 0

2018-07-17 21:25:08,651 [INFO] state.cpp:1274, cbsd#0, grant#0, relinquished, go to idle state and retry grant request after 60s

2018-07-17 21:25:08,651 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> idle, schedule after 60s, next req max, next rsp max

2018-07-17 21:25:08,651 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state

2018-07-17 21:25:08,651 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, authorized to idle

2018-07-17 21:25:08,651 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

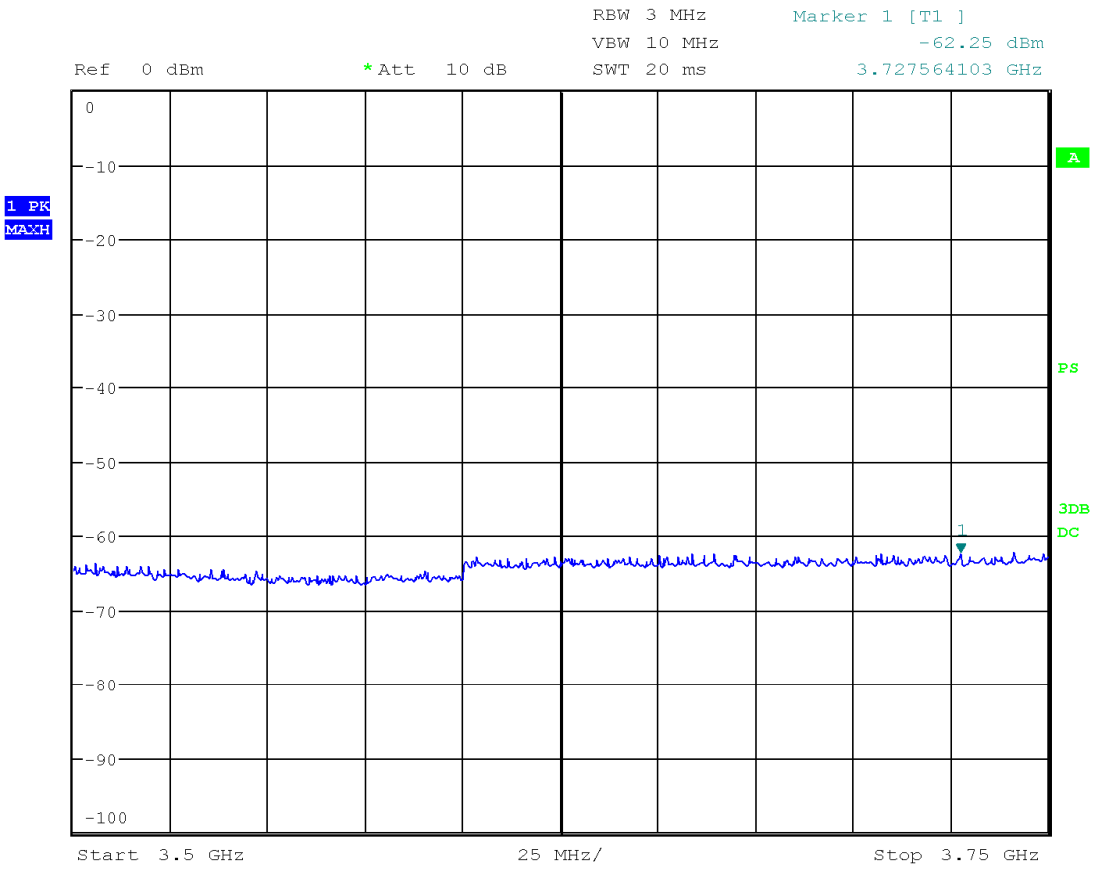
SAS

WINNF.FT.C.HBT.4

would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.HBT.4 is starting now
2018-07-17T21:20:07.922930Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T21:20:07Z: validation passed successfully, the engine sent registration Response
2018-07-17T21:20:07.983164Z: CBSD sent spectrumInquiry Request from the address : 192.168.26.100
2018-07-17T21:20:07Z: validation passed successfully, the engine sent spectrumInquiry Response
2018-07-17T21:20:08.029748Z: CBSD sent grant Request from the address : 192.168.26.100
2018-07-17T21:20:08Z: validation passed successfully, the engine sent grant Response
2018-07-17T21:20:08.084953Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:20:08Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:21:08.129853Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:21:08Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:22:08.141822Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:22:08Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:23:08.153542Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:23:08Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:24:08.164997Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:24:08Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:25:08.177288Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:25:08Z: validation passed successfully, the engine sent heartbeat Response
arrived to nstep starting question answer session with the technician
the question is : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? please choose one of the answers :
y
n
y
for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
the additional comments for the current test are :

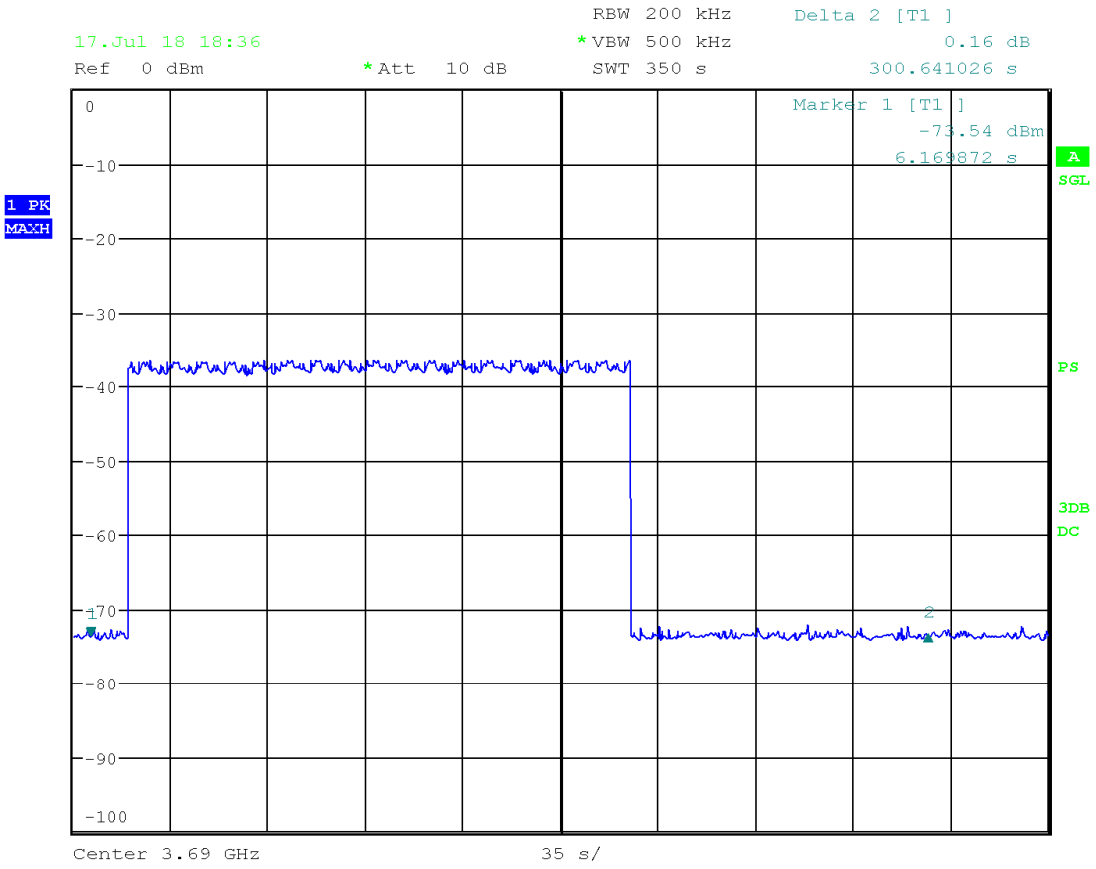
The final result of the test : WINNF.FT.C.HBT.4 is - passed

6.4.4.2.3	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	Monitor RF transmission from start of test. Ensure there is no transmission during the test	p



