

Test Logs

FCC ID: P27-SCE4255W

Test Model: SCE4255W

Received Date: Dec. 02, 2019

Test Date: Mar. 03, 2020 ~ Jun. 24, 2020

Issued Date: Jul. 01, 2020

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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

2020-06-23T09:21:32.361Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:21:32.361Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

2020-06-23T09:22:07.979Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqlhua4TF3-myrCrA71zGjw00lil-VweicDgtnX7sH0b_
GegICdA",

"encodedCpiSignedData":

"eyJpbN0YwxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
iYW50ZW5uYUdhaW4iOiMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpb2F5QWNjdXJhY3kiOiJMSlMfudGVubmFB
emltdXRoljowLCJsb25naXR1ZGUuOi0xMDUuMDI0MDk0LCJpbmRvb3JlZXBsb3ltZW50lJpmYWxzZSwibGF
0aXR1ZGUuOiJmXlJmMjAxZSwiZmNjSWQiOiJmZW10by5pliwicHJvZmVzZ2lvbmFsSW5zdGFsbGVyRGF0Y
Sl6eyJjcGlOYW1lIjoilwiawW5zdGFsbENlcnRpb2ZmIjYXRpb25UaW1lIjoiMjAyMC0wMy0xNiQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOiIlifSwiY2JzZFNlcmhE51bWJlci1lIiNlcmNvbW0tMTkxMkNlcmNNTMwMDAwMTYif
Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:22:07.994Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:22:07.994Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:22:07.994Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:22:08.072Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:22:08.072Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:22:08.072Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:22:08.072Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:22:09.822Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:22:09.822Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-06-23T09:22:16.384Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-06-23T09:22:16.618Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed

```

1.2 WINNF.FT.C.REG.3

2020-06-23T09:25:08.427Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:25:08.427Z - INFO - the selected test from the user : WINNF.FT.C.REG.3 is starting now

2020-06-23T09:25:11.818Z - 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"
  }
]
```

}
2020-06-23T09:25:11.834Z - INFO - engine sent successfully, the response to CBRS : {

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

}
2020-06-23T09:25:13.490Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:25:13.490Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-06-23T09:25:16.036Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2020-06-23T09:25:16.365Z - INFO - The final result of the test : WINNF.FT.C.REG.3 is – passed

1.3 WINNF.FT.C.REG.5

2020-06-23T09:22:58.276Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:22:58.292Z - INFO - the selected test from the user : WINNF.FT.C.REG.5 is starting now

2020-06-23T09:23:57.903Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtrmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JlZlZBsb3ltZW50IjpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRyZmlyYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOi0lIjY2JzZFNlcmhE51bWJlci0lIjY2JzZFNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:23:57.918Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:23:57.918Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:23:57.918Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```
"latitude": 31.30201,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 360,  
"height": 18,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",  
  "cpild": ""  
},  
"fcclid": "femto.i",  
"cbsdSerialNumber": "Sercomm-1912CW53000016"  
}  
2020-06-23T09:23:57.982Z - INFO - verified signature on cpiSignatureData  
2020-06-23T09:23:57.982Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema  
2020-06-23T09:23:57.982Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2020-06-23T09:23:57.982Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "cbsdId": "femto.iMock-SAS1912CW53000016",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}  
2020-06-23T09:23:59.888Z - INFO - arrived to nstep starting question answer session with the technician  
2020-06-23T09:23:59.888Z - INFO - the question is : Were there RF transmissions from the CBS1 during  
the test? please choose one of the answers :  
2020-06-23T09:24:02.184Z - INFO - for the question : Were there RF transmissions from the CBS1 during  
the test? , the user choose n  
2020-06-23T09:24:02.529Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed
```



```
"latitude": 31.30201,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 360,  
"height": 18,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",  
  "cpild": ""  
},  
"fcclid": "femto.i",  
"cbsdSerialNumber": "Sercomm-1912CW53000016"  
}  
2020-06-23T09:25:56.683Z - INFO - verified signature on cpiSignatureData  
2020-06-23T09:25:56.683Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema  
2020-06-23T09:25:56.697Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2020-06-23T09:25:56.697Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 102  
      }  
    }  
  ]  
}  
2020-06-23T09:25:58.183Z - INFO - arrived to nstep starting question answer session with the technician  
2020-06-23T09:25:58.183Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2020-06-23T09:26:06.246Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2020-06-23T09:26:06.573Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed
```

1.5 WINNF.FT.C.REG.10

2020-06-23T09:26:18.917Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:26:18.917Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now

2020-06-23T09:26:22.683Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtx7sH0b_
GegICdA",
      "encodedCpiSignedData":
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6MjcsImhlaWdodFR5cGU0iJBTVNMliw
iYW50ZW5uYUdhaW4iOiMslmhvcmI6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0JjowLCJh
bnRlbn5hQmVhXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRpY2FsQWNjdXJhY3kiOiMslmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGU0MDUuMDI0MDk0LCJpbmRvb3JEZXBs3ltZW50ljpmaWxzZSwibGF
0aXR1ZGU0MjM5YmV0b250YWx0by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcGLOYW1lIjoiwiaW5zdGFsbENlcnRpZmljYXRpb25UaW1lIjo1MjY0b250YWx0bW50aWx0bW50
MTMwMDBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmh5E51bWJlci6IiNlcmNvbW0tMTkxMkNNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fccId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2020-06-23T09:26:22.713Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:26:22.713Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:26:22.713Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",
  "longitude": -105.024094,
  "antennaGain": 3,
  "indoorDeployment": false,
```

```
"latitude": 31.30201,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 360,  
"height": 18,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",  
  "cpild": ""  
},  
"fcclid": "femto.i",  
"cbsdSerialNumber": "Sercomm-1912CW53000016"  
}
```

2020-06-23T09:26:22.776Z - INFO - verified signature on cpiSignatureData

2020-06-23T09:26:22.776Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema

2020-06-23T09:26:22.776Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-06-23T09:26:22.776Z - INFO - engine sent successfully, the response to CBRS : {

