

Test Logs

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**FCC Registration/
Designation Number:** 788550 / TW0003

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1 CBSD Registration Process

1.1 WINNF.FT.C.REG.1

2021-10-11T03:20:34.108Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T03:20:34.108Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

2021-10-11T03:20:44.655Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T03:20:44.671Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T03:20:46.250Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T03:20:46.250Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2021-10-11T03:21:08.967Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2021-10-11T03:21:09.749Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed

1.2 WINNF.FT.C.REG.3

2021-10-11T03:23:28.806Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T03:23:28.806Z - INFO - the selected test from the user : WINNF.FT.C.REG.3 is starting now

2021-10-11T03:23:34.384Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T03:23:34.400Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T03:23:35.915Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T03:23:35.915Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T03:23:42.588Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2021-10-11T03:23:43.509Z - INFO - The final result of the test : WINNF.FT.C.REG.3 is - passed

1.3 WINNF.FT.C.REG.8

2021-10-11T06:41:03.542Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T06:41:03.542Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2021-10-11T06:41:11.088Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T06:41:11.119Z - INFO - engine sent successfully, the response to CBRS : {

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

2021-10-11T06:41:12.683Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T06:41:12.683Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T06:41:20.572Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T06:41:21.167Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed

1.4 WINNF.FT.C.REG.10

2021-10-11T06:47:55.154Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T06:47:55.154Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now

2021-10-11T06:47:59.654Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T06:47:59.684Z - INFO - engine sent successfully, the response to CBRS : {

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

2021-10-11T06:48:01.246Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T06:48:01.246Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T06:48:05.496Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T06:48:05.996Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed

1.5 WINNF.FT.C.REG.12

2021-10-11T06:54:42.953Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T06:54:42.953Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now

2021-10-11T06:54:47.467Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T06:54:47.500Z - INFO - engine sent successfully, the response to CBRS : {

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

2021-10-11T06:54:49.046Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T06:54:49.046Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T06:54:54.749Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T06:54:55.217Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed

1.6 WINNF.FT.C.REG.14

2021-10-11T07:02:23.344Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:02:23.344Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now

2021-10-11T07:02:30.358Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T07:02:30.391Z - INFO - engine sent successfully, the response to CBRS : {

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

2021-10-11T07:02:31.469Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T07:02:31.469Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T07:02:46.062Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T07:02:46.765Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed

1.7 WINNF.FT.C.REG.16

2021-10-11T07:17:22.391Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:17:22.391Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now

2021-10-11T07:17:32.079Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T07:17:32.111Z - INFO - engine sent successfully, the response to CBRS : {

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

2021-10-11T07:17:33.563Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T07:17:33.563Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T07:17:47.859Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T07:17:48.095Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed

1.8 WINNF.FT.C.REG.18

2021-10-11T07:20:15.651Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:20:15.667Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now

2021-10-11T07:20:19.089Z - INFO - registration request from CBRS : {

```

    "registrationRequest": [
      {
        "airInterface": {
          "radioTechnology": "E_UTRA",
          "supportedSpec": "FFS"
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdSerialNumber": "1912CW53000016",
        "fccId": "femto.i",
        "groupingParam": [
          {
            "groupId": "SERCOMM_111",
            "groupType": "INTERFERENCE_COORDINATION"
          }
        ],
        "installationParam": {
          "antennaAzimuth": 0,
          "antennaBeamwidth": 360,
          "antennaDowntilt": 0,
          "antennaGain": 6,
          "antennaModel": "",
          "eirpCapability": 30,
          "height": 18.0,
          "heightType": "AMSL",
          "horizontalAccuracy": 3,
          "indoorDeployment": false,
          "latitude": 31.30201,
          "longitude": -105.024094,
          "verticalAccuracy": 3
        },
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "XywyE9"
      }
    ]
  }

```

2021-10-11T07:20:19.121Z - INFO - engine sent successfully, the response to CBRS : {

```

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

```

2021-10-11T07:20:20.746Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T07:20:20.746Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T07:20:23.901Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

the test? , the user choose n

2021-10-11T07:20:24.323Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed

1.9 WINNF.FT.C.REG.20

2021-10-11T07:30:40.147Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:30:40.147Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_1 is starting now

2021-10-11T07:30:58.709Z - INFO - registration request from CBRS : {

```

  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "",
      "cbsdCategory": "A",
      "cbsdSerialNumber": "1912CW53000016",
      "fccId": "femto.i",
      "groupingParam": [
        {
          "groupId": "SERCOMM_111",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 6,
        "antennaModel": "",
        "eirpCapability": 30,
        "height": 18.0,
        "heightType": "AMSL",
        "horizontalAccuracy": 3,
        "indoorDeployment": false,
        "latitude": 31.30201,
        "longitude": -105.024094,
        "verticalAccuracy": 3
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "XywyE9"
    }
  ]
}

