Test Report

As per

FCC Part 96 SAS requirements (CBRS Test Plan)

Canada

Choose certainty.
Add value.

on the

E61
FCC ID: QGGIPA495X

Issued by:
TÜV SÜD Canada Inc.
1280 Teron Rd,
Ottawa, ON

Testing produced for

ip access

Scott Drysdale.
Test Personnel

Scott Drysdale

See Appendix A for full client & EUT details.

Nick Viktorov
Report Reviewer

Nick Viktorov

ACCREDITED
Testing Laboratory
Certificate #2955.19

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Table of Contents

Table of Contents 2

Report Scope 3

Summary 4

Test Results Summary 5
Notes, Justifications, or Deviations 14

Applicable Standards, Specifications and Methods 16

Document Revision Status 17

Definitions and Acronyms 18

Testing Facility 19

Calibrations and Accreditations 19
Testing Environmental Conditions and Dates 20

Detailed Test Results Section 21

Authorization transmit after it receives authorization from a SAS 22
Check the device registration and authorization with the SAS 47
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. 47
Confirm that the device transmits at a power level less than or equal to the maximum power level approved by the SAS 145

WINNF Security Test Case Analysis 147

WINNF.FT.C.SCS.2 149
WINNF.FT.C.SCS.3 151
WINNF.FT.C.SCS.4 153
WINNF.FT.C.SCS.5 155

Appendix A – EUT & Client Provided Details 158

Technical Description 160

Appendix B – EUT, Peripherals, and Test Setup Photos 163

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Report Scope

This report addresses the EMC verification testing and test results of the **E61** 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)	**E61**
EUT passed all tests performed	Yes
Tests conducted by	Scott Drysdale

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

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Test Results Summary

Section as per Working Document WINNF-TS-0122

Section	CBSD	DP	Test Case ID	Test Case Title	RF Measurement Requirement	Pass / Fail
6.1.4.1.1	X	--	WINNF.FT.C.REG.1	Multi-Step registration	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.1.2	--	X	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.1.3	X	--	WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.1.4	--	X	WINNF.FT.D.REG.4	Domain Proxy Single-Step registration for Cat A CBSD (Note: Mandatory for without CPI, if EUT will always have signed CPI – asked for email waiver)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.1.5	X	--	WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.1.6	--	X	WINNF.FT.D.REG.6	Domain Proxy Single-Step registration for CBSD with CPI signed data	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.1.7	X	X	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	Test waits until transmission starts, then trigger an installationParam change.	N/A

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					• Record time at which transmission stops. Time must be within 60 seconds of the installationParam change taking effect.	
6.1.4.2.1	X	--	WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.2.2	--	X	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.2.3	X	--	WINNF.FT.C.REG.10	Pending registration (responseCode 200)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.2.4	--	X	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.2.5	X	--	WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.2.6	--	X	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.2.7	X	--	WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A

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6.1.4.2.8	--	X	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.2.9	X	--	WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.2.10	--	X	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version responseCode 100)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.2.11	X	--	WINNF.FT.C.REG.18	Group Error (responseCode 201)	Monitor for 60 seconds after REG message sent. No transmission during test.	N/A
6.1.4.2.12	--	X	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.1.4.3.1	X	X	WINNF.FT.C.REG.20	Category A CBSD location update		N/A
6.3.4.2.1	X	X	WINNF.FT.C.GRA.1 (TYPO FIXED D TO C)	Unsuccessful Grant responseCode=400 (INTERFERENCE)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.3.4.2.2	X	X	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	Monitor for 60 seconds after REG message sent. No transmission during test.	Pass
6.4.4.1.1	X	--	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.	N/A

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					• After transmission starts, measure that transmission is within the granted channel (frequencyLow, frequencyHigh)	
6.4.4.1.2	--	X	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)	Pass
6.4.4.2.1	X	X	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	Pass

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6.4.4.2.2	X	--	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)		N/A
6.4.4.2.3	X	X	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	Pass
6.4.4.2.4	X	X	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	Pass
6.4.4.2.5	X	X	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	Pass
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	Pass

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					criteria, but Passcheck) • CBSD2: must stop transmission within 60 seconds of being sent heartbeatResponse with responseCode = 500	
6.4.4.3.1	X	X	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	Pass
6.4.4.3.2	X	X	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	Pass
6.5.4.2.1	X	--	WINNF.FT.C.MES.1	Registration Response contains measReportConfig	No RF monitoring	N/A
6.5.4.2.2	--	X	WINNF.FT.D.MES.2	Domain Proxy Registration Response contains measReportConfig	No RF monitoring	Pass
6.5.4.2.3	X	X	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	No RF monitoring	Pass

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6.5.4.2.4	X	--	WINNF.FT.C.MES.4	Heartbeat Response contains measReportConfig	No RF monitoring	N/A
6.5.4.2.5	--	X	WINNF.FT.D.MES.5	Domain Proxy Heartbeat Response contains measReportConfig	No RF monitoring	N/A
6.6.4.1.1	X	--	WINNF.FT.C.RLQ.1	Successful Relinquishment	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message.	N/A
6.6.4.1.2	--	X	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.	Pass
6.7.4.1.1	X	--	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)	N/A
6.7.4.1.2	--	X	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	Monitor RF transmission. Ensure:	Pass

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					• CBSD stops transmission at any time prior to sending the relinquishmentRequest message or deregistrationRequest message (whichever is sent first)	
6.8.4.1.1	X	X	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	No RF transmission during test Check the tcpdump for the TLS information	Pass
6.8.4.2.1	X	X	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	No RF transmission during test Check the tcpdump for the TLS information	Pass
6.8.4.2.2	X	X	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	No RF transmission during test Check the tcpdump for the TLS information	Pass
6.8.4.2.3	X	X	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	No RF transmission during test Check the tcpdump for the TLS information	Pass
6.8.4.2.4	X	X	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	No RF transmission during test Check the tcpdump for the TLS information	Pass
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), lower/middle/upper frequencies as	Pass

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					representative of band) for test. Measure at max transmit power, and reduce in steps of 3 dB to minimum declared transmit power.	

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.

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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 N/A test cases, the following justifications apply:

Test case Name	Description	Justification	Required for Certification
WINNF.FT.C.REG.1	Multi-Stepregistration	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.3	Single-Stepregistrationfor	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.D.REG.4	DomainProxySingle-Step	Not Supported	Mandatory for UUT which supports single-step registration.
WINNF.FT.C.REG.5	Single-Stepregistrationfor	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.D.REG.6	DomainProxySingle-Step	Not Supported	Mandatory for UUT which supports single-step registration
WINNF.FT.C.REG.7	Registrationduetochangeofan	Not Supported	Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration.
WINNF.FT.C.REG.8	MissingRequiredparameters	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.10	Pendingregistration	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.12	Invalidparameter(responseCode	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.14	BlacklistedCBSD(responseCode	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.16	UnsupportedSASprotocol	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.18	GroupError(responseCode201)	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.REG.20	CategoryACBSDlocation	Not Supported	Mandatory for UUT which supports single-step registration.
WINNF.FT.C.HBT.1	HeartbeatSuccessCase(first	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.HBT.4	HeartbeatresponseCode=500	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.HBT.11	SuccessfulGrantRenewalin	Supported	Optional

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WINNF.FT.C.MES.1	RegistrationResponsecontains	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.MES.3	GrantResponsecontains	Not Supported	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type
WINNF.FT.C.MES.4	HeartbeatResponsecontains	Not Supported	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type
WINNF.FT.D.MES.5	DomainProxyHeartbeat	Not Supported	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type
WINNF.FT.C.RLQ.1	SuccessfulRelinquishment	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.RLQ.3	UnsuccessfulRelinquishment,	Not Supported	Optional
WINNF.FT.D.RLQ.4	DomainProxyUnsuccessful	Optional	Optional
WINNF.FT.C.RLQ.5	UnsuccessfulRelinquishment,	Not Supported	Optional
WINNF.FT.D.RLQ.6	DomainProxyUnsuccessful	Optional	Optional
WINNF.FT.C.DRG.1	SuccessfulDeregistration	Not Supported	Mandatory for UUT which supports CBSD to SAS direct connectivity
WINNF.FT.C.DRG.3	DeregistrationresponseCode=102	Not Supported	Optional
WINNF.FT.D.DRG.4	DomainProxyDeregistration	Optional	Optional
WINNF.FT.C.DRG.5	DeregistrationresponseCode=103	Optional	Optional

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.

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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

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Document Revision Status

Revision 000: June 20th, 2019 First Revision.

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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'.

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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 #2955.19. 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.

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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)
14-15 May, 2019	All	SD	20-23	40-55	96.106

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Detailed Test Results Section

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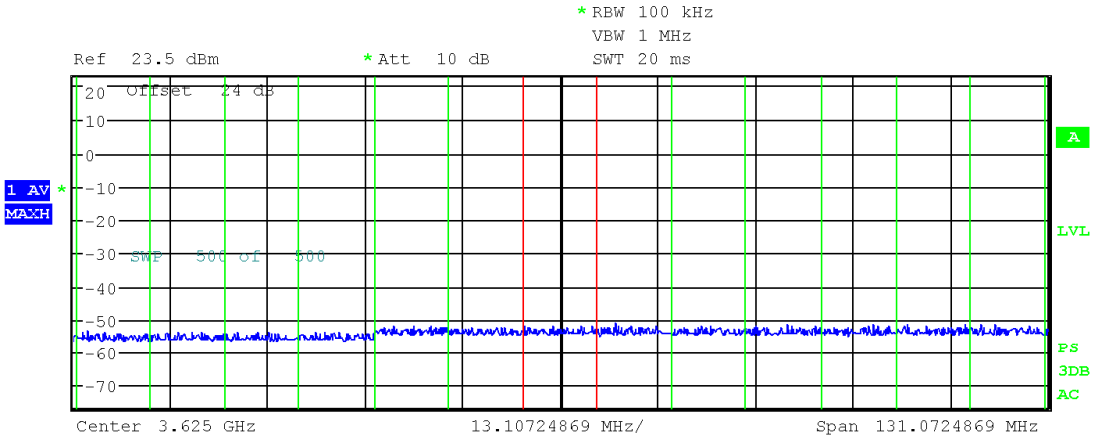
Authorization transmit after it receives authorization from a SAS.

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



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-33.86 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-33.91 dBm	-33.75 dBm
Alternate	10.000 MHz	20.000 MHz	-33.88 dBm	-33.88 dBm
2nd Alt	10.000 MHz	30.000 MHz	-35.58 dBm	-33.83 dBm
3rd Alt	10.000 MHz	40.000 MHz	-35.68 dBm	-33.83 dBm
4th Alt	10.000 MHz	50.000 MHz	-35.60 dBm	-33.74 dBm
5th Alt	10.000 MHz	60.000 MHz	-35.65 dBm	-33.73 dBm

Date: 14.MAY.2019 10:38:31

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2019-05-14T14:27:32.475Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:27:32.478Z - INFO - the selected test from the user : WINNF.FT.D.REG.2 is starting now
2019-05-14T14:27:44.523Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T14:27:44.566Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T14:27:46.147Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T14:27:46.148Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
     {
       "cbsdId": "IPaccess123Mock-SAS0100008267",
       "response": {
         "responseCode": 400
       }
     }
   ]
}
2019-05-14T14:28:04.993Z - INFO - registration request from CBRS  : {
   "registrationRequest": [
     {
       "airInterface": {
         "radioTechnology": "E_UTRA"
       },
       "callSign": "",
       "cbsdCategory": "A",
       "cbsdInfo": {
         "hardwareVersion": "495X030-00065",
         "model": "495X030-00065",
         "vendor": "000295"
       },
       "cbsdSerialNumber": "0100008310",
       "fccId": "IPaccess123",
       "measCapability": [
         "RECEIVED_POWER_WITHOUT_GRANT"
       ],
       "userId": "pgMyed"
```


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```
      }
    ]
}
2019-05-14T14:28:05.031Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008310",
         "response": {
            "responseCode": 0
         }
      }
   ]
}
```


2019-05-14T14:28:06.532Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:28:06.533Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T14:28:45.772Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T14:28:45.773Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T14:28:47.059Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T14:28:50.227Z - INFO - The final result of the test : WINNF.FT.D.REG.2 is - passed and :the additional comments for the current test are : no

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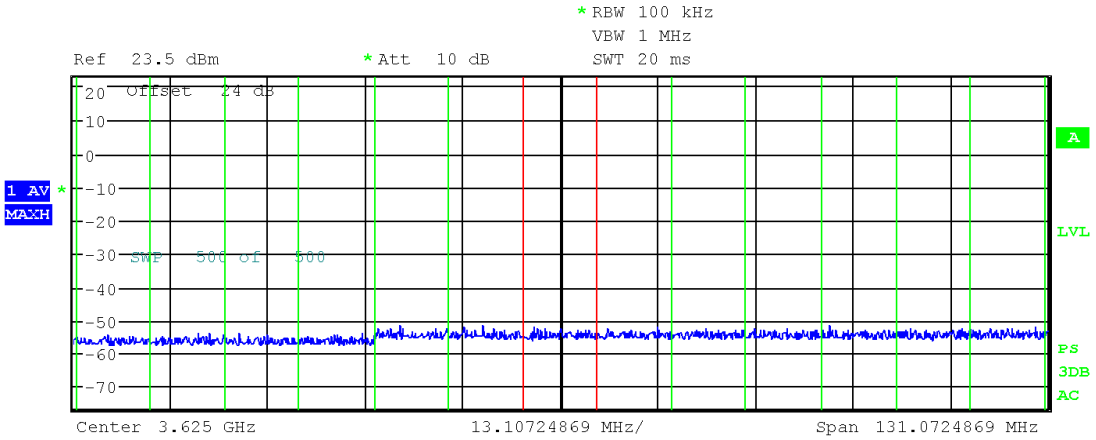
6.1.4.2.2	X	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-34.56 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-34.60 dBm	-34.58 dBm
Alternate	10.000 MHz	20.000 MHz	-34.53 dBm	-34.59 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.32 dBm	-34.52 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.45 dBm	-34.54 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.32 dBm	-34.46 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.41 dBm	-34.41 dBm

Date: 14.MAY.2019 10:42:48

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2019-05-14T14:42:12.144Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:42:12.146Z - INFO - the selected test from the user : WINNF.FT.D.REG.9 is starting now
2019-05-14T14:42:23.710Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T14:42:23.756Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
```


2019-05-14T14:42:44.611Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
```


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```
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008310",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T14:42:44.649Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
```


2019-05-14T14:42:46.209Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:42:46.212Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T14:43:10.422Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T14:43:10.423Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T14:43:12.085Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T14:43:21.231Z - INFO - The final result of the test : WINNF.FT.D.REG.9 is - passed and :the additional comments for the current test are : no

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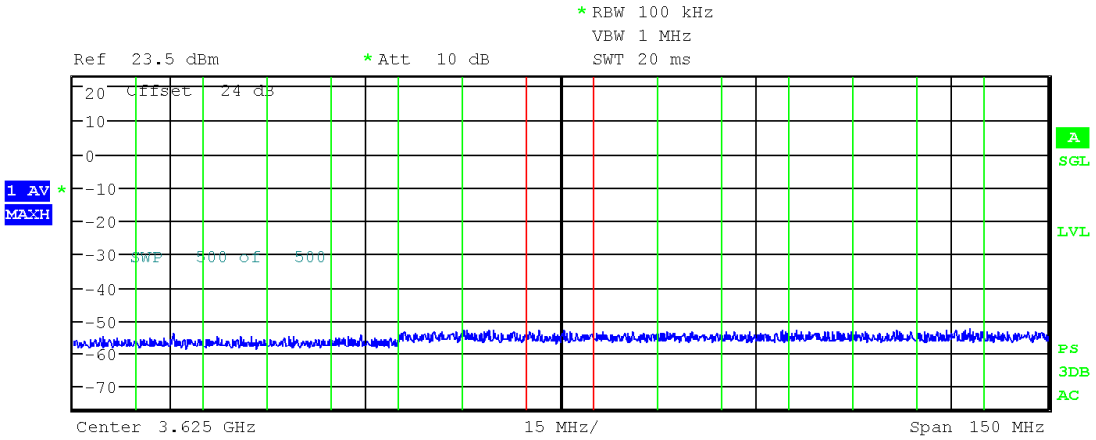
6.1.4.2.4	X	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-35.30 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-35.09 dBm	-35.28 dBm
Alternate	10.000 MHz	20.000 MHz	-35.17 dBm	-35.22 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.89 dBm	-35.20 dBm
3rd Alt	10.000 MHz	40.000 MHz	-37.05 dBm	-35.23 dBm
4th Alt	10.000 MHz	50.000 MHz	-37.07 dBm	-35.20 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.98 dBm	-35.12 dBm

Date: 14.MAY.2019 10:46:31

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2019-05-14T14:46:15.250Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:46:15.252Z - INFO - the selected test from the user : WINNF.FT.D.REG.11 is starting now
2019-05-14T14:46:26.488Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T14:46:26.532Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 200
      }
    }
  ]
}
```


2019-05-14T14:46:45.723Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
```


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```
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008310",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T14:46:45.762Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
        "response": {
          "responseCode": 200
        }
      }
   ]
}
```


2019-05-14T14:46:47.310Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:46:47.313Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T14:47:42.088Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T14:47:42.091Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T14:47:43.901Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T14:47:47.614Z - INFO - The final result of the test : WINNF.FT.D.REG.11 is - passed and :the additional comments for the current test are : no

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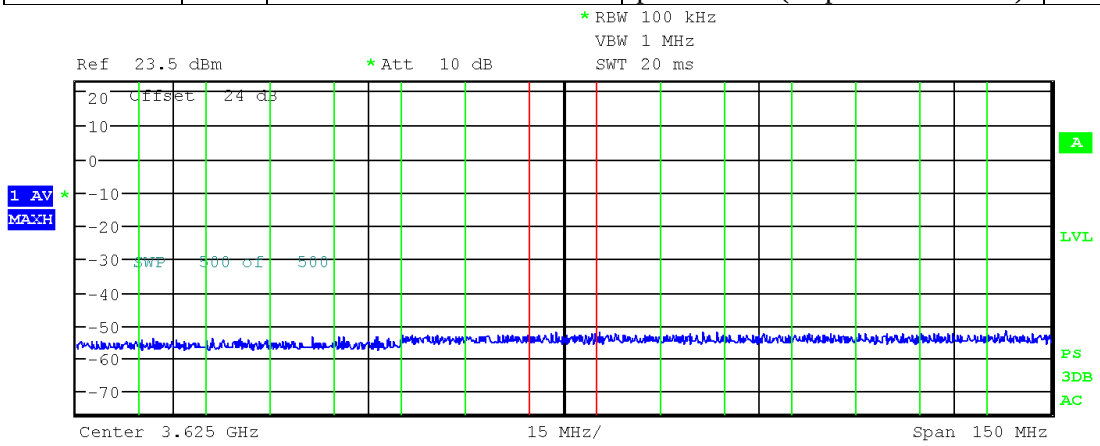
6.1.4.2.6	X	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-34.31 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-34.36 dBm	-34.28 dBm
Alternate	10.000 MHz	20.000 MHz	-34.46 dBm	-34.35 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.10 dBm	-34.39 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.21 dBm	-34.30 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.12 dBm	-34.31 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.22 dBm	-34.26 dBm

