TEST REPORT

Application No.:	SZEM2008007401CR
Applicant:	Huawei Technologies Co., Ltd
Address of Applicant:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen, 518129, P.R.C
Manufacturer:	Huawei Technologies Co., Ltd
Address of Manufacturer:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen, 518129, P.R.C
Factory:	Huawei Technologies Co., Ltd
Address of Factory:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen, 518129, P.R.C
Equipment Under Test (EUT):	
EUT Name:	Remote Radio Unit
Model No.:	RRU3278
Trademark:	HUAWEI
FCC ID:	QISRRU3278
Standard(s) :	CBRSA-TS-9001-V1.0.0 WINNF-TS-0122-V1.0.0 FCC 47 CFR Part 96 KDB 940660 D01
Date of Receipt:	2020-08-08
Date of Test:	2020-08-08 to 2020-08-13
Date of Issue:	2020-08-13
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2020-08-13		Original

Authorized for issue by:

Jacky Li /Project Engineer

Eric Fu /Reviewer

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2 Test Summary

Item	Standard	Test Case ID	Result
Domain Proxy Multi-Step registration	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.2	Pass
Domain Proxy Missing Required parameters (responseCode 102)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.9	Pass
Domain Proxy Pending registration (responseCode 200)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.11	Pass
Domain Proxy Invalid parameters (responseCode 103)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.13	Pass
Domain Proxy Blacklisted CBSD (responseCode 101)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.15	Pass
Domain Proxy Unsupported SAS protocol version responseCode 100)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.17	Pass
Domain Proxy Group Error (responseCode 201)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.19	Pass
Unsuccessful Grant responseCode=400 (INTERFERENCE)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.GRA.1	Pass
Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.GRA.2	Pass
Domain Proxy Heartbeat Success Case (first Heartbeat Response)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.HBT.2	Pass
Heartbeat responseCode=105 (DEREGISTER)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.3	Pass
Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.5	Pass
Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.6	Pass
Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.7	Pass
Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.HBT.8	Pass
Heartbeat Response Absent (First Heartbeat)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.9	Pass
Heartbeat Response Absent (Subsequent Heartbeat)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.10	Pass
Domain Proxy Successful Relinquishment	WINNF-TS-0122-V1.0.0	WINNF.FT.D.RLQ.2	Pass
Domain Proxy Successful Deregistration	WINNF-TS-0122-V1.0.0	WINNF.FT.D.DRG.2	Pass

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Item	Standard	Test Case ID	Result
Successful TLS connection between UUT and SAS Test Harness	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.1	Pass
TLS failure due to revoked certificate	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.2	Pass
TLS failure due to expired server certificate	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.3	Pass
TLS failure when SAS Test Harness certificate is issue by unknown CA	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.4	Pass
TLS failure when certificate at the SAS Test Harness is corrupted	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.5	Pass
UUT RF Transmit Power Measurement	WINNF-TS-0122-V1.0.0	WINNF.PT.C.HBT.1	Pass
SAS Version: 1.0.0.3			

The UUT is a CBSD with Domain Proxy. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

CBRSA-TS-9001-V1.0.0

CBRS Alliance Certification Test Plan

WINNF-TS-0122-V1.0.0

Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)

KDB 940660 D01 Part 96 CBRS Eqpt v02

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8.16 WINNF.FT.C.HBT.9 92
8.17 WINNF.FT.C.HBT.10 96
8.18 WINNF.FT.D.RLQ.2 101
8.19 WINNF.FT.D.DRG.2 110
8.20 WINNF.FT.C.SCS.1 120
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4 General Information

4.1 Details of E.U.T.

Power supply:	-48V DC
Sample Type:	Fixed device
CBSD Class:	B (Outdoor Base station)
Transmitter Frequency Band:	LTE Band 48
Transmitter Frequency Range:	3550~3700MHz
Hardware Version of CBSD:	Ver.A
Software Version of CBSD:	BTS3900_5900 V100R015C10
Hardware Version of DP:	TaiShan 200
Software Version of DP:	U2020 V300R019
Test sample:	S/N 1: 2102310WYG6TF4909643 S/N 2: 2102112722P0DC014666
Antenna Gain:	17 dBi
Antenna Number:	8 (This CBSD support UL 8*8 MIMO)

4.2 Description of CBSD/DP Support Features

Condition	Feature Description	Supported
C1	Mandatory for UUT which supports multi-step registration message.	Y
C2	Mandatory for UUT which supports single-step registration with no CPI-signed data in the registration message. By definition, this is a subset of Category A devices which determine all registration information, including location, without CPI intervention.	N
C3	Mandatory for UUT which supports single-step registration containing CPI-signed data in the registration message.	N
C4	Mandatory for UUT which supports RECEIVED_POWER_WITHOUT_GRANT measurement report type.	N
C5	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type.	N
C6	Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration.	N

Y: Supported

N: Not supported

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4.3 Summary of Test Results

WINNF-TS-0122			
Classes	Test Case Items	Pass Items	Pass Rate (%)
FT (CBSD, DP/CBSD)	24	24	100
PT (CBSD, DP/CBSD)	1	1	100
Total	25	25	100

Note:
1. Functional Test (FT): Test to validate the conformance of the Protocols and functionalities implemented in the CBSD/DP UUT to the requirements developed by WInnForum and supporting FCC/DoD requirements.
2. Field/Performance Test (PT): Test to check the capability of the CBSD/DP UUT to support various traffic models and actual operations in the field.

4.4 Modification Record

N/A

4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10^{-8}
2	RF conducted power	± 0.75dB
3	Temperature test	± 1°C
4	Humidity test	± 3%
5	Supply voltages	± 1.5%
6	Time	± 3%

4.6 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
CPE	Huawei	LTE Router	ss-2.3.4

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4.7 Test Location

All tests were performed to:

Huawei Xi'an Research Institute

V5-4F, No.127 Jinye Road, Yanta District, Xi'an City, Shaanxi Province, China.

Test setup and all test performs in Huawei Xi'an Research Institute and witness by SGS.

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5 Equipment List

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Laptop (With SAS Test hamess)	Huawei	Huawei Cloud	/	/	/
Spectrum Analyzer	R&S	FSQ26	201025	2020-07-22	2020-07-21
Coaxial Cable	Huawei	/	/	/	/
Attenuator	Shanghai Huaxiang	DTD100-30Db-4G	191210018	/	/

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6 Test Method and Environment

6.1 CBSD/DP Conformance and Performance

Test Requirement: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.0

Test Method: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.0
WINNF-IN-0156_WInnForum_SAS_Test_Harness_CBSD_UUT_Tutorial_v1_0_0_1

6.2 CBSD Test Procedure

a. Connect the UUT to SAS Test Harness system and RF Test instruments via the DP interface and RF components. The highest level is set to test configuration.

b. UUT shall be UTC time synchronized

c. The frequency band is granted and set as UUT supported Modulation and Channels, transmitted power of the UUT according to it granted parameters from the SAS Test Harness.

d. Each test case results were recorded and validated by SAS Test Harness system and RF instruments test cases was recorded test results from SAS Test Harness system.

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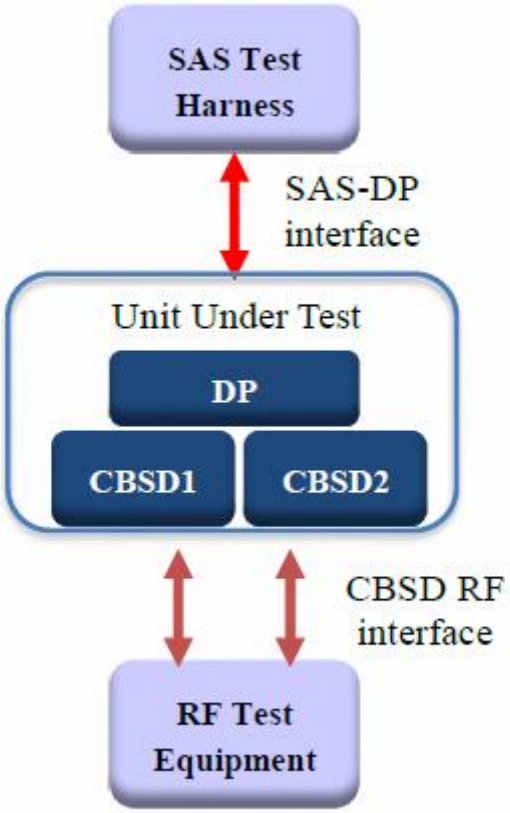
6.3 Test Environment

Test Harness Version:	V1.0.0.3
Operating System:	Microsoft Windows 10
TLS Version:	1.2
Python Version:	2.7.13
Environmental Conditions:	25deg. C, 65%RH
Input Power:	120Vac, 60Hz

6.4 Test Setup

1) DP is deployed on the network management, and the registration of DP to SAS is to register with SAS according to the granularity of CBSDID;

2) The DP and the network element communicate messages according to the cell granularity, and each CBSDID corresponds to a cell of an RRU which belongs to a base station.



DP/CBSD as UUT, BTS-CBSD communication with Domain Proxy

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7 Test Data

7.1 CBSD Registration Process

7.1.1 WINNF.FT.D.REG.2

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

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7.1.2 WINNF.FT.D.REG.9

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

7.1.3 WINNF.FT.D.REG.11

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

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7.1.4 WINNF.FT.D.REG.13

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

7.1.5 WINNF.FT.D.REG.15

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

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7.1.6 WINNF.FT.D.REG.17

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

7.1.7 WINNF.FT.D.REG.19

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

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7.2 CBSD Spectrum Grant Process

7.2.1 WINNF.FT.C.GRA.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C	--	--
2	UUT sends valid Grant Request.	--	--
3	SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = 400	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

7.2.2 WINNF.FT.C.GRA.2

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C	--	--
2	UUT sends valid Grant Request.	--	--
3	SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = 400	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

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7.3 CBSD HeartBeat Process

7.3.1 WINNF.FT.D.HBT.2

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● DP has two CBSD registered successfully with SAS Test Harness, with cbsdId = Ci, i={1,2}	--	--
2	DP sends a message: ● If message is type Spectrum Inquiry Request, go to step 3, or ● If message is type Grant Request, go to step 5	--	--
3	DP sends a Spectrum Inquiry Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Spectrum Inquiry Request message is formatted correctly for each CBSD, including for CBSDi, i={1,2}: ● cbsdId = Ci ● List of frequencyRange objects sent by DP are within the CBRS frequency range	■ Pass	□ Fail
4	If a separate Spectrum Inquiry Request message was sent for each CBSD, the SAS Test Harness shall respond to each Spectrum Inquiry Request message with a separate Spectrum Inquiry Response message. If a single Spectrum Inquiry Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Spectrum Inquiry Response message containing a 2-object array. Verify parameters for each CBSD within the Spectrum Inquiry Response message are as follows, for CBSDi, i={1,2}: ● cbsdId = Ci ● availableChannel is an array of availableChannel objects ● responseCode = 0	--	--
5	DP sends a Grant Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Grant Request message is formatted correctly for each CBSD, including for CBSDi, i={1,2}: ● cbsdId = C ● maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96 ● operationFrequencyRange, Fi, sent by UUT is a valid range within the CBRS band	■ Pass	□ Fail
6	If a separate Grant Request message was sent for each CBSD, the SAS Test Harness shall respond to each Grant Request message with a separate Grant Response message. If a single Grant Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Grant Response message containing a 2-object array. Verify parameters for each CBSD within the Grant Response message are as follows, for CBSDi, i={1,2}:	--	--

