

Test Logs

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Test Model: SFE3160S

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1 CBSD Registration Process

1.1 WINNF.FT.C.REG.3

2020-02-21T06:02:19.036Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T06:02:19.038Z - INFO - the selected test from the user : WINNF.FT.C.REG.3 is starting now

2020-02-21T06:02:29.719Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000002"
  }
]
```

2020-02-21T06:02:29.733Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-21T06:02:31.043Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T06:02:31.045Z - INFO - the question is : Were there RF transmissions from the CBSD1 during

the test? please choose one of the answers :

2020-02-21T06:05:36.882Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T06:05:37.585Z - INFO - The final result of the test : WINNF.FT.C.REG.3 is - passed

1.2 WINNF.FT.C.REG.7

2020-02-21T06:13:20.657Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T06:13:20.657Z - INFO - the selected test from the user : WINNF.FT.C.REG.7 is starting now

2020-02-21T06:13:32.836Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000002"
  }
]
```

2020-02-21T06:13:32.862Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-21T06:13:32.911Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-21T06:13:32.917Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-21T06:13:32.973Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-21T06:13:32.979Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-02-28T06:13:32Z",
            "grantId": "555790567",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-21T06:13:33.039Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [

```

```

        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2020-02-21T06:13:33.045Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-21T06:16:53Z"
        }
    ]
}
2020-02-21T06:14:33.088Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-21T06:14:33.088Z - INFO - Time interval between two heartbeat request messages is: 60.049, limit
is: 65.0
2020-02-21T06:14:33.088Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-21T06:17:53Z"
        }
    ]
}
2020-02-21T06:14:47.611Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567"
        }
    ]
}
2020-02-21T06:14:47.615Z - INFO - engine sent successfully, the response to CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "555790567",
            "response": {

```

```
        "responseCode": 0
      }
    ]
  }
2020-02-21T06:14:47.618Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276"
    }
  ]
}
2020-02-21T06:14:47.624Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-21T06:14:49.121Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-21T06:14:49.121Z - 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 :
2020-02-21T06:18:42.940Z - 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
2020-02-21T06:18:43.430Z - INFO - The final result of the test : WINNF.FT.C.REG.7 is - passed
```

1.3 WINNF.FT.C.REG.8

2020-02-21T06:21:58.476Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T06:21:58.477Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2020-02-21T06:22:14.308Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}

2020-02-21T06:22:14.338Z - INFO - engine sent successfully, the response to CBRS : {

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

}

2020-02-21T06:22:15.486Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T06:22:15.487Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T06:30:29.227Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T06:30:29.530Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed

1.4 WINNF.FT.C.REG.10

2020-02-21T06:36:44.049Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T06:36:44.049Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now

2020-02-21T06:36:54.706Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T06:36:54.737Z - INFO - engine sent successfully, the response to CBRS : {

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

}

2020-02-21T06:36:56.058Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T06:36:56.058Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T06:41:04.220Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T06:41:04.509Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed

1.5 WINNF.FT.C.REG.12

2020-02-21T07:01:54.528Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T07:01:54.529Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now

2020-02-21T07:02:05.697Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T07:02:05.734Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "response": {
      "responseCode": 103
    }
  }
]
```

2020-02-21T07:02:07.536Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T07:02:07.536Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T07:07:15.036Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T07:07:15.414Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed

1.6 WINNF.FT.C.REG.14

2020-02-21T07:20:59.790Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T07:20:59.790Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now

2020-02-21T07:21:13.342Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T07:21:13.372Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "response": {
      "responseCode": 101
    }
  }
]
```

2020-02-21T07:21:14.798Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T07:21:14.799Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T07:30:26.548Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T07:30:26.994Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed

1.7 WINNF.FT.C.REG.16

2020-02-21T07:35:55.700Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T07:35:55.701Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now

2020-02-21T07:36:05.553Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T07:36:05.589Z - INFO - engine sent successfully, the response to CBRS : {

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

2020-02-21T07:36:06.707Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T07:36:06.709Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T07:42:55.490Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T07:42:55.815Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is – passed

1.8 WINNF.FT.C.REG.18

2020-02-21T08:09:43.512Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T08:09:43.513Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now

2020-02-21T08:09:54.750Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T08:09:54.779Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "response": {
      "responseCode": 201
    }
  }
]
```