Date: 14.MAY.2019 10:51:56

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2019-05-14T14:49:34.525Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:49:34.528Z - INFO - the selected test from the user : WINNF.FT.D.REG.13 is starting now
2019-05-14T14:49:50.608Z - INFO - registration request from CBRS : {
"registrationRequest": [
{
"airInterface": {
"radioTechnology": "E_UTRA"
},
"callSign": "",
"cbsdCategory": "A",
"cbsdInfo": {
"hardwareVersion": "495X030-00065",
"model": "495X030-00065",
"vendor": "000295"
},
"cbsdSerialNumber": "0100008267",
"fccId": "IPaccess123",
"measCapability": [
"RECEIVED_POWER_WITHOUT_GRANT"
],
"userId": "pgMyed"
}
]
}
2019-05-14T14:49:50.651Z - INFO - engine sent successfully, the response to CBRS : {
"registrationResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T14:49:52.231Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",

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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T14:49:52.232Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
     {
       "cbsdId": "IPaccess123Mock-SAS0100008267",
       "response": {
         "responseCode": 400
       }
     }
   ]
}
2019-05-14T14:50:30.806Z - INFO - registration request from CBRS  : {
   "registrationRequest": [
     {
       "airInterface": {
         "radioTechnology": "E_UTRA"
       },
       "callSign": "",
       "cbsdCategory": "A",
       "cbsdInfo": {
         "hardwareVersion": "495X030-00065",
         "model": "495X030-00065",
         "vendor": "000295"
       },
       "cbsdSerialNumber": "0100008310",
       "fccId": "IPaccess123",
       "measCapability": [
         "RECEIVED_POWER_WITHOUT_GRANT"
       ],
       "userId": "pgMyed"
```


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```
      }
    ]
}
2019-05-14T14:50:30.844Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
         "response": {
            "responseCode": 103
         }
      }
   ]
}
```


2019-05-14T14:50:32.613Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:50:32.614Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T14:53:05.252Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T14:53:05.254Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T14:53:07.670Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T14:53:10.104Z - INFO - The final result of the test : WINNF.FT.D.REG.13 is - passed and :the additional comments for the current test are : no

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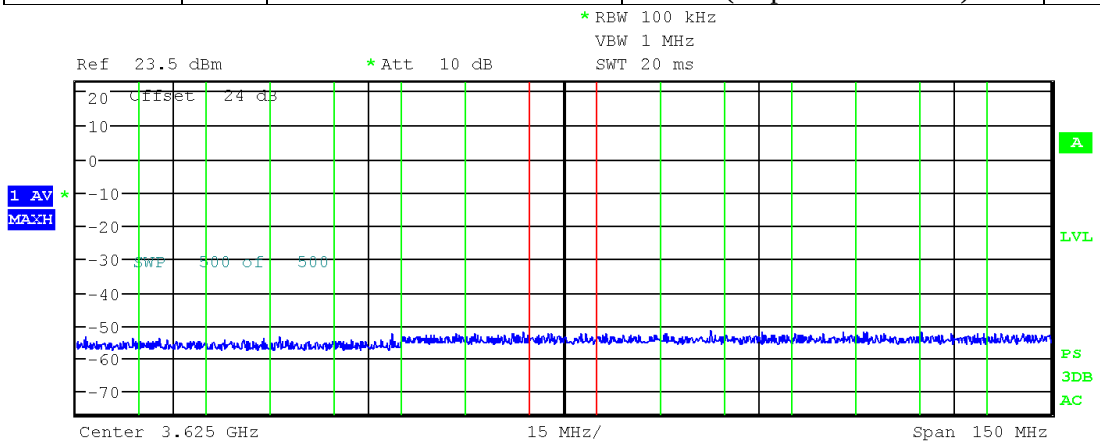
6.1.4.2.8	X	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-34.48 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-34.42 dBm	-34.44 dBm
Alternate	10.000 MHz	20.000 MHz	-34.43 dBm	-34.43 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.09 dBm	-34.40 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.21 dBm	-34.36 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.31 dBm	-34.38 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.12 dBm	-34.35 dBm

Date: 14.MAY.2019 10:56:25

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2019-05-14T14:55:26.034Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:55:26.036Z - INFO - the selected test from the user : WINNF.FT.D.REG.15 is starting now
2019-05-14T14:55:38.407Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T14:55:38.451Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T14:55:40.048Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T14:55:40.049Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
     {
       "cbsdId": "IPaccess123Mock-SAS0100008267",
       "response": {
         "responseCode": 400
       }
     }
   ]
}
2019-05-14T14:55:54.206Z - INFO - registration request from CBRS  : {
   "registrationRequest": [
     {
       "airInterface": {
         "radioTechnology": "E_UTRA"
       },
       "callSign": "",
       "cbsdCategory": "A",
       "cbsdInfo": {
         "hardwareVersion": "495X030-00065",
         "model": "495X030-00065",
         "vendor": "000295"
       },
       "cbsdSerialNumber": "0100008310",
       "fccId": "IPaccess123",
       "measCapability": [
         "RECEIVED_POWER_WITHOUT_GRANT"
       ],
       "userId": "pgMyed"
```


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```
      }
    ]
}
2019-05-14T14:55:54.243Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
         "response": {
            "responseCode": 101
         }
      }
   ]
}
```


2019-05-14T14:55:56.090Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:55:56.095Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T14:57:47.124Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T14:57:47.126Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T14:57:50.316Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T14:57:54.487Z - INFO - The final result of the test : WINNF.FT.D.REG.15 is - passed and :the additional comments for the current test are : no

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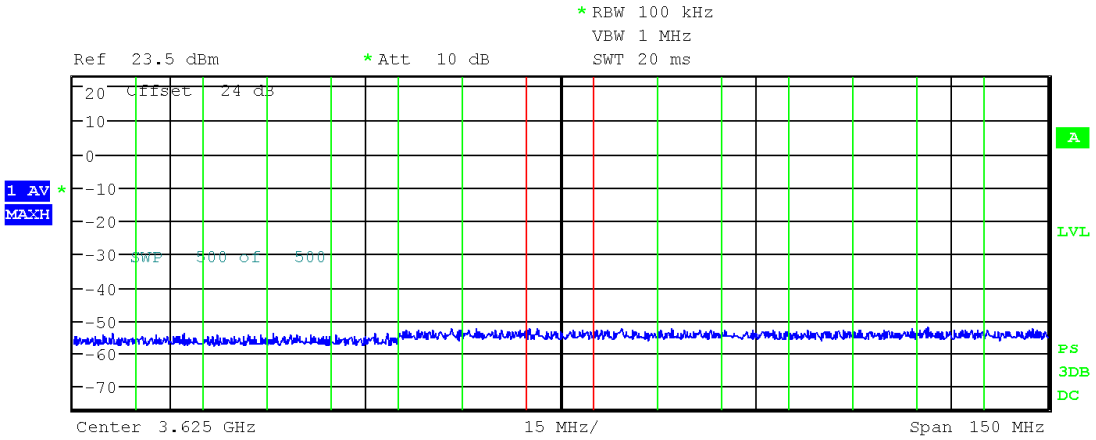
6.1.4.2.10	X	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version responseCode 100)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-34.60 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-34.50 dBm	-34.53 dBm
Alternate	10.000 MHz	20.000 MHz	-34.57 dBm	-34.56 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.26 dBm	-34.66 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.32 dBm	-34.57 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.36 dBm	-34.57 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.36 dBm	-34.52 dBm

Date: 14.MAY.2019 11:00:18

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2019-05-14T14:58:55.047Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T14:58:55.049Z - INFO - the selected test from the user : WINNF.FT.D.REG.17 is starting now
2019-05-14T14:59:10.203Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T14:59:10.245Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 100
      }
    }
  ]
}
```


2019-05-14T14:59:22.525Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
```


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```
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008310",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T14:59:22.563Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
        "response": {
          "responseCode": 100
        }
      }
    ]
}
```


2019-05-14T14:59:24.100Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T14:59:24.103Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T15:00:59.484Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T15:00:59.487Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T15:01:00.334Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T15:01:02.830Z - INFO - The final result of the test : WINNF.FT.D.REG.17 is - passed and :the additional comments for the current test are : no

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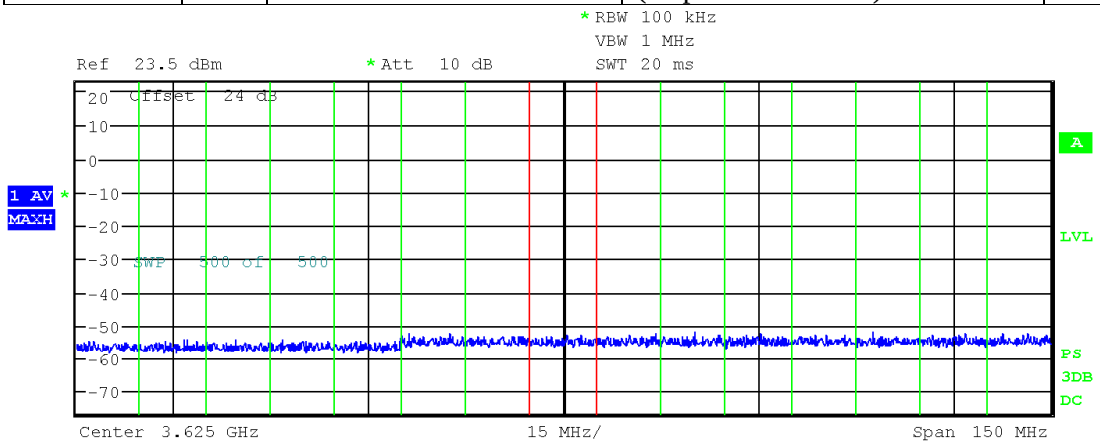
6.1.4.2.12	X	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-35.24 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-35.08 dBm	-35.01 dBm
Alternate	10.000 MHz	20.000 MHz	-35.08 dBm	-35.08 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.79 dBm	-35.01 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.69 dBm	-35.06 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.84 dBm	-35.07 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.90 dBm	-34.95 dBm

Date: 14.MAY.2019 11:02:02

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2019-05-14T15:02:25.913Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T15:02:25.916Z - INFO - the selected test from the user : WINNF.FT.D.REG.19 is starting now
2019-05-14T15:02:40.242Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T15:02:40.284Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T15:02:41.881Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T15:02:41.882Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
     {
       "cbsdId": "IPaccess123Mock-SAS0100008267",
       "response": {
         "responseCode": 400
       }
     }
   ]
}
2019-05-14T15:02:51.812Z - INFO - registration request from CBRS  : {
   "registrationRequest": [
     {
       "airInterface": {
         "radioTechnology": "E_UTRA"
       },
       "callSign": "",
       "cbsdCategory": "A",
       "cbsdInfo": {
         "hardwareVersion": "495X030-00065",
         "model": "495X030-00065",
         "vendor": "000295"
       },
       "cbsdSerialNumber": "0100008310",
       "fccId": "IPaccess123",
       "measCapability": [
         "RECEIVED_POWER_WITHOUT_GRANT"
       ],
       "userId": "pgMyed"
```


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```
      }
    ]
}
2019-05-14T15:02:51.851Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
         "response": {
            "responseCode": 201
         }
      }
   ]
}
```


2019-05-14T15:02:52.974Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T15:02:52.977Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T15:03:37.704Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T15:03:37.707Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :
2019-05-14T15:03:39.132Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n
2019-05-14T15:03:41.199Z - INFO - The final result of the test : WINNF.FT.D.REG.19 is - passed and :the additional comments for the current test are : no

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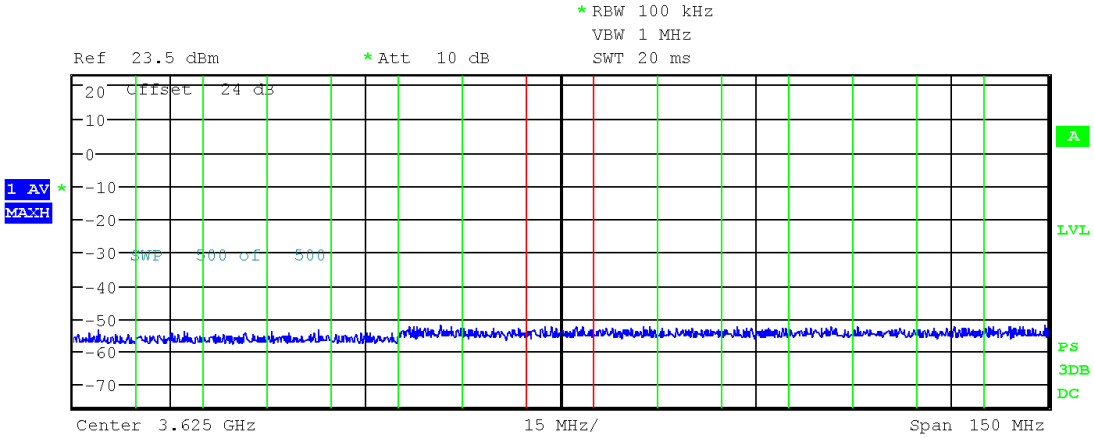
Check the device registration and authorization with the SAS*, *Confirm that the device changes its operating power and/or channel in response to a command from the SAS and Confirm that the device correctly configures based on the different license classes.

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



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	10.000 MHz		-34.61 dBm	
Adjacent	10.000 MHz	10.000 MHz	-34.72 dBm	-34.63 dBm
Alternate	10.000 MHz	20.000 MHz	-34.52 dBm	-34.63 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.32 dBm	-34.55 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.32 dBm	-34.56 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.38 dBm	-34.60 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.39 dBm	-34.67 dBm

Date: 14.MAY.2019 11:11:04

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2019-05-14T15:09:45.027Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T15:09:45.030Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
2019-05-14T15:10:05.577Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T15:10:05.635Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T15:10:07.236Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
```


2019-05-14T15:10:07.244Z - INFO - engine sent successfully, the response to CBRS : {


```
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 400
      }
    }
  ]
}
```


2019-05-14T15:10:09.066Z - INFO - arrived to nstep starting question answer session with the technician

2019-05-14T15:10:09.068Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2019-05-14T15:11:12.987Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2019-05-14T15:11:14.429Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current test are : no

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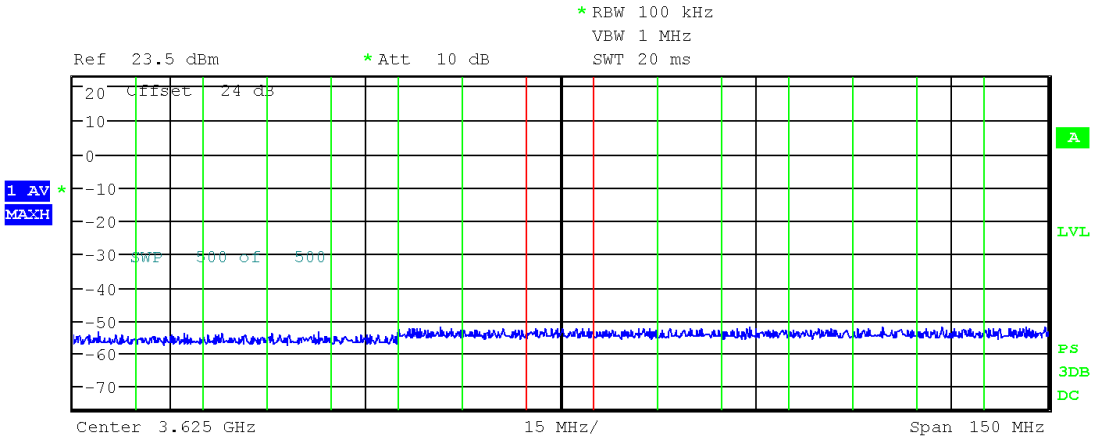
6.3.4.2.2	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	Monitor for 60 seconds after REG message sent. No transmission during test.	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	10.000 MHz		-34.26 dBm	
Adjacent	10.000 MHz	10.000 MHz	-34.38 dBm	-34.31 dBm
Alternate	10.000 MHz	20.000 MHz	-34.24 dBm	-34.26 dBm
2nd Alt	10.000 MHz	30.000 MHz	-36.00 dBm	-34.24 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.00 dBm	-34.26 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.04 dBm	-34.22 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.11 dBm	-34.29 dBm