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	● cbsdId = Ci ● grantId = Gi = a valid grant ID ● grantExpireTime = UTC time greater than duration of the test ● responseCode = 0		
7	Ensure DP sends first Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Heartbeat Request message is formatted correctly for each CBSD, including, for CBSDi i={1,2}: ● cbsdId = Ci, i={1,2} ● grantId = Gi, i={1,2} ● operationState = “GRANTED”	■ Pass	□ Fail
8	If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Verify parameters for each CBSD within the Heartbeat Response message are as follows, for CBSDi: ● cbsdId = Ci ● grantId = Gi ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	--	--
9	For further Heartbeat Request messages sent from DP after completion of step 8, validate message is sent within latest specified heartbeatInterval for CBSDi: ● cbsdId = Ci ● grantId = Gi ● operationState = “AUTHORIZED” and SAS Test Harness responds with a Heartbeat Response message including the following parameters, for CBSDi ● cbsdId = Ci ● grantId = Gi ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	■ Pass	□ Fail
10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Monitor the RF output of the UUT from start of test until RF transmission commences. Verify: ● UUT does not transmit at any time prior to completion of the first heartbeat response ● UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range Fi.	■ Pass	□ Fail

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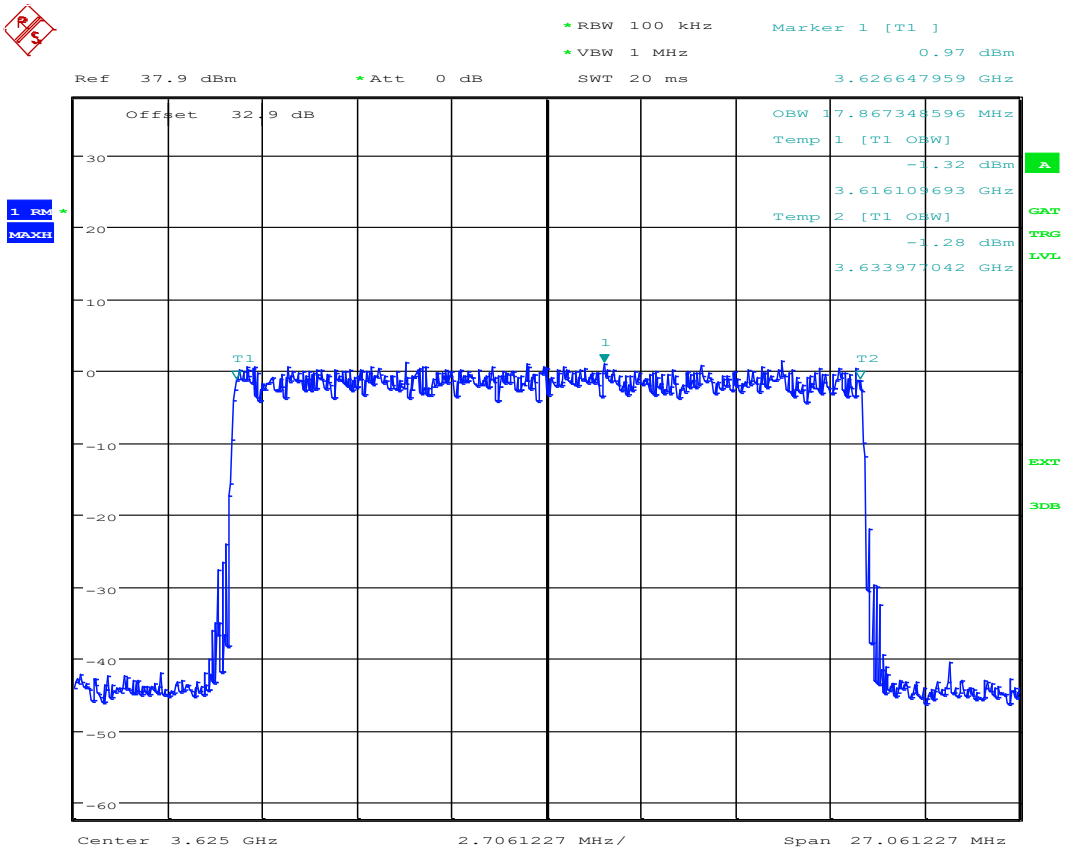

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7.3.2 WINNF.FT.C.HBT.3

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within Heartbeat Interval specified in the latest Heartbeat Response, and formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = “AUTHORIZED”	■ Pass	□ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = T = Current UTC time ● responseCode = 105 (DEREGISTER)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T + 60 seconds) of completion of step 3	■ Pass	□ Fail

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7.3.3 WINNF.FT.C.HBT.5

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

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7.3.4 WINNF.FT.C.HBT.6

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

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7.3.5 WINNF.FT.C.HBT.7

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

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7.3.6 WINNF.FT.D.HBT.8

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● DP has two CBSD registered successfully with SAS Test Harness ● Each CBSD {1,2} has a valid single grant as follows ○ valid cbsdId = Ci, i={1,2} ○ valid grantId = Gi, i={1,2} ○ grant is for frequency range Fi, power Pi ○ grantExpireTime = UTC time greater than duration of the test ● Both CBSD are in AUTHORIZED state and transmitting within their granted bandwidth on RF interface	--	--
2	DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of size 2. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly for each CBSD, including, for CBSDi i={1,2}: ● cbsdId = Ci, i = {1,2} ● grantId = Gi, i = {1,2} ● operationState = "AUTHORIZED"	■ Pass	□ Fail
3	If separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Parameters for each CBSD within the Heartbeat Response message should be as follows, for CBSDi: ● cbsdId = Ci ● grantId = Gi ● For CBSD1: ○ transmitExpireTime = current UTC time + 200 seconds ○ responseCode = 0 ● For CBSD2: ○ transmitExpireTime = T = current UTC time ○ responseCode = 500 (TERMINATED_GRANT)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. If CBSD sends further Heartbeat Request messages for CBSD1, SAS Test Harness shall respond with a Heartbeat Response message with parameters: ● cbsdId = C1 ● grantId = G1 ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 ● Heartbeat Request message is within heartbeatInterval of previous Heartbeat Request message	--	--
5	Monitor the RF output of CBSD2. Verify: ● CBSD2 shall stop transmission within bandwidth F2 within (T + 60 seconds) of completion of step 3	■ Pass	□ Fail

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7.3.7 WINNF.FT.C.HBT.9

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in GRANTED, but not AUTHORIZED state(i.e. has not performed its first Heartbeat Request)	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = “GRANTED”	■ Pass	□ Fail
3	After completion of step 2, SAS Test Harness does not respond to any further ● messages from UUT to simulate loss of network connection	--	--
4	Monitor the RF output of the UUT from start of test to 60 seconds after step 3. Verify: ● At any time during the test, UUT shall not transmit on RF interface	■ Pass	□ Fail

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7.3.8 WINNF.FT.C.HBT.10

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

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7.4 CBSD Relinquishment Process

7.4.1 WINNF.FT.D.RLQ.2

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

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7.5 CBSD Deregistration Process

7.5.1 WINNF.FT.D.DRG.2

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

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7.6 CBSD Security Validation

7.6.1 WINNF.FT.C.SCS.1

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedure ● The UUT shall establish a TLS handshake with the SAS Test Harness using configured certificate. ● Configure the SAS Test Harness to accept the security procedure and establish the connection	■ Pass	□ Fail

2	● Make sure that Mutual authentication happens between UUT and the SAS Test Harness.
	● Make sure that UUT uses TLS v1.2
	● Make sure that cipher suites from one of the following is selected,
	  ● TLS_RSA_WITH_AES_128_GCM_SHA256
	  ● TLS_RSA_WITH_AES_256_GCM_SHA384
	  ● TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
	  ● TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
	  ● TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
		■ Pass	□ Fail

3	A successful registration is accomplished using one of the test cases described in section 6.1.4.1, depending on CBSD capability. ● UUT sends a registration request to the SAS Test Harness and the SAS Test Harness sends a Registration Response with responseCode = 0 and cbsdId.	■ Pass	□ Fail
4	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

7.6.2 WINNF.FT.C.SCS.2

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	■ Pass	□ Fail
2	● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate. ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	■ Pass	□ Fail
3	● UUT may retry for the security procedure which shall fail.	■ Pass	□ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

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7.6.3 WINNF.FT.C.SCS.3

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	■ Pass	☐ Fail
2	● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate. ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	■ Pass	☐ Fail
3	● UUT may retry for the security procedure which shall fail.	■ Pass	☐ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	☐ Fail

7.6.4 WINNF.FT.C.SCS.4

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	■ Pass	☐ Fail
2	● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	■ Pass	☐ Fail
3	● UUT may retry for the security procedure which shall fail.	■ Pass	☐ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	☐ Fail

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7.6.5 WINNF.FT.C.SCS.5

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	■ Pass	□ Fail
2	● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	■ Pass	□ Fail
3	● UUT may retry for the security procedure which shall fail.	■ Pass	□ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

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7.7 CBSD RF Power Measurement

7.7.1 WINNF.PT.C.HBT.1

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

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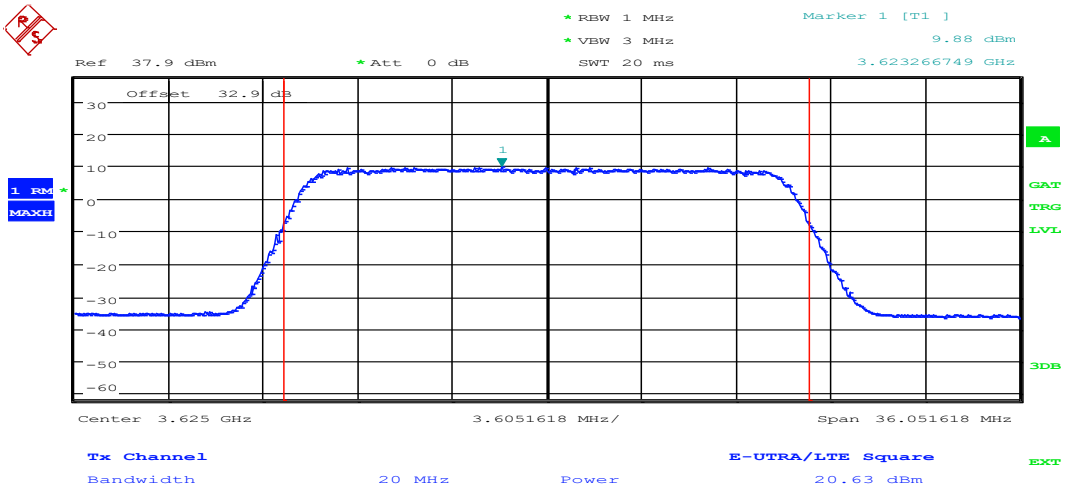
RF measurement plot for Test Case :

- Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.