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

2020-06-23T09:26:23.994Z - INFO - arrived to nstep starting question answer session with the technician

2020-06-23T09:26:23.994Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-06-23T09:26:26.010Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-06-23T09:26:26.338Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed

1.6 WINNF.FT.C.REG.12

2020-06-23T09:26:41.642Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:26:41.642Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now

2020-06-23T09:26:44.576Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpb2F5QWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpb2ZmIjYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMjo1MS4x
 MTMwMDBaliwiY3BpSWQiOi0lIjY2ZjZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:26:44.608Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:26:44.608Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:26:44.608Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```
"latitude": 31.30201,
"horizontalAccuracy": 3,
"antennaDowntilt": 0,
"antennaBeamwidth": 360,
"height": 18,
"verticalAccuracy": 3
},
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",
  "cpild": ""
},
"fcclid": "femto.i",
"cbbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:26:44.661Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:26:44.661Z - INFO - cbbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:26:44.661Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:26:44.661Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 103
      }
    }
  ]
}
}
2020-06-23T09:26:45.691Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:26:45.691Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-06-23T09:26:47.441Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-06-23T09:26:47.816Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed
```

1.7 WINNF.FT.C.REG.14

2020-06-23T09:27:11.868Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:27:11.868Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now

2020-06-23T09:27:15.648Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtxM7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRyZmlyYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMjoiMS4x
 MTMwMDBaliwiY3BpSWQiOi0xNjY2ZjZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:27:15.680Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:27:15.680Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:27:15.680Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:27:15.743Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:27:15.743Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:27:15.743Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:27:15.743Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 101
      }
    }
  ]
}
2020-06-23T09:27:16.900Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:27:16.900Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-06-23T09:27:19.354Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-06-23T09:27:19.651Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed

```



```
"latitude": 31.30201,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 360,  
"height": 18,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",  
  "cpild": ""  
},  
"fcclid": "femto.i",  
"cbsdSerialNumber": "Sercomm-1912CW53000016"  
}  
2020-06-23T09:27:47.733Z - INFO - verified signature on cpiSignatureData  
2020-06-23T09:27:47.733Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema  
2020-06-23T09:27:47.733Z - INFO - cpiSignatureData data successfully validated against jsonschema  
2020-06-23T09:27:47.747Z - INFO - engine sent successfully, the response to CBRS : {  
  "registrationResponse": [  
    {  
      "response": {  
        "responseCode": 100  
      }  
    }  
  ]  
}  
2020-06-23T09:27:48.763Z - INFO - arrived to nstep starting question answer session with the technician  
2020-06-23T09:27:48.763Z - INFO - the question is : Were there RF transmissions from the CBSD1 during  
the test? please choose one of the answers :  
2020-06-23T09:27:50.999Z - INFO - for the question : Were there RF transmissions from the CBSD1 during  
the test? , the user choose n  
2020-06-23T09:27:51.374Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed
```

1.9 WINNF.FT.C.REG.18

2020-06-23T09:28:06.046Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:28:06.046Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now

2020-06-23T09:28:09.812Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtnX7sH0b_
GeglCdA",
      "encodedCpiSignedData":
"eyJpbmN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
iYW50ZW5uYUdhaW4iOiJMSlMhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWw0lJowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFB
emltdXRoljowLCJsb25naXR1ZGUUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
0aXR1ZGUUiOiJmXlJmMjAxSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmhE51bWJlci6lIiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fcclId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2020-06-23T09:28:09.842Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:28:09.842Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:28:09.842Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",
  "longitude": -105.024094,
  "antennaGain": 3,
  "indoorDeployment": false,
```

```
"latitude": 31.30201,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 360,  
"height": 18,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "2020-03-16T14:22:51.113000Z",  
  "cpild": ""  
},  
"fcclid": "femto.i",  
"cbsdSerialNumber": "Sercomm-1912CW53000016"  
}
```

2020-06-23T09:28:09.905Z - INFO - verified signature on cpiSignatureData

2020-06-23T09:28:09.905Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema

2020-06-23T09:28:09.905Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-06-23T09:28:09.905Z - INFO - engine sent successfully, the response to CBRS : {

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

2020-06-23T09:28:11.124Z - INFO - arrived to nstep starting question answer session with the technician

2020-06-23T09:28:11.124Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-06-23T09:28:14.092Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-06-23T09:28:14.515Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed

1.10 WINNF.FT.C.REG.20

2020-06-23T09:33:02.845Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:33:02.845Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_1 is starting now

2020-06-23T09:33:09.188Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 Sl6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRyZmlyYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:33:09.203Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:33:09.203Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:33:09.203Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:33:09.266Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:33:09.266Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:33:09.282Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:33:09.282Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:33:09.361Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:33:09.361Z - 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
      }
    }
  ]
}

```

```

    }
  ]
}
2020-06-23T09:33:09.391Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-23T09:33:09.391Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-06-30T09:33:09Z",
      "grantId": "342333200",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:33:09.470Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "342333200",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-23T09:33:09.470Z - INFO - grantRenew received in HBT request message
2020-06-23T09:33:09.470Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-06-30T09:33:09Z",
      "grantId": "342333200",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:36:29Z"
    }
  ]
}
2020-06-23T09:34:09.582Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "342333200",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-23T09:34:09.582Z - INFO - Time interval between two heartbeat request messages is: 60.112, limit
is: 65.0
2020-06-23T09:34:09.582Z - INFO - engine sent successfully, the response to CBRS  :{
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "342333200",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-23T09:37:29Z"
        }
    ]
}
2020-06-23T09:34:14.424Z - INFO - relinquishment request from CBRS  :{
    "relinquishmentRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "342333200"
        }
    ]
}
2020-06-23T09:34:14.424Z - INFO - engine sent successfully, the response to CBRS  :{
    "relinquishmentResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "342333200",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-06-23T09:34:14.612Z - INFO - deregistration request from CBRS  :{
    "deregistrationRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016"
        }
    ]
}
2020-06-23T09:34:14.628Z - INFO - engine sent successfully, the response to CBRS  :{
    "deregistrationResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-06-23T09:34:16.503Z - INFO - arrived to nstep starting question answer session with the technician
```