```

2021-10-11T07:30:58.724Z - INFO - engine sent successfully, the response to CBRS : {

```

  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

2021-10-11T07:30:58.802Z - INFO - spectrumInquiry request from CBRS : {

```

  "spectrumInquiryRequest": [
    {

```

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}

2021-10-11T07:30:58.819Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

2021-10-11T07:30:58.834Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}

2021-10-11T07:30:58.834Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-18T07:30:58Z",
            "grantId": "352888097",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```
2021-10-11T07:30:58.897Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "352888097",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T07:30:58.911Z - INFO - grantRenew received in HBT request message
2021-10-11T07:30:58.911Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-18T07:30:58Z",
      "grantId": "352888097",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:34:18Z"
    }
  ]
}
2021-10-11T07:31:59.066Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "352888097",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T07:31:59.066Z - INFO - Time interval between two heartbeat request messages is: 60.155, limit
is: 65.0
2021-10-11T07:31:59.066Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "352888097",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:35:19Z"
    }
  ]
}
2021-10-11T07:32:03.582Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "352888097"
    }
  ]
}
2021-10-11T07:32:03.598Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
```

```

        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "352888097",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-11T07:32:15.799Z - INFO - deregistration request from CBRS : {
    "deregistrationRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016"
        }
    ]
}
2021-10-11T07:32:15.799Z - INFO - engine sent successfully, the response to CBRS : {
    "deregistrationResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-11T07:32:17.644Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T07:32:17.644Z - 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 :
2021-10-11T07:32:26.112Z - 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
2021-10-11T07:32:26.753Z - INFO - The final result of the test : WINNF.FT.C.REG.20_1 is - passed

2021-10-11T07:32:41.299Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2021-10-11T07:32:41.299Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_2 is starting now
2021-10-11T07:34:52.811Z - INFO - registration request from CBRS : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA",
                "supportedSpec": "FFS"
            },
            "callSign": "",
            "cbsdCategory": "A",
            "cbsdSerialNumber": "1912CW53000016",
            "fcId": "femto.i",
            "groupingParam": [
                {
                    "groupId": "SERCOMM_111",
                    "groupType": "INTERFERENCE_COORDINATION"
                }
            ]
        }
    ]
}

```

```

    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
}
2021-10-11T07:34:52.872Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-11T07:34:53.013Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-11T07:34:53.029Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ]
    }
  ]
}

```

```

    ],
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
        "responseCode": 0
    }
}
]
}
2021-10-11T07:34:53.061Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2021-10-11T07:34:53.061Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-18T07:34:53Z",
            "grantId": "306940150",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-11T07:34:53.154Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "306940150",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2021-10-11T07:34:53.154Z - INFO - grantRenew received in HBT request message
2021-10-11T07:34:53.154Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2021-10-18T07:34:53Z",
            "grantId": "306940150",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-11T07:38:13Z"
        }
    ]
}

```

```

    ]
  }
2021-10-11T07:35:53.278Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T07:35:53.278Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T07:35:53.292Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:39:13Z"
    }
  ]
}
2021-10-11T07:36:53.415Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T07:36:53.415Z - INFO - Time interval between two heartbeat request messages is: 60.138, limit
is: 65.0
2021-10-11T07:36:53.415Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:40:13Z"
    }
  ]
}
2021-10-11T07:37:53.523Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

```

    ]
  }
2021-10-11T07:37:53.523Z - INFO - Time interval between two heartbeat request messages is: 60.108, limit
is: 65.0
2021-10-11T07:37:53.539Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:41:13Z"
    }
  ]
}
2021-10-11T07:38:53.647Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T07:38:53.647Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T07:38:53.647Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:42:13Z"
    }
  ]
}
2021-10-11T07:39:53.769Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T07:39:53.769Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T07:39:53.769Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "306940150",
      "response": {

```

```
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T07:43:13Z"
    }
  ]
}
```

2021-10-11T07:39:54.957Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T07:39:54.957Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2021-10-11T07:40:34.940Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2021-10-11T07:40:34.940Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :
2021-10-11T07:40:36.236Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y
2021-10-11T07:40:36.799Z - INFO - The final result of the test : WINNF.FT.C.REG.20_2 is - passed

2 CBSD SPECTRUM GRANT PROCESS

2.1 WINNF.FT.C.GRA.1

2021-10-11T07:48:20.424Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:48:20.424Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now

2021-10-11T07:48:25.940Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

}
2021-10-11T07:48:25.971Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

}

2021-10-11T07:48:26.049Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "inquiredSpectrum": [
      {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    ]
  }
]
```

} 2021-10-11T07:48:26.065Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        },
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

} 2021-10-11T07:48:26.081Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "operationParam": {
      "maxEirp": 20,
      "operationFrequencyRange": {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    }
  }
]
```

} 2021-10-11T07:48:26.096Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 400
    }
  }
]
```