2020-02-21T08:09:56.522Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-21T08:09:56.522Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-02-21T08:17:29.329Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-02-21T08:17:29.494Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is – passed

1.9 WINNF.FT.C.REG.20

2020-02-21T08:20:28.346Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T08:20:28.346Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_1 is starting now

2020-02-21T08:20:54.536Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07363,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-21T08:20:54.562Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-21T08:20:54.614Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-21T08:20:54.619Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-21T08:20:54.673Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-21T08:20:54.678Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-02-28T08:20:54Z",
      "grantId": "535792506",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-21T08:20:54.720Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "535792506",

```

```
        "grantRenew": false,
        "operationState": "GRANTED"
    }
]
}
2020-02-21T08:20:54.726Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "535792506",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-21T08:24:14Z"
        }
    ]
}
2020-02-21T08:21:54.779Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "535792506",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-21T08:21:54.779Z - INFO - Time interval between two heartbeat request messages is: 60.059, limit
is: 65.0
2020-02-21T08:21:54.785Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "535792506",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-21T08:25:14Z"
        }
    ]
}
2020-02-21T08:22:12.552Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "535792506"
        }
    ]
}
2020-02-21T08:22:12.559Z - INFO - engine sent successfully, the response to CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "535792506",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
```

```

    ]
  }
  2020-02-21T08:22:12.569Z - INFO - deregistration request from CBRS : {
    "deregistrationRequest": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276"
      }
    ]
  }
  2020-02-21T08:22:12.575Z - INFO - engine sent successfully, the response to CBRS : {
    "deregistrationResponse": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  2020-02-21T08:22:14.394Z - INFO - arrived to nstep starting question answer session with the technician
  2020-02-21T08:22:14.394Z - 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 :
  2020-02-21T08:24:23.374Z - 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
  2020-02-21T08:24:23.812Z - INFO - The final result of the test : WINNF.FT.C.REG.20_1 is – passed

```

```

2020-02-21T08:24:34.588Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-02-21T08:24:34.588Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_2 is starting now
2020-02-21T08:26:12.769Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "LTE-Rel9"
      },
      "callSign": "ASKEY-TW",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "7.8.0.00352",
        "hardwareVersion": "1.0",
        "model": "SFE3160S",
        "softwareVersion": "lsc3.5.001_rc2",
        "vendor": "Askey Computer Corporation"
      },
      "cbsdSerialNumber": "198937330444276",
      "fccId": "H8NSFE3160S",
      "installationParam": {
        "antennaAzimuth": 90,

```

```

        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 5,
        "eirpCapability": 27,
        "height": 6.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 34.07463,
        "longitude": -118.32166
    },
    "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
}
]
}
2020-02-21T08:26:12.822Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-21T08:26:12.868Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            ]
        }
    ]
}
2020-02-21T08:26:12.874Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
  2020-02-21T08:26:12.917Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "operationParam": {
          "maxEirp": 19,
          "operationFrequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          }
        }
      }
    ]
  }
  2020-02-21T08:26:12.924Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "channelType": "GAA",
        "grantExpireTime": "2020-02-28T08:26:12Z",
        "grantId": "217959154",
        "heartbeatInterval": 60,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  2020-02-21T08:26:12.960Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "grantId": "217959154",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  2020-02-21T08:26:12.966Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "grantId": "217959154",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-02-21T08:29:32Z"
      }
    ]
  }
  2020-02-21T08:27:13.016Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
        "grantId": "217959154",
        "grantRenew": false,

```

```

    "operationState": "AUTHORIZED"
  }
]
}
2020-02-21T08:27:13.017Z - INFO - Time interval between two heartbeat request messages is: 60.056, limit
is: 65.0
2020-02-21T08:27:13.022Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-21T08:30:33Z"
    }
  ]
}
}
2020-02-21T08:28:13.040Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-02-21T08:28:13.042Z - INFO - Time interval between two heartbeat request messages is: 60.025, limit
is: 65.0
2020-02-21T08:28:13.046Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-21T08:31:33Z"
    }
  ]
}
}
}
2020-02-21T08:29:13.073Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
}
2020-02-21T08:29:13.075Z - INFO - Time interval between two heartbeat request messages is: 60.033, limit
is: 65.0
2020-02-21T08:29:13.078Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",

```