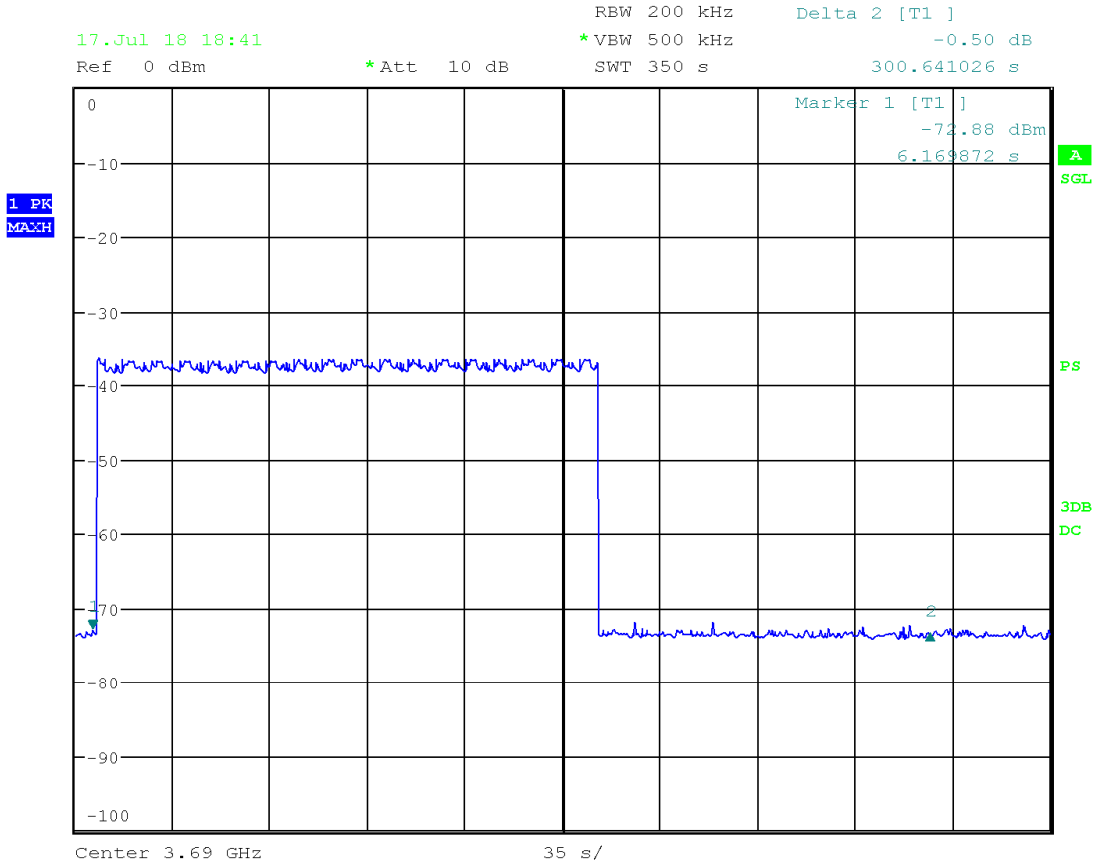
Date: 17.JUL.2018 12:45:36

6.4.4.2.4	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	Monitor RF transmission. Ensure: • CBSD stops transmission within 60 seconds of heartbeatResponse which contains responseCode=501	p

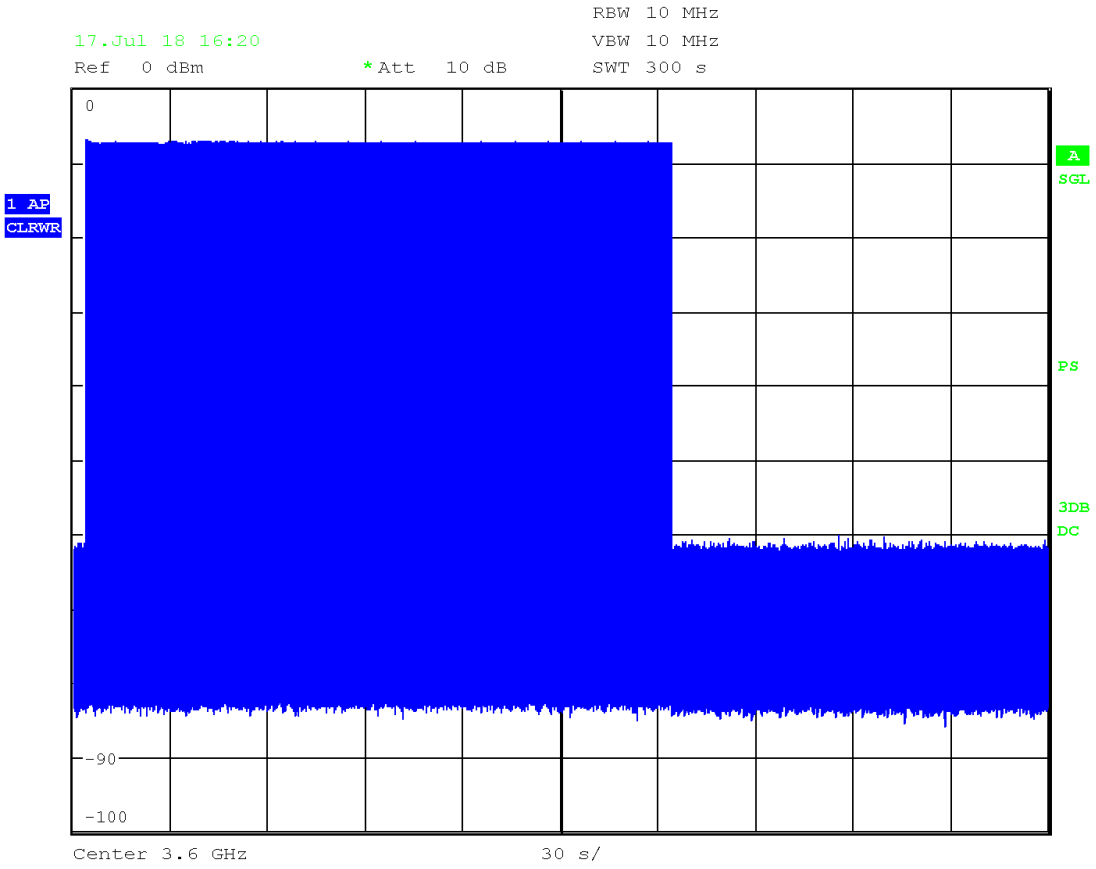


Date: 17.JUL.2018 18:36:33

6.4.4.2.5	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	Monitor RF transmission. Ensure: • CBSD stops transmission within 60 seconds of heartbeatResponse which contains responseCode=502	p

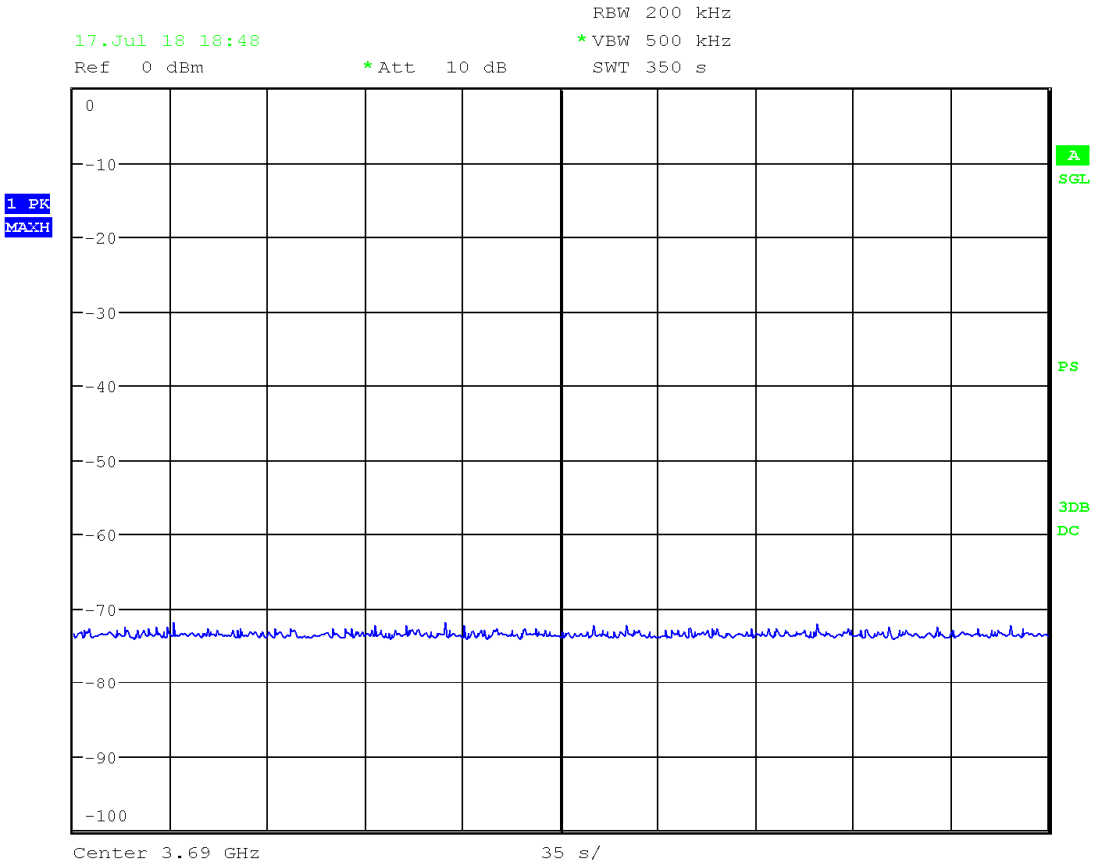


6.4.4.2.6	--	X	WINNF.FT.D.HBT.8	Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)	Monitor RF transmission. CBSDs will have different behavior: • CBSD1: will continue to transmit to end of test (this is not a pass/fail criteria, but check) • CBSD2: must stop transmission within 60 seconds of being sent heartbeatResponse with responseCode = 500	P



Date: 17.JUL.2018 16:20:21

6.4.4.3.1	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	Monitor RF from start of test to 60 seconds after last heartbeatResponse message was sent. CBSD should not transmit at any time during test	P