} 2021-10-11T07:48:27.533Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T07:48:27.533Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2021-10-11T07:48:32.065Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2021-10-11T07:48:32.486Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed

2.2 WINNF.FT.C.GRA.2

2021-10-11T07:53:19.976Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:53:19.976Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now

2021-10-11T07:53:25.914Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T07:53:25.946Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T07:53:26.023Z - INFO - spectrumInquiry request from CBRS : {

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

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}

2021-10-11T07:53:26.039Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

2021-10-11T07:53:26.071Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}

2021-10-11T07:53:26.071Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 401
            }
        }
    ]
}

2021-10-11T07:53:28.101Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T07:53:28.101Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2021-10-11T07:53:33.118Z - INFO - for the question : Were there RF transmissions from the CBSD1 during

```

the test? , the user choose n

2021-10-11T07:53:33.539Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed

3 CBSD Heart Beat Process

3.1 WINNF.FT.C.HBT.1

2021-10-11T07:59:57.433Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T07:59:57.433Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2021-10-11T08:00:02.776Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

}
2021-10-11T08:00:02.808Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

}

```

2021-10-11T08:00:02.869Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-11T08:00:02.885Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-11T08:00:02.933Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2021-10-11T08:00:02.948Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2021-10-18T08:00:02Z",
      "grantId": "554065596",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    }
  ]
}
2021-10-11T08:00:03.042Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T08:00:03.042Z - INFO - grantRenew received in HBT request message
2021-10-11T08:00:03.042Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-18T08:00:03Z",
      "grantId": "554065596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:03:23Z"
    }
  ]
}
2021-10-11T08:01:03.164Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:01:03.164Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:01:03.180Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:04:23Z"
    }
  ]
}
2021-10-11T08:02:03.288Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

```
    }
  ]
}
2021-10-11T08:02:03.288Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:02:03.288Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:05:23Z"
    }
  ]
}
2021-10-11T08:03:03.411Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:03:03.411Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:03:03.411Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:06:23Z"
    }
  ]
}
2021-10-11T08:04:03.519Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:04:03.519Z - INFO - Time interval between two heartbeat request messages is: 60.108, limit
is: 65.0
2021-10-11T08:04:03.519Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
```

```

    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2021-10-11T08:07:23Z"
  }
]
}
2021-10-11T08:05:03.625Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:05:03.641Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0
2021-10-11T08:05:03.641Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "554065596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:08:23Z"
    }
  ]
}
2021-10-11T08:05:05.157Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T08:05:05.157Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2021-10-11T08:06:31.483Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2021-10-11T08:06:31.483Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :
2021-10-11T08:06:33.092Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y
2021-10-11T08:06:33.529Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed

```

3.2. WINNF.FT.C.HBT.3

2021-10-11T08:12:26.002Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T08:12:26.002Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2021-10-11T08:12:31.799Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T08:12:31.845Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T08:12:31.924Z - INFO - spectrumInquiry request from CBRS : {

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

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}
2021-10-11T08:12:31.924Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-11T08:12:31.938Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2021-10-11T08:12:31.954Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-18T08:12:31Z",
            "grantId": "797138097",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

2021-10-11T08:12:32.032Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "797138097",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T08:12:32.032Z - INFO - grantRenew received in HBT request message
2021-10-11T08:12:32.049Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-18T08:12:32Z",
      "grantId": "797138097",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:15:52Z"
    }
  ]
}
2021-10-11T08:13:32.155Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "797138097",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:13:32.155Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:13:32.155Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "797138097",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:16:52Z"
    }
  ]
}
2021-10-11T08:14:32.279Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "797138097",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2021-10-11T08:14:32.279Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0

2021-10-11T08:14:32.279Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "797138097",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2021-10-11T08:17:52Z"  
  }  
]
```

}
2021-10-11T08:15:32.387Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "797138097",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2021-10-11T08:15:32.387Z - INFO - Time interval between two heartbeat request messages is: 60.108, limit is: 65.0

2021-10-11T08:15:32.387Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "797138097",  
    "response": {  
      "responseCode": 105  
    },  
    "transmitExpireTime": "2021-10-11T08:15:32Z"  
  }  
]
```

}
2021-10-11T08:15:33.887Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-11T08:15:33.887Z - 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 :

2021-10-11T08:15:48.338Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2021-10-11T08:15:48.855Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed

3.3. WINNF.FT.C.HBT.4

2021-10-11T08:23:36.463Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T08:23:36.463Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now

2021-10-11T08:23:40.948Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T08:23:40.980Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T08:23:41.058Z - INFO - spectrumInquiry request from CBRS : {

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

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}
2021-10-11T08:23:41.073Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-11T08:23:41.121Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2021-10-11T08:23:41.135Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-18T08:23:41Z",
            "grantId": "339874945",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