Date: 14.MAY.2019 11:14:13

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2019-05-14T15:14:00.531Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T15:14:00.534Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now
2019-05-14T15:14:11.362Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T15:14:11.418Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T15:14:13.004Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T15:14:13.014Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "response": {
          "responseCode": 401
        }
      }
    ]
}
```


2019-05-14T15:14:14.558Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T15:14:14.560Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2019-05-14T15:15:37.837Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2019-05-14T15:15:39.797Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current test are : no

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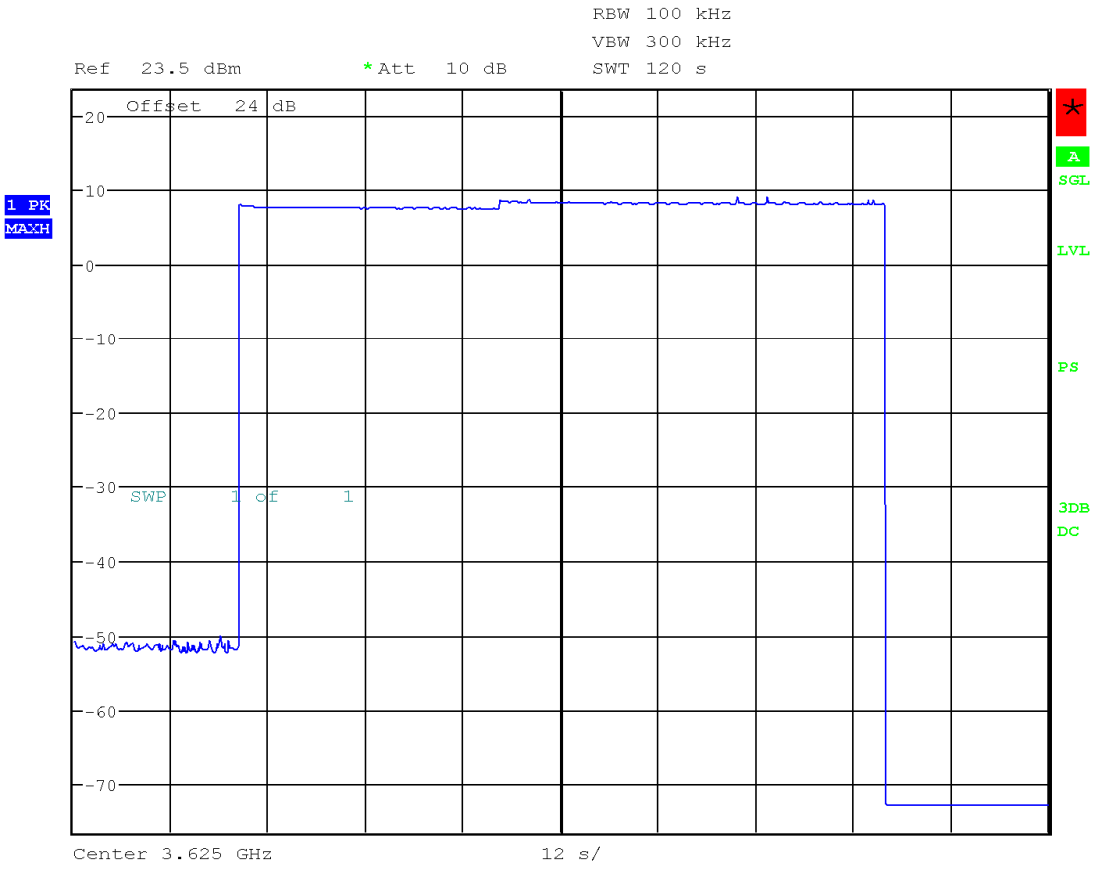
6.4.4.1.2	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	Monitor RF from start of test. Ensure that: • Transmission does not start until time of first heartbeat response or after. • After transmission starts, measure that transmission is within the granted channel (frequencyLow,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



Date: 14.MAY.2019 13:24:01

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2019-05-14T17:24:00.381Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T17:24:00.382Z - INFO - the selected test from the user : WINNF.FT.D.HBT.2 is starting now
2019-05-14T17:24:11.995Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T17:24:12.051Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T17:24:13.792Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T17:24:13.801Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "channelType": "GAA",
        "grantExpireTime": "2019-05-21T17:24:13Z",
        "grantId": "370969783",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T17:24:15.473Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "370969783",
        "operationState": "GRANTED"
      }
    ]
}
2019-05-14T17:24:15.480Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "370969783",
        "response": {
```


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```
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T17:27:35Z"
    }
  ]
}
2019-05-14T17:24:44.130Z - INFO - registration request from CBRS  : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008310",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T17:24:44.182Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T17:24:45.870Z - INFO - grant request from CBRS  : {
```


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```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
    }
  ]
}
2019-05-14T17:24:45.878Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T17:24:45Z",
      "grantId": "686573937",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T17:24:47.538Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "686573937",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T17:24:47.544Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
```


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"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:28:07Z"
}
]
}
2019-05-14T17:25:10.082Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "370969783",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:25:10.084Z - INFO - Time interval between two heartbeat request messages is: 54.608588, limit is: 65.0
2019-05-14T17:25:10.089Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "370969783",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:28:30Z"
}
]
}
2019-05-14T17:25:42.107Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"operationState": "AUTHORIZED"
}

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```
  ]
}
2019-05-14T17:25:42.108Z - INFO - Time interval between two heartbeat request messages is:
54.569642, limit is: 65.0
2019-05-14T17:25:42.115Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "686573937",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T17:29:02Z"
    }
  ]
}
2019-05-14T17:26:04.628Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "370969783",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T17:26:04.629Z - INFO - Time interval between two heartbeat request messages is:
54.545772, limit is: 65.0
2019-05-14T17:26:04.636Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "370969783",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T17:29:24Z"
    }
  ]
}
```


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2019-05-14T17:26:36.660Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:26:36.662Z - INFO - Time interval between two heartbeat request messages is: 54.55252, limit is: 65.0
2019-05-14T17:26:36.666Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:29:56Z"
}
]
}
2019-05-14T17:26:59.171Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "370969783",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:26:59.173Z - INFO - Time interval between two heartbeat request messages is: 54.543785, limit is: 65.0
2019-05-14T17:26:59.178Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "370969783",

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```
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2019-05-14T17:30:19Z"
      }
    ]
}
2019-05-14T17:27:31.198Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008310",
        "grantId": "686573937",
        "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:27:31.200Z - INFO - Time interval between two heartbeat request messages is:
54.537946, limit is: 65.0
2019-05-14T17:27:31.205Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008310",
        "grantId": "686573937",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2019-05-14T17:30:51Z"
      }
   ]
}
2019-05-14T17:27:53.706Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "370969783",
        "operationState": "AUTHORIZED"
      }
   ]
}
```


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2019-05-14T17:27:53.708Z - INFO - Time interval between two heartbeat request messages is: 54.534769, limit is: 65.0
2019-05-14T17:27:53.714Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "370969783",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:31:13Z"
}
]
}
2019-05-14T17:28:25.754Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:28:25.755Z - INFO - Time interval between two heartbeat request messages is: 54.555816, limit is: 65.0
2019-05-14T17:28:25.761Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "686573937",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:31:45Z"
}
]
}
2019-05-14T17:28:48.229Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [

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```
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "370969783",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T17:28:48.231Z - INFO - Time interval between two heartbeat request messages is:
54.523132, limit is: 65.0
2019-05-14T17:28:48.236Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "370969783",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T17:32:08Z"
    }
  ]
}
2019-05-14T17:29:20.308Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "686573937",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T17:29:20.309Z - INFO - Time interval between two heartbeat request messages is:
54.553787, limit is: 65.0
2019-05-14T17:29:20.315Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "686573937",
      "response": {
        "responseCode": 0
```


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```
        },
        "transmitExpireTime": "2019-05-14T17:32:40Z"
      }
    ]
}
```


2019-05-14T17:29:21.847Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T17:29:21.851Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2019-05-14T17:29:30.510Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2019-05-14T17:29:30.511Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :
2019-05-14T17:29:35.035Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y
2019-05-14T17:29:35.036Z - INFO - the question is : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2019-05-14T17:29:38.367Z - INFO - for the question : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2019-05-14T17:29:38.367Z - INFO - the question is : Did CBSD2 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :
2019-05-14T17:29:42.601Z - INFO - for the question : Did CBSD2 transmit only within the frequency range specified in its grantRequest message? , the user choose y
2019-05-14T17:29:44.611Z - INFO - The final result of the test : WINNF.FT.D.HBT.2 is - passed and :the additional comments for the current test are : no

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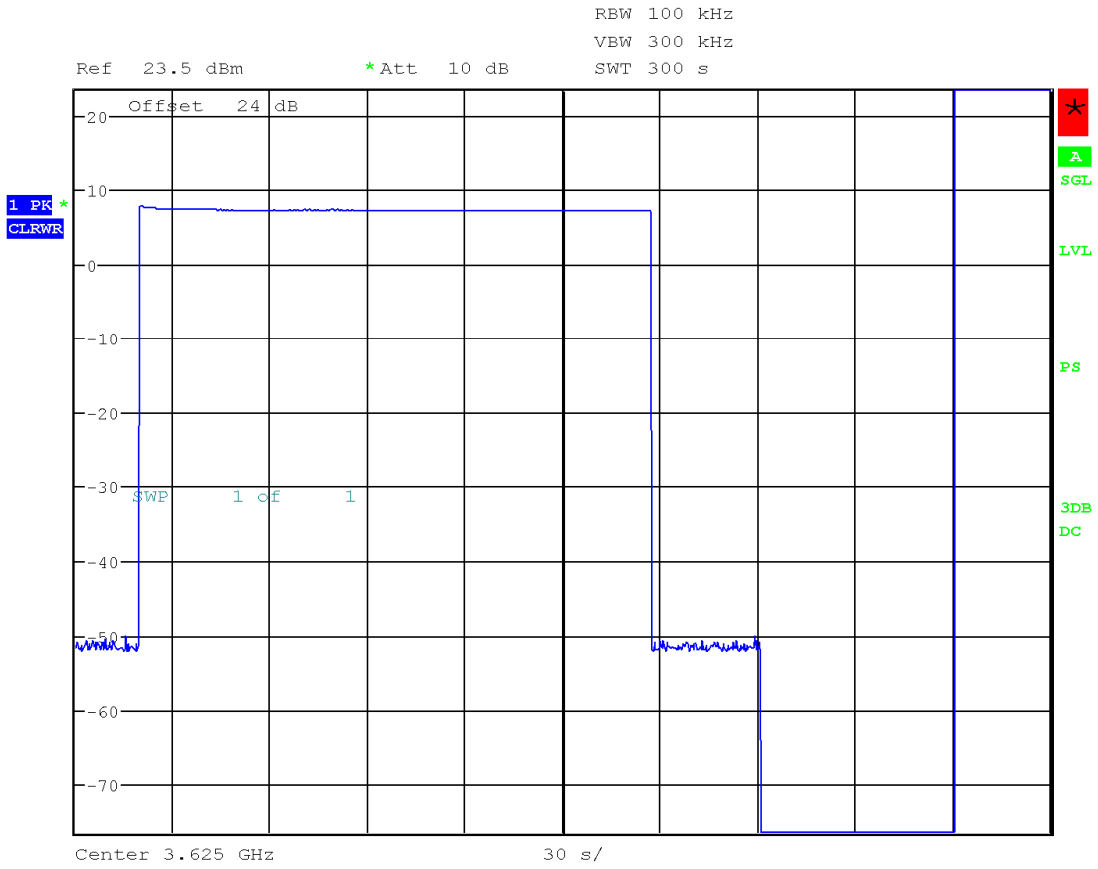
6.4.4.2.1	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	Monitor RF transmission. Ensure that: • CBSD stops transmission within 60 seconds of the heartbeatResponse which contains responseCode = 105	P



Date: 14.MAY.2019 13:36:52

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2019-05-14T17:32:12.022Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T17:32:12.024Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now
2019-05-14T17:35:11.575Z - INFO - registration request from CBRS : {
"registrationRequest": [
{
"airInterface": {
"radioTechnology": "E_UTRA"
},
"callSign": "",
"cbsdCategory": "A",
"cbsdInfo": {
"hardwareVersion": "495X030-00065",
"model": "495X030-00065",
"vendor": "000295"
},
"cbsdSerialNumber": "0100008267",
"fccId": "IPaccess123",
"measCapability": [
"RECEIVED_POWER_WITHOUT_GRANT"
],
"userId": "pgMyed"
}
]
}
2019-05-14T17:35:11.630Z - INFO - engine sent successfully, the response to CBRS : {
"registrationResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T17:35:13.235Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"operationParam": {

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```
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T17:35:13.242Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T17:35:13Z",
      "grantId": "785939694",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T17:35:14.899Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "785939694",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T17:35:14.904Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "785939694",
      "response": {
        "responseCode": 0
```


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```
        },
        "transmitExpireTime": "2019-05-14T17:38:34Z"
      }
    ]
}
2019-05-14T17:36:09.483Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "785939694",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:36:09.485Z - INFO - Time interval between two heartbeat request messages is:
54.584167, limit is: 65.0
2019-05-14T17:36:09.489Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "785939694",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T17:39:29Z"
      }
   ]
}
2019-05-14T17:37:03.967Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "785939694",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:37:03.968Z - INFO - Time interval between two heartbeat request messages is:
54.483649, limit is: 65.0
```


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2019-05-14T17:37:03.974Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "785939694",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:40:23Z"
}
]
}
2019-05-14T17:37:58.510Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "785939694",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:37:58.512Z - INFO - Time interval between two heartbeat request messages is: 54.54364, limit is: 65.0
2019-05-14T17:37:58.517Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "785939694",
"response": {
"responseCode": 105
},
"transmitExpireTime": "2019-05-14T17:37:58Z"
}
]
}
2019-05-14T17:37:59.596Z - INFO - arrived to nstep starting question answer session with the technician

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2019-05-14T17:37:59.599Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? please choose one of the answers :
2019-05-14T17:38:15.128Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y
2019-05-14T17:38:16.605Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current test are : no

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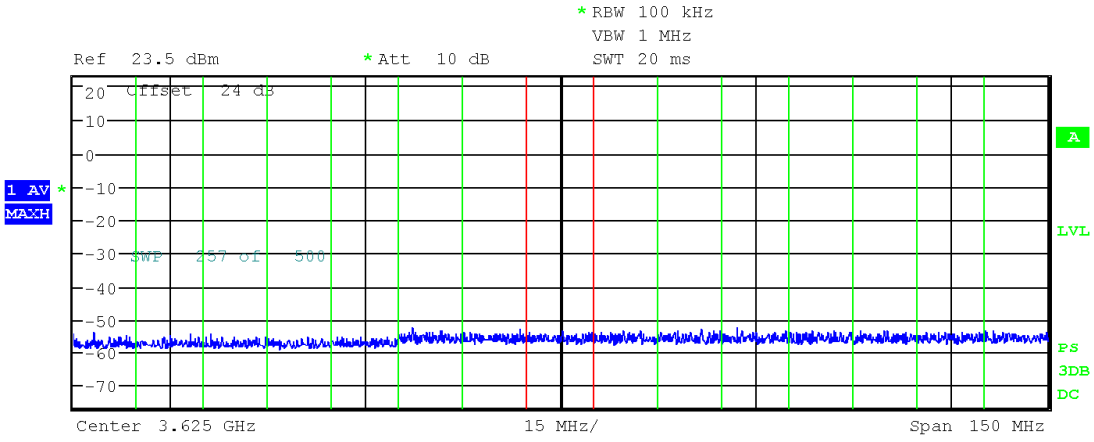
6.4.4.2.3	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	Monitor RF transmission from start of test. Ensure there is no transmission during the test	p



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	**10.000 MHz**		**-35.85 dBm**	
Adjacent	10.000 MHz	10.000 MHz	-35.82 dBm	-35.79 dBm
Alternate	10.000 MHz	20.000 MHz	-35.72 dBm	-35.67 dBm
2nd Alt	10.000 MHz	30.000 MHz	-37.34 dBm	-35.79 dBm
3rd Alt	10.000 MHz	40.000 MHz	-37.56 dBm	-35.77 dBm
4th Alt	10.000 MHz	50.000 MHz	-37.57 dBm	-35.81 dBm
5th Alt	10.000 MHz	60.000 MHz	-37.49 dBm	-35.65 dBm

Date: 14.MAY.2019 11:42:55

2019-05-14T15:35:14.659Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T15:35:14.661Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now
2019-05-14T15:35:24.616Z - INFO - registration request from CBRS : {
"registrationRequest": [
{

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```
        "airInterface": {
          "radioTechnology": "E_UTRA"
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008267",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T15:35:24.672Z - INFO - engine sent successfully, the response to CBRS  : {
   "registrationResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2019-05-14T15:35:26.262Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
```


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```
        }
      }
    ]
}
2019-05-14T15:35:26.271Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "channelType": "GAA",
         "grantExpireTime": "2019-05-21T15:35:26Z",
         "grantId": "613535040",
         "heartbeatInterval": 60,
         "response": {
            "responseCode": 0
         }
      }
   ]
}
2019-05-14T15:35:27.947Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "613535040",
         "operationState": "GRANTED"
      }
   ]
}
2019-05-14T15:35:27.953Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "613535040",
         "response": {
            "responseCode": 501
         },
         "transmitExpireTime": "2019-05-14T15:35:27Z"
      }
   ]
}
```


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2019-05-14T15:36:22.389Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "613535040",
"operationState": "GRANTED"
}
]
}
2019-05-14T15:36:22.391Z - INFO - Time interval between two heartbeat request messages is: 54.441842, limit is: 65.0
2019-05-14T15:36:22.397Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "613535040",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2019-05-14T15:36:22Z"
}
]
}
2019-05-14T15:36:23.776Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T15:36:23.779Z - INFO - the question is : Did the CBSD transmit at any time during the test? please choose one of the answers :
2019-05-14T15:36:29.654Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n
2019-05-14T15:36:31.839Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed and :the additional comments for the current test are : no

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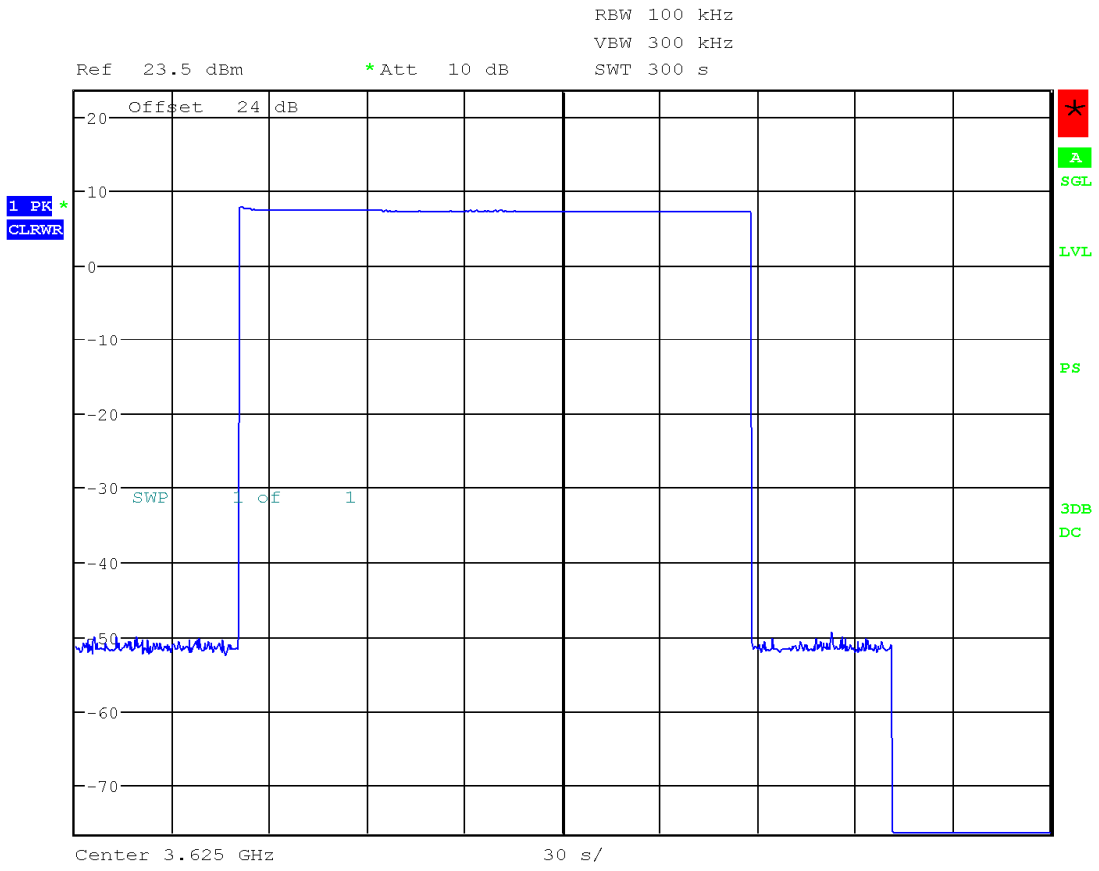
6.4.4.2.4	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	Monitor RF transmission. Ensure: • CBSD stops transmission within 60 seconds of heartbeatResponse which contains responseCode=501	p