2020-06-23T09:34:16.503Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :

2020-06-23T09:34:18.971Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y

2020-06-23T09:34:19.269Z - INFO - The final result of the test : WINNF.FT.C.REG.20_1 is - passed

2020-06-23T09:40:42.062Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:40:42.078Z - INFO - the selected test from the user : WINNF.FT.C.REG.20_2 is starting now

2020-06-23T09:40:48.219Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--I6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
GegIcAd",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
iYW50ZW5uYUdhaW4iOiMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnZlcnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFB
emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LCJpbmRvb3JJEZXBsb3ltZW50lJpmYWxzZSwibGF
0aXR1ZGUiOiJmXlJmMjAxfSwiZmNjSWQiOiJmZW10by5pliwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
Sl6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNiQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmIhbE51bWJlci6lIiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cGU6IjE6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

```

2020-06-23T09:40:48.250Z - INFO - Registration message contains cpiSignatureData
2020-06-23T09:40:48.250Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-06-23T09:40:48.250Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 27,
    "antennaAzimuth": 0,
    "heightType": "AMSL",
    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclId": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:40:48.312Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:40:48.312Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:40:48.312Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:40:48.312Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:40:48.375Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:40:48.391Z - 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
  }
}
]
}
2020-06-23T09:40:48.437Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-23T09:40:48.437Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-06-30T09:40:48Z",
      "grantId": "804041339",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:40:48.530Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "804041339",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-23T09:40:48.546Z - INFO - grantRenew received in HBT request message
2020-06-23T09:40:48.546Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-06-30T09:40:48Z",
      "grantId": "804041339",

```

```

    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-06-23T09:44:08Z"
  }
]
}
2020-06-23T09:41:48.654Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "804041339",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-23T09:41:48.654Z - INFO - Time interval between two heartbeat request messages is: 60.124, limit
is: 65.0
2020-06-23T09:41:48.671Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "804041339",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:45:08Z"
    }
  ]
}
2020-06-23T09:42:48.783Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "804041339",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-23T09:42:48.783Z - INFO - Time interval between two heartbeat request messages is: 60.129, limit
is: 65.0
2020-06-23T09:42:48.783Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "804041339",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:46:08Z"
    }
  ]
}
2020-06-23T09:43:48.898Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "804041339",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-23T09:43:48.898Z - INFO - Time interval between two heartbeat request messages is: 60.114, limit
is: 65.0
2020-06-23T09:43:48.914Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "804041339",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-23T09:47:08Z"
        }
    ]
}
2020-06-23T09:44:49.013Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "804041339",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-23T09:44:49.013Z - INFO - Time interval between two heartbeat request messages is: 60.116, limit
is: 65.0
2020-06-23T09:44:49.029Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "804041339",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-23T09:48:09Z"
        }
    ]
}
2020-06-23T09:45:49.134Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "804041339",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-23T09:45:49.134Z - INFO - Time interval between two heartbeat request messages is: 60.12, limit is:
65.0
2020-06-23T09:45:49.134Z - INFO - engine sent successfully, the response to CBRS  : {
```

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "804041339",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2020-06-23T09:49:09Z"  
  }  
]  
}
```

2020-06-23T09:45:50.275Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:45:50.275Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2020-06-23T09:45:59.336Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2020-06-23T09:45:59.336Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :
2020-06-23T09:46:00.556Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y
2020-06-23T09:46:00.904Z - 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

2020-06-23T09:46:53.532Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
2020-06-23T09:46:53.532Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
2020-06-23T09:46:58.565Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N390
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--I6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00Iil-VweicDgtmX7sH0b_
GegICdA",
      "encodedCpiSignedData":
"eyJpbN0YwxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNmlii
iYw50ZW5uYUdhaW4iOjMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWw0lGowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRpb2F5QWNjdXJhY3kiOjMslmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JlZSsBsb3ItZW50lGpmYWxzZSswibGF
0aXR1ZGU0i0jMxLjMwMjAxSwiZmNjSWQiOiJmZW10by5pliwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcG10YW11ljoiliw1aW5zdGFsbENlcnRpb2mljYXRpb25UaW11ljoimjAyMC0wMy0xNlQxNDoyMjo1MS4x
MTMwMDBaliwiY3BpSWQiOiJlZmVzc2lvbmFsSW5zdGFsbGVyRGF0YyZjZFNlcmllbE51bWJlciI6ImlcmNvbW0tMTkxMkNjNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fcid": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
}
```

2020-06-23T09:46:58.596Z - INFO - Registration message contains cpiSignatureData
2020-06-23T09:46:58.596Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-06-23T09:46:58.596Z - INFO - encodedCpiSignedData contents = {
"installationParam": {
"eirpCapability": 27,
"antennaAzimuth": 0,
"heightType": "AMSL",

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:46:58.658Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:46:58.658Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:46:58.658Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:46:58.658Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:46:58.753Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:46:58.753Z - 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
        }
      ]
    }
  }
  2020-06-23T09:46:58.767Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "operationParam": {
          "maxEirp": 20,
          "operationFrequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
          }
        }
      }
    ]
  }
  2020-06-23T09:46:58.783Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "response": {
          "responseCode": 400
        }
      }
    ]
  }
  }
  2020-06-23T09:47:00.596Z - INFO - arrived to nstep starting question answer session with the technician
  2020-06-23T09:47:00.596Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
  the test? please choose one of the answers :
  2020-06-23T09:47:03.596Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
  the test? , the user choose n
  2020-06-23T09:47:03.971Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed
```

2.2 WINNF.TC.GRA.2

2020-06-23T09:47:15.566Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:47:15.566Z - INFO - the selected test from the user : WINNF.TC.GRA.2 is starting now

2020-06-23T09:47:20.941Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
GegIcdA",
      "encodedCpiSignedData":
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
0aXR1ZGUiOiJmSlmWmjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcGlOYW1lIjoilwiawW5zdGFsbENlcnRpmjYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmhE51bWJlcil6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fcclId": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2020-06-23T09:47:20.973Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:47:20.973Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:47:20.973Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",
  "longitude": -105.024094,
  "antennaGain": 3,
  "indoorDeployment": false,
```