2021-10-11T08:23:41.230Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T08:23:41.230Z - INFO - grantRenew received in HBT request message
2021-10-11T08:23:41.230Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-18T08:23:41Z",
      "grantId": "339874945",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:27:01Z"
    }
  ]
}
2021-10-11T08:24:41.352Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:24:41.352Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:24:41.352Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-11T08:28:01Z"
    }
  ]
}
2021-10-11T08:25:41.460Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2021-10-11T08:25:41.460Z - INFO - Time interval between two heartbeat request messages is: 60.107, limit is: 65.0

2021-10-11T08:25:41.476Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "339874945",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2021-10-11T08:29:01Z"  
  }  
]
```

}
2021-10-11T08:26:41.582Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "339874945",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2021-10-11T08:26:41.582Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0

2021-10-11T08:26:41.582Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "339874945",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2021-10-11T08:30:01Z"  
  }  
]
```

}
2021-10-11T08:27:41.690Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "339874945",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2021-10-11T08:27:41.706Z - INFO - Time interval between two heartbeat request messages is: 60.108, limit is: 65.0

2021-10-11T08:27:41.706Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "339874945",  
    "response": {  
      "responseCode": 0  
    },  
  },  
]
```

```

    "transmitExpireTime": "2021-10-11T08:31:01Z"
  }
]
}
2021-10-11T08:28:41.813Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-11T08:28:41.813Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-11T08:28:41.828Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "339874945",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2021-10-11T08:28:41Z"
    }
  ]
}
2021-10-11T08:28:43.173Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T08:28:43.173Z - 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 :
2021-10-11T08:28:51.845Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60
seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
2021-10-11T08:28:52.187Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed

```

3.4. WINNF.FT.C.HBT.5

2021-10-11T08:36:24.313Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-11T08:36:24.313Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2021-10-11T08:36:32.282Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-11T08:36:32.328Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-11T08:36:32.407Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
```

```

    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-11T08:36:32.407Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-11T08:36:32.454Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2021-10-11T08:36:32.470Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2021-10-18T08:36:32Z",
      "grantId": "201080145",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

}
2021-10-11T08:36:32.563Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "201080145",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T08:36:32.563Z - INFO - grantRenew received in HBT request message
2021-10-11T08:36:32.563Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-18T08:36:32Z",
      "grantId": "201080145",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2021-10-11T08:36:32Z"
    }
  ]
}
2021-10-11T08:37:32.701Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "201080145",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-11T08:37:32.717Z - INFO - Time interval between two heartbeat request messages is: 60.138, limit
is: 65.0
2021-10-11T08:37:32.717Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "201080145",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2021-10-11T08:37:32Z"
    }
  ]
}
2021-10-11T08:37:34.390Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-11T08:37:34.390Z - INFO - the question is : Did the CBSD transmit at any time during the test?
please choose one of the answers :
2021-10-11T08:37:49.342Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the
user choose n
2021-10-11T08:37:49.654Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed

```

3.5. WINNF.FT.C.HBT.6

2021-10-13T12:09:08.779Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T12:09:08.779Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now

2021-10-13T12:09:19.668Z - INFO - registration request from CBRS : {

```

    "registrationRequest": [
      {
        "airInterface": {
          "radioTechnology": "E_UTRA",
          "supportedSpec": "FFS"
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdSerialNumber": "1912CW53000016",
        "fccId": "femto.i",
        "groupingParam": [
          {
            "groupId": "SERCOMM_111",
            "groupType": "INTERFERENCE_COORDINATION"
          }
        ],
        "installationParam": {
          "antennaAzimuth": 0,
          "antennaBeamwidth": 360,
          "antennaDowntilt": 0,
          "antennaGain": 6,
          "antennaModel": "",
          "eirpCapability": 30,
          "height": 18.0,
          "heightType": "AMSL",
          "horizontalAccuracy": 3,
          "indoorDeployment": false,
          "latitude": 31.30201,
          "longitude": -105.024094,
          "verticalAccuracy": 3
        },
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "XywyE9"
      }
    ]
  }

```

2021-10-13T12:09:19.716Z - INFO - engine sent successfully, the response to CBRS : {

```

    "registrationResponse": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

2021-10-13T12:09:19.793Z - INFO - spectrumInquiry request from CBRS : {