Date: 14.MAY.2019 13:47:14

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2019-05-14T17:44:50.230Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T17:44:50.236Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now
2019-05-14T17:45:23.952Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T17:45:24.010Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T17:45:25.658Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "operationParam": {
```


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```
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T17:45:25.667Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T17:45:25Z",
      "grantId": "776248841",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T17:45:27.335Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "776248841",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T17:45:27.341Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "776248841",
      "response": {
        "responseCode": 0
```


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```
        },
        "transmitExpireTime": "2019-05-14T17:48:47Z"
      }
    ]
}
2019-05-14T17:46:21.877Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "776248841",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:46:21.879Z - INFO - Time interval between two heartbeat request messages is:
54.541486, limit is: 65.0
2019-05-14T17:46:21.885Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "776248841",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T17:49:41Z"
      }
   ]
}
2019-05-14T17:47:16.402Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "776248841",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:47:16.403Z - INFO - Time interval between two heartbeat request messages is:
54.524451, limit is: 65.0
```


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2019-05-14T17:47:16.408Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "776248841",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:50:36Z"
}
]
}
2019-05-14T17:48:10.943Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "776248841",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:48:10.946Z - INFO - Time interval between two heartbeat request messages is: 54.540703, limit is: 65.0
2019-05-14T17:48:10.954Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "776248841",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2019-05-14T17:48:10Z"
}
]
}
2019-05-14T17:48:17.490Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",

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"grantId": "776248841",
"operationState": "GRANTED"
}
]
}
2019-05-14T17:48:17.493Z - INFO - Time interval between two heartbeat request messages is: 6.547814, limit is: 65.0
2019-05-14T17:48:17.499Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "776248841",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2019-05-14T17:48:17Z"
}
]
}
2019-05-14T17:48:18.606Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T17:48:18.608Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? please choose one of the answers :
2019-05-14T17:48:28.479Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y
2019-05-14T17:48:30.342Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current test are : no

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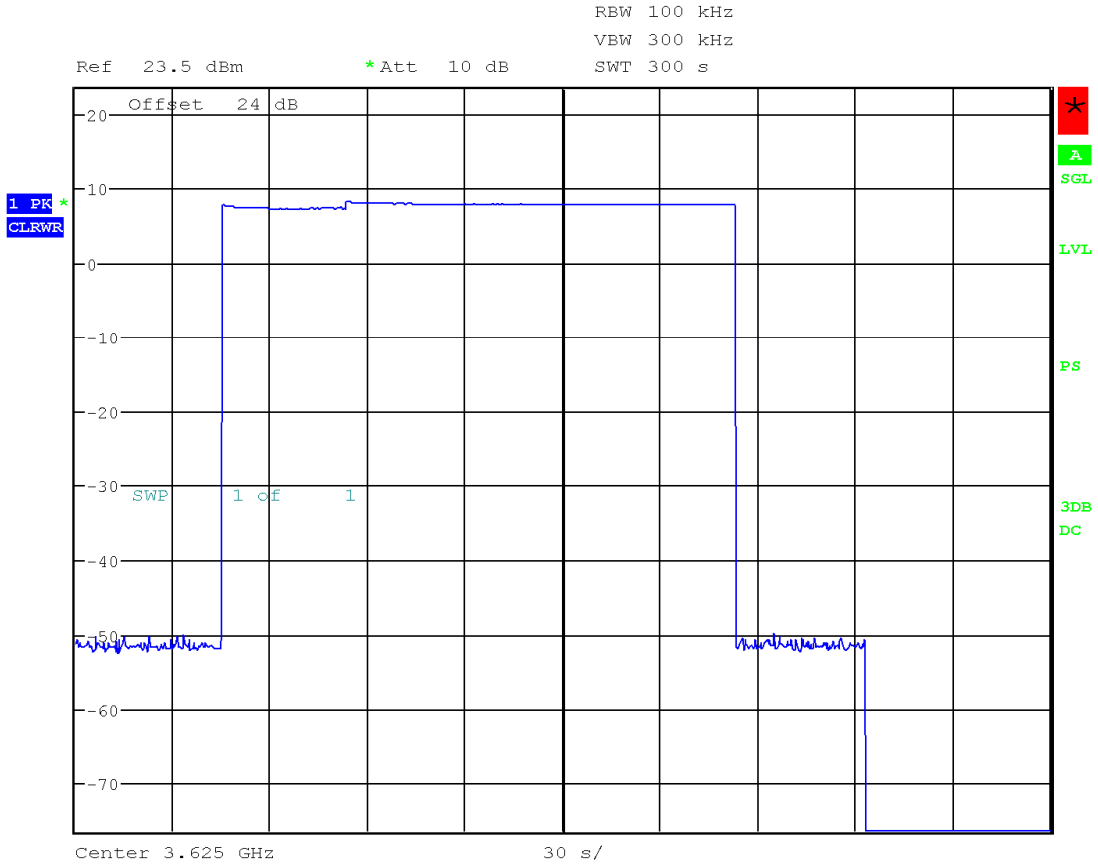
6.4.4.2.5	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	Monitor RF transmission. Ensure: • CBSD stops transmission within 60 seconds of heartbeatResponse which contains responseCode=502	p



Date: 14.MAY.2019 13:52:03

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2019-05-14T17:50:03.730Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T17:50:03.732Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now
2019-05-14T17:50:16.614Z - INFO - registration request from CBRS : {

```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```

2019-05-14T17:50:16.673Z - INFO - engine sent successfully, the response to CBRS : {

```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

2019-05-14T17:50:18.342Z - INFO - grant request from CBRS : {

```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "operationParam": {
```


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```
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T17:50:18.350Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "channelType": "GAA",
        "grantExpireTime": "2019-05-21T17:50:18Z",
        "grantId": "790211241",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2019-05-14T17:50:20.023Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "790211241",
        "operationState": "GRANTED"
      }
   ]
}
2019-05-14T17:50:20.029Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "790211241",
        "response": {
          "responseCode": 0
```


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```
        },
        "transmitExpireTime": "2019-05-14T17:53:40Z"
      }
    ]
}
2019-05-14T17:51:14.573Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "790211241",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:51:14.575Z - INFO - Time interval between two heartbeat request messages is:
54.550286, limit is: 65.0
2019-05-14T17:51:14.580Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "790211241",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T17:54:34Z"
      }
   ]
}
2019-05-14T17:52:09.120Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "790211241",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T17:52:09.122Z - INFO - Time interval between two heartbeat request messages is:
54.546537, limit is: 65.0
```


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2019-05-14T17:52:09.127Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "790211241",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T17:55:29Z"
}
]
}
2019-05-14T17:53:03.641Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "790211241",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T17:53:03.643Z - INFO - Time interval between two heartbeat request messages is: 54.521374, limit is: 65.0
2019-05-14T17:53:03.649Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "790211241",
"response": {
"responseCode": 502
},
"transmitExpireTime": "2019-05-14T17:53:03Z"
}
]
}
2019-05-14T17:53:10.062Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",

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"grantId": "790211241"
}
]
}
2019-05-14T17:53:10.067Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "790211241",
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T17:53:12.031Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T17:53:12.034Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? please choose one of the answers :
2019-05-14T17:53:19.900Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y
2019-05-14T17:53:21.288Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current test are : no

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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

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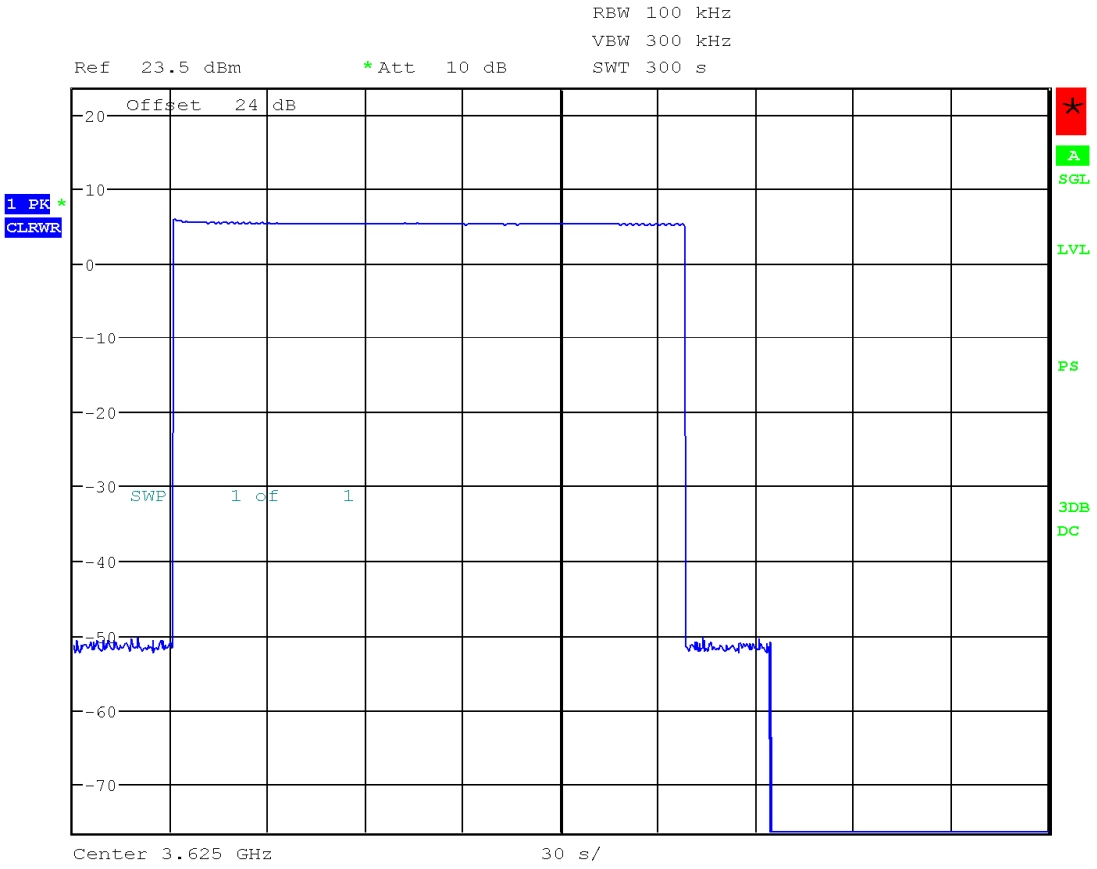

Date: 14.MAY.2019 14:02:58

2019-05-14T18:00:56.586Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T18:00:56.588Z - INFO - the selected test from the user : WINNF.FT.D.HBT.8 is starting now
2019-05-14T18:01:13.613Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
```


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```
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:01:13.670Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:01:15.286Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
    }
  ]
}
2019-05-14T18:01:15.294Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
```


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```
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "channelType": "GAA",
        "grantExpireTime": "2019-05-21T18:01:15Z",
        "grantId": "915588769",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T18:01:16.977Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "915588769",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T18:01:16.983Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "915588769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:04:36Z"
    }
  ]
}
2019-05-14T18:01:25.593Z - INFO - registration request from CBRS  : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
```


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```
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008310",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T18:01:25.646Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008310",
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T18:01:27.199Z - INFO - grant request from CBRS  : {
    "grantRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008310",
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
```


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2019-05-14T18:01:27.209Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"channelType": "GAA",
"grantExpireTime": "2019-05-21T18:01:27Z",
"grantId": "677941139",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T18:01:28.900Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "677941139",
"operationState": "GRANTED"
}
]
}
2019-05-14T18:01:28.906Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "677941139",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T18:04:48Z"
}
]
}
2019-05-14T18:02:11.490Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",

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```
        "grantId": "915588769",
        "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T18:02:11.491Z - INFO - Time interval between two heartbeat request messages is:
54.512779, limit is: 65.0
2019-05-14T18:02:11.496Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "915588769",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T18:05:31Z"
      }
   ]
}
2019-05-14T18:02:23.415Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008310",
         "grantId": "677941139",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T18:02:23.416Z - INFO - Time interval between two heartbeat request messages is:
54.515223, limit is: 65.0
2019-05-14T18:02:23.421Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008310",
         "grantId": "677941139",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T18:05:43Z"
```


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```
      }
   ]
}
2019-05-14T18:03:05.989Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "915588769",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T18:03:05.991Z - INFO - Time interval between two heartbeat request messages is:
54.499205, limit is: 65.0
2019-05-14T18:03:05.995Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "915588769",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T18:06:25Z"
      }
   ]
}
2019-05-14T18:03:17.939Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008310",
         "grantId": "677941139",
         "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T18:03:17.941Z - INFO - Time interval between two heartbeat request messages is:
54.524315, limit is: 65.0
2019-05-14T18:03:17.945Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
```


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```
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "677941139",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:06:37Z"
    }
  ]
}
2019-05-14T18:04:00.558Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "915588769",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T18:04:00.560Z - INFO - Time interval between two heartbeat request messages is:
54.568972, limit is: 65.0
2019-05-14T18:04:00.566Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "915588769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:07:20Z"
    }
  ]
}
2019-05-14T18:04:12.465Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "677941139",
      "operationState": "AUTHORIZED"
```


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```
      }
   ]
}
```


2019-05-14T18:04:12.467Z - INFO - Time interval between two heartbeat request messages is: 54.526317, limit is: 65.0

2019-05-14T18:04:12.474Z - INFO - engine sent successfully, the response to CBRS : {


```
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008310",
         "grantId": "677941139",
         "response": {
            "responseCode": 500
         },
         "transmitExpireTime": "2019-05-14T18:04:12Z"
      }
   ]
}
```


2019-05-14T18:04:13.876Z - INFO - arrived to nstep starting question answer session with the technician

2019-05-14T18:04:13.880Z - INFO - the question is : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :

2019-05-14T18:05:04.734Z - INFO - for the question : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

2019-05-14T18:05:04.735Z - INFO - the question is : Did the CBSD2 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? please choose one of the answers :

2019-05-14T18:05:07.119Z - INFO - for the question : Did the CBSD2 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y

2019-05-14T18:05:11.688Z - INFO - The final result of the test : WINNF.FT.D.HBT.8 is - passed and :the additional comments for the current test are : no

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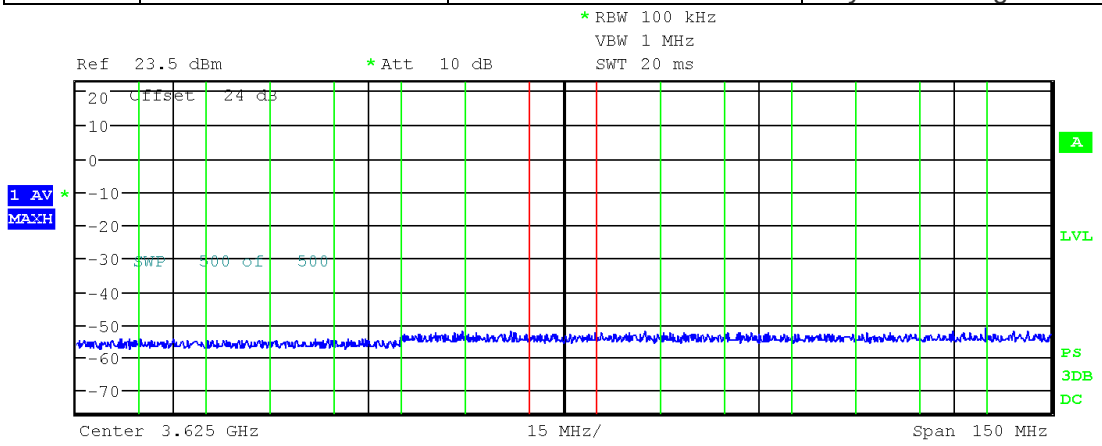
6.4.4.3.1	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	Monitor RF from start of test to 60 seconds after last heartbeatResponse message was sent. CBSD should not transmit at any time during test	P



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	10.000 MHz		-34.38 dBm	
Adjacent	10.000 MHz	10.000 MHz	-34.34 dBm	-34.24 dBm
Alternate	10.000 MHz	20.000 MHz	-34.25 dBm	-34.31 dBm
2nd Alt	10.000 MHz	30.000 MHz	-35.97 dBm	-34.30 dBm
3rd Alt	10.000 MHz	40.000 MHz	-36.08 dBm	-34.35 dBm
4th Alt	10.000 MHz	50.000 MHz	-36.11 dBm	-34.28 dBm
5th Alt	10.000 MHz	60.000 MHz	-36.17 dBm	-34.25 dBm

Date: 14.MAY.2019 12:59:00

2019-05-14T16:56:06.767Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T16:56:06.768Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now
2019-05-14T16:56:46.897Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
```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```
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008267",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T16:56:46.954Z - INFO - engine sent successfully, the response to CBRS  : {
    "registrationResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T16:56:48.586Z - INFO - grant request from CBRS  : {
    "grantRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
```


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}
2019-05-14T16:56:48.594Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"channelType": "GAA",
"grantExpireTime": "2019-05-21T16:56:48Z",
"grantId": "24893747",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T16:56:50.287Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "24893747",
"operationState": "GRANTED"
}
]
}
2019-05-14T16:57:50.269Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "24893747",
"operationState": "GRANTED"
}
]
}
2019-05-14T16:57:50.269Z - INFO - request message received while HBT is absent, sleep 145 sec before responding
2019-05-14T16:58:50.274Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",

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"grantId": "24893747",
"operationState": "GRANTED"
}
]
}
2019-05-14T16:58:50.274Z - INFO - request message received while HBT is absent, sleep 85 sec before responding
2019-05-14T16:59:50.269Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "24893747",
"operationState": "GRANTED"
}
]
}
2019-05-14T16:59:50.269Z - INFO - request message received while HBT is absent, sleep 25 sec before responding
2019-05-14T17:00:10.365Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "24893747",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2019-05-14T17:00:10Z"
}
]
}
2019-05-14T17:00:12.173Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T17:00:12.174Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :
2019-05-14T17:00:15.295Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T17:00:15.354Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T17:00:15.357Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

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2019-05-14T17:00:21.520Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n
2019-05-14T17:00:23.526Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed and :the additional comments for the current test are : no

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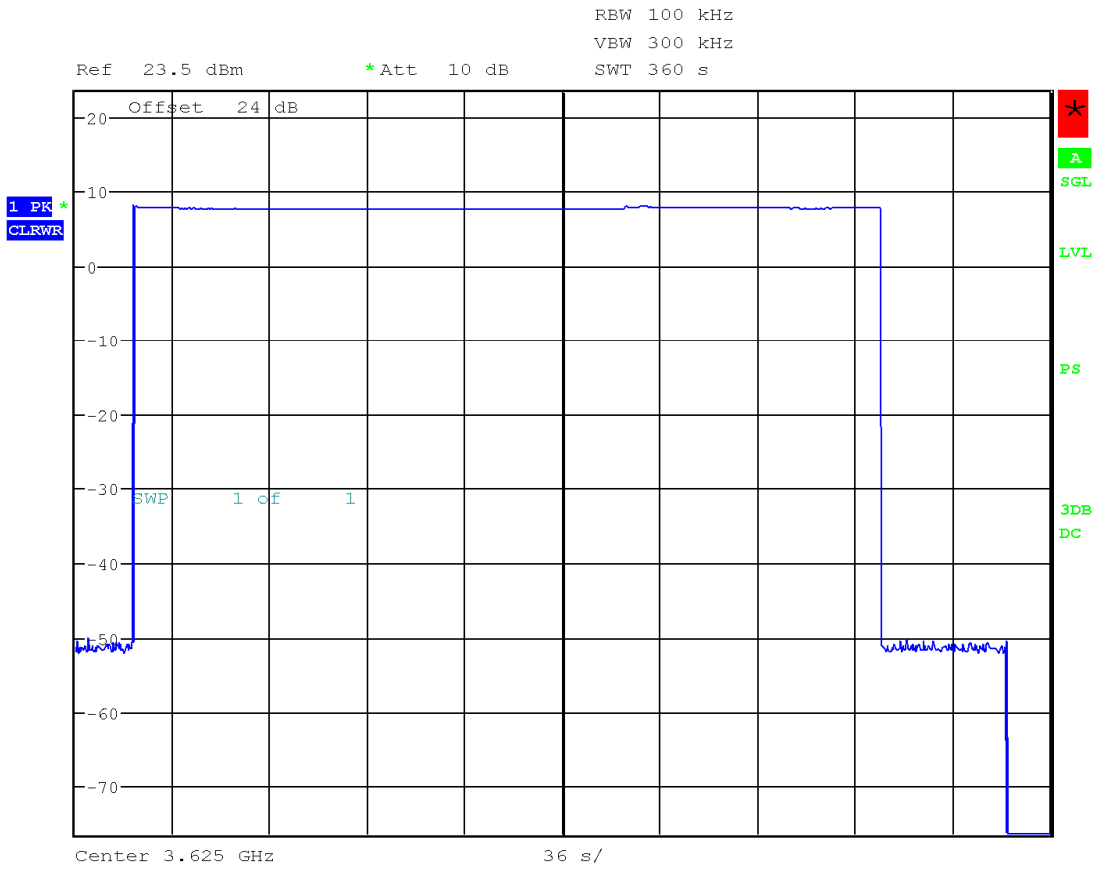
6.4.4.3.2	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	Monitor RF transmission. Verify: • CBSD must stop transmission within transmitExpireTime+60 seconds, where transmitExpireTime is from last successful heartbeatResponse message	P



Date: 14.MAY.2019 14:11:22

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2019-05-14T18:06:18.061Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T18:06:18.065Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now
2019-05-14T18:07:29.991Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
```