Freq. (MHz)	Conducted PSD (dBm/MHz)	Antenna Gain (dBi)	Array Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
3625	9.88	17.0	9.03	35.91	36	Pass

Note:
1. Array Gain=10log(n), n is the antenna number, for this CBSD the n=8
2. EIRP PSD= Conducted PSD+ Antenna Gain+ Array Gain
3. Conducted PSD test data include cable loss and loss of attenuator, offset show on test plot is (offset=cable loss + loss of attenuator)

Target Power: 36dBm/MHz



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8 Test Data Log

8.1 WINNF.FT.D.REG.2

2020-08-08T06:36:02.839Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:36:02.839Z - INFO - you have choose to add the test WINNF.FT.D.REG.2 to the specific folder :WINNF.FT.D.REG.282

2020-08-08T06:37:47.732Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:37:47.779Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "response": {
        "responseCode": 0
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


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2020-08-08T06:37:49.420Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:37:49.420Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

2020-08-08T06:37:52.325Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

2020-08-08T06:37:52.325Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:37:54.904Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:38:08.779Z - INFO - The final result of the test : WINNF.FT.D.REG.2 is - passed and :the additional comments for the current test are : n

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8.2 WINNF.FT.D.REG.9

2020-08-08T06:40:48.986Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:40:48.986Z - INFO - you have choose to add the test WINNF.FT.D.REG.9 to the specific folder :WINNF.FT.D.REG.9881

2020-08-08T06:42:22.974Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:42:23.036Z - INFO - engine sent successfully, the response to CBRS : {


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


2020-08-08T06:42:24.411Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:42:24.411Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

2020-08-08T06:42:29.427Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

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2020-08-08T06:42:29.427Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:42:43.381Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:42:53.224Z - INFO - The final result of the test : WINNF.FT.D.REG.9 is - passed and :the additional comments for the current test are : n

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8.3 WINNF.FT.D.REG.11

2020-08-08T06:44:01.884Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:44:01.898Z - INFO - you have choose to add the test WINNF.FT.D.REG.11 to the specific folder :WINNF.FT.D.REG.11

2020-08-08T06:44:22.946Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:44:23.009Z - INFO - engine sent successfully, the response to CBRS : {


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


2020-08-08T06:44:24.243Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:44:24.243Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

2020-08-08T06:44:29.634Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

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2020-08-08T06:44:29.634Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:44:33.211Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:44:41.509Z - INFO - The final result of the test : WINNF.FT.D.REG.11 is - passed and :the additional comments for the current test are : n

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8.4 WINNF.FT.D.REG.13

2020-08-08T06:45:11.229Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:45:11.229Z - INFO - you have choose to add the test WINNF.FT.D.REG.13 to the specific folder :WINNF.FT.D.REG.13

2020-08-08T06:46:22.963Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:46:23.010Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 103
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T06:46:24.323Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:46:24.323Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

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2020-08-08T06:46:56.153Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

2020-08-08T06:46:56.153Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:46:58.167Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:47:05.778Z - INFO - The final result of the test : WINNF.FT.D.REG.13 is - passed and :the additional comments for the current test are : n

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8.5 WINNF.FT.D.REG.15

2020-08-08T06:48:59.451Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:48:59.451Z - INFO - you have choose to add the test WINNF.FT.D.REG.15 to the specific folder :WINNF.FT.D.REG.15

2020-08-08T06:50:49.282Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:50:49.328Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 101
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T06:50:51.078Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:50:51.078Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

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2020-08-08T06:50:53.766Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

2020-08-08T06:50:53.766Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:50:55.937Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:51:03.609Z - INFO - The final result of the test : WINNF.FT.D.REG.15 is - passed and :the additional comments for the current test are : n

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8.6 WINNF.FT.D.REG.17

2020-08-08T06:52:23.065Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:52:23.065Z - INFO - you have choose to add the test WINNF.FT.D.REG.17 to the specific folder :WINNF.FT.D.REG.17

2020-08-08T06:54:00.411Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:54:00.457Z - INFO - engine sent successfully, the response to CBRS : {


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


2020-08-08T06:54:01.519Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:54:01.519Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

2020-08-08T06:54:04.676Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

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2020-08-08T06:54:04.676Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:54:08.082Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:54:17.161Z - INFO - The final result of the test : WINNF.FT.D.REG.17 is - passed and :the additional comments for the current test are : n

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8.7 WINNF.FT.D.REG.19

2020-08-08T06:55:54.835Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-08-08T06:55:54.835Z - INFO - you have choose to add the test WINNF.FT.D.REG.19 to the specific folder :WINNF.FT.D.REG.19

2020-08-08T06:56:00.397Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T06:56:00.444Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "response": {
        "responseCode": 201
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T06:56:01.944Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T06:56:01.944Z - INFO - the question is : Were there RF transmissions from the CBSD2 during the test? please choose one of the answers :

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2020-08-08T06:56:22.382Z - INFO - for the question : Were there RF transmissions from the CBSD2 during the test? , the user choose n

2020-08-08T06:56:22.382Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T06:56:24.023Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T06:56:30.601Z - INFO - The final result of the test : WINNF.FT.D.REG.19 is - passed and :the additional comments for the current test are : n

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8.8 WINNF.FT.C.GRA.1

2020-08-08T11:41:11.941Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T11:41:11.941Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
2020-08-08T11:42:01.723Z - INFO - registration request from CBRS : {
"registrationRequest": [
{
"cbsdCategory": "B",
"cbsdSerialNumber": "2102310WYG6TF4909643",
"fccId": "QISRRU3278",
"measCapability": [],
"userId": "HuaWei_U2020"
}
]
}
2020-08-08T11:42:01.755Z - INFO - engine sent successfully, the response to CBRS : {
"registrationResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"response": {
"responseCode": 0
}
}
]
}
2020-08-08T11:42:01.880Z - INFO - spectrumInquiry request from CBRS : {
"spectrumInquiryRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"inquiredSpectrum": [
{
"highFrequency": 3700000000,
"lowFrequency": 3550000000
}
]
}
]
}
2020-08-08T11:42:01.895Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{

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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2020-08-08T11:42:01.989Z - INFO - grant request from CBRS  : {
    "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
}
2020-08-08T11:42:02.005Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 400
        }
      }
    ]
}
```


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2020-08-08T11:42:03.693Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T11:42:03.693Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T11:45:31.072Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T11:45:41.180Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current test are : n

检验检测专用章 Inspection & Testing Services
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch Testing Center, EEC Laboratory.

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8.9 WINNF.FT.C.GRA.2

2020-08-08T11:47:50.887Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T11:47:50.887Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now
2020-08-08T11:49:34.765Z - INFO - registration request from CBRS : {
"registrationRequest": [
{
"cbsdCategory": "B",
"cbsdSerialNumber": "2102310WYG6TF4909643",
"fccId": "QISRRU3278",
"measCapability": [],
"userId": "HuaWei_U2020"
}
]
}
2020-08-08T11:49:34.796Z - INFO - engine sent successfully, the response to CBRS : {
"registrationResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"response": {
"responseCode": 0
}
}
]
}
2020-08-08T11:49:34.921Z - INFO - spectrumInquiry request from CBRS : {
"spectrumInquiryRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"inquiredSpectrum": [
{
"highFrequency": 3700000000,
"lowFrequency": 3550000000
}
]
}
]
}
2020-08-08T11:49:34.937Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{

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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2020-08-08T11:49:35.046Z - INFO - grant request from CBRS  : {
    "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
}
2020-08-08T11:49:35.062Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 401
        }
      }
    ]
}
```


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2020-08-08T11:49:36.451Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T11:49:36.451Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-08-08T11:49:41.265Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-08-08T11:49:45.780Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current test are : n

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8.10 WINNF.FT.D.HBT.2

2020-08-08T07:02:17.065Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T07:02:17.065Z - INFO - the selected test from the user : WINNF.FT.D.HBT.2 is starting now
2020-08-08T07:04:15.927Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T07:04:16.020Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "response": {
        "responseCode": 0
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T07:04:16.131Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
```


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```
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      }
    ]
}
2020-08-08T07:04:16.161Z - INFO - engine sent successfully, the response to CBRS  : {
   "spectrumInquiryResponse": [
      {
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "response": {
          "responseCode": 0
        }
      },
      {
        "availableChannel": [
          {
            "channelType": "GAA",
```


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```
            "frequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
         }
      ],
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
         "responseCode": 0
      }
   }
]
}
2020-08-08T07:04:16.270Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      }
   ]
}
2020-08-08T07:04:16.286Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
```


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"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"channelType": "GAA",
"grantExpireTime": "2020-08-15T07:04:16Z",
"grantId": "660143400",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"channelType": "GAA",
"grantExpireTime": "2020-08-15T07:04:16Z",
"grantId": "582466344",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2020-08-08T07:04:18.786Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "660143400",
"operationState": "GRANTED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "582466344",
"operationState": "GRANTED"
}
]
}
2020-08-08T07:04:18.802Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "660143400",
"response": {

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```
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:07:38Z"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "582466344",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:07:38Z"
      }
   ]
}
2020-08-08T07:05:15.803Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "660143400",
         "operationState": "AUTHORIZED"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "582466344",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T07:05:15.803Z - INFO - Time interval between two heartbeat request messages is: 57.017, limit is: 65.0
2020-08-08T07:05:15.803Z - INFO - Time interval between two heartbeat request messages is: 57.017, limit is: 65.0
2020-08-08T07:05:15.819Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "660143400",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:08:35Z"
      },
```


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```
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "582466344",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-08-08T07:08:35Z"
      }
    ]
}
```


2020-08-08T07:06:15.805Z - INFO - heartbeat request from CBRS : {


```
    "heartbeatRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "660143400",
        "operationState": "AUTHORIZED"
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "582466344",
        "operationState": "AUTHORIZED"
      }
    ]
}
```


2020-08-08T07:06:15.805Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0

2020-08-08T07:06:15.805Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0

2020-08-08T07:06:15.821Z - INFO - engine sent successfully, the response to CBRS : {


```
    "heartbeatResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "660143400",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-08-08T07:09:35Z"
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "582466344",
        "response": {
```


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```
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:09:35Z"
      }
   ]
}
2020-08-08T07:07:15.806Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "660143400",
         "operationState": "AUTHORIZED"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "582466344",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T07:07:15.806Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T07:07:15.806Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T07:07:15.822Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "660143400",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:10:35Z"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "582466344",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:10:35Z"
      }
```


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```
  ]
}
2020-08-08T07:08:15.809Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "660143400",
      "operationState": "AUTHORIZED"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "582466344",
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-08-08T07:08:15.809Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-08T07:08:15.809Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-08T07:08:15.823Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "660143400",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-08T07:11:35Z"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "582466344",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-08T07:11:35Z"
    }
  ]
}
2020-08-08T07:09:15.809Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
```


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{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "660143400",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "582466344",
"operationState": "AUTHORIZED"
}
]
}

2020-08-08T07:09:15.809Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0

2020-08-08T07:09:15.809Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0

2020-08-08T07:09:15.825Z - INFO - engine sent successfully, the response to CBRS : {

"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "660143400",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T07:12:35Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "582466344",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T07:12:35Z"
}
]
}

2020-08-08T07:09:17.200Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T07:09:17.200Z - INFO - the question is : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :

2020-08-08T07:13:17.517Z - INFO - for the question : Did CBSD2 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

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2020-08-08T07:13:17.517Z - INFO - the question is : Did CBSD2 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :

2020-08-08T07:13:22.549Z - INFO - for the question : Did CBSD2 transmit only within the frequency range specified in its grantRequest message? , the user choose y

2020-08-08T07:13:22.549Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :

2020-08-08T07:13:27.878Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

2020-08-08T07:13:27.878Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :

2020-08-08T07:13:33.924Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y

2020-08-08T07:13:37.565Z - INFO - The final result of the test : WINNF.FT.D.HBT.2 is - passed and :the additional comments for the current test are : n

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8.11 WINNF.FT.C.HBT.3

2020-08-08T07:44:47.344Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T07:44:47.344Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now
2020-08-08T07:46:28.658Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T07:46:28.690Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T07:46:28.846Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
```


2020-08-08T07:46:28.846Z - INFO - engine sent successfully, the response to CBRS : {


```
  "spectrumInquiryResponse": [
    {
```


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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T07:46:28.971Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T07:46:28.987Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T07:46:28Z",
        "grantId": "624338841",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
   ]
}
2020-08-08T07:46:31.174Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "624338841",
         "operationState": "GRANTED"
      }
   ]
}
2020-08-08T07:46:31.174Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "624338841",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T07:49:51Z"
      }
   ]
}
2020-08-08T07:47:28.489Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "624338841",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T07:47:28.489Z - INFO - Time interval between two heartbeat request messages is: 57.314, limit is: 65.0
2020-08-08T07:47:28.489Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "624338841",
         "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T07:50:48Z"
}
]
}
2020-08-08T07:48:28.474Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "624338841",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T07:48:28.474Z - INFO - Time interval between two heartbeat request messages is: 59.986, limit is: 65.0
2020-08-08T07:48:28.474Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "624338841",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T07:51:48Z"
}
]
}
2020-08-08T07:49:28.476Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "624338841",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T07:49:28.476Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-08T07:49:28.476Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