```

    "spectrumInquiryRequest": [
      {

```

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}

2021-10-13T12:09:19.793Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

2021-10-13T12:09:19.809Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}

2021-10-13T12:09:19.825Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-20T12:09:19Z",
            "grantId": "286094819",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

2021-10-13T12:09:19.903Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "286094819",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-13T12:09:19.918Z - INFO - grantRenew received in HBT request message
2021-10-13T12:09:19.918Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-20T12:09:19Z",
      "grantId": "286094819",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:12:39Z"
    }
  ]
}
2021-10-13T12:10:20.042Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "286094819",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-13T12:10:20.042Z - INFO - Time interval between two heartbeat request messages is: 60.139, limit
is: 65.0
2021-10-13T12:10:20.042Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "286094819",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:13:40Z"
    }
  ]
}
2021-10-13T12:11:20.148Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "286094819",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2021-10-13T12:11:20.148Z - INFO - Time interval between two heartbeat request messages is: 60.107, limit is: 65.0

2021-10-13T12:11:20.148Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "286094819",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2021-10-13T12:14:40Z"  
  }  
]
```

}
2021-10-13T12:12:20.272Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "286094819",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2021-10-13T12:12:20.272Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0

2021-10-13T12:12:20.272Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "286094819",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2021-10-13T12:12:20Z"  
  }  
]
```

}
2021-10-13T12:13:20.380Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "286094819",  
    "grantRenew": false,  
    "operationState": "GRANTED"  
  }  
]
```

}
2021-10-13T12:13:20.380Z - INFO - Time interval between two heartbeat request messages is: 60.108, limit is: 65.0

2021-10-13T12:13:20.380Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "286094819",  
    "response": {  
      "responseCode": 501  
    },  
  }  
]
```

"transmitExpireTime": "2021-10-13T12:13:20Z"

}

]

}

2021-10-13T12:13:21.661Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-13T12:13:21.661Z - 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 :

2021-10-13T12:13:32.411Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y

2021-10-13T12:13:33.144Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed

3.6. WINNF.FT.C.HBT.7

2021-10-13T12:19:15.148Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T12:19:15.148Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now

2021-10-13T12:19:18.039Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T12:19:18.086Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-13T12:19:18.164Z - INFO - spectrumInquiry request from CBRS : {

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

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}

2021-10-13T12:19:18.180Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

2021-10-13T12:19:18.196Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}

2021-10-13T12:19:18.211Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-20T12:19:18Z",
            "grantId": "257418754",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

2021-10-13T12:19:18.305Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "257418754",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-13T12:19:18.321Z - INFO - grantRenew received in HBT request message
2021-10-13T12:19:18.321Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-20T12:19:18Z",
      "grantId": "257418754",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:22:38Z"
    }
  ]
}
2021-10-13T12:20:18.444Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "257418754",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-13T12:20:18.444Z - INFO - Time interval between two heartbeat request messages is: 60.139, limit
is: 65.0
2021-10-13T12:20:18.444Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "257418754",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:23:38Z"
    }
  ]
}
2021-10-13T12:21:18.566Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "257418754",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2021-10-13T12:21:18.566Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0

2021-10-13T12:21:18.566Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "257418754",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2021-10-13T12:24:38Z"  
  }  
]
```

}
2021-10-13T12:22:18.674Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "257418754",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2021-10-13T12:22:18.674Z - INFO - Time interval between two heartbeat request messages is: 60.107, limit is: 65.0

2021-10-13T12:22:18.674Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "257418754",  
    "response": {  
      "responseCode": 502  
    },  
    "transmitExpireTime": "2021-10-13T12:22:18Z"  
  }  
]
```

}
2021-10-13T12:22:18.690Z - INFO - relinquishment request from CBRS : {

```
"relinquishmentRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "257418754"  
  }  
]
```

}
2021-10-13T12:22:18.690Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "257418754",  
    "response": {  
      "responseCode": 0  
    }  
  }  
]
```

}
2021-10-13T12:22:19.986Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-13T12:22:19.986Z - 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 :
2021-10-13T12:22:51.611Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y
2021-10-13T12:22:51.970Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed

3.7 WINNF.FT.C.HBT.9

2021-10-13T12:28:22.272Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T12:28:22.272Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2021-10-13T12:28:25.334Z - INFO - registration request from CBRS : {

```

    "registrationRequest": [
      {
        "airInterface": {
          "radioTechnology": "E_UTRA",
          "supportedSpec": "FFS"
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdSerialNumber": "1912CW53000016",
        "fccId": "femto.i",
        "groupingParam": [
          {
            "groupId": "SERCOMM_111",
            "groupType": "INTERFERENCE_COORDINATION"
          }
        ],
        "installationParam": {
          "antennaAzimuth": 0,
          "antennaBeamwidth": 360,
          "antennaDowntilt": 0,
          "antennaGain": 6,
          "antennaModel": "",
          "eirpCapability": 30,
          "height": 18.0,
          "heightType": "AMSL",
          "horizontalAccuracy": 3,
          "indoorDeployment": false,
          "latitude": 31.30201,
          "longitude": -105.024094,
          "verticalAccuracy": 3
        },
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "XywyE9"
      }
    ]
  }