2019-05-14T18:07:30.047Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2019-05-14T18:07:31.627Z - INFO - grant request from CBRS : {


```
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "operationParam": {
          "maxEirp": 14,
          "operationFrequencyRange": {
            "highFrequency": 3630000000,
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T18:07:31.635Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "channelType": "GAA",
        "grantExpireTime": "2019-05-21T18:07:31Z",
        "grantId": "137927371",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T18:07:33.329Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "137927371",
        "operationState": "GRANTED"
      }
    ]
}
2019-05-14T18:07:33.334Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "137927371",
        "response": {
```


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```
          "responseCode": 0
        },
        "transmitExpireTime": "2019-05-14T18:10:53Z"
      }
    ]
}
2019-05-14T18:08:27.858Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T18:08:27.859Z - INFO - Time interval between two heartbeat request messages is:
54.52841, limit is: 65.0
2019-05-14T18:08:27.863Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:11:47Z"
    }
  ]
}
2019-05-14T18:09:22.407Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "operationState": "AUTHORIZED"
    }
  ]
}
```


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2019-05-14T18:09:22.409Z - INFO - Time interval between two heartbeat request messages is: 54.549457, limit is: 65.0
2019-05-14T18:09:22.411Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT: 2019-05-14 18:08:27.858173
2019-05-14T18:10:15.507Z - INFO - heartbeat request from CBRS : {

```
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "operationState": "AUTHORIZED"
    }
  ]
}
```

2019-05-14T18:10:15.507Z - INFO - request message received while HBT is absent, sleep 151 sec before responding
2019-05-14T18:10:45.815Z - INFO - heartbeat request from CBRS : {

```
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "operationState": "AUTHORIZED"
    }
  ]
}
```

2019-05-14T18:10:45.815Z - INFO - request message received while HBT is absent, sleep 121 sec before responding
2019-05-14T18:11:16.212Z - INFO - heartbeat request from CBRS : {

```
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "137927371",
      "operationState": "AUTHORIZED"
    }
  ]
}
```

2019-05-14T18:11:16.212Z - INFO - request message received while HBT is absent, sleep 91 sec before responding
2019-05-14T18:11:46.635Z - INFO - heartbeat request from CBRS : {

```
  "heartbeatRequest": [
    {
```


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```
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "grantId": "137927371",
        "operationState": "AUTHORIZED"
      }
   ]
}
2019-05-14T18:11:46.635Z - INFO - request message received while HBT is absent, sleep 60 sec before responding
2019-05-14T18:12:17.309Z - INFO - registration request from CBRS  : {
   "registrationRequest": [
      {
         "airInterface": {
            "radioTechnology": "E_UTRA"
         },
         "callSign": "",
         "cbsdCategory": "A",
         "cbsdInfo": {
            "hardwareVersion": "495X030-00065",
            "model": "495X030-00065",
            "vendor": "000295"
         },
         "cbsdSerialNumber": "0100008267",
         "fccId": "IPaccess123",
         "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT"
         ],
         "userId": "pgMyed"
      }
   ]
}
2019-05-14T18:12:17.310Z - INFO - request message received while HBT is absent, sleep 30 sec before responding
2019-05-14T18:12:42.439Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "137927371",
         "response": {
            "responseCode": 501
```


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```
        },
        "transmitExpireTime": "2019-05-14T18:12:42Z"
      }
   ]
}
```


2019-05-14T18:12:43.708Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T18:12:43.710Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2019-05-14T18:12:46.609Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T18:12:46.699Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T18:12:46.919Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T18:12:47.239Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2019-05-14T18:12:47.326Z - INFO - engine sent successfully, the response to CBRS : "for the CBRS with the cbsdSerialNumber :0100008267 list index out of range"
2019-05-14T18:12:56.236Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2019-05-14T18:12:58.343Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current test are : no

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6.5.4.2.2	WINNF.FT.D.MES.2	Domain Proxy Registration Response contains measReportConfig	No RF monitoring	P

Pass saw “measreportconfig” in logs


```
2019-05-14T18:17:07.655Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T18:17:07.657Z - INFO - the selected test from the user : WINNF.FT.D.MES.2 is starting
now
2019-05-14T18:17:19.089Z - INFO - registration request from CBRS  : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:17:19.146Z - INFO - Response message contains measReportConfig
2019-05-14T18:17:19.147Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "measReportConfig": [
        "RECEIVED_POWER_WITHOUT_GRANT"
```


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```
        ],
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2019-05-14T18:17:23.428Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "IPaccess123Mock-SAS0100008267",
        "measReport": {
          "rcvdPowerMeasReports": [
            {
              "measBandwidth": 5000000,
              "measFrequency": 3550000000,
              "measRcvdPower": -25
            },
            {
              "measBandwidth": 5000000,
              "measFrequency": 3555000000,
              "measRcvdPower": -25
            },
            {
              "measBandwidth": 5000000,
              "measFrequency": 3560000000,
              "measRcvdPower": -25
            },
            {
              "measBandwidth": 5000000,
              "measFrequency": 3565000000,
              "measRcvdPower": -25
            },
            {
              "measBandwidth": 5000000,
              "measFrequency": 3570000000,
              "measRcvdPower": -25
            },
            {
```


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```
    "measBandwidth": 5000000,
    "measFrequency": 3575000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3580000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3585000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3595000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3605000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3610000000,
    "measRcvdPower": -25
  },
```


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```
{
  "measBandwidth": 5000000,
  "measFrequency": 3615000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3625000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3635000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3645000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -25
```


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```
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3655000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3665000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3675000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3685000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3690000000,
```


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```
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3695000000,
            "measRcvdPower": -25
          }
        ]
      },
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
    }
  ]
}
2019-05-14T18:17:23.448Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T18:17:23Z",
      "grantId": "161494112",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:17:25.048Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "161494112",
      "operationState": "GRANTED"
```


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```
    }
  ]
}
2019-05-14T18:17:25.050Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "161494112",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2019-05-14T18:17:25Z"
    }
  ]
}
2019-05-14T18:18:01.553Z - INFO - registration request from CBRS  : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008310",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:18:01.610Z - INFO - Response message contains measReportConfig
2019-05-14T18:18:01.611Z - INFO - engine sent successfully, the response to CBRS  : {
```


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```
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "measReportConfig": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:18:05.831Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 5000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3555000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3565000000,
            "measRcvdPower": -25
          },
          {
```


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```
    "measBandwidth": 5000000,
    "measFrequency": 3570000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3575000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3580000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3585000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3595000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3605000000,
    "measRcvdPower": -25
  },
```


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```
{
  "measBandwidth": 5000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3615000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3625000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3635000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3645000000,
  "measRcvdPower": -25
```


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```
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3655000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3665000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3675000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3685000000,
```


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```
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3695000000,
            "measRcvdPower": -25
          }
        ]
      },
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
    }
  ]
}
2019-05-14T18:18:05.863Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T18:18:05Z",
      "grantId": "494970419",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


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2019-05-14T18:18:07.754Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T18:18:12.883Z - INFO - The final result of the test : WINNF.FT.D.MES.2 is - passed and :the additional comments for the current test are : no

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6.5.4.2.3	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	No RF monitoring	P

Pass saw “measreportconfig” in logs

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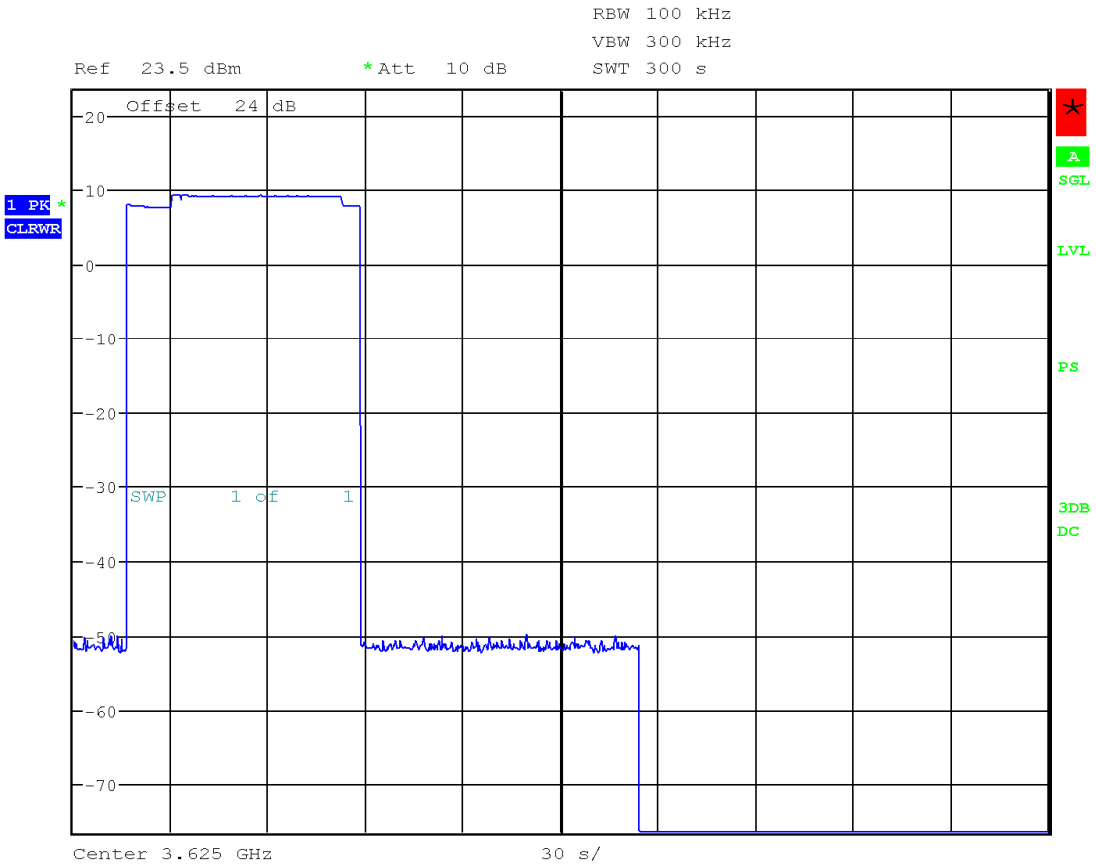
6.6.4.1.2	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message.	P



2019-05-14T18:30:52.685Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T18:30:52.686Z - INFO - the selected test from the user : WINNF.FT.D.RLQ.2 is starting now
2019-05-14T18:31:29.089Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
```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```
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdInfo": {
          "hardwareVersion": "495X030-00065",
          "model": "495X030-00065",
          "vendor": "000295"
        },
        "cbsdSerialNumber": "0100008267",
        "fccId": "IPaccess123",
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "pgMyed"
      }
    ]
}
2019-05-14T18:31:29.133Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:31:30.726Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
    }
```


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```
  ]
}
2019-05-14T18:31:30.735Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T18:31:30Z",
      "grantId": "372264586",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:31:32.402Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "372264586",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T18:31:32.407Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "372264586",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:34:52Z"
    }
  ]
}
2019-05-14T18:31:43.225Z - INFO - registration request from CBRS  : {
  "registrationRequest": [
```


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```
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008310",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:31:43.267Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:31:44.939Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
```


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```
          }
        }
      }
    ]
}
2019-05-14T18:31:44.947Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T18:31:44Z",
      "grantId": "957258940",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:31:46.636Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "957258940",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T18:31:46.643Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "957258940",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:35:06Z"
    }
  ]
```


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}
2019-05-14T18:32:26.917Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "372264586",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T18:32:26.919Z - INFO - Time interval between two heartbeat request messages is: 54.515324, limit is: 65.0
2019-05-14T18:32:26.924Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"grantId": "372264586",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2019-05-14T18:35:46Z"
}
]
}
2019-05-14T18:32:41.153Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "957258940",
"operationState": "AUTHORIZED"
}
]
}
2019-05-14T18:32:41.154Z - INFO - Time interval between two heartbeat request messages is: 54.516707, limit is: 65.0
2019-05-14T18:32:41.160Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",

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```
        "grantId": "957258940",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2019-05-14T18:36:01Z"
      }
    ]
}
2019-05-14T18:32:51.784Z - INFO - relinquishment request from CBRS  : {
  "relinquishmentRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "372264586"
    }
  ]
}
2019-05-14T18:32:51.791Z - INFO - engine sent successfully, the response to CBRS  : {
  "relinquishmentResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "372264586",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:32:55.871Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 5000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -25
          },
          {
```


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```
    "measBandwidth": 5000000,
    "measFrequency": 3555000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3560000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3565000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3570000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3575000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3580000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3585000000,
    "measRcvdPower": -25
  },
  {
    "measBandwidth": 5000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -25
  },
```


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{
"measBandwidth": 5000000,
"measFrequency": 3595000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3600000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3605000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3610000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3615000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3620000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3625000000,
"measRcvdPower": -25
},
{
"measBandwidth": 5000000,
"measFrequency": 3630000000,
"measRcvdPower": -25

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```
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3635000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3645000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3655000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3665000000,
  "measRcvdPower": -25
},
{
  "measBandwidth": 5000000,
  "measFrequency": 3670000000,
```


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```
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3675000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3685000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -25
          },
          {
            "measBandwidth": 5000000,
            "measFrequency": 3695000000,
            "measRcvdPower": -25
          }
        ]
      },
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3560000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
```


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2019-05-14T18:32:55.873Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008267",
"response": {
"responseCode": 400
}
}
]
}
2019-05-14T18:32:57.633Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "957258940"
}
]
}
2019-05-14T18:32:57.638Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "IPaccess123Mock-SAS0100008310",
"grantId": "957258940",
"response": {
"responseCode": 0
}
}
]
}
2019-05-14T18:32:58.965Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T18:32:58.968Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :
2019-05-14T18:33:29.235Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y
2019-05-14T18:33:29.236Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :
2019-05-14T18:33:31.315Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y

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2019-05-14T18:33:32.936Z - INFO - The final result of the test : WINNF.FT.D.RLQ.2 is - passed and :the additional comments for the current test are : no

Note: Shutdown confirmed by RF monitoring.