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:47:21.036Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:47:21.036Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:47:21.036Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:47:21.036Z - INFO - engine sent successfully, the response to CBRS  :{
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:47:21.098Z - INFO - spectrumInquiry request from CBRS  :{
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:47:21.114Z - 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
      }
    }
  ]
}

```

```
    }
  ]
}
2020-06-23T09:47:21.161Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-23T09:47:21.161Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 401
      }
    }
  ]
}
2020-06-23T09:47:22.661Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:47:22.661Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-06-23T09:47:25.506Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-06-23T09:47:25.959Z - 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

2020-06-24T02:07:24.357Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:07:24.357Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2020-06-24T02:07:28.763Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRolj0zNjAsImhlaWdodCI6MTgslncnRpbY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 Sl6eyJjcGlOYW1lIjoilwiawW5zdGFsbENlcnRpbZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmhE51bWJlcil6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcell": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T02:07:28.809Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:07:28.809Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:07:28.825Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:07:29.063Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:07:29.063Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:07:29.063Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:07:29.063Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:07:29.157Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:07:29.157Z - 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
        }
    ]
}
2020-06-24T02:07:29.188Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2020-06-24T02:07:29.204Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2020-07-01T02:07:29Z",
            "grantId": "836746979",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-06-24T02:07:29.298Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "836746979",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2020-06-24T02:07:29.298Z - INFO - grantRenew received in HBT request message
2020-06-24T02:07:29.313Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2020-07-01T02:07:29Z",
            "grantId": "836746979",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:10:49Z"
        }
    ]
}

```

```
2020-06-24T02:08:29.434Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "836746979",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T02:08:29.434Z - INFO - Time interval between two heartbeat request messages is: 60.137, limit
is: 65.0
2020-06-24T02:08:29.434Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "836746979",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:11:49Z"
    }
  ]
}
2020-06-24T02:09:29.532Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "836746979",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T02:09:29.532Z - INFO - Time interval between two heartbeat request messages is: 60.097, limit
is: 65.0
2020-06-24T02:09:29.546Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "836746979",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:12:49Z"
    }
  ]
}
2020-06-24T02:10:29.644Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "836746979",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
```


2020-06-24T02:10:29.644Z - INFO - Time interval between two heartbeat request messages is: 60.112, limit is: 65.0

2020-06-24T02:10:29.660Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "836746979",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2020-06-24T02:13:49Z"  
  }  
]
```

}
2020-06-24T02:11:29.767Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "836746979",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2020-06-24T02:11:29.767Z - INFO - Time interval between two heartbeat request messages is: 60.124, limit is: 65.0

2020-06-24T02:11:29.767Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "836746979",  
    "response": {  
      "responseCode": 0  
    },  
    "transmitExpireTime": "2020-06-24T02:14:49Z"  
  }  
]
```

}
2020-06-24T02:12:29.881Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "836746979",  
    "grantRenew": false,  
    "operationState": "AUTHORIZED"  
  }  
]
```

}
2020-06-24T02:12:29.881Z - INFO - Time interval between two heartbeat request messages is: 60.114, limit is: 65.0

2020-06-24T02:12:29.898Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "836746979",  
    "response": {  
      "responseCode": 0  
    },  
  }  
]
```

```
"transmitExpireTime": "2020-06-24T02:15:49Z"
```

```
}
```

```
]
```

```
}
```

```
2020-06-24T02:12:31.200Z - INFO - arrived to nstep starting question answer session with the technician  
2020-06-24T02:12:31.200Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state  
(first successful HBT response)? please choose one of the answers :  
2020-06-24T02:12:34.979Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state  
(first successful HBT response)? , the user choose n  
2020-06-24T02:12:34.979Z - INFO - the question is : Did CBSD1 transmit only within the frequency range  
specified in its grantRequest message? please choose one of the answers :  
2020-06-24T02:12:36.384Z - INFO - for the question : Did CBSD1 transmit only within the frequency range  
specified in its grantRequest message? , the user choose y  
2020-06-24T02:12:36.795Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed
```

3.2. WINNF.FT.C.HBT.3

2020-06-24T02:13:05.938Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:13:05.938Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2020-06-24T02:13:10.173Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmJmMjAxZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRyZmJjYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
 MTMwMDBaliwiY3BpSWQiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF0YyY3BpSWQi
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T02:13:10.220Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:13:10.220Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:13:10.220Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:13:10.282Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:13:10.282Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:13:10.282Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:13:10.282Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:13:10.437Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:13:10.437Z - 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
      }
    }
  ]
}

```

```

    }
  ]
}
2020-06-24T02:13:10.470Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:13:10.484Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:13:10Z",
      "grantId": "830140673",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:13:10.562Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "830140673",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:13:10.562Z - INFO - grantRenew received in HBT request message
2020-06-24T02:13:10.562Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:13:10Z",
      "grantId": "830140673",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:16:30Z"
    }
  ]
}
2020-06-24T02:14:10.683Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "830140673",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-24T02:14:10.683Z - INFO - Time interval between two heartbeat request messages is: 60.12, limit is:
65.0
2020-06-24T02:14:10.683Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "830140673",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:17:30Z"
        }
    ]
}
2020-06-24T02:15:10.799Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "830140673",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:15:10.799Z - INFO - Time interval between two heartbeat request messages is: 60.117, limit
is: 65.0
2020-06-24T02:15:10.799Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "830140673",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:18:30Z"
        }
    ]
}
2020-06-24T02:16:10.913Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "830140673",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:16:10.913Z - INFO - Time interval between two heartbeat request messages is: 60.113, limit
is: 65.0
2020-06-24T02:16:10.921Z - INFO - engine sent successfully, the response to CBRS  : {
```