```

2021-10-13T12:28:25.365Z - INFO - engine sent successfully, the response to CBRS : {

```

    "registrationResponse": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

2021-10-13T12:28:25.490Z - INFO - spectrumInquiry request from CBRS : {

```

    "spectrumInquiryRequest": [
      {

```

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}
2021-10-13T12:28:25.490Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-13T12:28:25.506Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2021-10-13T12:28:25.506Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-20T12:28:25Z",
            "grantId": "948783555",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

2021-10-13T12:28:25.584Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "948783555",  
    "grantRenew": true,  
    "operationState": "GRANTED"  
  }  
]
```

}

2021-10-13T12:31:45.592Z - INFO - grantRenew received in HBT request message

2021-10-13T12:31:45.592Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantExpireTime": "2021-10-20T12:31:45Z",  
    "grantId": "948783555",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2021-10-13T12:31:45Z"  
  }  
]
```

}

2021-10-13T12:31:47.421Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-13T12:31:47.421Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :

2021-10-13T12:32:56.591Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n

2021-10-13T12:32:57.059Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed

3.8. WINNF.FT.C.HBT.10

2021-10-13T12:39:15.000Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T12:39:15.000Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now

2021-10-13T12:39:18.469Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T12:39:18.516Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-13T12:39:18.562Z - INFO - spectrumInquiry request from CBRS : {

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

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "inquiredSpectrum": [
            {
                "highFrequency": 3635000000,
                "lowFrequency": 3615000000
            }
        ]
    }
}
2021-10-13T12:39:18.578Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-13T12:39:18.641Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2021-10-13T12:39:18.641Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-20T12:39:18Z",
            "grantId": "786714793",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

2021-10-13T12:39:18.734Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "786714793",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-13T12:39:18.734Z - INFO - grantRenew received in HBT request message
2021-10-13T12:39:18.734Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-20T12:39:18Z",
      "grantId": "786714793",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:42:38Z"
    }
  ]
}
2021-10-13T12:40:18.858Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "786714793",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-13T12:40:18.858Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-13T12:40:18.872Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "786714793",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-13T12:43:38Z"
    }
  ]
}
2021-10-13T12:41:18.980Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "786714793",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2021-10-13T12:41:18.980Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit is: 65.0

2021-10-13T12:41:18.980Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT:
2021-10-13 12:40:18.858000

2021-10-13T12:42:19.213Z - INFO - relinquishment request from CBRS : {
 "relinquishmentRequest": [
 {
 "cbstdId": "femto.iMock-SAS1912CW53000016",
 "grantId": "786714793"
 }
]
}

2021-10-13T12:42:19.213Z - INFO - request message received while HBT is absent, sleep 144 sec before responding

2021-10-13T12:44:39.005Z - INFO - engine sent successfully, the response to CBRS : {
 "heartbeatResponse": [
 {
 "cbstdId": "femto.iMock-SAS1912CW53000016",
 "grantId": "786714793",
 "response": {
 "responseCode": 501
 },
 "transmitExpireTime": "2021-10-13T12:44:39Z"
 }
]
}

2021-10-13T12:44:41.005Z - INFO - arrived to nstep starting question answer session with the technician

2021-10-13T12:44:41.005Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :

2021-10-13T12:44:43.223Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"

2021-10-13T12:44:56.380Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y

2021-10-13T12:44:57.130Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed

4 CBSD Measurement Report

4.1 WINNF.FT.C.MES.1

2021-10-13T12:51:19.507Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T12:51:19.507Z - INFO - the selected test from the user : WINNF.FT.C.MES.1 is starting now

2021-10-13T12:51:36.694Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T12:51:36.740Z - INFO - Response message contains measReportConfig

2021-10-13T12:51:36.756Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "measReportConfig": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "response": {
      "responseCode": 0
    }
  }
]
```

```

    }
  }
]
}
2021-10-13T12:51:36.819Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -91.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -91.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -92.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -92.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -92.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -92.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3610000000,
            "measRcvdPower": -92.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3620000000,
            "measRcvdPower": -93.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3630000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -92.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -92.0
    }
]
}
]
}
]
}
2021-10-13T12:51:36.835Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}

```

2021-10-13T12:51:36.898Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -91.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000,
          "measRcvdPower": -91.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3570000000,
          "measRcvdPower": -92.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3580000000,
          "measRcvdPower": -92.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3590000000,
          "measRcvdPower": -92.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3600000000,
          "measRcvdPower": -92.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3610000000,
          "measRcvdPower": -92.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3620000000,
          "measRcvdPower": -93.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3630000000,
          "measRcvdPower": -93.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3640000000,
          "measRcvdPower": -93.0
        },
        {
          "measBandwidth": 10000000,
```