```

    "grantId": "217959154",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-02-21T08:32:33Z"
  }
]
}
2020-02-21T08:30:13.098Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-21T08:30:13.098Z - INFO - Time interval between two heartbeat request messages is: 60.024, limit
is: 65.0
2020-02-21T08:30:13.105Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-21T08:33:33Z"
    }
  ]
}
2020-02-21T08:31:13.115Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-21T08:31:13.118Z - INFO - Time interval between two heartbeat request messages is: 60.018, limit
is: 65.0
2020-02-21T08:31:13.127Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "217959154",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-21T08:34:33Z"
    }
  ]
}
2020-02-21T08:31:14.757Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-21T08:31:14.759Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state

```

(first successful HBT response)? please choose one of the answers :

2020-02-21T08:34:25.769Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

2020-02-21T08:34:25.773Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :

2020-02-21T08:34:26.997Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y

2020-02-21T08:34:27.490Z - INFO - The final result of the test : WINNF.FT.C.REG.20_2 is - passed

CBSD SPECTRUM GRANT PROCESS

1.10 WINNF.FT.C.GRA.1

2020-02-21T08:34:57.384Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T08:34:57.384Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now

2020-02-21T08:35:07.348Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-21T08:35:07.401Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-21T08:35:07.448Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-21T08:35:07.456Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-21T08:35:07.506Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-21T08:35:07.513Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2020-02-21T08:35:09.391Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-21T08:35:09.391Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-02-21T09:13:26.592Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-02-21T09:13:26.930Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed

```

1.11 WINNF.FT.C.GRA.2

2020-02-21T09:13:37.219Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-21T09:13:37.220Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now

2020-02-21T09:13:48.680Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-21T09:13:48.720Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-21T09:13:48.769Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-21T09:13:48.775Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-21T09:13:48.812Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-21T09:13:48.818Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 401
      }
    }
  ]
}
2020-02-21T09:13:50.230Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-21T09:13:50.230Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-02-21T09:22:40.483Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-02-21T09:22:41.405Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed

```

2 CBSD Heart Beat Process

2.1 WINNF.FT.C.HBT.1

2020-02-25T06:34:47.710Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-25T06:34:47.711Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2020-02-25T06:34:59.591Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-25T06:34:59.625Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-25T06:34:59.664Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-25T06:34:59.671Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-25T06:34:59.724Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-25T06:34:59.730Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-03T06:34:59Z",
            "grantId": "50948707",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-25T06:34:59.776Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [

```

```

    {
      "cbid": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-25T06:34:59.782Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbid": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:38:19Z"
    }
  ]
}
2020-02-25T06:35:59.831Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbid": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:35:59.832Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit
is: 65.0
2020-02-25T06:35:59.836Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbid": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:39:19Z"
    }
  ]
}
2020-02-25T06:36:59.851Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbid": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:36:59.852Z - INFO - Time interval between two heartbeat request messages is: 60.021, limit
is: 65.0
2020-02-25T06:36:59.858Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:40:19Z"
    }
  ]
}
2020-02-25T06:37:59.872Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:37:59.874Z - INFO - Time interval between two heartbeat request messages is: 60.021, limit
is: 65.0
2020-02-25T06:37:59.878Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:41:19Z"
    }
  ]
}
2020-02-25T06:38:59.897Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:38:59.898Z - INFO - Time interval between two heartbeat request messages is: 60.024, limit
is: 65.0
2020-02-25T06:38:59.903Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:42:19Z"
    }
  ]
}

```

```
2020-02-25T06:39:59.921Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:39:59.924Z - INFO - Time interval between two heartbeat request messages is: 60.026, limit
is: 65.0
2020-02-25T06:39:59.930Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "50948707",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:43:19Z"
    }
  ]
}
2020-02-25T06:40:01.839Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-25T06:40:01.842Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? please choose one of the answers :
2020-02-25T06:43:46.622Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? , the user choose n
2020-02-25T06:43:46.624Z - INFO - the question is : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? please choose one of the answers :
2020-02-25T06:43:47.592Z - INFO - for the question : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? , the user choose y
2020-02-25T06:43:47.950Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed
```