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```
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "624338841",
      "response": {
        "responseCode": 105
      },
      "transmitExpireTime": "2020-08-08T07:49:28Z"
    }
  ]
}
```


2020-08-08T07:49:30.476Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T07:49:30.476Z - 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 :

2020-08-08T07:49:43.226Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2020-08-08T07:49:46.007Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current test are : n

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8.12 WINNF.FT.C.HBT.5

2020-08-08T07:56:13.062Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T07:56:13.062Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now
2020-08-08T07:57:16.815Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T07:57:16.845Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T07:57:16.940Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
```


2020-08-08T07:57:16.940Z - INFO - engine sent successfully, the response to CBRS : {


```
  "spectrumInquiryResponse": [
    {
```


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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T07:57:17.049Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T07:57:17.065Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T07:57:17Z",
        "grantId": "766027767",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
   ]
}
2020-08-08T07:57:18.815Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "766027767",
         "operationState": "GRANTED"
      }
   ]
}
2020-08-08T07:57:18.829Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "766027767",
         "response": {
            "responseCode": 501
         },
         "transmitExpireTime": "2020-08-08T07:57:18Z"
      }
   ]
}
2020-08-08T07:57:18.924Z - INFO - relinquishment request from CBRS  : {
   "relinquishmentRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "766027767"
      }
   ]
}
2020-08-08T07:57:18.940Z - INFO - engine sent successfully, the response to CBRS  : {
   "relinquishmentResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "766027767",
         "response": {
            "responseCode": 0
         }
```


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}
]
}
2020-08-08T07:57:20.049Z - INFO - arrived to nstep starting question answer session with the technician
2020-08-08T07:57:20.049Z - INFO - the question is : Did the CBSD transmit at any time during the test? please choose one of the answers :
2020-08-08T07:57:23.986Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n
2020-08-08T07:58:09.628Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed and :the additional comments for the current test are : n

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8.13 WINNF.FT.C.HBT.6

2020-08-08T08:01:24.397Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T08:01:24.397Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now
2020-08-08T08:03:13.493Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
    {
        "cbsdCategory": "B",
        "cbsdSerialNumber": "2102310WYG6TF4909643",
        "fccId": "QISRRU3278",
        "measCapability": [],
        "userId": "HuaWei_U2020"
    }
]
```

}
2020-08-08T08:03:13.525Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
            "responseCode": 0
        }
    }
]
```

}
2020-08-08T08:03:13.650Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
```

}
2020-08-08T08:03:13.664Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
    {
```

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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T08:03:13.775Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T08:03:13.775Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T08:03:13Z",
        "grantId": "878256467",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
   ]
}
2020-08-08T08:03:15.446Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "878256467",
         "operationState": "GRANTED"
      }
   ]
}
2020-08-08T08:03:15.446Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "878256467",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T08:06:35Z"
      }
   ]
}
2020-08-08T08:04:13.354Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "878256467",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T08:04:13.354Z - INFO - Time interval between two heartbeat request messages is: 57.908, limit is: 65.0
2020-08-08T08:04:13.369Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "878256467",
         "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:07:33Z"
}
]
}
2020-08-08T08:05:13.355Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T08:05:13.355Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:05:13.371Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:08:33Z"
}
]
}
2020-08-08T08:06:13.357Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T08:06:13.357Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-08T08:06:13.372Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

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{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2020-08-08T08:06:13Z"
}
]
}

2020-08-08T08:06:13.543Z - INFO - relinquishment request from CBRS : {

"relinquishmentRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467"
}
]
}

2020-08-08T08:06:13.543Z - INFO - engine sent successfully, the response to CBRS : {

"relinquishmentResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "878256467",
"response": {
"responseCode": 0
}
}
]
}

2020-08-08T08:06:14.607Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T08:06:14.607Z - 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 :

2020-08-08T08:06:19.967Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y

2020-08-08T08:06:25.450Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current test are : y

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8.14 WINNF.FT.C.HBT.7

2020-08-08T08:11:42.099Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T08:11:42.099Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now
2020-08-08T08:12:25.226Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
    {
        "cbsdCategory": "B",
        "cbsdSerialNumber": "2102310WYG6TF4909643",
        "fccId": "QISRRU3278",
        "measCapability": [],
        "userId": "HuaWei_U2020"
    }
]
```

}
2020-08-08T08:12:25.273Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
            "responseCode": 0
        }
    }
]
```

}
2020-08-08T08:12:25.413Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
```

}
2020-08-08T08:12:25.413Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
    {
```

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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T08:12:25.523Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T08:12:25.523Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T08:12:25Z",
        "grantId": "807123847",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
   ]
}
2020-08-08T08:12:27.381Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "807123847",
         "operationState": "GRANTED"
      }
   ]
}
2020-08-08T08:12:27.381Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "807123847",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T08:15:47Z"
      }
   ]
}
2020-08-08T08:13:25.086Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "807123847",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T08:13:25.086Z - INFO - Time interval between two heartbeat request messages is: 57.705, limit is: 65.0
2020-08-08T08:13:25.086Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "807123847",
         "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:16:45Z"
}
]
}
2020-08-08T08:14:25.088Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T08:14:25.088Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:14:25.104Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:17:45Z"
}
]
}
2020-08-08T08:15:25.088Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T08:15:25.088Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:15:25.105Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

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{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847",
"response": {
"responseCode": 502
},
"transmitExpireTime": "2020-08-08T08:15:25Z"
}
]
}

2020-08-08T08:15:25.323Z - INFO - relinquishment request from CBRS : {

"relinquishmentRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847"
}
]
}

2020-08-08T08:15:25.323Z - INFO - engine sent successfully, the response to CBRS : {

"relinquishmentResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "807123847",
"response": {
"responseCode": 0
}
}
]
}

2020-08-08T08:15:26.371Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T08:15:26.371Z - 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 :

2020-08-08T08:15:31.276Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y

2020-08-08T08:15:35.558Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current test are : y

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8.15 WINNF.FT.D.HBT.8

2020-08-08T08:32:00.954Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T08:32:00.954Z - INFO - the selected test from the user : WINNF.FT.D.HBT.8 is starting now
2020-08-08T08:33:42.660Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T08:33:42.723Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "response": {
        "responseCode": 0
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T08:33:42.848Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
```


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```
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      }
    ]
}
2020-08-08T08:33:42.862Z - INFO - engine sent successfully, the response to CBRS  : {
   "spectrumInquiryResponse": [
      {
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "response": {
          "responseCode": 0
        }
      },
      {
        "availableChannel": [
          {
            "channelType": "GAA",
```


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```
            "frequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
         }
      ],
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
         "responseCode": 0
      }
   }
]
}
2020-08-08T08:33:42.973Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      }
   ]
}
2020-08-08T08:33:42.987Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
```


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"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"channelType": "GAA",
"grantExpireTime": "2020-08-15T08:33:42Z",
"grantId": "354084805",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"channelType": "GAA",
"grantExpireTime": "2020-08-15T08:33:42Z",
"grantId": "451403497",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2020-08-08T08:33:44.753Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"operationState": "GRANTED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "451403497",
"operationState": "GRANTED"
}
]
}
2020-08-08T08:33:44.769Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"response": {

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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:37:04Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "451403497",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:37:04Z"
}
]
}

2020-08-08T08:34:42.520Z - INFO - heartbeat request from CBRS : {

"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "451403497",
"operationState": "AUTHORIZED"
}
]
}

2020-08-08T08:34:42.520Z - INFO - Time interval between two heartbeat request messages is: 57.767, limit is: 65.0

2020-08-08T08:34:42.536Z - INFO - Time interval between two heartbeat request messages is: 57.767, limit is: 65.0

2020-08-08T08:34:42.536Z - INFO - engine sent successfully, the response to CBRS : {

"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:38:02Z"
},

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```
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "451403497",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T08:38:02Z"
      }
   ]
}
2020-08-08T08:35:42.522Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "354084805",
         "operationState": "AUTHORIZED"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "451403497",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T08:35:42.536Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:35:42.536Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:35:42.536Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "354084805",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T08:39:02Z"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "451403497",
         "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:39:02Z"
}
]
}
2020-08-08T08:36:42.523Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "451403497",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T08:36:42.523Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:36:42.523Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-08T08:36:42.539Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "354084805",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-08T08:40:02Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "451403497",
"response": {
"responseCode": 500
},
"transmitExpireTime": "2020-08-08T08:36:42Z"
}

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]
}

2020-08-08T08:36:44.085Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T08:36:44.085Z - INFO - the question is : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :

2020-08-08T08:36:52.039Z - INFO - for the question : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

2020-08-08T08:36:52.039Z - 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 :

2020-08-08T08:36:58.430Z - INFO - for the question : Did the CBSD2 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y

2020-08-08T08:37:02.805Z - INFO - The final result of the test : WINNF.FT.D.HBT.8 is - passed and :the additional comments for the current test are : n

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8.16 WINNF.FT.C.HBT.9

2020-08-08T08:49:56.464Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T08:49:56.464Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now
2020-08-08T08:51:43.200Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-08T08:51:43.232Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-08T08:51:43.325Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
```


2020-08-08T08:51:43.342Z - INFO - engine sent successfully, the response to CBRS : {


```
  "spectrumInquiryResponse": [
    {
```


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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T08:51:43.482Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T08:51:43.482Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T08:51:43Z",
        "grantId": "510820519",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
    ]
}
```


2020-08-08T08:51:43.592Z - INFO - heartbeat request from CBRS : {


```
    "heartbeatRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "510820519",
        "operationState": "GRANTED"
      }
    ]
}
```


2020-08-08T08:53:43.171Z - INFO - registration request from CBRS : {


```
    "registrationRequest": [
      {
        "cbsdCategory": "B",
        "cbsdSerialNumber": "2102310WYG6TF4909643",
        "fccId": "QISRRU3278",
        "measCapability": [],
        "userId": "HuaWei_U2020"
      }
    ]
}
```


2020-08-08T08:53:43.171Z - INFO - request message received while HBT is absent, sleep 85 sec before responding

2020-08-08T08:55:03.611Z - INFO - engine sent successfully, the response to CBRS : {


```
    "heartbeatResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "510820519",
        "response": {
          "responseCode": 501
        },
        "transmitExpireTime": "2020-08-08T08:55:03Z"
      }
    ]
}
```


2020-08-08T08:55:04.938Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T08:55:04.938Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :

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2020-08-08T08:55:08.188Z - INFO - engine sent successfully, the response to CBRS : "for the CBRS with the cbsdSerialNumber :2102310WYG6TF4909643 list index out of range"

2020-08-08T08:55:21.815Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n

2020-08-08T08:55:25.940Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed and :the additional comments for the current test are : n

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8.17 WINNF.FT.C.HBT.10

2020-08-08T09:01:01.055Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-08T09:01:01.055Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now
2020-08-08T09:01:27.040Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
    {
        "cbsdCategory": "B",
        "cbsdSerialNumber": "2102310WYG6TF4909643",
        "fccId": "QISRRU3278",
        "measCapability": [],
        "userId": "HuaWei_U2020"
    }
]
```

}
2020-08-08T09:01:27.072Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
            "responseCode": 0
        }
    }
]
```

}
2020-08-08T09:01:27.305Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
    {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
```

}
2020-08-08T09:01:27.322Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
    {
```