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "830140673",  
    "response": {  
      "responseCode": 105  
    },  
    "transmitExpireTime": "2020-06-24T02:16:10Z"  
  }  
]  
}
```

2020-06-24T02:16:12.908Z - INFO - arrived to nstep starting question answer session with the technician

2020-06-24T02:16:12.908Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? please choose one of the answers :

2020-06-24T02:16:18.263Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2020-06-24T02:16:18.673Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed

3.3. WINNF.FT.C.HBT.4

2020-06-24T02:16:44.038Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:16:44.038Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now

2020-06-24T02:16:53.267Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

```
{
```

```
  "airInterface": {
```

```
    "radioTechnology": "E_UTRA",
```

```
    "supportedSpec": "FFS"
```

```
  },
```

```
  "callSign": "",
```

```
  "cbsdCategory": "A",
```

```
  "cbsdSerialNumber": "1912CW53000016",
```

```
  "cpiSignatureData": {
```

```
    "digitalSignature":
```

```
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
GegIcdA",
```

```
    "encodedCpiSignedData":
```

```
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTVMliiw
iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
0aXR1ZGU0i0xMjMwMjAxZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcGLOYW1lIjoilwiaW5zdGFsbENlcnRpZmljYXRpb25UaW1lIjo1MjAyMC0wMy0xNlQxNDoyMjM1MS4x
MTMwMDBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
```

```
    "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

```
  },
```

```
  "fcellId": "femto.i",
```

```
  "groupingParam": [
```

```
    {
```

```
      "groupId": "SERCOMM_111",
```

```
      "groupType": "INTERFERENCE_COORDINATION"
```

```
    }
```

```
  ],
```

```
  "measCapability": [
```

```
    "RECEIVED_POWER_WITHOUT_GRANT"
```

```
  ],
```

```
  "userId": "XywyE9"
```

```
  }
```

```
]
```

```
}
```

2020-06-24T02:16:53.299Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:16:53.299Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:16:53.299Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
```

```
  "eirpCapability": 27,
```

```
  "antennaAzimuth": 0,
```

```
  "heightType": "AMSL",
```

```
  "longitude": -105.024094,
```

```
  "antennaGain": 3,
```

```
  "indoorDeployment": false,
```



```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:16:53.361Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:16:53.361Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:16:53.361Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:16:53.361Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:16:53.454Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:16:53.454Z - 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
      }
    }
  ]
}

```

```

    }
  ]
}
2020-06-24T02:16:53.486Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:16:53.486Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:16:53Z",
      "grantId": "435737527",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:16:53.565Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:16:53.579Z - INFO - grantRenew received in HBT request message
2020-06-24T02:16:53.579Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:16:53Z",
      "grantId": "435737527",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:20:13Z"
    }
  ]
}
2020-06-24T02:17:53.696Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```

    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "grantId": "435737527",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
}
2020-06-24T02:17:53.696Z - INFO - Time interval between two heartbeat request messages is: 60.131, limit
is: 65.0
2020-06-24T02:17:53.696Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:21:13Z"
    }
  ]
}
2020-06-24T02:18:53.813Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T02:18:53.813Z - INFO - Time interval between two heartbeat request messages is: 60.118, limit
is: 65.0
2020-06-24T02:18:53.813Z - INFO - engine sent successfully, the response to CBRS  : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:22:13Z"
    }
  ]
}
2020-06-24T02:19:53.926Z - INFO - heartbeat request from CBRS  : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T02:19:53.926Z - INFO - Time interval between two heartbeat request messages is: 60.112, limit
is: 65.0
2020-06-24T02:19:53.926Z - INFO - engine sent successfully, the response to CBRS  : {

```

```

    "heartbeatResponse": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "435737527",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2020-06-24T02:23:13Z"
      }
    ]
  }
}
2020-06-24T02:20:54.039Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T02:20:54.055Z - INFO - Time interval between two heartbeat request messages is: 60.113, limit
is: 65.0
2020-06-24T02:20:54.055Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:24:14Z"
    }
  ]
}
}
2020-06-24T02:21:54.161Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-06-24T02:21:54.161Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2020-06-24T02:21:54.177Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "435737527",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2020-06-24T02:21:54Z"
    }
  ]
}
]

```

}

2020-06-24T02:21:56.128Z - INFO - arrived to nstep starting question answer session with the technician

2020-06-24T02:21:56.128Z - INFO - the question is : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? please choose one of the answers :

2020-06-24T02:22:39.576Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y

2020-06-24T02:22:40.539Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed

3.4. WINNF.FT.C.HBT.5

2020-06-24T02:23:04.934Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:23:04.934Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2020-06-24T02:23:08.559Z - INFO - registration request from CBRS : {

```

"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00Iil-VweicDgtmX7sH0b_
GeglCdA",
      "encodedCpiSignedData":
"eyJpbmN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTVMliiw
iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJh
bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncmVjZmVzZ2lvcjI6ImVzZW50IjpmYWxzZSwibGF
emltdXRoljowLCJsb25naXR1ZGU0MDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50IjpmYWxzZSwibGF0Y
0aXR1ZGU0IjpmYWxzZSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzZ2lvcjI6ImVzZW50IjpmYWxzZSwibGF0Y
SI6eyJjcGLOYW1IjoiliwiaW5zdGFsbENlcnRpZmljYXRpb25UaW1IjoiiMjAyMC0wMy0xNiQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOiIlifSwiY2JzZFNIcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fccl": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
  
```

2020-06-24T02:23:08.605Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:23:08.605Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:23:08.605Z - INFO - encodedCpiSignedData contents = {

```

"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",
  "longitude": -105.024094,
  "antennaGain": 3,

```

```

    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:23:08.668Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:23:08.668Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:23:08.668Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:23:08.668Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:23:08.763Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:23:08.763Z - 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
      }
    }
  ]
}

```

```

    }
  }
]
}
2020-06-24T02:23:08.793Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:23:08.793Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:23:08Z",
      "grantId": "355524279",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:23:08.871Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "355524279",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:23:08.871Z - INFO - grantRenew received in HBT request message
2020-06-24T02:23:08.871Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:23:08Z",
      "grantId": "355524279",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-06-24T02:23:08Z"
    }
  ]
}
2020-06-24T02:24:09.020Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



```
{  
  "cbsdId": "femto.iMock-SAS1912CW53000016",  
  "grantId": "355524279",  
  "grantRenew": false,  
  "operationState": "GRANTED"  
}
```

```
]
```

```
}
```