2.2 WINNF.FT.C.HBT.3

2020-02-25T06:50:02.915Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-25T06:50:02.915Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2020-02-25T06:50:21.282Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-25T06:50:21.322Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-25T06:50:21.368Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-25T06:50:21.375Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T06:50:21.427Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-25T06:50:21.434Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-03T06:50:21Z",
      "grantId": "701717290",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T06:50:21.482Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",

```

```

    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
2020-02-25T06:50:21.487Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:53:41Z"
    }
  ]
}
2020-02-25T06:51:21.533Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:51:21.535Z - INFO - Time interval between two heartbeat request messages is: 60.051, limit
is: 65.0
2020-02-25T06:51:21.539Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T06:54:41Z"
    }
  ]
}
2020-02-25T06:52:21.555Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:52:21.556Z - INFO - Time interval between two heartbeat request messages is: 60.022, limit
is: 65.0
2020-02-25T06:52:21.561Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",

```

```

    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-02-25T06:55:41Z"
  }
]
}
2020-02-25T06:53:21.586Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T06:53:21.588Z - INFO - Time interval between two heartbeat request messages is: 60.031, limit
is: 65.0
2020-02-25T06:53:21.592Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "701717290",
      "response": {
        "responseCode": 105
      },
      "transmitExpireTime": "2020-02-25T06:53:21Z"
    }
  ]
}
}
2020-02-25T06:53:22.994Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-25T06:53:22.996Z - 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 :
2020-02-25T07:02:58.871Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 105? , the user choose y
2020-02-25T07:02:59.207Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed

```

2.3 WINNF.FT.C.HBT.4

2020-02-25T07:14:02.986Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-25T07:14:02.987Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now

2020-02-25T07:14:13.989Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-25T07:14:14.029Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-25T07:14:14.082Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-25T07:14:14.088Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T07:14:14.135Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-25T07:14:14.141Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-03T07:14:14Z",
      "grantId": "885121633",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T07:14:14.184Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",

```

```

    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
2020-02-25T07:14:14.190Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T07:17:34Z"
    }
  ]
}
2020-02-25T07:15:14.236Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T07:15:14.237Z - INFO - Time interval between two heartbeat request messages is: 60.053, limit
is: 65.0
2020-02-25T07:15:14.243Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-25T07:18:34Z"
    }
  ]
}
2020-02-25T07:16:14.255Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-25T07:16:14.256Z - INFO - Time interval between two heartbeat request messages is: 60.018, limit
is: 65.0
2020-02-25T07:16:14.260Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "885121633",

```

```

        "response": {
            "responseCode": 0
        },
        "transmitExpireTime": "2020-02-25T07:19:34Z"
    }
}
2020-02-25T07:17:14.280Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "885121633",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-25T07:17:14.282Z - INFO - Time interval between two heartbeat request messages is: 60.027, limit
is: 65.0
2020-02-25T07:17:14.286Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "885121633",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-25T07:20:34Z"
        }
    ]
}
2020-02-25T07:18:14.305Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "885121633",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-25T07:18:14.305Z - INFO - Time interval between two heartbeat request messages is: 60.023, limit
is: 65.0
2020-02-25T07:18:14.312Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "885121633",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-25T07:21:34Z"
        }
    ]
}
2020-02-25T07:19:14.329Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {

```

```
"cbsdId": "H8NSFE3160SMock-SAS198937330444276",  
"grantId": "885121633",  
"grantRenew": false,  
"operationState": "AUTHORIZED"
```

```
}
```

```
]
```

```
}
```

2020-02-25T07:19:14.332Z - INFO - Time interval between two heartbeat request messages is: 60.025, limit is: 65.0

2020-02-25T07:19:14.338Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
```

```
{
```

```
"cbsdId": "H8NSFE3160SMock-SAS198937330444276",  
"grantId": "885121633",  
"response": {  
  "responseCode": 500
```