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```
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "response": {
          "responseCode": 0
        }
      }
   ]
}
2020-08-08T09:01:27.618Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "operationParam": {
          "maxEirp": 0,
          "operationFrequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        }
      }
   ]
}
2020-08-08T09:01:27.618Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-15T09:01:27Z",
        "grantId": "452630618",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
```


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```
        }
      }
   ]
}
2020-08-08T09:01:29.805Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "452630618",
         "operationState": "GRANTED"
      }
   ]
}
2020-08-08T09:01:29.822Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "452630618",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-08T09:04:49Z"
      }
   ]
}
2020-08-08T09:02:26.884Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "452630618",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-08T09:02:26.901Z - INFO - Time interval between two heartbeat request messages is: 57.079, limit is: 65.0
2020-08-08T09:02:26.901Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "452630618",
         "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-08T09:05:46Z"
}
]
}
2020-08-08T09:03:26.901Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "452630618",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T09:03:26.901Z - INFO - Time interval between two heartbeat request messages is: 60.017, limit is: 65.0
2020-08-08T09:03:26.901Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT: 2020-08-08 09:02:26.885000
2020-08-08T09:04:26.888Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "452630618",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T09:04:26.888Z - INFO - request message received while HBT is absent, sleep 145 sec before responding
2020-08-08T09:05:26.888Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "452630618",
"operationState": "AUTHORIZED"
}
]
}
2020-08-08T09:05:26.888Z - INFO - request message received while HBT is absent, sleep 85 sec before responding
2020-08-08T09:06:26.890Z - INFO - heartbeat request from CBRS : {

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"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "452630618",
"operationState": "AUTHORIZED"
}
]
}

2020-08-08T09:06:26.890Z - INFO - request message received while HBT is absent, sleep 25 sec before responding

2020-08-08T09:06:46.921Z - INFO - engine sent successfully, the response to CBRS : {

"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "452630618",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2020-08-08T09:06:46Z"
}
]
}

2020-08-08T09:06:48.094Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-08T09:06:48.094Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :

2020-08-08T09:06:51.905Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2020-08-08T09:06:51.905Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2020-08-08T09:06:51.905Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2020-08-08T09:07:16.546Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y

2020-08-08T09:07:26.250Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current test are : n

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8.18 WINNF.FT.D.RLQ.2

2020-08-10T05:02:16.688Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-10T05:02:16.690Z - INFO - the selected test from the user : WINNF.FT.D.RLQ.2 is starting now
2020-08-10T05:04:03.551Z - INFO - registration request from CBRS : {


```
  "registrationRequest": [
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102112722P0DC014666",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    },
    {
      "cbsdCategory": "B",
      "cbsdSerialNumber": "2102310WYG6TF4909643",
      "fccId": "QISRRU3278",
      "measCapability": [],
      "userId": "HuaWei_U2020"
    }
  ]
}
```


2020-08-10T05:04:03.644Z - INFO - engine sent successfully, the response to CBRS : {


```
  "registrationResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "response": {
        "responseCode": 0
      }
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```


2020-08-10T05:04:03.775Z - INFO - spectrumInquiry request from CBRS : {


```
  "spectrumInquiryRequest": [
    {
```


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```
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      }
    ]
}
2020-08-10T05:04:03.806Z - INFO - engine sent successfully, the response to CBRS  : {
   "spectrumInquiryResponse": [
      {
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "response": {
          "responseCode": 0
        }
      },
      {
        "availableChannel": [
          {
            "channelType": "GAA",
```


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```
            "frequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
         }
      ],
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
         "responseCode": 0
      }
   }
]
}
2020-08-10T05:04:03.917Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      }
   ]
}
2020-08-10T05:04:03.947Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
```


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```
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-17T05:04:03Z",
        "grantId": "789082212",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "channelType": "GAA",
        "grantExpireTime": "2020-08-17T05:04:03Z",
        "grantId": "809748765",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
    ]
}
2020-08-10T05:04:07.224Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "789082212",
        "operationState": "GRANTED"
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "809748765",
        "operationState": "GRANTED"
      }
    ]
}
2020-08-10T05:04:07.246Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "789082212",
        "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:07:27Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:07:27Z"
}
]
}
2020-08-10T05:05:03.404Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765",
"operationState": "AUTHORIZED"
}
]
}
2020-08-10T05:05:03.408Z - INFO - Time interval between two heartbeat request messages is: 56.18, limit is: 65.0
2020-08-10T05:05:03.417Z - INFO - Time interval between two heartbeat request messages is: 56.18, limit is: 65.0
2020-08-10T05:05:03.423Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:08:23Z"
},

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```
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "809748765",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-08-10T05:08:23Z"
      }
    ]
}
2020-08-10T05:06:03.404Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "789082212",
        "operationState": "AUTHORIZED"
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "809748765",
        "operationState": "AUTHORIZED"
      }
    ]
}
2020-08-10T05:06:03.407Z - INFO - Time interval between two heartbeat request messages is: 60.0, limit is: 65.0
2020-08-10T05:06:03.414Z - INFO - Time interval between two heartbeat request messages is: 60.0, limit is: 65.0
2020-08-10T05:06:03.421Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
      {
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "grantId": "789082212",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-08-10T05:09:23Z"
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "grantId": "809748765",
        "response": {
```


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"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:09:23Z"
}
]
}
2020-08-10T05:07:03.403Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765",
"operationState": "AUTHORIZED"
}
]
}
2020-08-10T05:07:03.404Z - INFO - Time interval between two heartbeat request messages is: 59.998, limit is: 65.0
2020-08-10T05:07:03.411Z - INFO - Time interval between two heartbeat request messages is: 59.998, limit is: 65.0
2020-08-10T05:07:03.415Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:10:23Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T05:10:23Z"
}

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```
  ]
}
2020-08-10T05:08:03.401Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "789082212",
      "operationState": "AUTHORIZED"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "809748765",
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-08-10T05:08:03.403Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2020-08-10T05:08:03.410Z - INFO - Time interval between two heartbeat request messages is: 59.999, limit is: 65.0
2020-08-10T05:08:03.414Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "789082212",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-10T05:11:23Z"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "809748765",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-10T05:11:23Z"
    }
  ]
}
2020-08-10T05:08:03.552Z - INFO - relinquishment request from CBRS  : {
  "relinquishmentRequest": [
```


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{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765"
}
]
}

2020-08-10T05:08:03.575Z - INFO - engine sent successfully, the response to CBRS : {

"relinquishmentResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "789082212",
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "809748765",
"response": {
"responseCode": 0
}
}
]
}

2020-08-10T05:08:04.881Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-10T05:08:04.881Z - INFO - the question is : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :

2020-08-10T05:08:30.111Z - INFO - for the question : Did CBSD2 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y

2020-08-10T05:08:30.111Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :

2020-08-10T05:08:32.217Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y

2020-08-10T05:08:38.562Z - INFO - The final result of the test : WINNF.FT.D.RLQ.2 is - passed and :the additional comments for the current test are : y

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8.19 WINNF.FT.D.DRG.2

2020-08-10T11:48:04.532Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-08-10T11:48:04.532Z - INFO - the selected test from the user : WINNF.FT.D.DRG.2 is starting now
2020-08-10T11:49:39.880Z - INFO - registration request from CBRS : {
"registrationRequest": [
{
"cbsdCategory": "B",
"cbsdSerialNumber": "2102112722P0DC014666",
"fccId": "QISRRU3278",
"measCapability": [],
"userId": "HuaWei_U2020"
},
{
"cbsdCategory": "B",
"cbsdSerialNumber": "2102310WYG6TF4909643",
"fccId": "QISRRU3278",
"measCapability": [],
"userId": "HuaWei_U2020"
}
]
}
2020-08-10T11:49:39.957Z - INFO - engine sent successfully, the response to CBRS : {
"registrationResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"response": {
"responseCode": 0
}
}
]
}
2020-08-10T11:49:40.082Z - INFO - spectrumInquiry request from CBRS : {
"spectrumInquiryRequest": [
{

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```
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      },
      {
        "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
        "inquiredSpectrum": [
          {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          }
        ]
      }
    ]
}
2020-08-10T11:49:40.114Z - INFO - engine sent successfully, the response to CBRS  : {
   "spectrumInquiryResponse": [
      {
        "availableChannel": [
          {
            "channelType": "GAA",
            "frequencyRange": {
              "highFrequency": 3700000000,
              "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
          }
        ],
        "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
        "response": {
          "responseCode": 0
        }
      },
      {
        "availableChannel": [
          {
            "channelType": "GAA",
```


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```
            "frequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            },
            "ruleApplied": "FCC_PART_96"
         }
      ],
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "response": {
         "responseCode": 0
      }
   }
]
}
2020-08-10T11:49:40.223Z - INFO - grant request from CBRS  : {
   "grantRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "operationParam": {
            "maxEirp": 0,
            "operationFrequencyRange": {
               "highFrequency": 3700000000,
               "lowFrequency": 3550000000
            }
         }
      }
   ]
}
2020-08-10T11:49:40.239Z - INFO - engine sent successfully, the response to CBRS  : {
   "grantResponse": [
      {
```


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"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"channelType": "GAA",
"grantExpireTime": "2020-08-17T11:49:40Z",
"grantId": "66504658",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"channelType": "GAA",
"grantExpireTime": "2020-08-17T11:49:40Z",
"grantId": "345327132",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2020-08-10T11:49:42.364Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658",
"operationState": "GRANTED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132",
"operationState": "GRANTED"
}
]
}
2020-08-10T11:49:42.364Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658",
"response": {

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```
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:53:02Z"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "345327132",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:53:02Z"
      }
   ]
}
2020-08-10T11:50:39.740Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "66504658",
         "operationState": "AUTHORIZED"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "345327132",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-10T11:50:39.740Z - INFO - Time interval between two heartbeat request messages is: 57.376, limit is: 65.0
2020-08-10T11:50:39.740Z - INFO - Time interval between two heartbeat request messages is: 57.376, limit is: 65.0
2020-08-10T11:50:39.756Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "66504658",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:53:59Z"
      },
```


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{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T11:53:59Z"
}
]
}
2020-08-10T11:51:39.726Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658",
"operationState": "AUTHORIZED"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132",
"operationState": "AUTHORIZED"
}
]
}
2020-08-10T11:51:39.726Z - INFO - Time interval between two heartbeat request messages is: 59.986, limit is: 65.0
2020-08-10T11:51:39.742Z - INFO - Time interval between two heartbeat request messages is: 59.986, limit is: 65.0
2020-08-10T11:51:39.742Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-08-10T11:54:59Z"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132",
"response": {

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```
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:54:59Z"
      }
   ]
}
2020-08-10T11:52:39.727Z - INFO - heartbeat request from CBRS  : {
   "heartbeatRequest": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "66504658",
         "operationState": "AUTHORIZED"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "345327132",
         "operationState": "AUTHORIZED"
      }
   ]
}
2020-08-10T11:52:39.727Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-10T11:52:39.727Z - INFO - Time interval between two heartbeat request messages is: 60.002, limit is: 65.0
2020-08-10T11:52:39.727Z - INFO - engine sent successfully, the response to CBRS  : {
   "heartbeatResponse": [
      {
         "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
         "grantId": "66504658",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:55:59Z"
      },
      {
         "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
         "grantId": "345327132",
         "response": {
            "responseCode": 0
         },
         "transmitExpireTime": "2020-08-10T11:55:59Z"
      }
```