2020-06-24T02:24:09.020Z - INFO - Time interval between two heartbeat request messages is: 60.149, limit is: 65.0

2020-06-24T02:24:09.036Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [  
  {
```

```
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "355524279",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2020-06-24T02:24:09Z"
```

```
  }
```

```
]
```

```
}
```

2020-06-24T02:24:10.604Z - INFO - arrived to nstep starting question answer session with the technician

2020-06-24T02:24:10.604Z - INFO - the question is : Did the CBSD transmit at any time during the test?

please choose one of the answers :

2020-06-24T02:24:14.213Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n

2020-06-24T02:24:14.651Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed

3.5. WINNF.FT.C.HBT.6

2020-06-24T02:24:38.263Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:24:38.263Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now

2020-06-24T02:24:43.381Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--I6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtrmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNMIiw
 iYW50ZW5uYUdhaW4iOjMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRolj0zNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWVjdXJhY3kiOjMslmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGU0i0jMxLjMwMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpmjYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmh5E51bWJlci06IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T02:24:43.427Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:24:43.427Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:24:43.427Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:24:43.490Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:24:43.490Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:24:43.490Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:24:43.490Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:24:43.536Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:24:43.552Z - 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
      }
    }
  ]
}

```

```

    }
  ]
}
2020-06-24T02:24:43.598Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:24:43.598Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:24:43Z",
      "grantId": "790699150",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:24:43.693Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "790699150",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:24:43.693Z - INFO - grantRenew received in HBT request message
2020-06-24T02:24:43.693Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:24:43Z",
      "grantId": "790699150",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:28:03Z"
    }
  ]
}
2020-06-24T02:25:43.812Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "790699150",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-24T02:25:43.812Z - INFO - Time interval between two heartbeat request messages is: 60.12, limit is:
65.0
2020-06-24T02:25:43.828Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "790699150",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:29:03Z"
        }
    ]
}
2020-06-24T02:26:43.936Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "790699150",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:26:43.936Z - INFO - Time interval between two heartbeat request messages is: 60.123, limit
is: 65.0
2020-06-24T02:26:43.936Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "790699150",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:30:03Z"
        }
    ]
}
2020-06-24T02:27:44.046Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "790699150",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:27:44.046Z - INFO - Time interval between two heartbeat request messages is: 60.111, limit
is: 65.0
2020-06-24T02:27:44.046Z - INFO - engine sent successfully, the response to CBRS  : {
```

```

    "heartbeatResponse": [
      {
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "790699150",
        "response": {
          "responseCode": 501
        },
        "transmitExpireTime": "2020-06-24T02:27:44Z"
      }
    ]
  }
}
2020-06-24T02:28:44.161Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "790699150",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:28:44.161Z - INFO - Time interval between two heartbeat request messages is: 60.114, limit is: 65.0
2020-06-24T02:28:44.177Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "790699150",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-06-24T02:28:44Z"
    }
  ]
}
}
2020-06-24T02:28:45.621Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-24T02:28:45.621Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? please choose one of the answers :
2020-06-24T02:28:50.947Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y
2020-06-24T02:28:51.270Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed

```

3.6. WINNF.FT.C.HBT.7

2020-06-24T02:29:43.516Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:29:43.516Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now

2020-06-24T02:29:49.723Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmJmMjAxZSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRyZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMj01MS4x
 MTMwMDBaliwiY3BpSWQiOi0xMjY2ZjZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T02:29:49.769Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:29:49.769Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:29:49.769Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:29:49.832Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:29:49.832Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:29:49.832Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:29:49.832Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:29:49.911Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:29:49.926Z - 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
      }
    }
  ]
}

```



```

    }
  ]
}
2020-06-24T02:29:49.941Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:29:49.957Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:29:49Z",
      "grantId": "910238731",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:29:50.066Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "910238731",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:29:50.066Z - INFO - grantRenew received in HBT request message
2020-06-24T02:29:50.082Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:29:50Z",
      "grantId": "910238731",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:33:10Z"
    }
  ]
}
2020-06-24T02:30:50.203Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {

```

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "910238731",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-24T02:30:50.203Z - INFO - Time interval between two heartbeat request messages is: 60.137, limit
is: 65.0
2020-06-24T02:30:50.203Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "910238731",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:34:10Z"
        }
    ]
}
2020-06-24T02:31:50.308Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "910238731",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:31:50.308Z - INFO - Time interval between two heartbeat request messages is: 60.104, limit
is: 65.0
2020-06-24T02:31:50.322Z - INFO - engine sent successfully, the response to CBRS  : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "910238731",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:35:10Z"
        }
    ]
}
2020-06-24T02:32:50.437Z - INFO - heartbeat request from CBRS  : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "910238731",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:32:50.437Z - INFO - Time interval between two heartbeat request messages is: 60.129, limit
is: 65.0
2020-06-24T02:32:50.437Z - INFO - engine sent successfully, the response to CBRS  : {
```

```
"heartbeatResponse": [  
  {  
    "cbsdId": "femto.iMock-SAS1912CW53000016",  
    "grantId": "910238731",  
    "response": {  
      "responseCode": 502  
    },  
    "transmitExpireTime": "2020-06-24T02:32:50Z"  
  }  
]  
}  
2020-06-24T02:32:50.467Z - INFO - relinquishment request from CBRS : {  
  "relinquishmentRequest": [  
    {  
      "cbsdId": "femto.iMock-SAS1912CW53000016",  
      "grantId": "910238731"  
    }  
  ]  
}  
2020-06-24T02:32:50.467Z - INFO - engine sent successfully, the response to CBRS : {  
  "relinquishmentResponse": [  
    {  
      "cbsdId": "femto.iMock-SAS1912CW53000016",  
      "grantId": "910238731",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}  
2020-06-24T02:32:52.147Z - INFO - arrived to nstep starting question answer session with the technician  
2020-06-24T02:32:52.147Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds  
of receiving Heartbeat response with responseCode = 502? please choose one of the answers :  
2020-06-24T02:33:43.789Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds  
of receiving Heartbeat response with responseCode = 502? , the user choose y  
2020-06-24T02:33:44.211Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed
```