```
},
```

```
"transmitExpireTime": "2020-02-25T07:19:14Z"
```

```
}
```

```
]
```

```
}
```

2020-02-25T07:19:16.112Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-25T07:19:16.114Z - INFO - the question is : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? please choose one of the answers :

2020-02-25T08:05:12.364Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y

2020-02-25T08:05:12.691Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed

2.4 WINNF.FT.C.HBT.5

2020-02-25T08:25:18.407Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-25T08:25:18.407Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2020-02-25T08:25:38.426Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-25T08:25:38.470Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-25T08:25:38.520Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-25T08:25:38.526Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T08:25:38.569Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-25T08:25:38.575Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-03T08:25:38Z",
      "grantId": "19866107",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-25T08:25:38.618Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "19866107",

```

```

    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
2020-02-25T08:25:38.625Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "19866107",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-25T08:25:38Z"
    }
  ]
}
2020-02-25T08:26:38.677Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "19866107",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-25T08:26:38.680Z - INFO - Time interval between two heartbeat request messages is: 60.06, limit is: 65.0
2020-02-25T08:26:38.686Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "19866107",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-25T08:26:38Z"
    }
  ]
}
2020-02-25T08:26:40.448Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-25T08:26:40.448Z - INFO - the question is : Did the CBSD transmit at any time during the test?
please choose one of the answers :
2020-02-25T08:37:22.280Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the
user choose n
2020-02-25T08:37:22.608Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed

```

2.5 WINNF.FT.C.HBT.6

2020-02-26T05:47:26.391Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T05:47:26.391Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now

2020-02-26T05:47:41.667Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-26T05:47:41.753Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-26T05:47:41.801Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-26T05:47:41.815Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T05:47:41.868Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-26T05:47:41.881Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-04T05:47:41Z",
      "grantId": "68135689",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T05:47:41.920Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "68135689",

```

```
        "grantRenew": false,
        "operationState": "GRANTED"
    }
]
}
2020-02-26T05:47:41.931Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "68135689",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-26T05:51:01Z"
        }
    ]
}
2020-02-26T05:48:41.974Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "68135689",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-26T05:48:41.976Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2020-02-26T05:48:41.980Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "68135689",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-26T05:52:01Z"
        }
    ]
}
2020-02-26T05:49:41.997Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "68135689",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-26T05:49:41.999Z - INFO - Time interval between two heartbeat request messages is: 60.023, limit is: 65.0
2020-02-26T05:49:42.003Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "68135689",
```

```

    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-02-26T05:53:02Z"
  }
]
}
2020-02-26T05:50:42.022Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "68135689",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T05:50:42.023Z - INFO - Time interval between two heartbeat request messages is: 60.024, limit
is: 65.0
2020-02-26T05:50:42.028Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "68135689",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-26T05:50:42Z"
    }
  ]
}
2020-02-26T05:51:42.039Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "68135689",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-26T05:51:42.040Z - INFO - Time interval between two heartbeat request messages is: 60.018, limit
is: 65.0
2020-02-26T05:51:42.046Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "68135689",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-26T05:51:42Z"
    }
  ]
}
2020-02-26T05:51:43.519Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-26T05:51:43.519Z - 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 :

```

2020-02-26T05:58:23.015Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y
2020-02-26T05:58:23.378Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed

2.6 WINNF.FT.C.HBT.7

2020-02-26T06:31:24.082Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T06:31:24.098Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now

2020-02-26T06:31:34.944Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

}
2020-02-26T06:31:34.992Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2020-02-26T06:31:35.039Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-26T06:31:35.039Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T06:31:35.085Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-26T06:31:35.101Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-04T06:31:35Z",
      "grantId": "879406218",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T06:31:35.132Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",

```

```

    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
2020-02-26T06:31:35.132Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T06:34:55Z"
    }
  ]
}
2020-02-26T06:32:35.193Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T06:32:35.193Z - INFO - Time interval between two heartbeat request messages is: 60.06, limit is: 65.0
2020-02-26T06:32:35.193Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T06:35:55Z"
    }
  ]
}
2020-02-26T06:33:35.221Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T06:33:35.221Z - INFO - Time interval between two heartbeat request messages is: 60.029, limit is: 65.0
2020-02-26T06:33:35.221Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",