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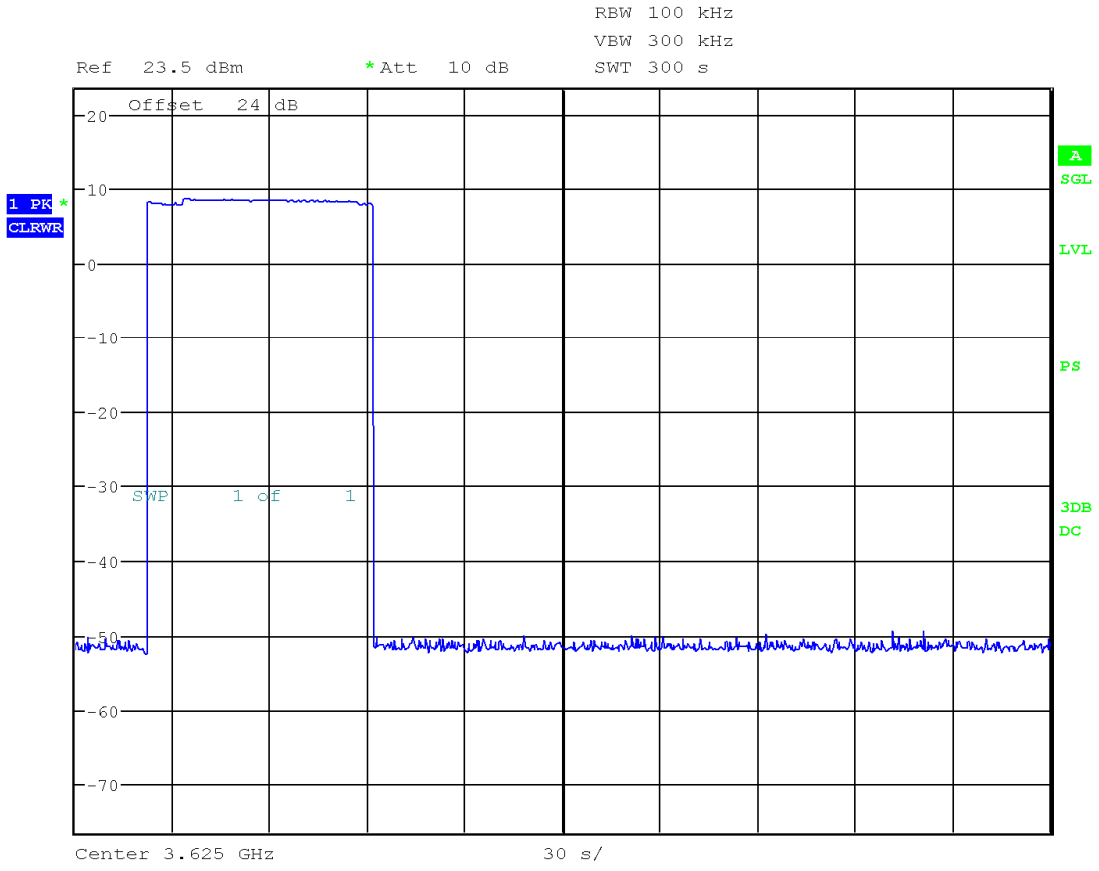
6.7.4.1.2	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	Monitor RF transmission. Ensure: • CBSD stops transmission at any time prior to sending the relinquishmentRequest message or deregistrationRequest message (whichever is sent first)	P



2019-05-14T18:36:37.915Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2019-05-14T18:36:37.917Z - INFO - the selected test from the user : WINNF.FT.D.DRG.2 is starting now
2019-05-14T18:38:28.901Z - INFO - registration request from CBRS : {

```
  "registrationRequest": [
    {
      "airInterface": {
```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```
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008267",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:38:28.950Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:38:30.620Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
          "lowFrequency": 3620000000
        }
      }
```


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```
      }
    ]
}
2019-05-14T18:38:30.628Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "channelType": "GAA",
         "grantExpireTime": "2019-05-21T18:38:30Z",
         "grantId": "341809681",
         "heartbeatInterval": 60,
         "response": {
            "responseCode": 0
         }
      }
   ]
}
2019-05-14T18:38:32.311Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "341809681",
         "operationState": "GRANTED"
      }
   ]
}
2019-05-14T18:38:32.317Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "IPaccess123Mock-SAS0100008267",
         "grantId": "341809681",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2019-05-14T18:41:52Z"
      }
   ]
}
2019-05-14T18:38:40.289Z - INFO - registration request from CBRS  : {
```


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```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "hardwareVersion": "495X030-00065",
        "model": "495X030-00065",
        "vendor": "000295"
      },
      "cbsdSerialNumber": "0100008310",
      "fccId": "IPaccess123",
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "pgMyed"
    }
  ]
}
2019-05-14T18:38:40.342Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:38:42.049Z - INFO - grant request from CBRS  : {
  "grantRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "operationParam": {
        "maxEirp": 14,
        "operationFrequencyRange": {
          "highFrequency": 3630000000,
```


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```
            "lowFrequency": 3620000000
          }
        }
      }
    ]
}
2019-05-14T18:38:42.056Z - INFO - engine sent successfully, the response to CBRS  : {
  "grantResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "channelType": "GAA",
      "grantExpireTime": "2019-05-21T18:38:42Z",
      "grantId": "823694681",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:38:43.784Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "823694681",
      "operationState": "GRANTED"
    }
  ]
}
2019-05-14T18:38:43.791Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "823694681",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:42:03Z"
    }
```


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```
  ]
}
2019-05-14T18:39:26.862Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "341809681",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T18:39:26.863Z - INFO - Time interval between two heartbeat request messages is:
54.550664, limit is: 65.0
2019-05-14T18:39:26.870Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "341809681",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2019-05-14T18:42:46Z"
    }
  ]
}
2019-05-14T18:39:38.375Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "823694681",
      "operationState": "AUTHORIZED"
    }
  ]
}
2019-05-14T18:39:38.377Z - INFO - Time interval between two heartbeat request messages is:
54.590846, limit is: 65.0
2019-05-14T18:39:38.381Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
```


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```
        "cbsdId": "IPaccess123Mock-SAS0100008310",
        "grantId": "823694681",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2019-05-14T18:42:58Z"
      }
    ]
}
2019-05-14T18:39:50.179Z - INFO - relinquishment request from CBRS  : {
  "relinquishmentRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "341809681"
    }
  ]
}
2019-05-14T18:39:50.185Z - INFO - engine sent successfully, the response to CBRS  : {
  "relinquishmentResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
      "grantId": "341809681",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:39:51.596Z - INFO - deregistration request from CBRS  : {
  "deregistrationRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267"
    }
  ]
}
2019-05-14T18:39:51.601Z - INFO - engine sent successfully, the response to CBRS  : {
  "deregistrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008267",
```