3.7 WINNF.FT.C.HBT.9

2020-06-24T02:34:00.029Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T02:34:00.029Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2020-06-24T02:34:03.801Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMIiw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50IjpmYWxzZSwibGF
 0aXR1ZGUiOiJmSlmWmJmMjAxZSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpmjYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOi0ifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T02:34:03.832Z - INFO - Registration message contains cpiSignatureData

2020-06-24T02:34:03.832Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T02:34:03.832Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

"longitude": -105.024094,

"antennaGain": 3,

"indoorDeployment": false,

```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:34:03.894Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:34:03.894Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:34:03.894Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:34:03.894Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:34:03.987Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:34:03.987Z - 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
      }
    }
  ]
}

```

```

    }
  ]
}
2020-06-24T02:34:04.019Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:34:04.019Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:34:04Z",
      "grantId": "685698860",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:34:04.128Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "685698860",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:37:24.142Z - INFO - grantRenew received in HBT request message
2020-06-24T02:37:24.142Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:37:24Z",
      "grantId": "685698860",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-06-24T02:37:24Z"
    }
  ]
}
2020-06-24T02:37:26.127Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-24T02:37:26.127Z - INFO - the question is : Were there RF transmissions from the CBSD during the
test? please choose one of the answers :
```

2020-06-24T02:37:42.125Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n
2020-06-24T02:37:42.483Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed


```

    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T02:38:13.693Z - INFO - verified signature on cpiSignatureData
2020-06-24T02:38:13.693Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T02:38:13.693Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T02:38:13.693Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:38:13.770Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T02:38:13.786Z - 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
      }
    }
  ]
}

```

```
    }
  ]
}
2020-06-24T02:38:13.802Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T02:38:13.818Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-01T02:38:13Z",
      "grantId": "128867401",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T02:38:13.880Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "128867401",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T02:38:13.895Z - INFO - grantRenew received in HBT request message
2020-06-24T02:38:13.895Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-07-01T02:38:13Z",
      "grantId": "128867401",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T02:41:33Z"
    }
  ]
}
2020-06-24T02:39:14.016Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
```

```

        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "grantId": "128867401",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-24T02:39:14.016Z - INFO - Time interval between two heartbeat request messages is: 60.137, limit
is: 65.0
2020-06-24T02:39:14.016Z - INFO - engine sent successfully, the response to CBRS  :{
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "128867401",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T02:42:34Z"
        }
    ]
}
2020-06-24T02:40:14.131Z - INFO - heartbeat request from CBRS  :{
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "128867401",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T02:40:14.131Z - INFO - Time interval between two heartbeat request messages is: 60.115, limit
is: 65.0
2020-06-24T02:40:14.131Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT:
2020-06-24 02:39:14.017000
2020-06-24T02:41:14.230Z - INFO - relinquishment request from CBRS  :{
    "relinquishmentRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "128867401"
        }
    ]
}
2020-06-24T02:41:14.230Z - INFO - request message received while HBT is absent, sleep 144 sec before
responding
2020-06-24T02:43:34.163Z - INFO - engine sent successfully, the response to CBRS  :{
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "128867401",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2020-06-24T02:43:34Z"
        }
    ]
}
2020-06-24T02:43:35.772Z - INFO - arrived to nstep starting question answer session with the technician

```

2020-06-24T02:43:35.772Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2020-06-24T02:43:38.240Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2020-06-24T02:43:45.720Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2020-06-24T02:43:45.940Z - 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

2020-06-23T09:47:44.085Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13
 2020-06-23T09:47:44.085Z - INFO - the selected test from the user : WINNF.FT.C.MES.1 is starting now
 2020-06-23T09:47:49.895Z - INFO - registration request from CBRS : {

```

    "registrationRequest": [
      {
        "airInterface": {
          "radioTechnology": "E_UTRA",
          "supportedSpec": "FFS"
        },
        "callSign": "",
        "cbsdCategory": "A",
        "cbsdSerialNumber": "1912CW53000016",
        "cpiSignatureData": {
          "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
GegIcdA",
          "encodedCpiSignedData":
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNmliw
iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpbY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
0aXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF0YSl6eyJjcGlOYW1lIjoilw
iawW5zdGFsbENlcnRpbZmljYXRpb25UaW1lIjo1MjAyMC0wMy0xNlQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmhE51bWJlcil6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
          "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
        },
        "fccl": "femto.i",
        "groupingParam": [
          {
            "groupId": "SERCOMM_111",
            "groupType": "INTERFERENCE_COORDINATION"
          }
        ],
        "measCapability": [
          "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "userId": "XywyE9"
      }
    ]
  }

```

2020-06-23T09:47:49.943Z - INFO - Registration message contains cpiSignatureData
 2020-06-23T09:47:49.943Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
 2020-06-23T09:47:49.943Z - INFO - encodedCpiSignedData contents = {
 "installationParam": {
 "eirpCapability": 27,
 "antennaAzimuth": 0,
 "heightType": "AMSL",

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:47:50.006Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:47:50.006Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:47:50.006Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:47:50.006Z - INFO - Response message contains measReportConfig
2020-06-23T09:47:50.006Z - INFO - engine sent successfully, the response to CBRS  : {
  "registrationResponse": [
    {
      "cbsdid": "femto.iMock-SAS1912CW53000016",
      "measReportConfig": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:47:50.068Z - INFO - spectrumInquiry request from CBRS  : {
  "spectrumInquiryRequest": [
    {
      "cbsdid": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -89.0
          }
        ]
      }
    }
  ]
}

```