```

```

    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-02-26T06:36:55Z"
  }
]
}
2020-02-26T06:34:35.239Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T06:34:35.239Z - INFO - Time interval between two heartbeat request messages is: 60.017, limit
is: 65.0
2020-02-26T06:34:35.253Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "response": {
        "responseCode": 502
      },
      "transmitExpireTime": "2020-02-26T06:34:35Z"
    }
  ]
}
2020-02-26T06:34:35.269Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218"
    }
  ]
}
2020-02-26T06:34:35.269Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "879406218",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T06:34:36.941Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-26T06:34:36.941Z - 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 :
2020-02-26T06:40:48.492Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 502? , the user choose y
2020-02-26T06:40:48.898Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed

```

2.7 WINNF.FT.C.HBT.9

2020-02-26T06:52:22.397Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T06:52:22.397Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2020-02-26T06:52:33.262Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-26T06:52:33.292Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-26T06:52:33.355Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-26T06:52:33.355Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T06:52:33.403Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-26T06:52:33.403Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-04T06:52:33Z",
            "grantId": "147939029",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T06:52:33.450Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [

```

```

    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "147939029",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-26T06:53:43.477Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "147939029",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-26T06:53:43.477Z - INFO - request message received while HBT is absent, sleep 134 sec before
responding
2020-02-26T06:54:53.506Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "147939029",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-26T06:54:53.506Z - INFO - request message received while HBT is absent, sleep 64 sec before
responding
2020-02-26T06:55:53.473Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "147939029",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-26T06:55:53Z"
    }
  ]
}
2020-02-26T06:55:54.614Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-26T06:55:54.614Z - INFO - the question is : Were there RF transmissions from the CBSD during the
test? please choose one of the answers :
2020-02-26T06:55:57.505Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2020-02-26T06:55:57.519Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2020-02-26T07:01:44.437Z - INFO - for the question : Were there RF transmissions from the CBSD during
the test? , the user choose n
2020-02-26T07:01:44.834Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed

```

2.8 WINNF.FT.C.HBT.10

2020-02-26T08:06:46.891Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T08:06:46.891Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now

2020-02-26T08:06:57.911Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-26T08:06:57.944Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-26T08:06:57.997Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
      {
        "highFrequency": 3630000000.0,
        "lowFrequency": 3610000000.0
      }
    ]
  }
]
```

```

    }
  ]
}
2020-02-26T08:06:58.003Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T08:06:58.049Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 19,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-02-26T08:06:58.053Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-04T08:06:58Z",
      "grantId": "255237139",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T08:06:58.098Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",

```

```

    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
2020-02-26T08:06:58.105Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T08:10:18Z"
    }
  ]
}
2020-02-26T08:07:58.154Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T08:07:58.154Z - INFO - Time interval between two heartbeat request messages is: 60.055, limit is: 65.0
2020-02-26T08:07:58.160Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T08:11:18Z"
    }
  ]
}
2020-02-26T08:08:58.184Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T08:08:58.186Z - INFO - Time interval between two heartbeat request messages is: 60.031, limit is: 65.0
2020-02-26T08:08:58.187Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT: 2020-02-26 08:07:58.154000
2020-02-26T08:10:08.217Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
"cbstdId": "H8NSFE3160SMock-SAS198937330444276",
"grantId": "255237139",
"grantRenew": false,
"operationState": "GRANTED"
}
]
}
2020-02-26T08:10:08.217Z - INFO - request message received while HBT is absent, sleep 134 sec before
responding
2020-02-26T08:11:18.226Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2020-02-26T08:11:18.226Z - INFO - request message received while HBT is absent, sleep 64 sec before
responding
2020-02-26T08:12:18.194Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbstdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "255237139",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-02-26T08:12:18Z"
    }
  ]
}
}
2020-02-26T08:12:20.025Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-26T08:12:20.026Z - INFO - the question is : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2020-02-26T08:12:22.220Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2020-02-26T08:12:22.230Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2020-02-26T08:13:34.523Z - INFO - for the question : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2020-02-26T08:13:34.963Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed
```