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```
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2019-05-14T18:39:55.378Z - INFO - relinquishment request from CBRS  : {
  "relinquishmentRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "823694681"
    }
  ]
}
2019-05-14T18:39:55.383Z - INFO - engine sent successfully, the response to CBRS  : {
  "relinquishmentResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "grantId": "823694681",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2019-05-14T18:39:56.817Z - INFO - deregistration request from CBRS  : {
  "deregistrationRequest": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310"
    }
  ]
}
2019-05-14T18:39:56.822Z - INFO - engine sent successfully, the response to CBRS  : {
  "deregistrationResponse": [
    {
      "cbsdId": "IPaccess123Mock-SAS0100008310",
      "response": {
        "responseCode": 0
      }
```


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}
]
}
2019-05-14T18:39:58.220Z - INFO - arrived to nstep starting question answer session with the technician
2019-05-14T18:39:58.222Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :
2019-05-14T18:40:04.039Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y
2019-05-14T18:40:04.040Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :
2019-05-14T18:40:09.842Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y
2019-05-14T18:40:12.419Z - INFO - The final result of the test : WINNF.FT.D.DRG.2 is - passed and :the additional comments for the current test are : no

Note: shutdown confirmed by RF monitoring.

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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 minimum declared transmit power.	P

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lowFrequency (MHz)	highFrequency (MHz)	Grant Center Freq (MHz)	FCC Max power (EIRP) dBm / MHz	Granted power (EIRP) dBm / MHz	Measured power (EIRP) dBm / MHz	Pass/ Fail
3550	3560	3555	20	14	13.5	Pass
3620	3630	3625	20	14	13.4	Pass
3690	3700	3695	20	14	13.7	Pass
3550	3560	3555	20	-11	-10.9	Pass
3620	3630	3625	20	-11	-10.6	Pass
3690	3700	3695	20	-11	-10.5	Pass

Note 1: Pass or fail was determined as by being within 1 dB of the granted value and not exceeding the limit as defined in FCC Part 96. EIRP Values are the raw reading with the applicable factors and take into account the 2 dBi for the antenna gain.

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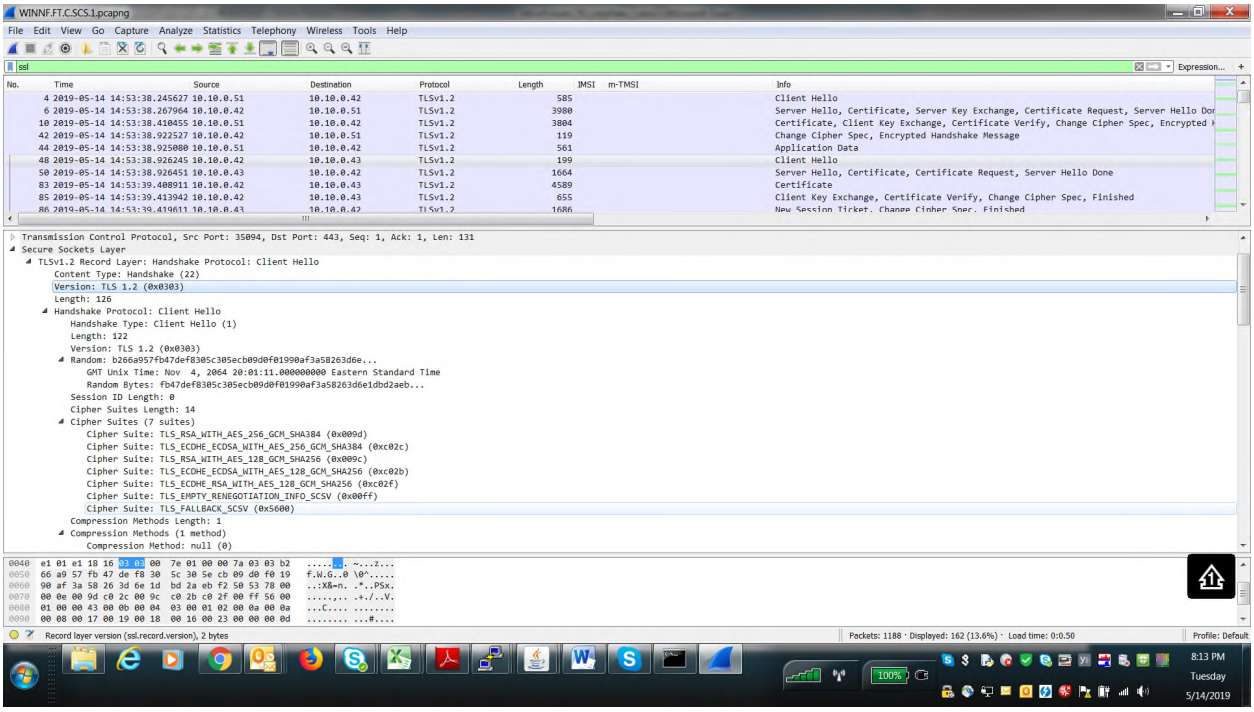
DOT CBRS Radio: WINNF / Security Test Case Analysis

WINNF Security Test Case Analysis

WINNF.FT.C.SCS.1

From Client Hello: TLS Version is 1.2



Cipher Suite list from Client Hello

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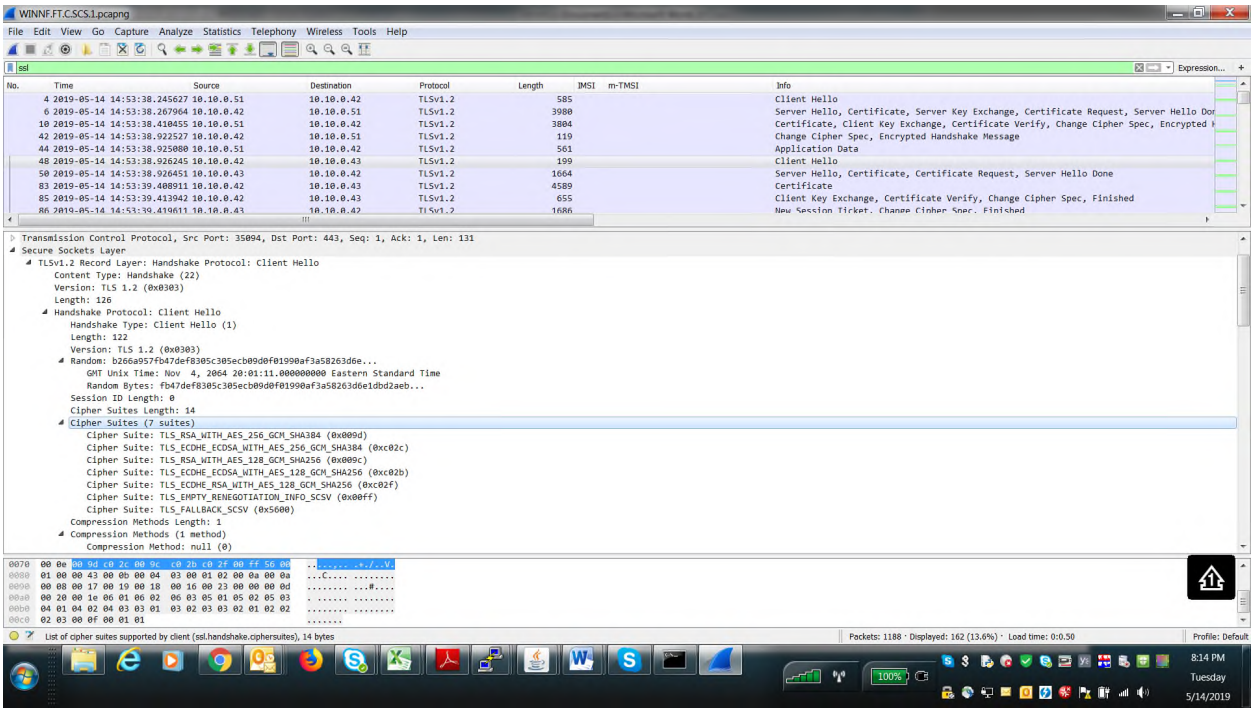
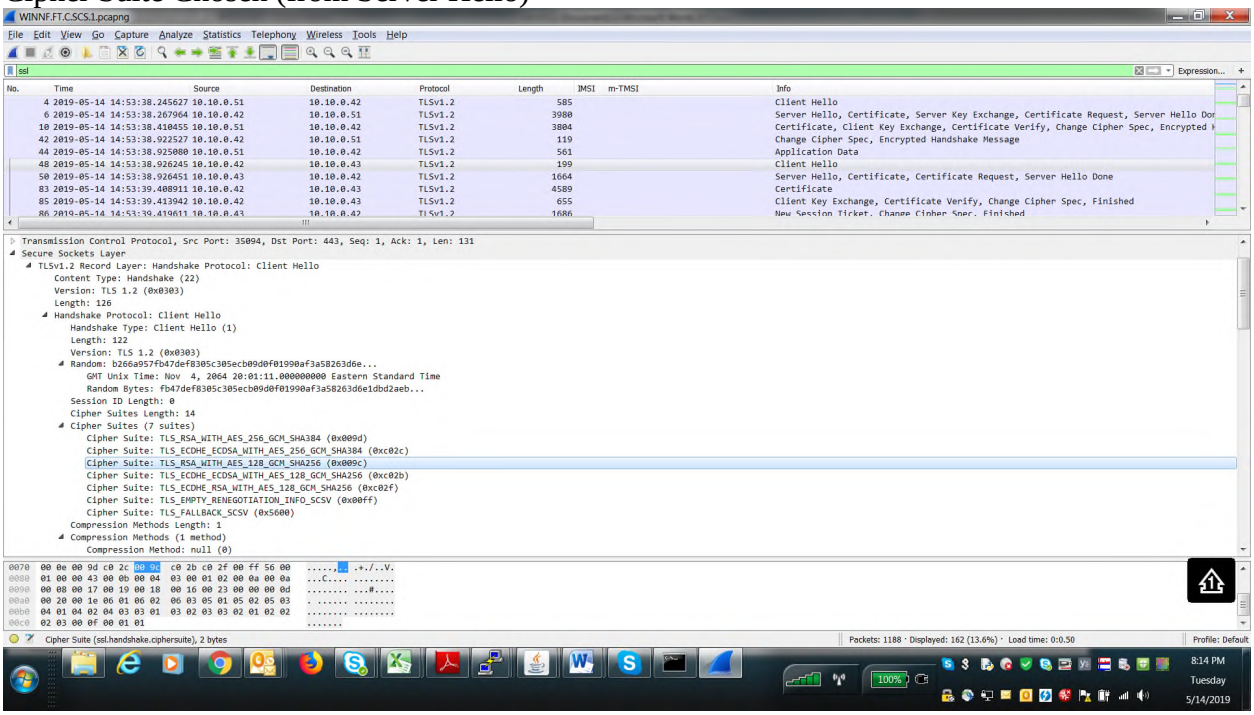


Cipher Suite Chosen (from Server Hello)



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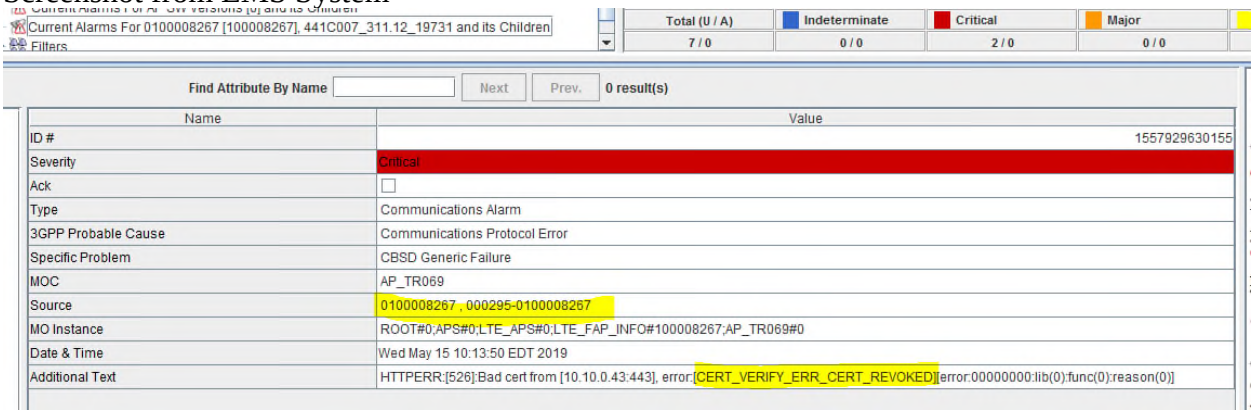
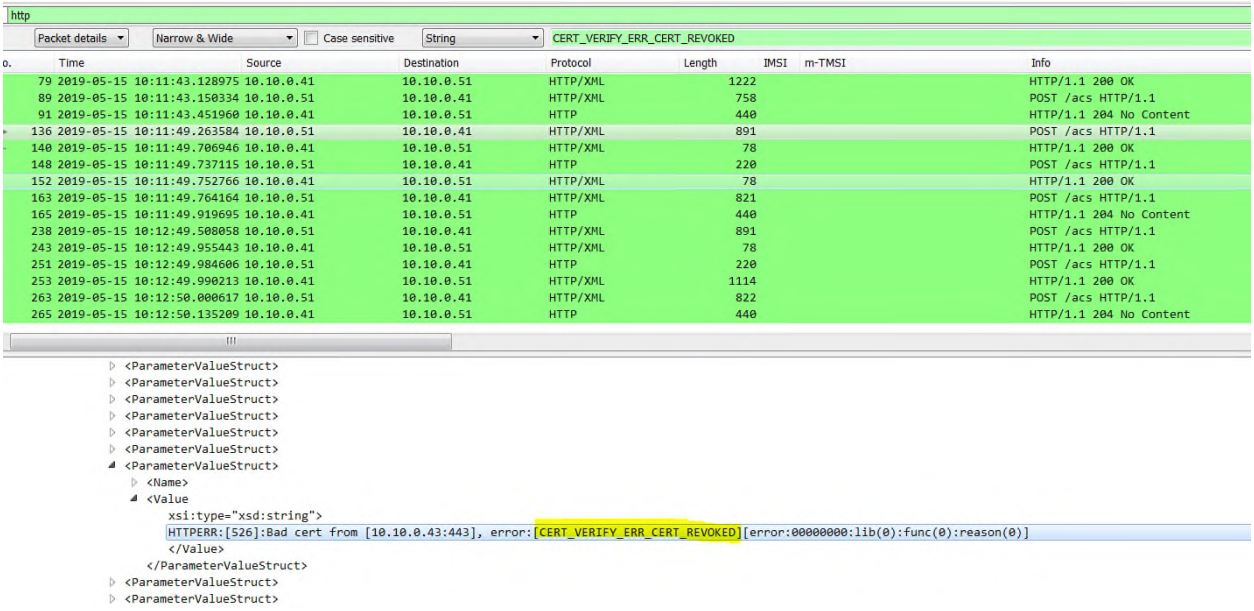
WINNF.FT.C.SCS.2

WINNF.FT.C.SCS.2

Screenshot from EMS System



Wireshark trace between CBSD & EMS



Screenshot from Domain Proxy Logfile

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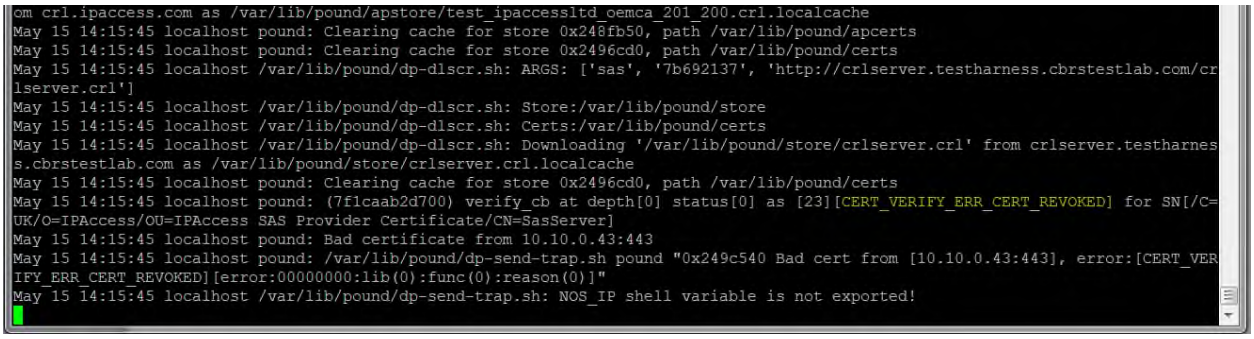
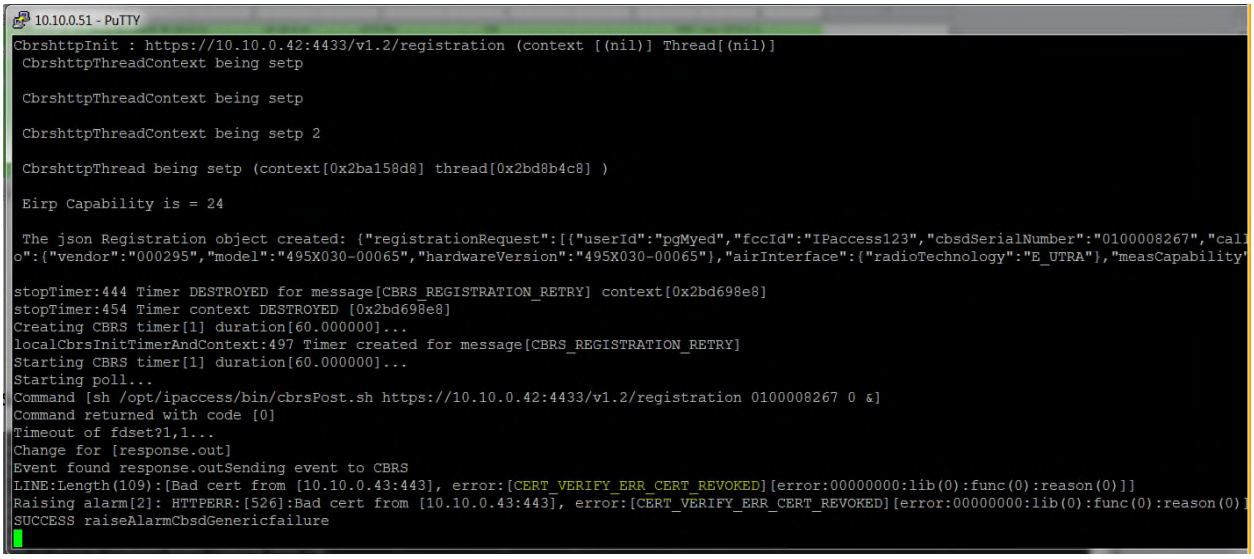
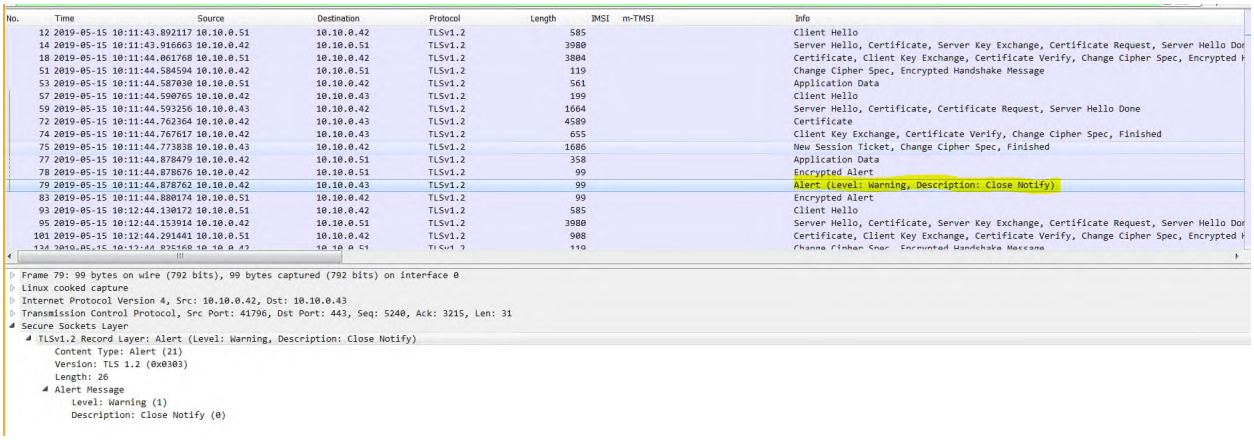


Screenshot from CBSD



Wireshark trace between DP & SAS



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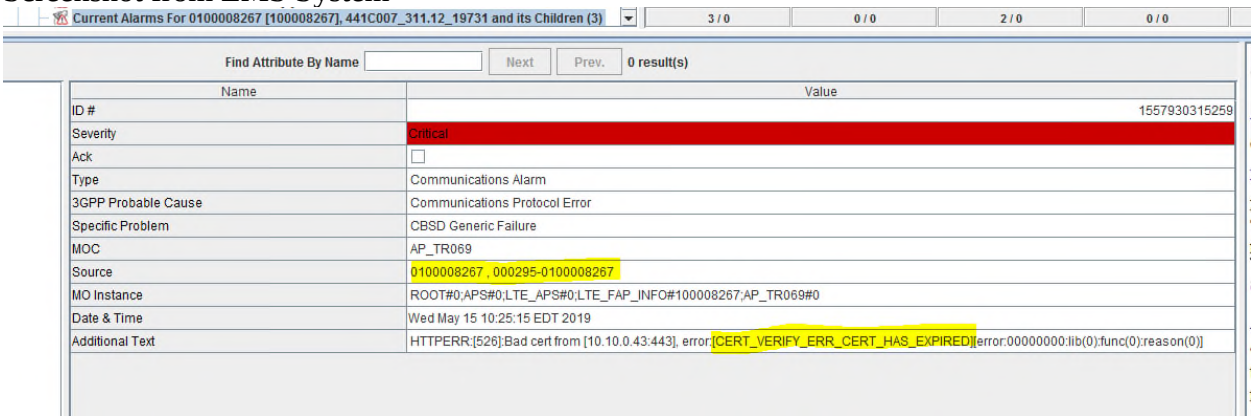
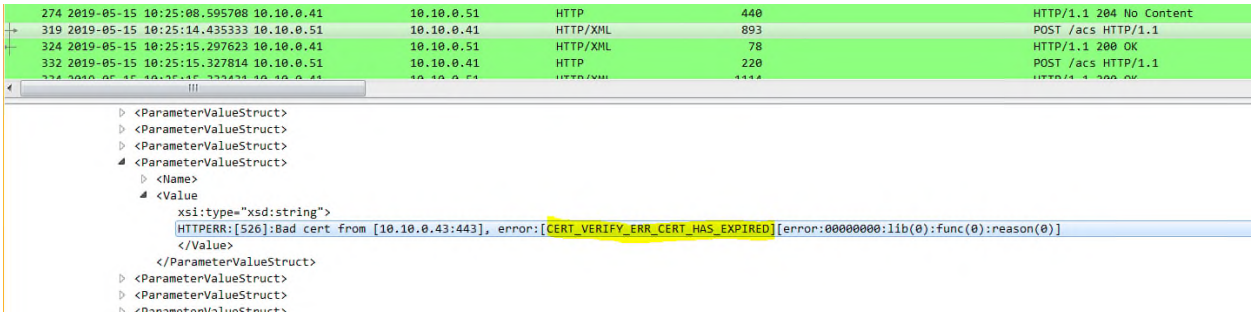
WINNF.FT.C.SCS.3

WINNF.FT.C.SCS.3

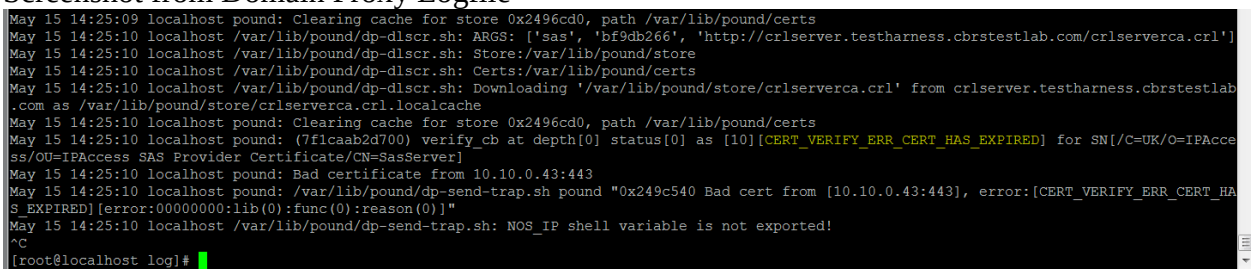
Screenshot from EMS System



Wireshark trace between CBSD & EMS



Screenshot from Domain Proxy Logfile



Screenshot from CBSD

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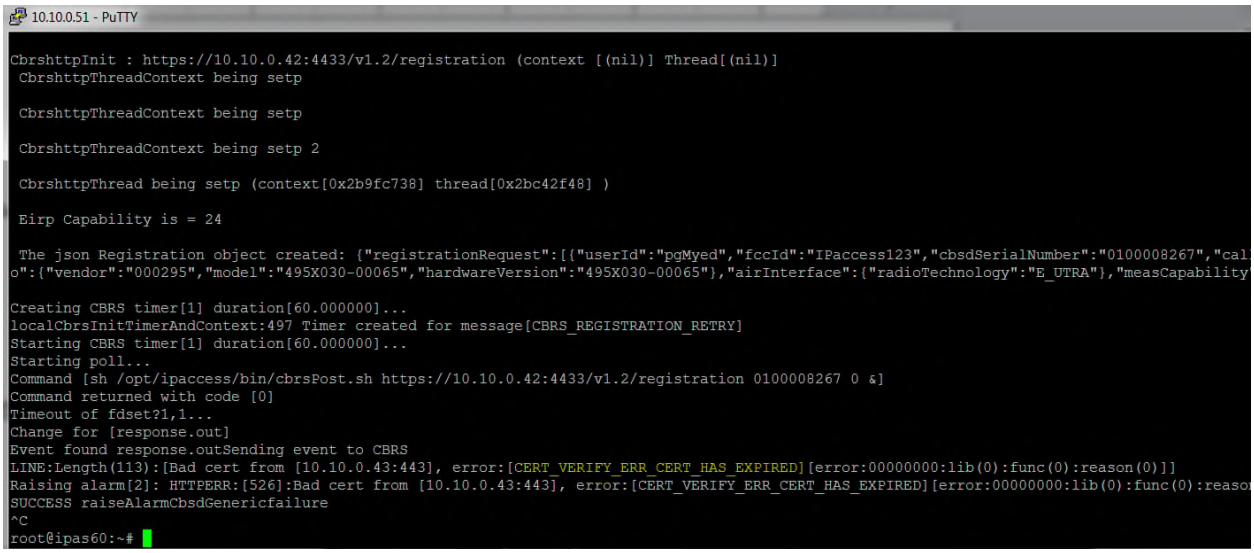

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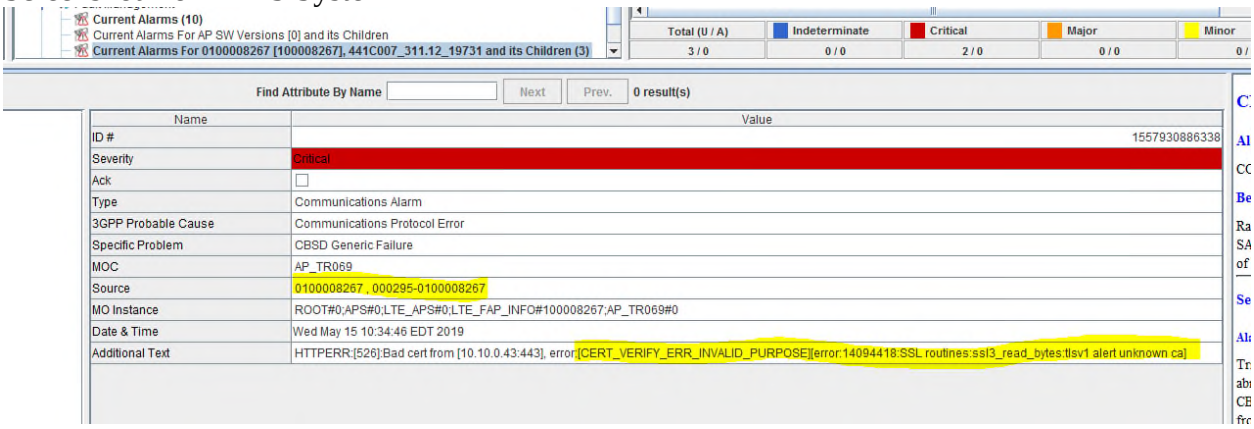
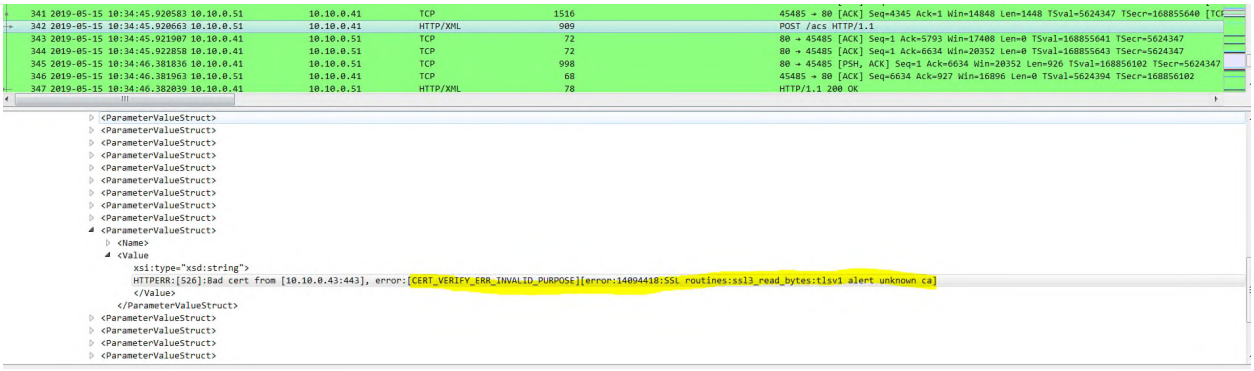
WINNF.FT.C.SCS.4

WINNF.FT.C.SCS.4

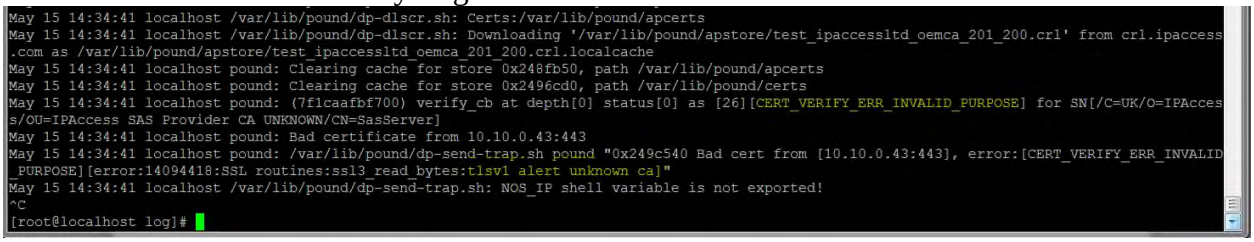