```

        "measFrequency": 3650000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -92.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -93.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -92.0
    }
]
},
"operationParam": {
    "maxEirp": 20,
    "operationFrequencyRange": {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
    }
}
}
]
}
2021-10-13T12:51:36.898Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2021-10-20T12:51:36Z",
            "grantId": "253811065",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2021-10-13T12:51:38.803Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-13T12:51:47.006Z - INFO - The final result of the test : WINNF.FT.C.MES.1 is - passed

```

5 CBSD Relinquishment Process

5.1 WINNF.FT.C.RLQ.1

2021-10-16T03:27:32.336Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-16T03:27:32.336Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2021-10-16T03:27:48.351Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-16T03:27:48.384Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

```

2021-10-16T03:27:48.476Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-16T03:27:48.493Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-16T03:27:48.509Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2021-10-16T03:27:48.523Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2021-10-23T03:27:48Z",
      "grantId": "814036151",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    }
  ]
}
2021-10-16T03:27:48.618Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "814036151",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-16T03:27:48.618Z - INFO - grantRenew received in HBT request message
2021-10-16T03:27:48.618Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-23T03:27:48Z",
      "grantId": "814036151",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-16T03:31:08Z"
    }
  ]
}
2021-10-16T03:28:48.740Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "814036151",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-16T03:28:48.740Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-16T03:28:48.740Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "814036151",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-16T03:32:08Z"
    }
  ]
}
2021-10-16T03:29:16.224Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "814036151"
    }
  ]
}

```

```
}  
2021-10-16T03:29:16.240Z - INFO - engine sent successfully, the response to CBRS : {  
  "relinquishmentResponse": [  
    {  
      "cbsdId": "femto.iMock-SAS1912CW53000016",  
      "grantId": "814036151",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}
```

2021-10-16T03:29:17.959Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-16T03:29:17.959Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :
2021-10-16T03:30:33.081Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y
2021-10-16T03:30:33.769Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed

6 CBSD Deregistration Process

6.1 WINNF.FT.C.DRG.1

2021-10-16T03:50:09.855Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-16T03:50:09.855Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now

2021-10-16T03:50:16.338Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

}
2021-10-16T03:50:16.371Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

```

2021-10-16T03:50:16.417Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-16T03:50:16.417Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-16T03:50:16.480Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2021-10-16T03:50:16.480Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2021-10-23T03:50:16Z",
      "grantId": "656971148",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    }
  ]
}
2021-10-16T03:50:16.573Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "656971148",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2021-10-16T03:50:16.573Z - INFO - grantRenew received in HBT request message
2021-10-16T03:50:16.573Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2021-10-23T03:50:16Z",
      "grantId": "656971148",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-16T03:53:36Z"
    }
  ]
}
2021-10-16T03:51:16.697Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "656971148",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2021-10-16T03:51:16.697Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2021-10-16T03:51:16.697Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "656971148",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2021-10-16T03:54:36Z"
    }
  ]
}
2021-10-16T03:52:09.367Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "656971148"
    }
  ]
}

```

```

}
2021-10-16T03:52:09.381Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "656971148",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

}
2021-10-16T03:52:09.506Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016"
    }
  ]
}

```

```

}
2021-10-16T03:52:09.506Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

}
2021-10-16T03:52:10.710Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-16T03:52:10.710Z - 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 :
2021-10-16T03:52:18.694Z - 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
2021-10-16T03:52:19.038Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed

```

7 CBSD Security Validation

7.1 WINNF.FT.C.SCS.1

2021-10-16T04:11:02.938Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-16T04:11:02.938Z - INFO - the selected test from the user : WINNF.FT.C.SCS.1 is starting now

2021-10-16T04:11:12.298Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

}
2021-10-16T04:11:12.312Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

}

2021-10-16T04:11:14.109Z - INFO - arrived to nstep starting question answer session with the technician
2021-10-16T04:11:14.109Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2021-10-16T04:11:36.453Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2021-10-16T04:11:36.905Z - INFO - The final result of the test : WINNF.FT.C.SCS.1 is - passed

7.2 WINNF.FT.C.SCS.2

2021-10-16T04:24:19.772Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2021-10-16T04:24:19.772Z - INFO - the selected test from the user : WINNF.FT.C.SCS.2 is starting now

7.3 WINNF.FT.C.SCS.3

2021-10-16T04:27:53.779Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2021-10-16T04:27:53.779Z - INFO - the selected test from the user : WINNF.FT.C.SCS.3 is starting now

7.4 WINNF.FT.C.SCS.4

2021-10-16T04:30:54.150Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2021-10-16T04:30:54.150Z - INFO - the selected test from the user : WINNF.FT.C.SCS.4 is starting now

7.5 WINNF.FT.C.SCS.5

2021-10-16T04:39:25.226Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2021-10-16T04:39:25.226Z - INFO - the selected test from the user : WINNF.FT.C.SCS.5 is starting now

8 CBSD RF POWER MEASUREMENT

8.1 WINNF.PT.C.HBT.1(Max Eirp = -23 dBm/MHz)

2021-10-13T11:41:00.865Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T11:41:00.865Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}

2021-10-13T11:41:00.865Z - INFO - Granted Spectrum Max Eirp = -23dBm/MHz

2021-10-13T11:41:00.865Z - INFO - the selected test from the user : PowerMeasTest is starting now

2021-10-13T11:41:11.443Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T11:41:11.459Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