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```
  ]
}
2020-08-10T11:53:39.729Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "66504658",
      "operationState": "AUTHORIZED"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "345327132",
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-08-10T11:53:39.729Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-10T11:53:39.729Z - INFO - Time interval between two heartbeat request messages is: 60.001, limit is: 65.0
2020-08-10T11:53:39.729Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
      "grantId": "66504658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-10T11:56:59Z"
    },
    {
      "cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
      "grantId": "345327132",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-08-10T11:56:59Z"
    }
  ]
}
2020-08-10T11:53:39.884Z - INFO - relinquishment request from CBRS  : {
  "relinquishmentRequest": [
```


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{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132"
}
]
}
2020-08-10T11:53:39.901Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"grantId": "66504658",
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"grantId": "345327132",
"response": {
"responseCode": 0
}
}
]
}
2020-08-10T11:53:39.993Z - INFO - deregistration request from CBRS : {
"deregistrationRequest": [
{
"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666"
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643"
}
]
}
2020-08-10T11:53:40.026Z - INFO - engine sent successfully, the response to CBRS : {
"deregistrationResponse": [
{

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"cbsdId": "QISRRU3278Mock-SAS2102112722P0DC014666",
"response": {
"responseCode": 0
}
},
{
"cbsdId": "QISRRU3278Mock-SAS2102310WYG6TF4909643",
"response": {
"responseCode": 0
}
}
]
}

2020-08-10T11:53:41.493Z - INFO - arrived to nstep starting question answer session with the technician

2020-08-10T11:53:41.493Z - 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 :

2020-08-10T11:53:44.134Z - 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

2020-08-10T11:53:44.134Z - 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 :

2020-08-10T11:53:45.776Z - 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

2020-08-10T11:53:48.651Z - INFO - The final result of the test : WINNF.FT.D.DRG.2 is - passed and :the additional comments for the current test are : n

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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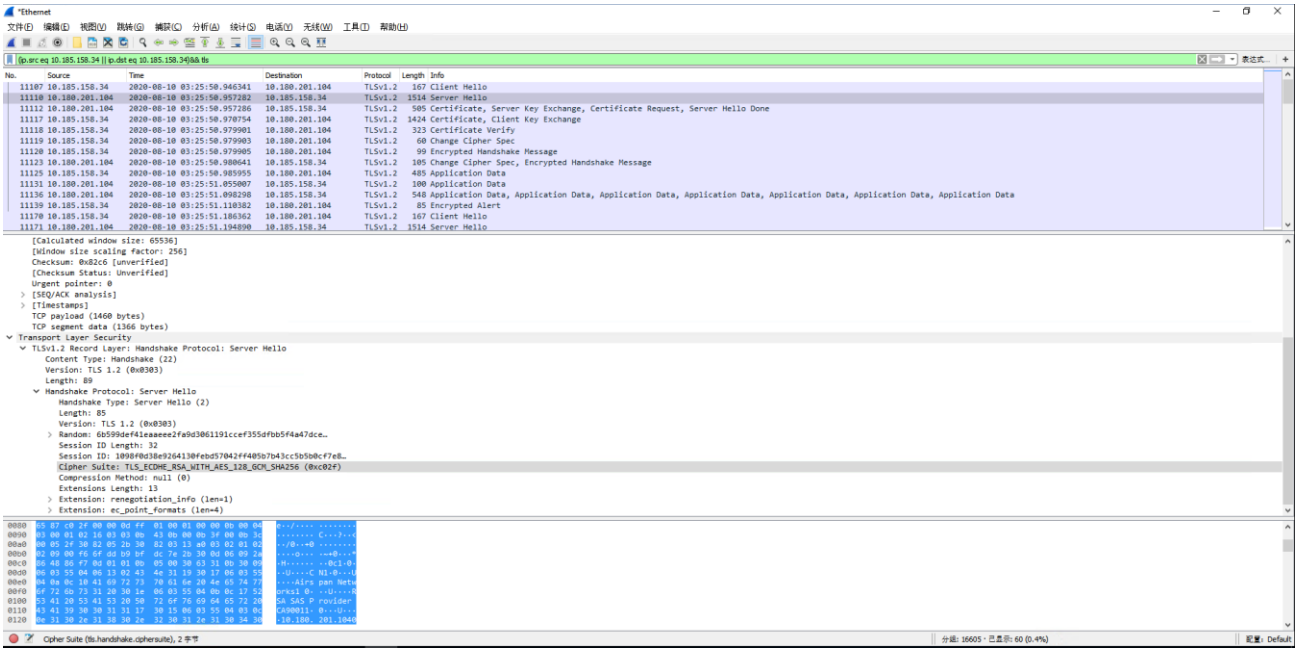
8.20 WINNF.FT.C.SCS.1



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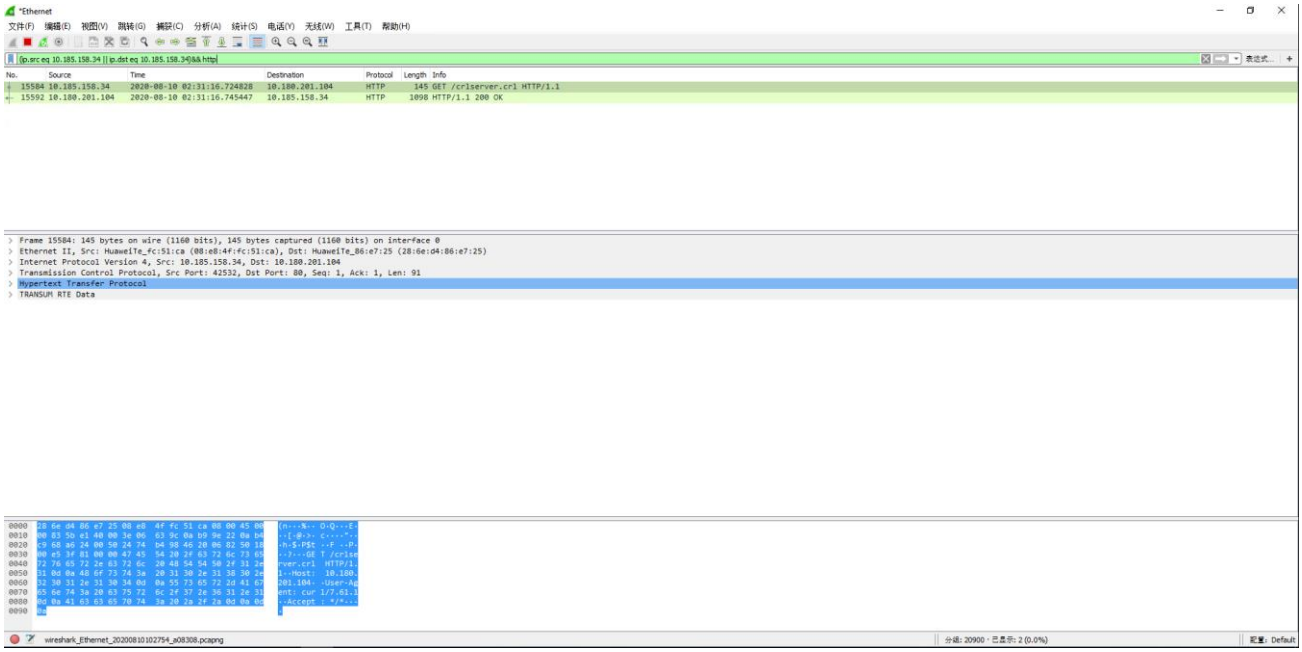
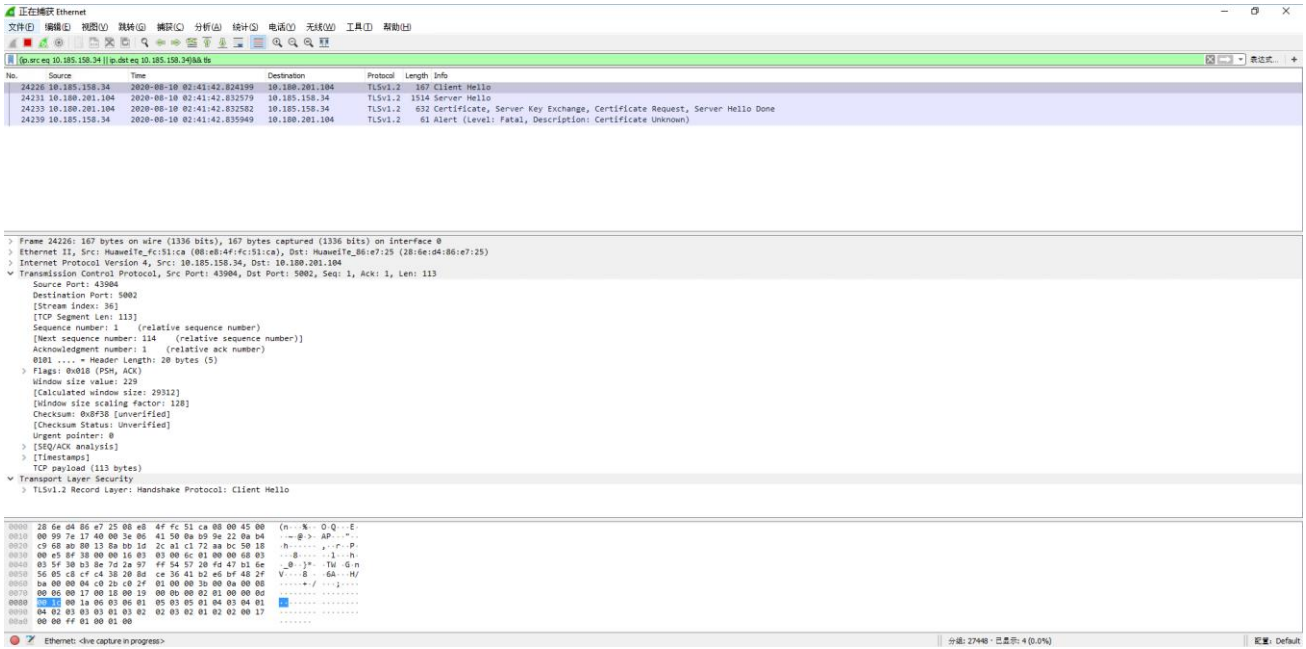
8.21 WINNF.FT.C.SCS.2





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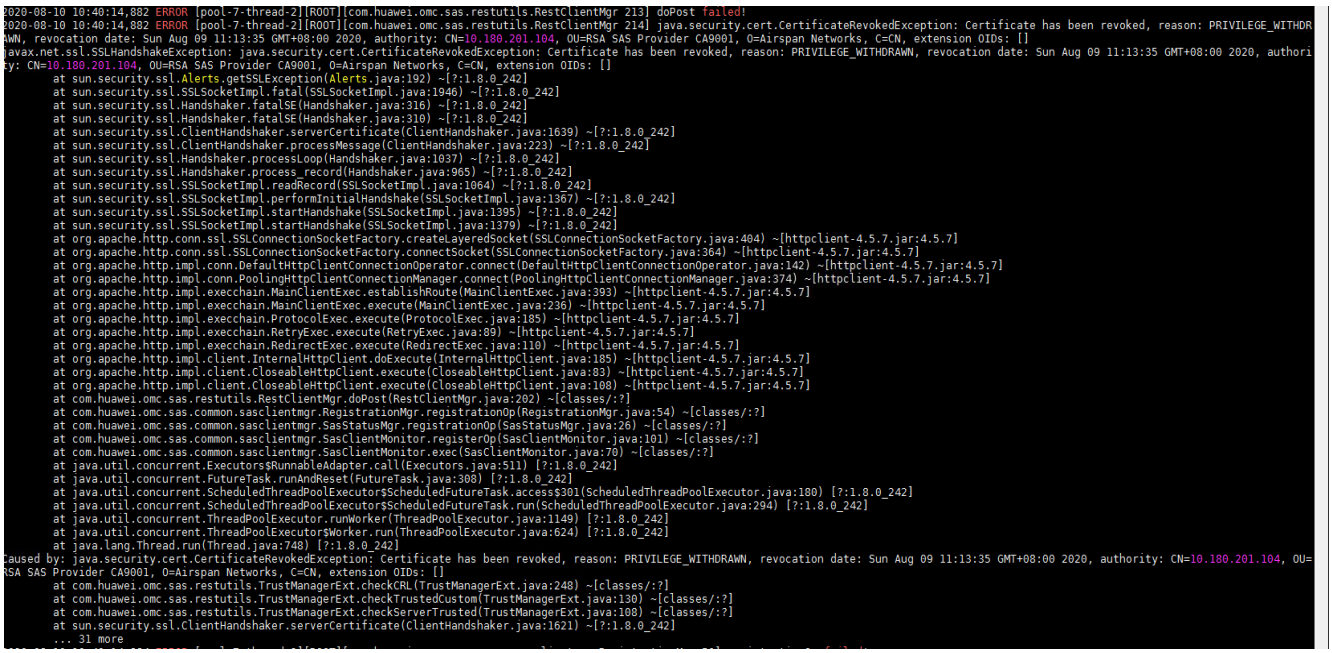