Screenshot from EMS System



Wireshark between CBSD & EMS



Screenshot from Domain Proxy Logfile



Wireshark between DP & SAS

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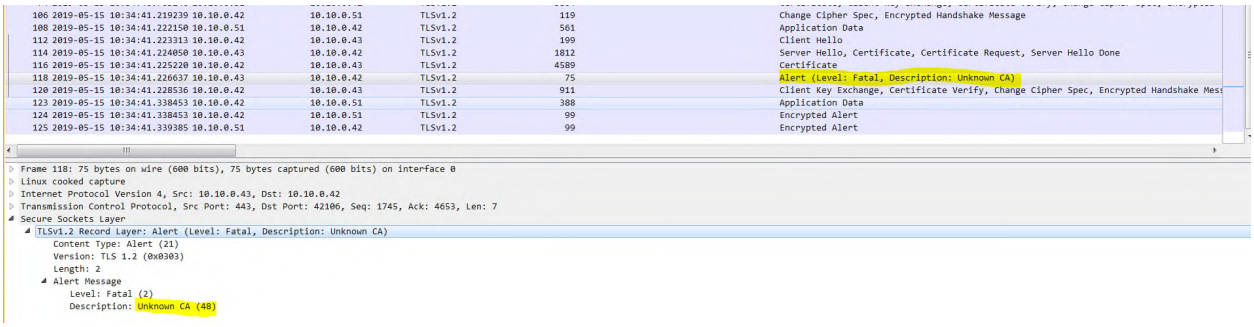
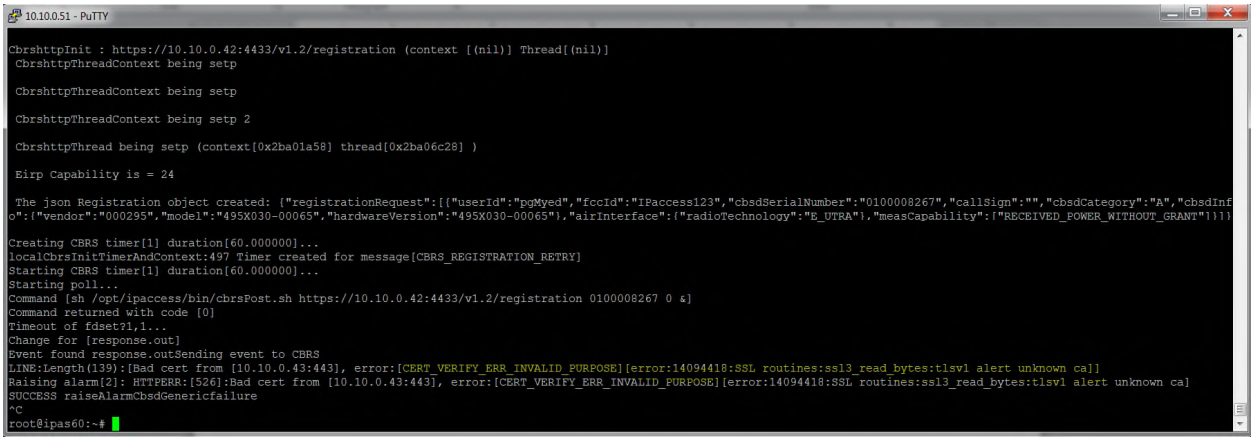


Screenshot from CBSD



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WINNF.FT.C.SCS.5

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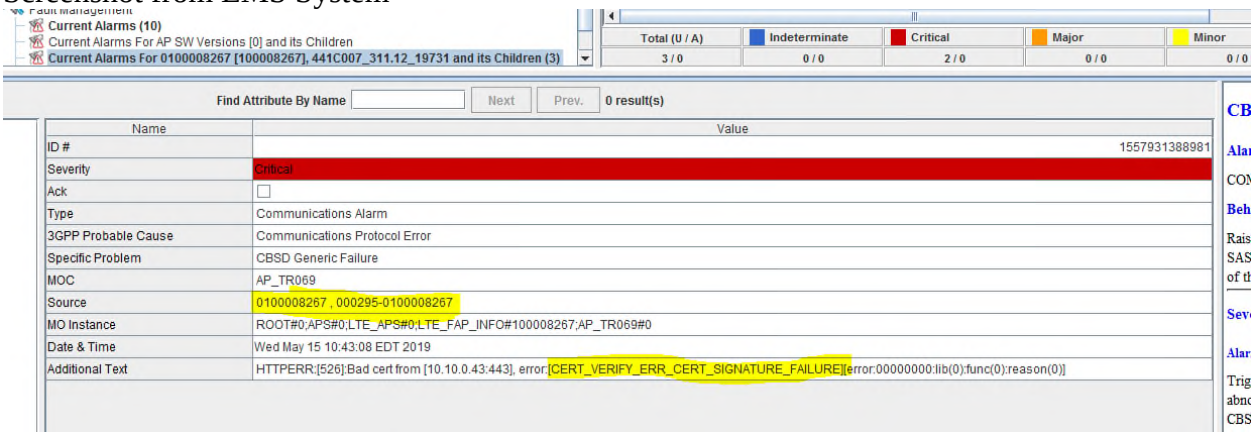
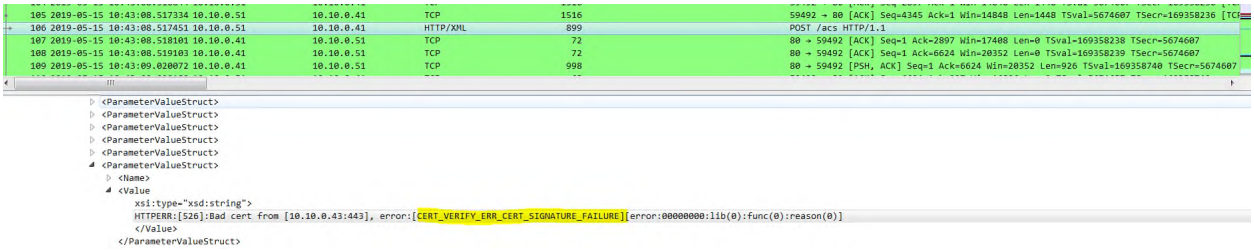
WINNF.FT.C.SCS.5

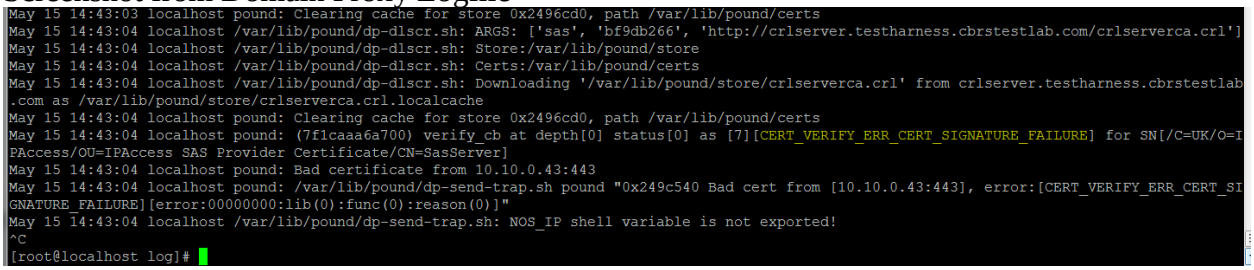
Screenshot from EMS System



Wireshark between CBSD & EMS



Screenshot from Domain Proxy Logfile



Wireshark between DP & SAS

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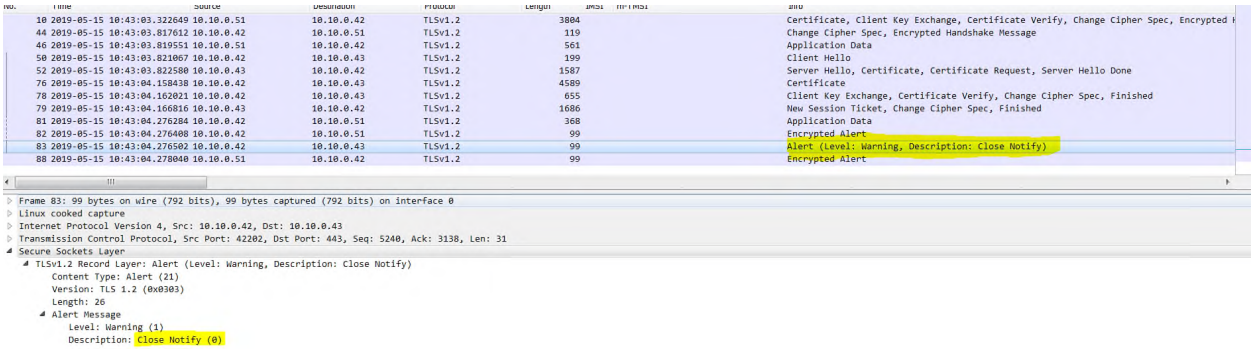
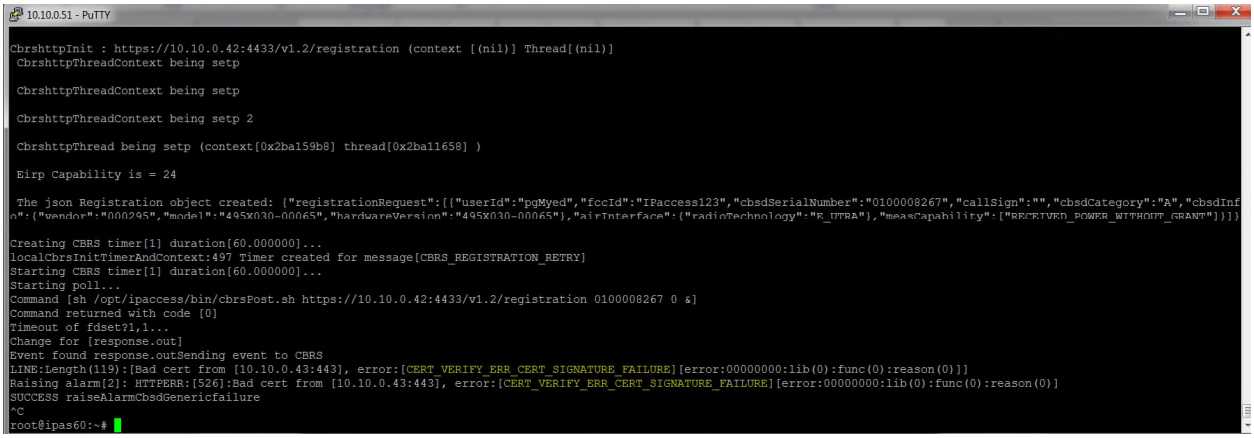


Screenshot from CBSD



Test Equipment

Instrument	Manufacturer	Type No.	Serial No	Calibration Period (months)	Calibration Due
THG	Fluke	77 IV	34770264	12	18-Apr-2020
DVM	VWR	61161-378	170120564	24	17-Feb-2020
Power Supply	Xantrex	XKW 60-50	E00109863	O/P Mon	-N/A
Attenuator	Pasternack	PE7004-10	N/S	O/P Mon	-N/A
Switching Control Unit	Hewlett Packard	11713A	3748A060876	O/P Mon	-N/A
RF Switch Unit	Burnsco	RARFSW 4x1	001	O/P Mon	-N/A
Power Supply	Leader	730-3D	9801135	O/P Mon	-N/A
Receiver	Rohde & Schwarz	ESU40	1001162	24	6-June-2020

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Appendix A – EUT & Client Provided Details

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Client Details	
Organization / Address	Ip.access Ltd, 2020 Cambourne Business Park, Cambourne, CAmbs CB23 6DW UK
EUT (Equipment Under Test) Details	
EUT Name (for report title)	E61
EUT Model / SN (if known)	495X BAND 48 TDD
EUT revision	New product
Software version	2.5.0_LTE_311.12
Equipment category	
EUT is powered using	DC
Input voltage range(s) (V)	12V or Poe+
Frequency range(s) (Hz)	NA
Rated input current (A)	1.75A
Nominal power consumption (W)	22W
Number of power supplies in EUT	15
Transmits RF energy? (describe)	Yes Band 48 LTE Small Cell
Basic EUT functionality description	LTE TDD Band 48 Small CEll
Frequency of all clocks present in EUT	25M, 800M,
I/O cable description Specify length and type	DC Power with included Adaptor, unshilded Cat 5 or higher Ethernet up to 100M, GPS antenna connection
Available connectors on EUT	Dc Barrel RJ45 GPS antenna input
Peripherals required to exercise EUT Ex. Signal generator	ip.access
Dimensions of product	L 300mm W 225mm H 64mm

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Technical Description

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.

Picture of EUT

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- **Product Name:** E61 (495X) 4G AP B48 (3550-3700MHz) and Domain Proxy
- **Product Description:** 'E61' is an ip.access 4G Access Point (AP) that operates in B48 spectrum in conjunction with an ip.access designed Domain Proxy (DP). The AP is meant to serve as a Category A CBRS base station (CBSD) and provide 4G service on frequency channels allocated by a standard Spectum Allocation Server (SAS). The maximum output power of CBSD is +24dBm (250mW) per antenna port and it uses 12VDC or PoE as input power source. The DP operates in a virtualized environment on standard 'x86' based machines. It communicates with SAS and AP using secure channels and it capable of serving multiple CBSDs simultaneously.
- **E61 HW rev :** 495X030
- **E61 SW Build :** 2.5.0_LTE_311.12
- **Domain Proxy SW Build :** 1.0.0_DOMAIN_PROXY_4.0 Subversion Reference - 12851
- **E61 Serial numbers :** 000295-0100002975, 000295-0100008329

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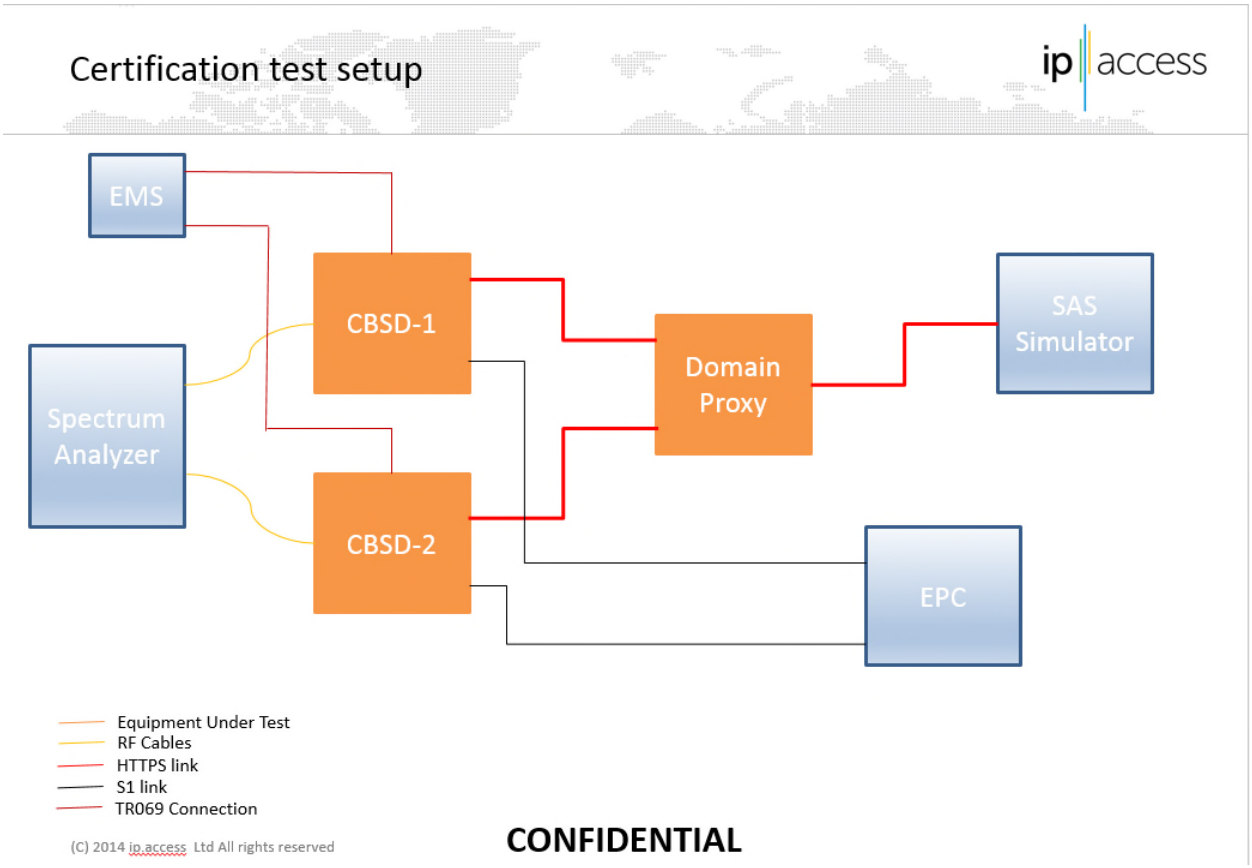

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Appendix B – EUT, Peripherals, and Test Setup Photos

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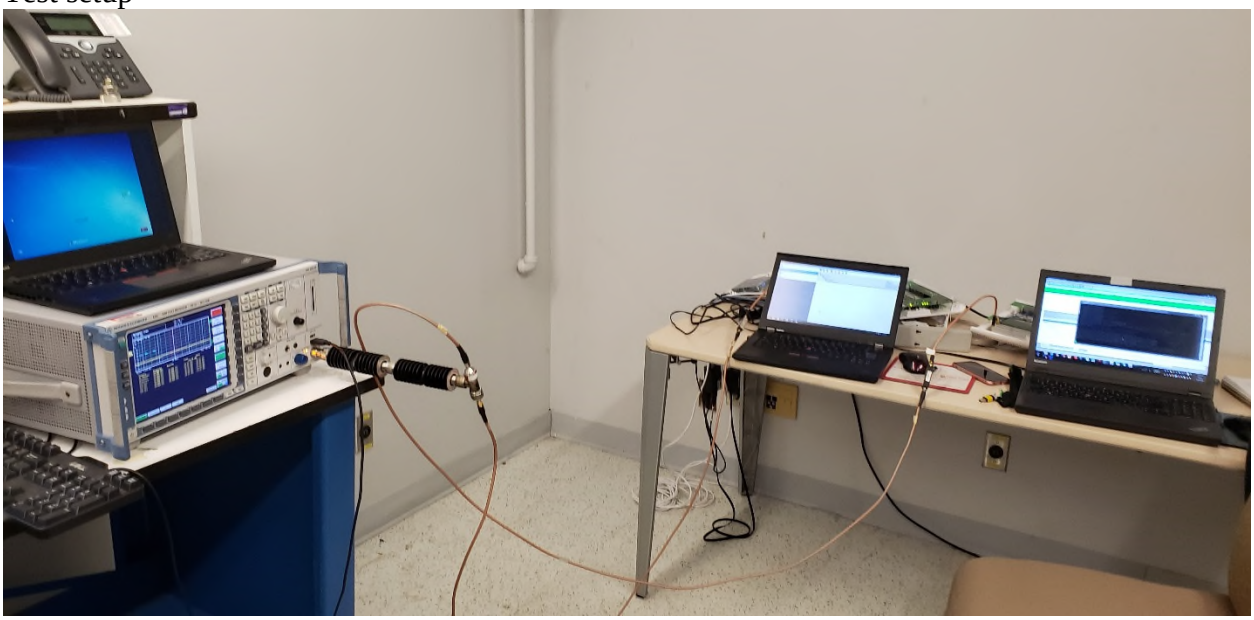
Test setup



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