```

    }
  }
]
}
2021-10-13T11:41:11.552Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2021-10-13T11:41:11.552Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2021-10-13T11:41:11.568Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          },
          "maxEirp": -23,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2021-10-13T11:41:11.599Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": -23,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2021-10-13T11:41:11.599Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",

```

```
        "channelType": "GAA",
        "grantExpireTime": "2021-10-20T11:41:11Z",
        "grantId": "219664964",
        "heartbeatInterval": 60,
        "response": {
            "responseCode": 0
        }
    }
]
}
2021-10-13T11:41:11.693Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "219664964",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2021-10-13T11:41:11.693Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2021-10-13T11:47:11Z",
            "grantId": "219664964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:44:31Z"
        }
    ]
}
2021-10-13T11:42:11.832Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "219664964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2021-10-13T11:42:11.832Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "219664964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:45:31Z"
        }
    ]
}
```

8.2. WINNF.PT.C.HBT.1(Max Eirp = -2 dBm/MHz)

2021-10-13T11:36:44.983Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T11:36:44.983Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}

2021-10-13T11:36:44.983Z - INFO - Granted Spectrum Max Eirp = -2dBm/MHz

2021-10-13T11:36:44.983Z - INFO - the selected test from the user : PowerMeasTest is starting now

2021-10-13T11:36:53.811Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T11:36:53.842Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-13T11:36:53.904Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "inquiredSpectrum": [
      {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    ]
  }
]
```

}
2021-10-13T11:36:53.904Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2021-10-13T11:36:53.904Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        },
        "maxEirp": -2,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2021-10-13T11:36:53.967Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "operationParam": {
      "maxEirp": -2,
      "operationFrequencyRange": {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    }
  }
]
```

}
2021-10-13T11:36:53.967Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "channelType": "GAA",
    "grantExpireTime": "2021-10-20T11:36:53Z",
    "grantId": "570201657",
    "heartbeatInterval": 60,
```

```
        "response": {
            "responseCode": 0
        }
    ]
}
2021-10-13T11:36:54.029Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "570201657",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2021-10-13T11:36:54.029Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2021-10-13T11:42:54Z",
            "grantId": "570201657",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:40:14Z"
        }
    ]
}
2021-10-13T11:37:54.168Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "570201657",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2021-10-13T11:37:54.184Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "570201657",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:41:14Z"
        }
    ]
}
```

8.3. WINNF.PT.C.HBT.1(Max Eirp = 20 dBm/MHz)

2021-10-13T11:15:12.901Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2021-10-13T11:15:12.901Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}

2021-10-13T11:15:12.901Z - INFO - Granted Spectrum Max Eirp = 20dBm/MHz

2021-10-13T11:15:12.901Z - INFO - the selected test from the user : PowerMeasTest is starting now

2021-10-13T11:15:23.868Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 6,
      "antennaModel": "",
      "eirpCapability": 30,
      "height": 18.0,
      "heightType": "AMSL",
      "horizontalAccuracy": 3,
      "indoorDeployment": false,
      "latitude": 31.30201,
      "longitude": -105.024094,
      "verticalAccuracy": 3
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2021-10-13T11:15:23.901Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

2021-10-13T11:15:23.979Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "inquiredSpectrum": [
      {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    ]
  }
]
```

}
 2021-10-13T11:15:23.993Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2021-10-13T11:15:23.993Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        },
        "maxEirp": 20,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "response": {
      "responseCode": 0
    }
  }
]
```

}
 2021-10-13T11:15:24.009Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "operationParam": {
      "maxEirp": 20,
      "operationFrequencyRange": {
        "highFrequency": 3635000000,
        "lowFrequency": 3615000000
      }
    }
  }
]
```

}
 2021-10-13T11:15:24.009Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "channelType": "GAA",
    "grantExpireTime": "2021-10-20T11:15:24Z",
    "grantId": "456082723",
    "heartbeatInterval": 60,
```

```

        "response": {
            "responseCode": 0
        }
    ]
}
2021-10-13T11:15:24.118Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "456082723",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2021-10-13T11:15:24.118Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2021-10-13T11:21:24Z",
            "grantId": "456082723",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:18:44Z"
        }
    ]
}
2021-10-13T11:16:24.242Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "456082723",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2021-10-13T11:16:24.242Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "456082723",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2021-10-13T11:19:44Z"
        }
    ]
}

```