```
2020-08-10 10:40:14,882 ERROR [pool-7-thread-2][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 213] doPost failed!
2020-08-10 10:40:14,882 ERROR [pool-7-thread-2][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 214] java.security.cert.CertificateRevokedException: Certificate has been revoked, reason: PRIVILEGE_WITHDR
AWN, revocation date: Sun Aug 09 11:13:35 GMT+08:00 2020, authority: CN=10.180.201.104, OU=RSA SAS Provider CA9001, O=Airspan Networks, C=CN, extension OIDs: []
javax.net.ssl.SSLHandshakeException: java.security.cert.CertificateRevokedException: Certificate has been revoked, reason: PRIVILEGE_WITHDRAWN, revocation date: Sun Aug 09 11:13:35 GMT+08:00 2020, authori
ty: CN=10.180.201.104, OU=RSA SAS Provider CA9001, O=Airspan Networks, C=CN, extension OIDs: []
        at sun.security.ssl.Alerts.getSSLException(Alerts.java:192) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.fatal(SSLSocketImpl.java:1946) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:316) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:310) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1639) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.processMessage(ClientHandshaker.java:223) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.processLoop(Handshaker.java:1037) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.process_record(Handshaker.java:965) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.readRecord(SSLSocketImpl.java:1064) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.performInitialHandshake(SSLSocketImpl.java:1367) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1395) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1379) ~[?:1.8.0_242]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.createLayeredSocket(SSLConnectionSocketFactory.java:404) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.connectSocket(SSLConnectionSocketFactory.java:364) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.DefaultHttpClientConnectionOperator.connect(DefaultHttpClientConnectionOperator.java:142) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.PoolingHttpClientConnectionManager.connect(PoolingHttpClientConnectionManager.java:374) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.establishRoute(MainClientExec.java:393) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.execute(MainClientExec.java:236) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.ProtocolExec.execute(ProtocolExec.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RetryExec.execute(RetryExec.java:89) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RedirectExec.execute(RedirectExec.java:110) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.InternalHttpClient.doExecute(InternalHttpClient.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:83) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:108) ~[httpclient-4.5.7.jar:4.5.7]
        at com.huawei.omc.sas.restutils.RestClientMgr.doPost(RestClientMgr.java:202) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr.registrationOp(RegistrationMgr.java:54) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasStatusMgr.registrationOp(SasStatusMgr.java:26) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.registerOp(SasClientMonitor.java:101) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.exec(SasClientMonitor.java:70) ~[classes/:?]
        at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511) [?:1.8.0_242]
        at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$301(ScheduledThreadPoolExecutor.java:180) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:294) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624) [?:1.8.0_242]
        at java.lang.Thread.run(Thread.java:748) [?:1.8.0_242]
Caused by: java.security.cert.CertificateRevokedException: Certificate has been revoked, reason: PRIVILEGE_WITHDRAWN, revocation date: Sun Aug 09 11:13:35 GMT+08:00 2020, authority: CN=10.180.201.104, OU=
RSA SAS Provider CA9001, O=Airspan Networks, C=CN, extension OIDs: []
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkCRL(TrustManagerExt.java:248) ~[classes/:?]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkTrustedCustom(TrustManagerExt.java:130) ~[classes/:?]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:108) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
```

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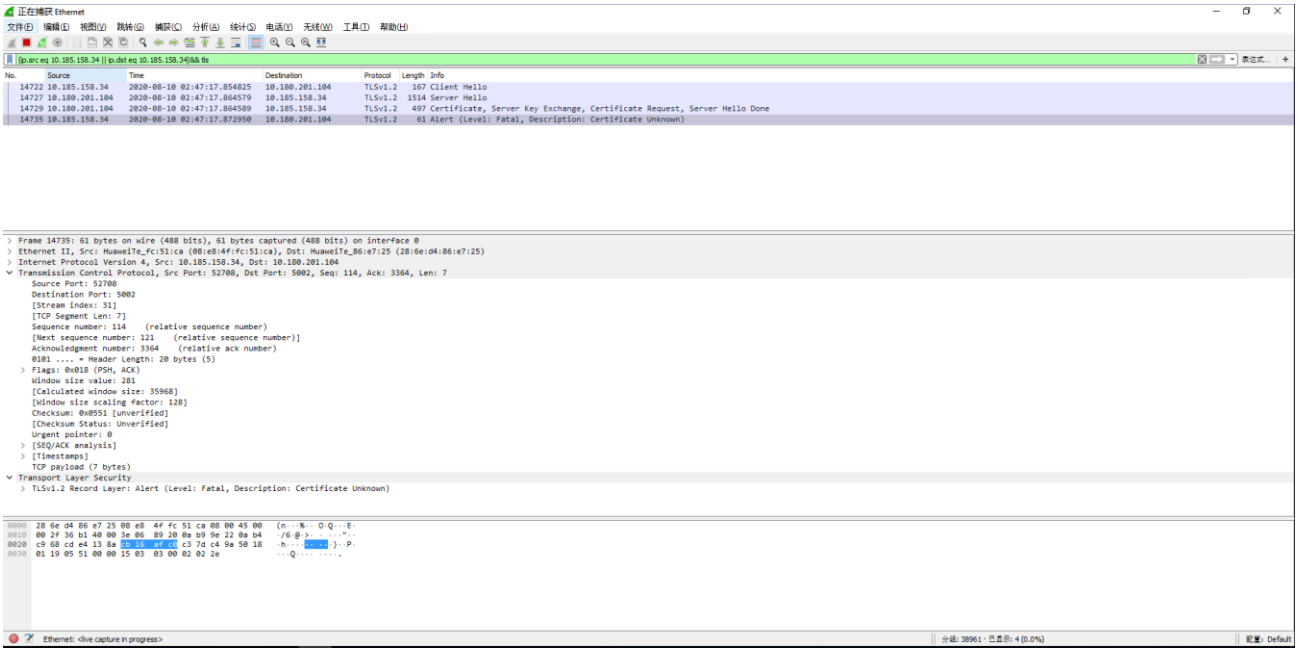
8.22 WINNF.FT.C.SCS.3




```
2020-08-10 10:45:49,869 INFO  [pool-7-thread-3][ROOT][com.huawei.omc.sas.common.sasclientmgr.SasStatusMgr 24] registrationOp start:
2020-08-10 10:45:49,869 INFO  [pool-7-thread-3][ROOT][com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr 46] Registration:{"registrationRequest":[{"cbsdCategory":"B","cbsdSerialNumber":"2102310WYG6TF4
009643","fccId":"M1-04-102","measCapability":[],"userId":"HuaWei_U2020"}]}
2020-08-10 10:45:49,894 INFO  [pool-7-thread-3][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 183] RestClient Post URI: https://10.180.201.104:5002/v1.2/registration
2020-08-10 10:45:49,915 ERROR [pool-7-thread-3][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 213] doPost failed!
2020-08-10 10:45:49,916 ERROR [pool-7-thread-3][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 214] sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathVal
idatorException: validity check failed
javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: validity check failed
        at sun.security.ssl.Alerts.getSSLException(Alerts.java:192) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.fatal(SSLSocketImpl.java:1946) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:316) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:310) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1639) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.processMessage(ClientHandshaker.java:223) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.processLoop(Handshaker.java:1037) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.process_record(Handshaker.java:965) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.readRecord(SSLSocketImpl.java:1064) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.performInitialHandshake(SSLSocketImpl.java:1367) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1395) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1379) ~[?:1.8.0_242]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.createLayeredSocket(SSLConnectionSocketFactory.java:404) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.connectSocket(SSLConnectionSocketFactory.java:364) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.DefaultHttpClientConnectionOperator.connect(DefaultHttpClientConnectionOperator.java:142) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.PoolingHttpClientConnectionManager.connect(PoolingHttpClientConnectionManager.java:374) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.establishRoute(MainClientExec.java:393) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.execute(MainClientExec.java:236) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.ProtocolExec.execute(ProtocolExec.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RetryExec.execute(RetryExec.java:89) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RedirectExec.execute(RedirectExec.java:110) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.InternalHttpClient.doExecute(InternalHttpClient.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:83) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:108) ~[httpclient-4.5.7.jar:4.5.7]
        at com.huawei.omc.sas.restutils.RestClientMgr.doPost(RestClientMgr.java:202) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr.registrationOp(RegistrationMgr.java:54) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasStatusMgr.registrationOp(SasStatusMgr.java:26) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.registerOp(SasClientMonitor.java:101) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.exec(SasClientMonitor.java:70) ~[classes/:?]
        at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511) [?:1.8.0_242]
        at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$301(ScheduledThreadPoolExecutor.java:180) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:294) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624) [?:1.8.0_242]
        at java.lang.Thread.run(Thread.java:748) [?:1.8.0_242]
Caused by: sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: validity check failed
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:380) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
```

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```
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
Caused by: java.security.cert.CertPathValidatorException: validity check failed
        at sun.security.provider.certpath.PKIXMasterCertPathValidator.validate(PKIXMasterCertPathValidator.java:135) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:233) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:141) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.engineValidate(PKIXCertPathValidator.java:80) ~[?:1.8.0_242]
        at java.security.cert.CertPathValidator.validate(CertPathValidator.java:292) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:375) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
Caused by: java.security.cert.CertificateExpiredException: NotAfter: Mon Aug 10 10:30:47 GMT+08:00 2020
        at sun.security.x509.CertificateValidity.valid(CertificateValidity.java:274) ~[?:1.8.0_242]
        at sun.security.x509.X509CertImpl.checkValidity(X509CertImpl.java:629) ~[?:1.8.0_242]
        at sun.security.provider.certpath.BasicChecker.verifyValidity(BasicChecker.java:190) ~[?:1.8.0_242]
        at sun.security.provider.certpath.BasicChecker.check(BasicChecker.java:144) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXMasterCertPathValidator.validate(PKIXMasterCertPathValidator.java:125) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:233) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:141) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.engineValidate(PKIXCertPathValidator.java:80) ~[?:1.8.0_242]
        at java.security.cert.CertPathValidator.validate(CertPathValidator.java:292) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:375) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
2020-08-10 10:45:49,920 ERROR [pool-7-thread-3][ROOT][com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr 56] registration0p failed!
```