3 CBSD Relinquishment Process

3.1 WINNF.FT.C.RLQ.1

2020-02-26T08:27:11.137Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T08:27:11.137Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2020-02-26T08:27:21.750Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-26T08:27:21.779Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-26T08:27:21.828Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-26T08:27:21.834Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T08:27:21.877Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-26T08:27:21.882Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-04T08:27:21Z",
            "grantId": "281576008",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T08:27:21.927Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [

```

```

    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-02-26T08:27:21.933Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T08:30:41Z"
    }
  ]
}
2020-02-26T08:28:21.983Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-02-26T08:28:21.984Z - INFO - Time interval between two heartbeat request messages is: 60.057, limit
is: 65.0
2020-02-26T08:28:21.990Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-02-26T08:31:41Z"
    }
  ]
}
2020-02-26T08:28:36.434Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008"
    }
  ]
}
2020-02-26T08:28:36.438Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "281576008",
      "response": {

```

"responseCode": 0

}

}

]

}

2020-02-26T08:28:38.171Z - INFO - arrived to nstep starting question answer session with the technician

2020-02-26T08:28:38.173Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :

2020-02-26T08:31:57.892Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y

2020-02-26T08:31:58.450Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed

4 CBSD Deregistration Process

4.1 WINNF.FT.C.DRG.1

2020-02-26T08:49:46.266Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-02-26T08:49:46.266Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now

2020-02-26T08:49:57.094Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-02-26T08:49:57.121Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-02-26T08:49:57.176Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-02-26T08:49:57.181Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T08:49:57.232Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-02-26T08:49:57.236Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-04T08:49:57Z",
            "grantId": "350023018",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-02-26T08:49:57.283Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [

```

```

        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2020-02-26T08:49:57.289Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-26T08:53:17Z"
        }
    ]
}
2020-02-26T08:50:57.336Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-02-26T08:50:57.338Z - INFO - Time interval between two heartbeat request messages is: 60.054, limit
is: 65.0
2020-02-26T08:50:57.344Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-02-26T08:54:17Z"
        }
    ]
}
2020-02-26T08:51:15.062Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018"
        }
    ]
}
2020-02-26T08:51:15.068Z - INFO - engine sent successfully, the response to CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "grantId": "350023018",
            "response": {

```

```

        "responseCode": 0
      }
    ]
  }
2020-02-26T08:51:15.075Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276"
    }
  ]
}
2020-02-26T08:51:15.079Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-02-26T08:51:16.303Z - INFO - arrived to nstep starting question answer session with the technician
2020-02-26T08:51:16.305Z - 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 :
2020-02-26T08:53:37.555Z - 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
2020-02-26T08:53:37.743Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed

```

5 CBSD Security Validation

5.1 WINNF.FT.C.SCS.1

2020-03-02T07:01:06.760Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-03-02T07:01:06.760Z - INFO - the selected test from the user : WINNF.FT.C.SCS.1 is starting now

2020-03-02T07:01:30.987Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-03-02T07:01:31.038Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-03-02T07:01:32.780Z - INFO - arrived to nstep starting question answer session with the technician

2020-03-02T07:01:32.782Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-03-02T07:03:16.259Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-03-02T07:03:16.944Z - INFO - The final result of the test : WINNF.FT.C.SCS.1 is - passed

CBSD RF POWER MEASUREMENT

5.2 WINNF.PT.C.HBT.1(Max Eirp = 5 dBm/MHz)

2020-03-04T10:10:42.510Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-03-04T10:10:42.526Z - INFO - Selected spectrum frequency is {'lowFrequency': 3610000000L, 'highFrequency': 3630000000L}

2020-03-04T10:10:42.526Z - INFO - Granted Spectrum Max Eirp = 5dBm/MHz

2020-03-04T10:10:42.526Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-03-04T10:10:52.947Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-03-04T10:10:52.976Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-03-04T10:10:53.026Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
```