Date: 17.JUL.2018 18:48:19

6.4.4.3.2	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	Monitor RF transmission. Verify: • CBSD must stop transmission within transmitExpireTime+60 seconds, where transmitExpireTime is from last successful heartbeatResponse message	P

CBSD

#start
2018-07-17 21:48:36,574 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 21:48:36,574 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 21:48:36,574 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 21:48:36,574 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 21:48:36,574 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 21:48:36,574 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,574 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 21:48:36,574 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 21:48:36,576 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,576 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 21:48:36,576 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 21:48:36,577 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:48:36,639 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {

```
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:48:36,639 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:48:36,639 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-07-17 21:48:36,639 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 21:48:36,639 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 21:48:36,640 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 21:48:36,640 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,641 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,641 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-07-17 21:48:36,641 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 21:48:36,642 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:48:36,690 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3680000000,
      "highFrequency": 3700000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
```

```
   }
  ]
}
2018-07-17 21:48:36,691 [INFO] cbsd.cpp:238, cbsd#0, available chnl#26, 3680 MHz, GAA,
FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:48:36,691 [INFO] cbsd.cpp:238, cbsd#0, available chnl#27, 3685 MHz, GAA,
FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:48:36,691 [INFO] cbsd.cpp:238, cbsd#0, available chnl#28, 3690 MHz, GAA,
FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:48:36,691 [INFO] cbsd.cpp:238, cbsd#0, available chnl#29, 3695 MHz, GAA,
FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:48:36,691 [INFO] cbsd.cpp:2697, cbsd#0, grant#0, keep using configured max eirp 20
2018-07-17 21:48:36,692 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 21:48:36,692 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm,
CLR, CRIT, Got error response, code 0,
2018-07-17 21:48:36,692 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0
2018-07-17 21:48:36,692 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle,
schedule after 0s, next req max, next rsp max
2018-07-17 21:48:36,692 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:48:36,692 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-17 21:48:36,693 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer
req, expire in 0 seconds, for max
2018-07-17 21:48:36,694 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for
max
2018-07-17 21:48:36,694 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 21:48:36,694 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request,
{"grantRequest":[{"cbsdId":"blinq77operationsMock-
SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":368
0000000,"highFrequency":3700000000}}}]}
2018-07-17 21:48:36,695 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:48:36,740 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {
 "grantResponse": [
  {
   "grantExpireTime": "2018-07-24T21:48:36Z",
   "grantId": "92327237",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   },
   "channelType": "GAA",
   "heartbeatInterval": 60
```

```
   }
  ]
}
2018-07-17 21:48:36,741 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:48:36,741 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0
2018-07-17 21:48:36,746 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max
2018-07-17 21:48:36,747 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state
2018-07-17 21:48:36,747 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted
2018-07-17 21:48:36,748 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,749 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:48:36,750 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)
2018-07-17 21:48:36,750 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"92327237","operationState":"GRANTED"}]}
2018-07-17 21:48:36,751 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:48:36,775 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 0, ", rc 0
2018-07-17 21:48:36,790 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "grantId": "92327237",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:51:56Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:48:36,790 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:48:36,791 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0
2018-07-17 21:48:36,791 [WARN] cbsd.cpp:982, cbsd#0, RF max EIRP is unchanged, 20dBm/MHz
2018-07-17 21:48:36,791 [WARN] cbsd.cpp:1003, cbsd#0, RF frequency is unchanged, 3690MHz
2018-07-17 21:48:36,791 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====
2018-07-17 21:48:36,791 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled
```

2018-07-17 21:48:36,791 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max
2018-07-17 21:48:36,791 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state
2018-07-17 21:48:36,792 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized
2018-07-17 21:48:36,792 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:49:36,793 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:49:36,793 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:49:36,793 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"92327237","operationState":"AUTHORIZED"}]}
2018-07-17 21:49:36,794 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:49:36,802 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "92327237",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:52:56Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-17 21:49:36,803 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:49:36,803 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:49:36,804 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:49:36,804 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:50:36,805 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:50:36,805 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:50:36,805 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"92327237","operationState":"AUTHORIZED"}]}
2018-07-17 21:50:36,806 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:52:56,825 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer trans, expire in 0 seconds

2018-07-17 21:52:56,825 [INFO] state.cpp:1353, cbsd#0, grant#0, transmission timer expired, retry heartbeat request after 60s
2018-07-17 21:52:56,825 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is disabled =====
2018-07-17 21:52:56,825 [INFO] shmem.cpp:2318, cell#0, RF transmission is disabled
2018-07-17 21:52:56,825 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> granted, schedule after 60s, next req max, next rsp heartbeat
2018-07-17 21:52:56,826 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state
2018-07-17 21:52:56,826 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, authorized to granted
2018-07-17 21:52:56,826 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:53:56,827 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:53:56,828 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)
2018-07-17 21:53:56,828 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"92327237","operationState":"GRANTED"}]}
2018-07-17 21:53:56,828 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:53:56,891 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "92327237",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T21:53:56Z",
   "response": {
    "responseCode": 501
   }
  }
 ]
}
```

2018-07-17 21:53:56,892 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 501,
2018-07-17 21:53:56,892 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUSPENDED_GRANT, code 501
2018-07-17 21:53:56,895 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:53:56,896 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:53:56,926 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 501, ", rc 0
2018-07-17 21:54:01,839 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], "list index out of range"

2018-07-17 21:54:01,839 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Failed to parse response, msg max
2018-07-17 21:54:01,839 [ERROR] state.cpp:813, cbsd#0, grant#0, failed to parse response[0], "list index out of range"
2018-07-17 21:54:01,839 [INFO] state.cpp:824, cbsd#0, grant#0, retry after 60s
2018-07-17 21:54:01,842 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:54:01,843 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:54:01,873 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Failed to parse response, msg max", rc 0
2018-07-17 21:54:01,908 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Failed to parse response, msg max", rc 0

SAS

WINNF.FT.C.HBT.10
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.HBT.10 is starting now
2018-07-17T21:48:36.161435Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T21:48:36Z: validation passed successfully, the engine sent registration Response
2018-07-17T21:48:36.225329Z: CBSD sent spectrumInquiry Request from the address : 192.168.26.100
2018-07-17T21:48:36Z: validation passed successfully, the engine sent spectrumInquiry Response
2018-07-17T21:48:36.278520Z: CBSD sent grant Request from the address : 192.168.26.100
2018-07-17T21:48:36Z: validation passed successfully, the engine sent grant Response
2018-07-17T21:48:36.334806Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:48:36Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:49:36.377670Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:49:36Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:50:36.389691Z: CBSD sent heartbeat Request from the address : 192.168.26.100
LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT: 2018-07-17 21:49:36.378193
2018-07-17T21:53:56.411601Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:53:56Z: validation passed successfully, the engine sent heartbeat Response
arrived to nstep starting question answer session with the technician

the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :

y

n

2018-07-17T21:54:01Z: validation passed successfully, the engine sent heartbeat Response

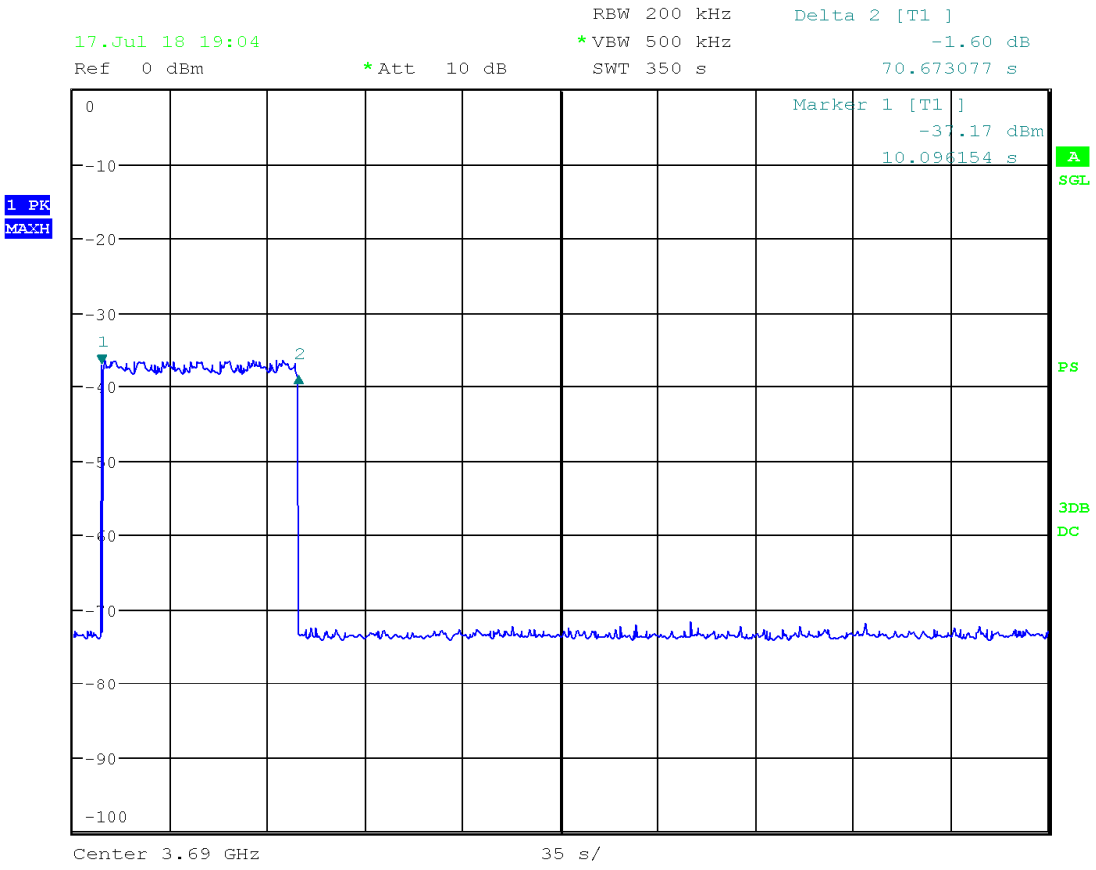
y

for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y

the additional comments for the current test are :

The final result of the test : WINNF.FT.C.HBT.10 is - passed

6.6.4.1.1	WINNF.FT.C.RLQ.1	Successful Relinquishment	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message.	P



Date: 17.JUL.2018 19:04:26

CBSD

#start
2018-07-17 21:58:38,382 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 21:58:38,382 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 21:58:38,382 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max
2018-07-17 21:58:38,382 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state

2018-07-17 21:58:38,382 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 21:58:38,382 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,382 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 21:58:38,382 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 21:58:38,383 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,384 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 21:58:38,384 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 21:58:38,386 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:58:38,410 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-17 21:58:38,411 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:58:38,411 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-07-17 21:58:38,412 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 21:58:38,412 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 21:58:38,412 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 21:58:38,412 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,414 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,414 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-07-17 21:58:38,414 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 21:58:38,415 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:58:38,460 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {

```
 "spectrumInquiryResponse": [
  {
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3680000000,
      "highFrequency": 3700000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-17 21:58:38,461 [INFO] cbsd.cpp:238, cbsd#0, available chnl#26, 3680 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:58:38,461 [INFO] cbsd.cpp:238, cbsd#0, available chnl#27, 3685 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:58:38,461 [INFO] cbsd.cpp:238, cbsd#0, available chnl#28, 3690 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:58:38,461 [INFO] cbsd.cpp:238, cbsd#0, available chnl#29, 3695 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 21:58:38,461 [INFO] cbsd.cpp:2697, cbsd#0, grant#0, keep using configured max eirp 20
2018-07-17 21:58:38,462 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 21:58:38,462 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:58:38,462 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0
2018-07-17 21:58:38,462 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle, schedule after 0s, next req max, next rsp max

2018-07-17 21:58:38,462 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:58:38,463 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-17 21:58:38,463 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,464 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,464 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 21:58:38,465 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 21:58:38,465 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:58:38,510 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {
 "grantResponse": [
  {
   "grantExpireTime": "2018-07-24T21:58:38Z",
   "grantId": "544161021",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   },
   "channelType": "GAA",
   "heartbeatInterval": 60
  }
 ]
}
2018-07-17 21:58:38,511 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:58:38,511 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0
2018-07-17 21:58:38,516 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max
2018-07-17 21:58:38,516 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state
2018-07-17 21:58:38,516 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted
2018-07-17 21:58:38,516 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,518 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:58:38,518 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)
2018-07-17 21:58:38,518 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"544161021","operationState":"GRANTED"}]}

2018-07-17 21:58:38,519 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:58:38,537 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 0, ", rc 0
2018-07-17 21:58:38,560 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "grantId": "544161021",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T22:01:58Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 21:58:38,561 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:58:38,561 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0
2018-07-17 21:58:38,561 [WARN] cbsd.cpp:982, cbsd#0, RF max EIRP is unchanged, 20dBm/MHz
2018-07-17 21:58:38,562 [WARN] cbsd.cpp:1003, cbsd#0, RF frequency is unchanged, 3690MHz
2018-07-17 21:58:38,562 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====
2018-07-17 21:58:38,562 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled
2018-07-17 21:58:38,562 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max
2018-07-17 21:58:38,562 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state
2018-07-17 21:58:38,563 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized
2018-07-17 21:58:38,563 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 21:59:38,564 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 21:59:38,564 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 21:59:38,564 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"544161021","operationState":"AUTHORIZED"}]}
2018-07-17 21:59:38,565 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:59:38,575 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "heartbeatResponse": [
  {
   "grantId": "544161021",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",

```
    "transmitExpireTime": "2018-07-17T22:02:58Z",
    "response": {
      "responseCode": 0
    }
   }
 ]
}
```


2018-07-17 21:59:38,576 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 21:59:38,576 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 21:59:38,577 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 21:59:38,577 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

#
#relinq 0
2018-07-17 21:59:49,217 [INFO] cbsd.cpp:894, cbsd#0, relinquish all grants
2018-07-17 21:59:49,217 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 0s, next req relinquishment, next rsp max
2018-07-17 21:59:49,218 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for relinquishment
#2018-07-17 21:59:49,219 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for relinquishment
2018-07-17 21:59:49,219 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is disabled =====
2018-07-17 21:59:49,219 [INFO] shmem.cpp:2318, cell#0, RF transmission is disabled
2018-07-17 21:59:49,220 [INFO] state.cpp:1097, cbsd#0, grant#0, send RELINQ-REQ request
2018-07-17 21:59:49,220 [DEBUG] state.cpp:1098, cbsd#0, grant#0, send request, {"relinquishmentRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"544161021"}]}
2018-07-17 21:59:49,220 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 21:59:49,228 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {


```
 "relinquishmentResponse": [
  {
   "grantId": "544161021",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
```

]
}
2018-07-17 21:59:49,228 [ERROR] state.cpp:1258, cbsd#0, grant#0, RELINQ-RSP, SUCCESS, code 0
2018-07-17 21:59:49,228 [INFO] state.cpp:1274, cbsd#0, grant#0, relinquished, go to idle state and retry grant request after 60s
2018-07-17 21:59:49,229 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> idle, schedule after 60s, next req max, next rsp max
2018-07-17 21:59:49,229 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 21:59:49,229 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, authorized to idle
2018-07-17 21:59:49,230 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 22:00:49,231 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:00:49,231 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 22:00:49,232 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 22:00:49,232 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:00:49,236 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {
 "grantResponse": [
  {
   "response": {
    "responseCode": 400
   },
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
2018-07-17 22:00:49,237 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 400,
2018-07-17 22:00:49,237 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, INTERFERENCE, code 400
2018-07-17 22:00:49,237 [INFO] state.cpp:598, cbsd#0, grant#0 retry grant request after 60s
2018-07-17 22:00:49,237 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> max, schedule after 60s, next req max, next rsp max
2018-07-17 22:00:49,241 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 22:00:49,267 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 400, ", rc 0

2018-07-17 22:01:49,244 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:01:49,245 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 22:01:49,245 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 22:01:49,246 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:01:49,249 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {

```
 "grantResponse": [
  {
   "response": {
    "responseCode": 400
   },
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```

2018-07-17 22:01:49,250 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 400,
2018-07-17 22:01:49,250 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, INTERFERENCE, code 400
2018-07-17 22:01:49,255 [INFO] state.cpp:598, cbsd#0, grant#0 retry grant request after 60s
2018-07-17 22:01:49,256 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> max, schedule after 60s, next req max, next rsp max
2018-07-17 22:01:49,257 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 22:01:49,279 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 400, ", rc 0
2018-07-17 22:01:49,315 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 400, ", rc 0
2018-07-17 22:02:49,258 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:02:49,258 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 22:02:49,259 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 22:02:49,260 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:02:49,263 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {

```
 "grantResponse": [
  {
   "response": {
    "responseCode": 400
   },
   "cbsdId": "blinq77operationsMock-SASenb_sector0"
  }
 ]
}
```


2018-07-17 22:02:49,264 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, SET, CRIT, Got error response, code 400,
2018-07-17 22:02:49,268 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, INTERFERENCE, code 400
2018-07-17 22:02:49,269 [INFO] state.cpp:598, cbsd#0, grant#0 retry grant request after 60s
2018-07-17 22:02:49,269 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> max, schedule after 60s, next req max, next rsp max
2018-07-17 22:02:49,270 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max
2018-07-17 22:02:49,290 [DEBUG] alarms.cpp:101, clear existing alarm before set, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 400, ", rc 0
2018-07-17 22:02:49,317 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#0" CRIT 11002 "Got error response, code 400, ", rc 0

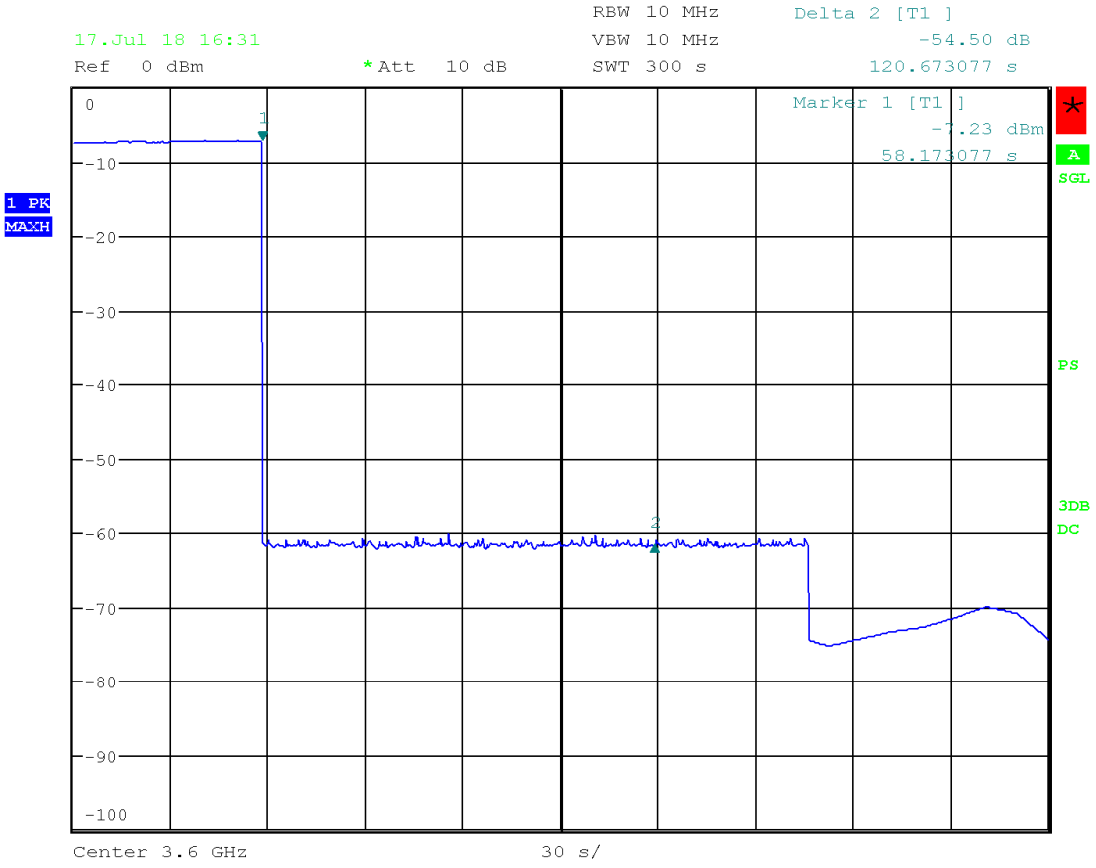
SAS

WINNF.FT.C.RLQ.1
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.RLQ.1 is starting now
2018-07-17T21:58:37.969332Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T21:58:37Z: validation passed successfully, the engine sent registration Response
2018-07-17T21:58:37.997415Z: CBSD sent spectrumInquiry Request from the address : 192.168.26.100
2018-07-17T21:58:38Z: validation passed successfully, the engine sent spectrumInquiry Response
2018-07-17T21:58:38.047955Z: CBSD sent grant Request from the address : 192.168.26.100
2018-07-17T21:58:38Z: validation passed successfully, the engine sent grant Response

2018-07-17T21:58:38.102118Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:58:38Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:59:38.148239Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T21:59:38Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T21:59:48.803050Z: CBSD sent relinquishment Request from the address : 192.168.26.100
2018-07-17T21:59:48Z: validation passed successfully, the engine sent relinquishment Response
arrived to nstep starting question answer session with the technician
the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :
y
n
y
for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y
the additional comments for the current test are :

The final result of the test : WINNF.FT.C.RLQ.1 is - passed

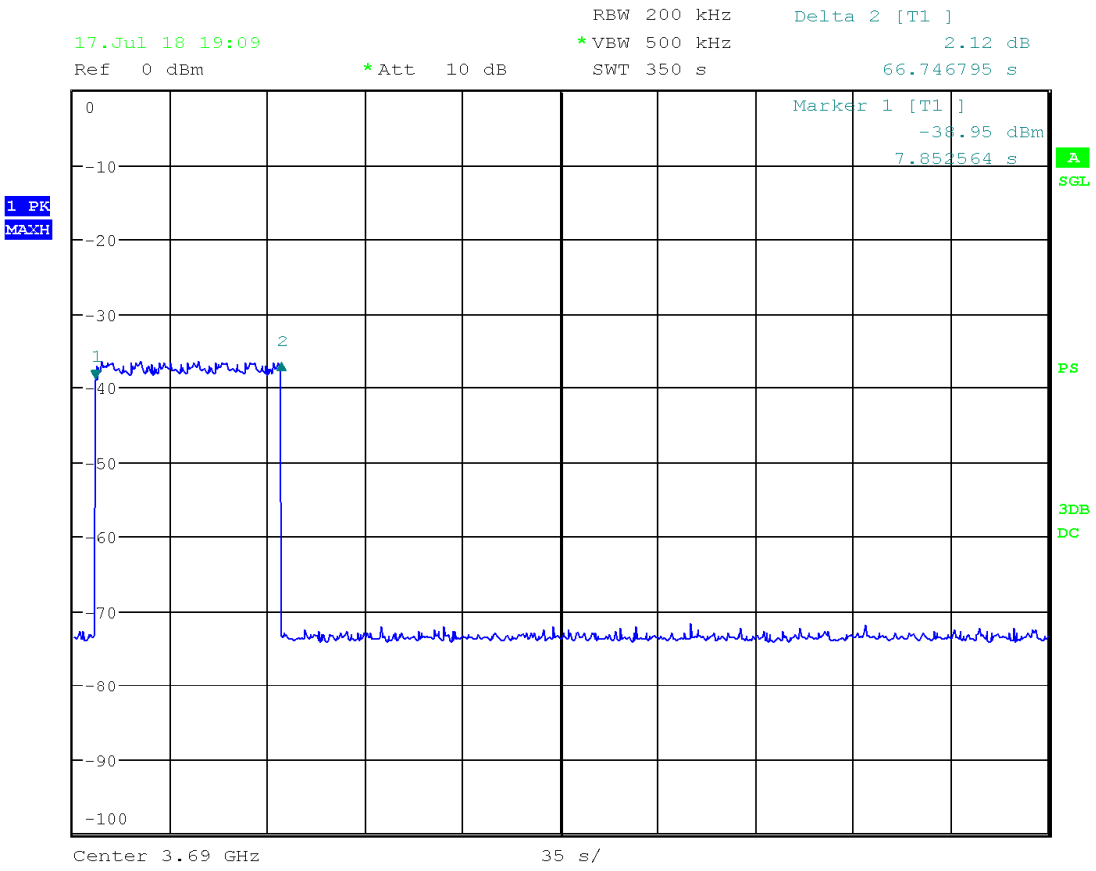
6.6.4.1.2	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message.	P



Date: 17.JUL.2018 16:31:40

Note: shutdown time taken from Domain Proxy logs, and shutdown confirmed by RF monitoring.

6.7.4.1.1	WINNF.FT.C.DRG.1	Successful Deregistration	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message or deregistrationRequest message (whichever is sent first)	P



Date: 17.JUL.2018 19:09:07

CBSD

#start
2018-07-17 22:05:58,116 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 22:05:58,117 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 22:05:58,117 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp max

2018-07-17 22:05:58,117 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 22:05:58,117 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 22:05:58,117 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,117 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 22:05:58,117 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 22:05:58,118 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,119 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 22:05:58,120 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 22:05:58,121 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:05:58,146 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 22:05:58,147 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:05:58,148 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0
2018-07-17 22:05:58,148 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max
2018-07-17 22:05:58,148 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state
2018-07-17 22:05:58,148 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered
2018-07-17 22:05:58,149 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,150 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-17 22:05:58,150 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ
2018-07-17 22:05:58,150 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}
2018-07-17 22:05:58,151 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:05:58,190 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {
 "spectrumInquiryResponse": [
  {
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
     "frequencyRange": {
      "lowFrequency": 3680000000,
      "highFrequency": 3700000000
     }
    }
   ],
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
2018-07-17 22:05:58,190 [INFO] cbsd.cpp:238, cbsd#0, available chnl#26, 3680 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 22:05:58,191 [INFO] cbsd.cpp:238, cbsd#0, available chnl#27, 3685 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 22:05:58,191 [INFO] cbsd.cpp:238, cbsd#0, available chnl#28, 3690 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 22:05:58,191 [INFO] cbsd.cpp:238, cbsd#0, available chnl#29, 3695 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 22:05:58,191 [INFO] cbsd.cpp:2697, cbsd#0, grant#0, keep using configured max eirp 20
2018-07-17 22:05:58,191 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 22:05:58,192 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:05:58,192 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, SUCCESS, code 0

2018-07-17 22:05:58,192 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> idle, schedule after 0s, next req max, next rsp max
2018-07-17 22:05:58,192 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 22:05:58,193 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to idle
2018-07-17 22:05:58,193 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,195 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,195 [INFO] state.cpp:429, cbsd#0, grant#0, send GRANT-REQ
2018-07-17 22:05:58,195 [DEBUG] state.cpp:430, cbsd#0, grant#0, send request, {"grantRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","operationParam":{"maxEirp":20,"operationFrequencyRange":{"lowFrequency":3680000000,"highFrequency":3700000000}}}]}
2018-07-17 22:05:58,196 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:05:58,240 [DEBUG] state.cpp:496, cbsd#0, grant#0, receive response[0], {