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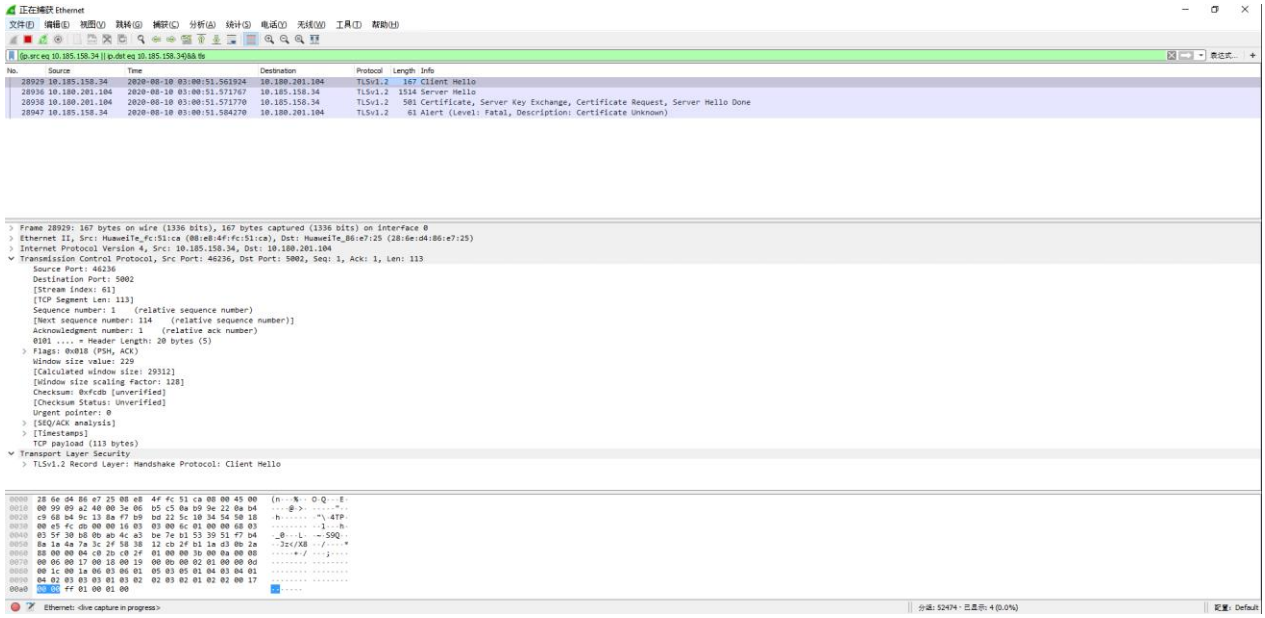
8.23 WINNF.FT.C.SCS.4



```
2020-08-10 10:59:23,587 INFO  [pool-7-thread-2][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 183] RestClient Post URI: https://10.180.201.104:5002/v1.2/registration
2020-08-10 10:59:23,614 ERROR [pool-7-thread-2][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 213] doPost failed!
2020-08-10 10:59:23,614 ERROR [pool-7-thread-2][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 214] sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target
javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target
        at sun.security.ssl.Alerts.getSSLException(Alerts.java:192) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.fatal(SSLSocketImpl.java:1946) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:316) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:310) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1639) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.processMessage(ClientHandshaker.java:223) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.processLoop(Handshaker.java:1037) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.process_record(Handshaker.java:965) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.readRecord(SSLSocketImpl.java:1064) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.performInitialHandshake(SSLSocketImpl.java:1367) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1395) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1379) ~[?:1.8.0_242]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.createLayeredSocket(SSLConnectionSocketFactory.java:404) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.connectSocket(SSLConnectionSocketFactory.java:364) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.DefaultHttpClientConnectionOperator.connect(DefaultHttpClientConnectionOperator.java:142) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.PoolingHttpClientConnectionManager.connect(PoolingHttpClientConnectionManager.java:374) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.establishRoute(MainClientExec.java:393) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.execute(MainClientExec.java:236) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.ProtocolExec.execute(ProtocolExec.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RetryExec.execute(RetryExec.java:89) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RedirectExec.execute(RedirectExec.java:110) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.InternalHttpClient.doExecute(InternalHttpClient.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:83) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:108) ~[httpclient-4.5.7.jar:4.5.7]
        at com.huawei.omc.sas.restutils.RestClientMgr.doPost(RestClientMgr.java:202) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr.registrationOp(RegistrationMgr.java:54) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasStatusMgr.registrationOp(SasStatusMgr.java:26) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.registerOp(SasClientMonitor.java:101) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.exec(SasClientMonitor.java:70) ~[classes/:?]
        at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511) [?:1.8.0_242]
        at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$301(ScheduledThreadPoolExecutor.java:180) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:294) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624) [?:1.8.0_242]
        at java.lang.Thread.run(Thread.java:748) [?:1.8.0_242]
Caused by: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target
        at sun.security.validator.PKIXValidator.doBuild(PKIXValidator.java:450) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:259) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
```

```
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
Caused by: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target
        at sun.security.provider.certpath.SunCertPathBuilder.build(SunCertPathBuilder.java:141) ~[?:1.8.0_242]
        at sun.security.provider.certpath.SunCertPathBuilder.engineBuild(SunCertPathBuilder.java:126) ~[?:1.8.0_242]
        at java.security.cert.CertPathBuilder.build(CertPathBuilder.java:280) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.doBuild(PKIXValidator.java:445) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:259) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
2020-08-10 10:59:23,620 ERROR [pool-7-thread-2][ROOT][com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr 56] registrationOp failed!
```

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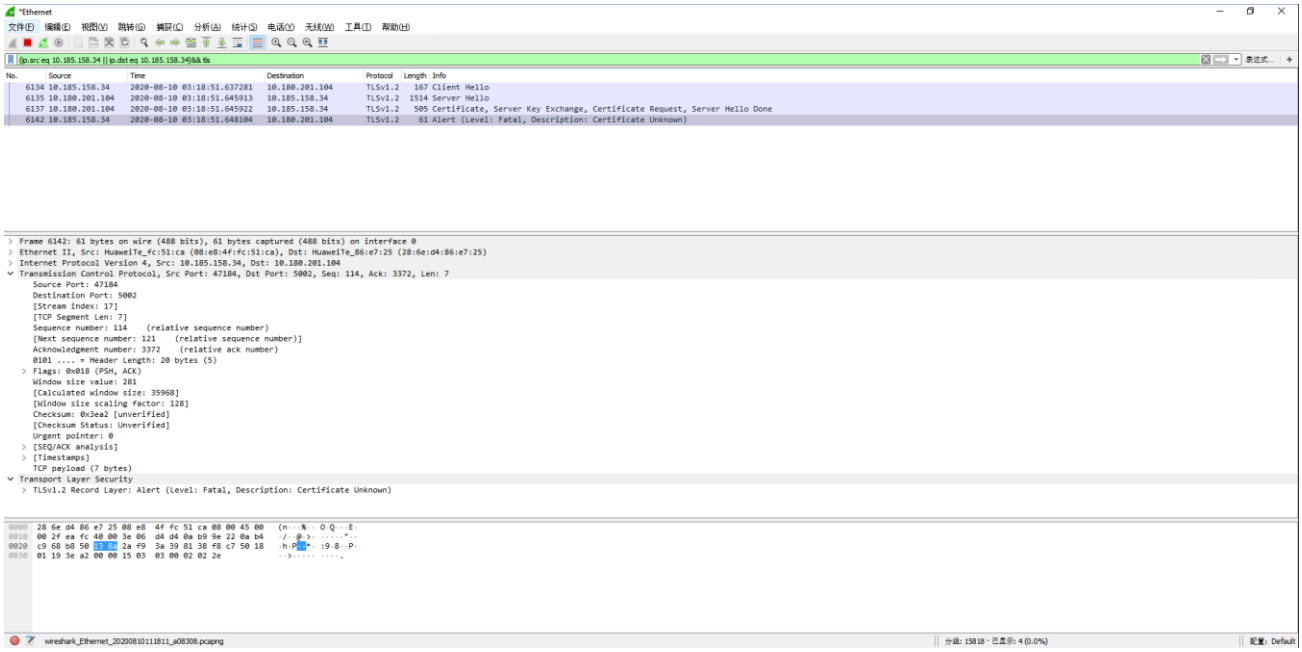
8.24 WINNF.FT.C.SCS.5




```
2020-08-10 11:17:23,640 INFO  [pool-7-thread-1][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 183] RestClient Post URI: https://10.180.201.104:5002/v1.2/registration
2020-08-10 11:17:23,659 ERROR [pool-7-thread-1][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 213] doPost failed!
2020-08-10 11:17:23,659 ERROR [pool-7-thread-1][ROOT][com.huawei.omc.sas.restutils.RestClientMgr 214] sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: signature check failed
javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: signature check failed
        at sun.security.ssl.Alerts.getSSLException(Alerts.java:192) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.fatal(SSLSocketImpl.java:1946) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:316) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.fatalSE(Handshaker.java:310) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1639) ~[?:1.8.0_242]
        at sun.security.ssl.ClientHandshaker.processMessage(ClientHandshaker.java:223) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.processLoop(Handshaker.java:1037) ~[?:1.8.0_242]
        at sun.security.ssl.Handshaker.process_record(Handshaker.java:965) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.readRecord(SSLSocketImpl.java:1064) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.performInitialHandshake(SSLSocketImpl.java:1367) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1395) ~[?:1.8.0_242]
        at sun.security.ssl.SSLSocketImpl.startHandshake(SSLSocketImpl.java:1379) ~[?:1.8.0_242]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.createLayeredSocket(SSLConnectionSocketFactory.java:404) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.conn.ssl.SSLConnectionSocketFactory.connectSocket(SSLConnectionSocketFactory.java:364) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.DefaultHttpClientConnectionOperator.connect(DefaultHttpClientConnectionOperator.java:142) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.conn.PoolingHttpClientConnectionManager.connect(PoolingHttpClientConnectionManager.java:374) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.establishRoute(MainClientExec.java:393) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.MainClientExec.execute(MainClientExec.java:236) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.ProtocolExec.execute(ProtocolExec.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RetryExec.execute(RetryExec.java:89) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.execchain.RedirectExec.execute(RedirectExec.java:110) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.InternalHttpClient.doExecute(InternalHttpClient.java:185) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:83) ~[httpclient-4.5.7.jar:4.5.7]
        at org.apache.http.impl.client.CloseableHttpClient.execute(CloseableHttpClient.java:108) ~[httpclient-4.5.7.jar:4.5.7]
        at com.huawei.omc.sas.restutils.RestClientMgr.doPost(RestClientMgr.java:202) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr.registrationOp(RegistrationMgr.java:54) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasStatusMgr.registrationOp(SasStatusMgr.java:26) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.registerOp(SasClientMonitor.java:101) ~[classes/:?]
        at com.huawei.omc.sas.common.sasclientmgr.SasClientMonitor.exec(SasClientMonitor.java:70) ~[classes/:?]
        at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511) [?:1.8.0_242]
        at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$301(ScheduledThreadPoolExecutor.java:180) [?:1.8.0_242]
        at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:294) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149) [?:1.8.0_242]
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624) [?:1.8.0_242]
        at java.lang.Thread.run(Thread.java:748) [?:1.8.0_242]
Caused by: sun.security.validator.ValidatorException: PKIX path validation failed: java.security.cert.CertPathValidatorException: signature check failed
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:380) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
```

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```
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
Caused by: java.security.cert.CertPathValidatorException: signature check failed
        at sun.security.provider.certpath.PKIXMasterCertPathValidator.validate(PKIXMasterCertPathValidator.java:135) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:233) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:141) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.engineValidate(PKIXCertPathValidator.java:80) ~[?:1.8.0_242]
        at java.security.cert.CertPathValidator.validate(CertPathValidator.java:292) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:375) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
Caused by: java.security.SignatureException: Signature does not match.
        at sun.security.x509.X509CertImpl.verify(X509CertImpl.java:424) ~[?:1.8.0_242]
        at sun.security.provider.certpath.BasicChecker.verifySignature(BasicChecker.java:166) ~[?:1.8.0_242]
        at sun.security.provider.certpath.BasicChecker.check(BasicChecker.java:147) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXMasterCertPathValidator.validate(PKIXMasterCertPathValidator.java:125) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:233) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.validate(PKIXCertPathValidator.java:141) ~[?:1.8.0_242]
        at sun.security.provider.certpath.PKIXCertPathValidator.engineValidate(PKIXCertPathValidator.java:80) ~[?:1.8.0_242]
        at java.security.cert.CertPathValidator.validate(CertPathValidator.java:292) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.doValidate(PKIXValidator.java:375) ~[?:1.8.0_242]
        at sun.security.validator.PKIXValidator.engineValidate(PKIXValidator.java:285) ~[?:1.8.0_242]
        at sun.security.validator.Validator.validate(Validator.java:262) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.validate(X509TrustManagerImpl.java:330) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkTrusted(X509TrustManagerImpl.java:237) ~[?:1.8.0_242]
        at sun.security.ssl.X509TrustManagerImpl.checkServerTrusted(X509TrustManagerImpl.java:132) ~[?:1.8.0_242]
        at com.huawei.omc.sas.restutils.TrustManagerExt.checkServerTrusted(TrustManagerExt.java:109) ~[classes/:?]
        at sun.security.ssl.ClientHandshaker.serverCertificate(ClientHandshaker.java:1621) ~[?:1.8.0_242]
        ... 31 more
2020-08-10 11:17:23,663 ERROR [pool-7-thread-1][ROOT][com.huawei.omc.sas.common.sasclientmgr.RegistrationMgr 56] registrationOp failed!
```

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9 Photographs

9.1 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -

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