```

    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "inquiredSpectrum": [
        {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      ]
    }
  ]
}
2020-03-04T10:10:53.032Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2020-03-04T10:10:53.032Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
          },
          "maxEirp": 5,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-03-04T10:10:53.085Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "operationParam": {
        "maxEirp": 5,
        "operationFrequencyRange": {
          "highFrequency": 3630000000.0,
          "lowFrequency": 3610000000.0
        }
      }
    }
  ]
}
2020-03-04T10:10:53.089Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "channelType": "GAA",
      "grantExpireTime": "2020-03-11T10:10:53Z",
      "grantId": "792270517",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    }
  }
]
}
2020-03-04T10:10:53.127Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "792270517",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-03-04T10:10:53.132Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "792270517",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:14:13Z"
    }
  ]
}
2020-03-04T10:11:53.178Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "792270517",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-03-04T10:11:53.184Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "792270517",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:15:13Z"
    }
  ]
}
}

```

5.3 WINNF.PT.C.HBT.1(Max Eirp = 12 dBm/MHz)

2020-03-04T10:13:35.147Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-03-04T10:13:35.147Z - INFO - Selected spectrum frequency is {'lowFrequency': 3610000000L, 'highFrequency': 3630000000L}

2020-03-04T10:13:35.147Z - INFO - Granted Spectrum Max Eirp = 12dBm/MHz

2020-03-04T10:13:35.147Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-03-04T10:13:45.585Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-03-04T10:13:45.614Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-03-04T10:13:45.663Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-03-04T10:13:45.667Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0
2020-03-04T10:13:45.667Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "maxEirp": 12,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-03-04T10:13:45.723Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 12,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-03-04T10:13:45.726Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-11T10:13:45Z",
            "grantId": "865304377",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```
}
2020-03-04T10:13:45.763Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "865304377",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-03-04T10:13:45.769Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "865304377",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:17:05Z"
    }
  ]
}
2020-03-04T10:14:45.822Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "865304377",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-03-04T10:14:45.828Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "865304377",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:18:05Z"
    }
  ]
}
```

5.4 WINNF.PT.C.HBT.1(Max Eirp = 19 dBm/MHz)

2020-03-04T10:16:40.855Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-03-04T10:16:40.857Z - INFO - Selected spectrum frequency is {'lowFrequency': 3610000000L, 'highFrequency': 3630000000L}

2020-03-04T10:16:40.857Z - INFO - Granted Spectrum Max Eirp = 19dBm/MHz

2020-03-04T10:16:40.858Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-03-04T10:16:50.882Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "LTE-Rel9"
    },
    "callSign": "ASKEY-TW",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "7.8.0.00352",
      "hardwareVersion": "1.0",
      "model": "SFE3160S",
      "softwareVersion": "lsc3.5.001_rc2",
      "vendor": "Askey Computer Corporation"
    },
    "cbsdSerialNumber": "198937330444276",
    "fccId": "H8NSFE3160S",
    "installationParam": {
      "antennaAzimuth": 90,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 5,
      "eirpCapability": 27,
      "height": 6.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 34.07463,
      "longitude": -118.32166
    },
    "measCapability": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "AskeyUserId-000003"
  }
]
```

2020-03-04T10:16:50.911Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-03-04T10:16:50.956Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
    "inquiredSpectrum": [
```

```

        {
            "highFrequency": 3630000000.0,
            "lowFrequency": 3610000000.0
        }
    ]
}
2020-03-04T10:16:50.960Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0
2020-03-04T10:16:50.961Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3630000000.0,
                        "lowFrequency": 3610000000.0
                    },
                    "maxEirp": 19,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-03-04T10:16:51.007Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "operationParam": {
                "maxEirp": 19,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000.0,
                    "lowFrequency": 3610000000.0
                }
            }
        }
    ]
}
2020-03-04T10:16:51.013Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
            "channelType": "GAA",
            "grantExpireTime": "2020-03-11T10:16:51Z",
            "grantId": "956518545",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```
}
2020-03-04T10:16:51.061Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "956518545",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-03-04T10:16:51.066Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "956518545",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:20:11Z"
    }
  ]
}
2020-03-04T10:17:51.112Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "956518545",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-03-04T10:17:51.119Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "H8NSFE3160SMock-SAS198937330444276",
      "grantId": "956518545",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-03-04T10:21:11Z"
    }
  ]
}
```