```
 "grantResponse": [
  {
   "grantExpireTime": "2018-07-24T22:05:57Z",
   "grantId": "915803839",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   },
   "channelType": "GAA",
   "heartbeatInterval": 60
  }
 ]
}
```

2018-07-17 22:05:58,240 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:05:58,243 [ERROR] state.cpp:547, cbsd#0, grant#0, GRANT-RSP, SUCCESS, code 0
2018-07-17 22:05:58,244 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, idle -> granted, schedule after 0s, next req max, next rsp max
2018-07-17 22:05:58,244 [INFO] state.cpp:714, cbsd#0, grant#0, switched into granted state
2018-07-17 22:05:58,244 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, idle to granted
2018-07-17 22:05:58,244 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,246 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:05:58,247 [INFO] state.cpp:735, cbsd#0, grant#0, send HBEAT-REQ (1st)

2018-07-17 22:05:58,247 [DEBUG] state.cpp:736, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"915803839","operationState":"GRANTED"}]}
2018-07-17 22:05:58,248 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:05:58,267 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "cbsd#0, grant#0" CRIT 11002 "Got error response, code 0, ", rc 0
2018-07-17 22:05:58,290 [DEBUG] state.cpp:788, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "915803839",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T22:09:17Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```

2018-07-17 22:05:58,291 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:05:58,291 [ERROR] state.cpp:837, cbsd#0, grant#0, HBEAT-RSP (1st), SUCCESS, code 0
2018-07-17 22:05:58,292 [WARN] cbsd.cpp:982, cbsd#0, RF max EIRP is unchanged, 20dBm/MHz
2018-07-17 22:05:58,292 [WARN] cbsd.cpp:1003, cbsd#0, RF frequency is unchanged, 3690MHz
2018-07-17 22:05:58,292 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is enabled =====
2018-07-17 22:05:58,292 [INFO] shmem.cpp:2318, cell#0, RF transmission is enabled
2018-07-17 22:05:58,293 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, granted -> authorized, schedule after 60s, next req max, next rsp max
2018-07-17 22:05:58,293 [INFO] state.cpp:1049, cbsd#0, grant#0, switched into authorized state
2018-07-17 22:05:58,293 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, granted to authorized
2018-07-17 22:05:58,293 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

#2018-07-17 22:06:58,294 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for max
2018-07-17 22:06:58,295 [INFO] state.cpp:1070, cbsd#0, grant#0, send HBEAT-REQ request
2018-07-17 22:06:58,295 [DEBUG] state.cpp:1071, cbsd#0, grant#0, send request, {"heartbeatRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"915803839","operationState":"AUTHORIZED"}]}
2018-07-17 22:06:58,296 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:06:58,304 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {

```
 "heartbeatResponse": [
  {
   "grantId": "915803839",
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "transmitExpireTime": "2018-07-17T22:10:17Z",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 22:06:58,305 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#0, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:06:58,306 [ERROR] state.cpp:1172, cbsd#0, grant#0, HBEAT-RSP, SUCCESS, code 0
2018-07-17 22:06:58,306 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 60s, next req max, next rsp max
2018-07-17 22:06:58,306 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 60 seconds, for max

#stop 0
2018-07-17 22:07:04,984 [INFO] cbsd.cpp:813, cbsd#0, schedule to stop
2018-07-17 22:07:04,984 [DEBUG] cbsd.cpp:825, cbsd#0, stop immediately
2018-07-17 22:07:04,984 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> max, schedule after 0s, next req deregistration, next rsp max
2018-07-17 22:07:04,984 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#0, schedule, cbsd#0, grant#0, timer req, expire in 0 seconds, for deregistration
#2018-07-17 22:07:04,985 [DEBUG] timer.cpp:78, cbsd#0, grant#0, timer req, expire in 0 seconds, for deregistration
2018-07-17 22:07:04,986 [WARN] state.cpp:1092, cbsd#0, grant#0, relinquish grant before deregistration
2018-07-17 22:07:04,986 [INFO] cbsd.cpp:1016, cbsd#0, ===== RF transmission is disabled =====
2018-07-17 22:07:04,986 [INFO] shmem.cpp:2318, cell#0, RF transmission is disabled
2018-07-17 22:07:04,986 [INFO] state.cpp:1097, cbsd#0, grant#0, send RELINQ-REQ request
2018-07-17 22:07:04,986 [DEBUG] state.cpp:1098, cbsd#0, grant#0, send request, {"relinquishmentRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","grantId":"915803839"}]}
2018-07-17 22:07:04,987 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:07:04,994 [DEBUG] state.cpp:1123, cbsd#0, grant#0, receive response[0], {
 "relinquishmentResponse": [
  {

```
    "grantId": "915803839",
    "cbsdId": "blinq77operationsMock-SASenb_sector0",
    "response": {
     "responseCode": 0
    }
   }
 ]
}
```


2018-07-17 22:07:04,994 [ERROR] state.cpp:1258, cbsd#0, grant#0, RELINQ-RSP, SUCCESS, code 0
2018-07-17 22:07:04,994 [INFO] state.cpp:1267, cbsd#0, grant#0, stopping, go to idle state and send deregistration request
2018-07-17 22:07:04,995 [DEBUG] cbsd.cpp:1048, cbsd#0, is stopping right after received response
2018-07-17 22:07:04,995 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#0, update, authorized -> idle, schedule after 0s, next req deregistration, next rsp max
2018-07-17 22:07:04,995 [INFO] state.cpp:404, cbsd#0, grant#0, switched into idle state
2018-07-17 22:07:04,996 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#0, transit, authorized to idle
2018-07-17 22:07:04,996 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 22:07:04,997 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 22:07:04,998 [INFO] state.cpp:251, cbsd#0, grant#-1, send DEREG-REQ
2018-07-17 22:07:04,998 [DEBUG] state.cpp:252, cbsd#0, grant#-1, send request, {"deregistrationRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0"}]}
2018-07-17 22:07:04,999 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 22:07:05,040 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "deregistrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 22:07:05,040 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, GRANT alarm, CLR, CRIT, Got error response, code 0,
2018-07-17 22:07:05,041 [ERROR] state.cpp:348, cbsd#0, grant#-1, DEREG-RSP, SUCCESS, code 0
2018-07-17 22:07:05,041 [DEBUG] cbsd.cpp:1048, cbsd#0, is stopping right after received response
2018-07-17 22:07:05,041 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> unregistered, schedule after 0s, next req deregistration, next rsp max

2018-07-17 22:07:05,041 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 22:07:05,041 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, registered to unregistered
2018-07-17 22:07:05,041 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 22:07:05,043 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for deregistration
2018-07-17 22:07:05,043 [INFO] state.cpp:103, cbsd#0, grant#-1, is stopped

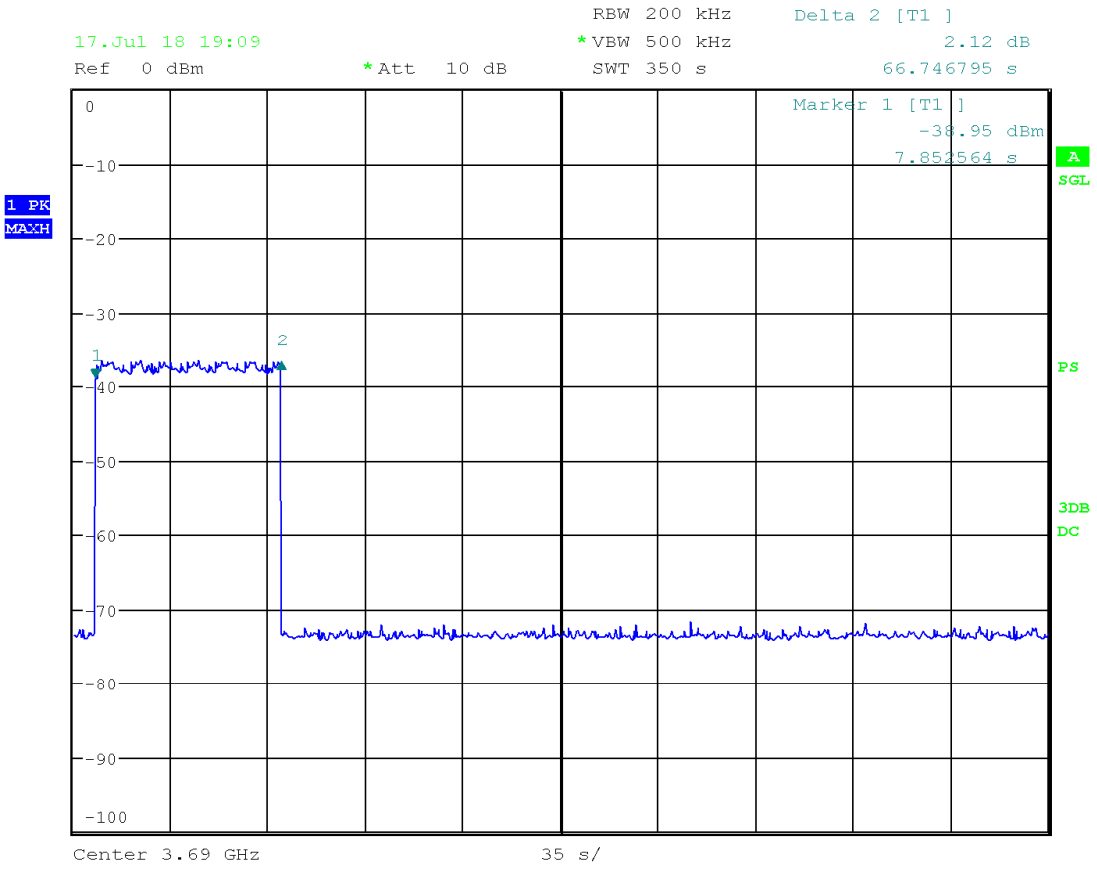
SAS

WINNF.FT.C.DRG.1
would you like to add the test to specific folder ? (select yes or no)
no
the selected test from the user : WINNF.FT.C.DRG.1 is starting now
2018-07-17T22:05:57.703928Z: CBSD sent registration Request from the address : 192.168.26.100
2018-07-17T22:05:57Z: validation passed successfully, the engine sent registration Response
2018-07-17T22:05:57.733257Z: CBSD sent spectrumInquiry Request from the address : 192.168.26.100
2018-07-17T22:05:57Z: validation passed successfully, the engine sent spectrumInquiry Response
2018-07-17T22:05:57.778286Z: CBSD sent grant Request from the address : 192.168.26.100
2018-07-17T22:05:57Z: validation passed successfully, the engine sent grant Response
2018-07-17T22:05:57.829934Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T22:05:57Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T22:06:57.878277Z: CBSD sent heartbeat Request from the address : 192.168.26.100
2018-07-17T22:06:57Z: validation passed successfully, the engine sent heartbeat Response
2018-07-17T22:07:04.568900Z: CBSD sent relinquishment Request from the address : 192.168.26.100
2018-07-17T22:07:04Z: validation passed successfully, the engine sent relinquishment Response
2018-07-17T22:07:04.580421Z: CBSD sent deregistration Request from the address : 192.168.26.100
2018-07-17T22:07:04Z: validation passed successfully, the engine sent deregistration Response
arrived to nstep starting question answer session with the technician
the question is : Did the CBSD stop RF transmissions upon sending the Deregister request? please choose one of the answers :
y
n
y
for the question : Did the CBSD stop RF transmissions upon sending the Deregister request? , the user choose y

the additional comments for the current test are :

The final result of the test : WINNF.FT.C.DRG.1 is - passed

6.7.4.1.2	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message or deregistrationRequest message (whichever is sent first)	P



Date: 17.JUL.2018 19:09:07

Note: shutdown time taken from Domain Proxy logs, and shutdown confirmed by RF monitoring.

Confirm that the device transmits at a power level less than or equal to the maximum power level approved by the SAS.

7.1.4.1.1	X	X	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	Power Spectral Density test case. Assume we use 1 carrier bandwidth (say, 5 or 10 MHz), one frequency (say middle channel in band) for test. Measure at max transmit power, and reduce in steps of 3 dB to minimum declared transmit power.	P

Confirmed. The power levels matched the request.

7.1.4.1.1	X	X	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	Power Spectral Density test case. Assume we use 1 carrier bandwidth (say, 5 or 10 MHz), one frequency (say middle channel in band) for test. Measure at max transmit power, and reduce in steps of 3 dB to minimum declared transmit power.	P

WINNF Security Test Case Analysis

WINNF.FT.C.SCS.1

CBSD

#start
2018-07-17 23:38:39,926 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:38:39,926 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:38:39,926 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-17 23:38:39,926 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:38:39,926 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:38:39,927 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:38:39,927 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 23:38:39,927 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 23:38:39,928 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:38:39,928 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 23:38:39,929 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 23:38:39,930 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 23:38:40,053 [DEBUG] state.cpp:118, cbsd#0, grant#-1, receive response[0], {

```
 "registrationResponse": [
  {
   "cbsdId": "blinq77operationsMock-SASenb_sector0",
   "response": {
    "responseCode": 0
   }
  }
 ]
}
```


2018-07-17 23:38:40,055 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, CLR, CRIT, Got error response, code 0,

2018-07-17 23:38:40,055 [ERROR] state.cpp:152, cbsd#0, grant#-1, REG-RSP, SUCCESS, code 0

2018-07-17 23:38:40,055 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> registered, schedule after 0s, next req max, next rsp max

2018-07-17 23:38:40,055 [INFO] state.cpp:214, cbsd#0, grant#-1, switched into registered state

2018-07-17 23:38:40,055 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to registered

2018-07-17 23:38:40,055 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-17 23:38:40,057 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max

2018-07-17 23:38:40,057 [INFO] state.cpp:232, cbsd#0, grant#-1, send INQ-REQ

2018-07-17 23:38:40,057 [DEBUG] state.cpp:233, cbsd#0, grant#-1, send request, {"spectrumInquiryRequest":[{"cbsdId":"blinq77operationsMock-SASenb_sector0","inquiredSpectrum":[{"lowFrequency":3680000000,"highFrequency":3700000000}]}]}

2018-07-17 23:38:40,058 [DEBUG] tls.cpp:677, no tls crl configured

2018-07-17 23:38:40,077 [DEBUG] alarms.cpp:120, clear existing alarm, /opt/active/app/bin/eventgen CLR "SAS" CRIT 11001 "No error, https://20.0.0.1:5000/v1.2/registration", rc 0

2018-07-17 23:38:40,093 [DEBUG] state.cpp:277, cbsd#0, grant#-1, receive response[0], {


```
 "spectrumInquiryResponse": [
  {
   "response": {
    "responseCode": 0
   },
   "availableChannel": [
    {
     "channelType": "GAA",
     "ruleApplied": "FCC_PART_96",
```

```
      "frequencyRange": {
        "lowFrequency": 3550000000,
        "highFrequency": 3555000000
      }
     }
    ],
    "cbsdId": "blinq77operationsMock-SASenb_sector0"
   }
 ]
}
```


2018-07-17 23:38:40,094 [INFO] cbsd.cpp:238, cbsd#0, available chnl#0, 3550 MHz, GAA, FCC_PART_96, no maxEirp specified for this channel
2018-07-17 23:38:40,094 [ERROR] cbsd.cpp:2718, cbsd#0, grant#0, channel is unavailable
2018-07-17 23:38:40,094 [ERROR] cbsd.cpp:2808, cbsd#0, not support changing grant frequency
2018-07-17 23:38:40,094 [ERROR] cbsd.cpp:2107, cbsd#0, at least one requested grant channel is unavailable
2018-07-17 23:38:40,094 [DEBUG] cbsd.cpp:961, post alarm, cbsd#0, grant#-1, sector#0, REG alarm, SET, CRIT, Got error response, code -100,
2018-07-17 23:38:40,095 [ERROR] state.cpp:325, cbsd#0, grant#-1, INQ-RSP, RETRY, code -100
2018-07-17 23:38:40,095 [INFO] state.cpp:342, cbsd#0, grant#-1 retry spectrum inquiry after 60s
2018-07-17 23:38:40,096 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, registered -> max, schedule after 60s, next req max, next rsp max
2018-07-17 23:38:40,096 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 23:38:40,119 [DEBUG] alarms.cpp:111, set new alarm, /opt/active/app/bin/eventgen SET "cbsd#0, grant#-1" CRIT 11001 "Got error response, code -100, ", rc 0

WINNF test requirements:

WINNF test requirements from WINNF-TS-0122-V1.0.0 CBRS CBSD Test Specification:

2	• Make sure that Mutual authentication happens between UUT and the SAS Test Harness.
	• Make sure that UUT uses TLS v1.2
	• Make sure that cipher suites from one of the following is selected,
	  • 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
		PASS

WINNF.FT.C.SCS.2

CBSD

#start
2018-07-17 22:59:52,014 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 22:59:52,014 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 22:59:52,014 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-17 22:59:52,014 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 22:59:52,014 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 22:59:52,014 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 22:59:52,015 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 22:59:52,015 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 22:59:52,016 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 22:59:52,016 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 22:59:52,016 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 22:59:52,028 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 60, SSL certificate problem: certificate revoked
2018-07-17 22:59:52,029 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 22:59:52,029 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, Peer certificate cannot be authenticated with given CA certificates
2018-07-17 22:59:52,029 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 22:59:52,030 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 22:59:52,030 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 22:59:52,030 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 22:59:52,030 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 22:59:52,030 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered

2018-07-17 22:59:52,030 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration
2018-07-17 22:59:52,030 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 22:59:52,030 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 22:59:52,030 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 23:00:52,031 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:00:52,032 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 23:00:52,032 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 23:00:52,040 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 60, SSL certificate problem: certificate revoked
2018-07-17 23:00:52,041 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 23:00:52,041 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, Peer certificate cannot be authenticated with given CA certificates
2018-07-17 23:00:52,041 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:00:52,041 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:00:52,041 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 23:00:52,041 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 23:00:52,041 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:00:52,041 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:00:52,042 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration
2018-07-17 23:00:52,042 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:00:52,042 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:00:52,042 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max
2018-07-17 23:01:52,043 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:01:52,043 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ

2018-07-17 23:01:52,043 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}

2018-07-17 23:01:52,053 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 60, SSL certificate problem: certificate revoked
2018-07-17 23:01:52,053 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 23:01:52,054 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, Peer certificate cannot be authenticated with given CA certificates
2018-07-17 23:01:52,054 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:01:52,054 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:01:52,054 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 23:01:52,054 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 23:01:52,054 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:01:52,054 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:01:52,054 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration
2018-07-17 23:01:52,054 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:01:52,055 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:01:52,055 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max

WINNF Test Requirements:

WINNF test requirements from WINNF-TS-0122-V1.0.0 CBRS CBSD Test Specification:

2	• Make sure that UUT uses TLS v1.2 for security establishment. • Make sure UUT selects the correct cipher suite. • UUT shall use CRL or OCSP to verify the validity of the server certificate. • Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	PASS

WINNF.FT.C.SCS.3

CBSD

#start
2018-07-17 23:12:54,960 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:12:54,960 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:12:54,960 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-17 23:12:54,960 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:12:54,960 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:12:54,960 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:12:54,960 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 23:12:54,960 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 23:12:54,961 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:12:54,962 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 23:12:54,962 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 23:12:54,963 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 23:12:54,975 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 60, SSL certificate problem: certificate has expired
2018-07-17 23:12:54,975 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 23:12:54,976 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, Peer certificate cannot be authenticated with given CA certificates
2018-07-17 23:12:54,976 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:12:54,976 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:12:54,976 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 23:12:54,976 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 23:12:54,976 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:12:54,976 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered

2018-07-17 23:12:54,976 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration
2018-07-17 23:12:54,976 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:12:54,976 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:12:54,977 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max

WINNF Test Requirements:

WINNF test requirements from WINNF-TS-0122-V1.0.0 CBRS CBSD Test Specification:

2	• Make sure that UUT uses TLS v1.2 for security establishment. • Make sure UUT selects the correct cipher suite. • UUT shall use CRL or OCSP to verify the validity of the server certificate. • Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	PASS

WINNF.FT.C.SCS.4

CBSD

#start
2018-07-17 23:20:46,124 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:20:46,124 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:20:46,124 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-17 23:20:46,124 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:20:46,124 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:20:46,124 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:20:46,124 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 23:20:46,124 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 23:20:46,125 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:20:46,126 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 23:20:46,126 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 23:20:46,128 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 23:20:46,136 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 60, SSL certificate problem: unable to get local issuer certificate
2018-07-17 23:20:46,136 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 23:20:46,137 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, Peer certificate cannot be authenticated with given CA certificates
2018-07-17 23:20:46,137 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:20:46,137 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:20:46,137 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 23:20:46,137 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 23:20:46,137 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:20:46,137 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered

2018-07-17 23:20:46,137 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration
2018-07-17 23:20:46,137 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:20:46,138 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:20:46,138 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max

WINNF.FT.C.SCS.5

CBSD

#start
2018-07-17 23:28:48,547 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:28:48,547 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:28:48,547 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 0s, next req max, next rsp registration
2018-07-17 23:28:48,547 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:28:48,548 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:28:48,548 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:28:48,548 [WARN] cbsd.cpp:774, cbsd#1, skip disabled cbsd on sector#1
2018-07-17 23:28:48,548 [WARN] cbsd.cpp:774, cbsd#2, skip disabled cbsd on sector#2
#2018-07-17 23:28:48,549 [DEBUG] timer.cpp:78, cbsd#0, grant#-1, timer req, expire in 0 seconds, for max
2018-07-17 23:28:48,550 [INFO] state.cpp:81, cbsd#0, grant#-1, send REG-REQ
2018-07-17 23:28:48,550 [DEBUG] state.cpp:82, cbsd#0, grant#-1, send request, {"registrationRequest":[{"userId":"dwiaX5","fccId":"blinq77operations","cbsdSerialNumber":"enb_sector0","cbsdCategory":"A","airInterface":{"radioTechnology":"E_UTRA"},"installationParam":{"latitude":35.172,"longitude":-
85.786,"height":6,"heightType":"AGL","horizontalAccuracy":1,"verticalAccuracy":1,"indoorDeployment":false,"antennaAzimuth":180,"antennaDowntilt":5,"antennaGain":15,"eirpCapability":30,"antennaBeamwidth":20},"groupingParam":[{"groupType":"INTERFERENCE_COORDINATION","groupId":"cell#0"}]}]}
2018-07-17 23:28:48,551 [DEBUG] tls.cpp:677, no tls crl configured
2018-07-17 23:28:48,563 [ERROR] tls.cpp:535, https://20.0.0.1:5000/v1.2/registration, error code 35, error:0407006A:rsa routines:RSA_padding_check_PKCS1_type_1:block type is not 01
2018-07-17 23:28:48,563 [WARN] tls.cpp:542, cbsd#0, grant#-1, is being terminated on this connection
2018-07-17 23:28:48,564 [FATAL] cbsd.cpp:1088, cbsd#0, grant#-1, SSL connect error
2018-07-17 23:28:48,564 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:28:48,564 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:28:48,564 [ERROR] cbsd.cpp:1101, cbsd#0, is terminated and in unregistered state
2018-07-17 23:28:48,564 [INFO] cbsd.cpp:1109, cbsd#0, try to restart after 60s
2018-07-17 23:28:48,565 [INFO] cbsd.cpp:782, cbsd#0, schedule to start
2018-07-17 23:28:48,565 [INFO] cbsd.cpp:787, cbsd#0, start from current state unregistered
2018-07-17 23:28:48,565 [DEBUG] cbsd.cpp:1163, cbsd#0, grant#-1, update, unregistered -> unregistered, schedule after 60s, next req max, next rsp registration

2018-07-17 23:28:48,565 [INFO] state.cpp:52, cbsd#0, grant#-1, switched to unregistered state
2018-07-17 23:28:48,566 [DEBUG] cbsd.cpp:1269, cbsd#0, grant#-1, transit, unregistered to unregistered
2018-07-17 23:28:48,566 [DEBUG] cbsd.cpp:1294, cbsd#0, grant#-1, schedule, cbsd#0, grant#-1, timer req, expire in 60 seconds, for max

WINNF Test Requirements:

WINNF test requirements from WINNF-TS-0122-V1.0.0 CBRS CBSD Test Specification:

2	• Make sure that UUT uses TLS v1.2 for security establishment. • Make sure UUT selects the correct cipher suite. • UUT shall use CRL or OCSP to verify the validity of the server certificate. • Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	PASS

Test Equipment

Instrument	Manufacturer	Type No.	Serial No	Calibration Period (months)	Calibration Due
THG	Fluke	77 IV	34770264	12	18-Apr-2019
DVM	VWR	61161-378	170120564	24	17-Feb-2019
Power Supply	Xantrex	XKW 60-50	E00109863	O/P Mon	-
Spectrum Analyser	Keysight	N9030A	MY55410202	12	26-Sep-2019
Attenuator	Pasternack	PE7004-10	N/S	O/P Mon	-
Switching Control Unit	Hewlett Packard	11713A	3748A060876	O/P Mon	-
RF Switch Unit	Burnsco	RARFSW 4x1	001	O/P Mon	-
Power Supply	Leader	730-3D	9801135	O/P Mon	-
Receiver	Rohde & Schwarz	ESU40	1001162	24	20-Apr-2019

Appendix A – EUT & Client Provided Details

General EUT Description

Manufacturer	Blinq Wireless
Address	140 Renfrew Drive, Suite 205, Markham ON
Product Name	**FW-300i Intelligent LTE Base Station (3550-3700MHz**
Model Number	FW-300i
Serial Number(s)	A180814008
Software Version	1.2.2
Hardware Version	A01
Test Specification/Issue/Date	FCC CFR 47 Part 96: 2017

Technical Description

The BLiNQ FW-300i system operates in the sub 6 GHz licensed frequency bands and incorporates advanced Physical Layer (PHY) and Media Access Control (MAC) layer algorithms and techniques. BLiNQ Networks includes enhanced beamforming techniques in its solutions to increase capacity and reliability beyond that of ordinary Small Cell solutions. Mitigating interference and enhancing signal reliability maximizes system performance.
The FW-300i packs up to three (3), 2x2 Multiple Input Multiple Output (MIMO) carrier radios in one compact form factor.
The FW-300i system operates in licensed Long Term Evolution (LTE) bands 42 and 43 plus Citizens Broadband Radio Service (CBRS) band 48 including 3.4 — 3.70 GHz bands in Point-to-Multipoint (PMP) configurations.

The Equipment Under Test (EUT) is shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.

EUT Configuration

Please see Appendix B for close up pictures of the unit as configured during testing

- Cables and earthing when applicable were connected as per manufacturer's specification.

Appendix B – EUT, Peripherals, and Test Setup Photos

Test setup