```
"measBandwidth": 1000000,  
"measFrequency": 3570000000,  
"measRcvdPower": -90.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3580000000,  
"measRcvdPower": -91.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3590000000,  
"measRcvdPower": -90.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3600000000,  
"measRcvdPower": -90.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3610000000,  
"measRcvdPower": -90.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3620000000,  
"measRcvdPower": -88.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3630000000,  
"measRcvdPower": -90.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3640000000,  
"measRcvdPower": -91.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3650000000,  
"measRcvdPower": -91.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3660000000,  
"measRcvdPower": -92.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3670000000,  
"measRcvdPower": -91.0  
},  
{  
"measBandwidth": 1000000,  
"measFrequency": 3680000000,  
"measRcvdPower": -92.0
```

```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -91.0
        }
    ]
}
}
2020-06-23T09:47:50.068Z - 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
            }
        }
    ]
}
2020-06-23T09:47:50.115Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -90.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -89.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -90.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -91.0
                    }
                ]
            }
        }
    ]
}

```



```
        "measBandwidth": 1000000,  
        "measFrequency": 3590000000,  
        "measRcvdPower": -90.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3600000000,  
        "measRcvdPower": -90.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3610000000,  
        "measRcvdPower": -90.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3620000000,  
        "measRcvdPower": -88.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3630000000,  
        "measRcvdPower": -90.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3640000000,  
        "measRcvdPower": -91.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3650000000,  
        "measRcvdPower": -91.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3660000000,  
        "measRcvdPower": -92.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3670000000,  
        "measRcvdPower": -91.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3680000000,  
        "measRcvdPower": -92.0  
    },  
    {  
        "measBandwidth": 1000000,  
        "measFrequency": 3690000000,  
        "measRcvdPower": -91.0  
    }  
    ]  
},  
"operationParam": {  
    "maxEirp": 20,
```

```
        "operationFrequencyRange": {
            "highFrequency": 3635000000,
            "lowFrequency": 3615000000
        }
    }
}
]
}
2020-06-23T09:47:50.131Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2020-06-30T09:47:50Z",
            "grantId": "198295930",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-06-23T09:47:51.193Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:47:54.194Z - 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

2020-06-23T09:49:09.882Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:49:09.882Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2020-06-23T09:49:16.905Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNmliw
 iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRolj0zNjAsImhlaWdodCI6MTgslncnRpbY2FsQWNjdXJhY3kiOiJmSlmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JlZlZBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGU0i0jMxLjMwMjAxSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzZ2lVbmFsSW5zdGFsbGVyRGF0Y
 Sl6eyJjcGlOYW1lIjoilwiawW5zdGFsbENlcnRpbZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOiIlifSwiY2JzZFNlcmhE51bWJlci06IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcell": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-23T09:49:16.937Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:49:16.937Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:49:16.937Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 27,

"antennaAzimuth": 0,

"heightType": "AMSL",

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:49:16.990Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:49:16.990Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:49:17.006Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:49:17.006Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:49:17.107Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:49:17.107Z - 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
    }
  ]
}
2020-06-23T09:49:17.138Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-23T09:49:17.154Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",
      "grantExpireTime": "2020-06-30T09:49:17Z",
      "grantId": "645443904",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:49:17.239Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "645443904",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-23T09:49:17.253Z - INFO - grantRenew received in HBT request message
2020-06-23T09:49:17.253Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-06-30T09:49:17Z",
      "grantId": "645443904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:52:37Z"
    }
  ]
}

```

```
2020-06-23T09:50:17.368Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "645443904",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-23T09:50:17.368Z - INFO - Time interval between two heartbeat request messages is: 60.13, limit is:
65.0
2020-06-23T09:50:17.368Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "645443904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:53:37Z"
    }
  ]
}
2020-06-23T09:50:20.572Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "645443904"
    }
  ]
}
2020-06-23T09:50:20.572Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "645443904",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:50:21.650Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:50:21.650Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of
Relinquishment Request by Test Harness? please choose one of the answers :
2020-06-23T09:50:34.884Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of
Relinquishment Request by Test Harness? , the user choose y
2020-06-23T09:50:35.509Z - 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

2020-06-23T09:51:32.694Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-23T09:51:32.694Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now

2020-06-23T09:51:37.897Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqIpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00Iil-VweicDgtmX7sH0b_
GegIcDA",
      "encodedCpiSignedData":
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGUiOiJBTvNMliw
iYW50ZW5uYUdhaW4iOiMslmhvcml6b250YWxBy2N1cmFjeSI6MywiYW50ZW5uYURvd250aWw0lJowLCJh
bnRlbn5hQmVhXdpZHRoljozNjAsImhlaWdodCI6MTgslZlcnRpY2FsQWVjZmVzZ2l2bmFsSW5zdGFsbGVyRGF0Y
emltdXRoljowLCJsb25naXR1ZGUiOi0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50ljpMjYwZzZSwibGF
0aXR1ZGUiOiMxLjMwMjAxfSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzZ2l2bmFsSW5zdGFsbGVyRGF0Y
SI6eyJjcGLOYW1lIjoilwiaW5zdGFsbENlcnRpZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNQxNDoyMj01MS4x
MTMwMDBBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmIhbE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMjYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fccl": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]
```

2020-06-23T09:51:37.928Z - INFO - Registration message contains cpiSignatureData

2020-06-23T09:51:37.928Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-23T09:51:37.928Z - INFO - encodedCpiSignedData contents = {

```
"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",
```

```

    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-23T09:51:37.990Z - INFO - verified signature on cpiSignatureData
2020-06-23T09:51:37.990Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-23T09:51:37.990Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-23T09:51:37.990Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:51:38.069Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-23T09:51:38.069Z - 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
        }
    ]
}
2020-06-23T09:51:38.101Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2020-06-23T09:51:38.101Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "channelType": "GAA",
            "grantExpireTime": "2020-06-30T09:51:38Z",
            "grantId": "631013022",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-06-23T09:51:38.178Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "631013022",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2020-06-23T09:51:38.194Z - INFO - grantRenew received in HBT request message
2020-06-23T09:51:38.194Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2020-06-30T09:51:38Z",
            "grantId": "631013022",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-23T09:54:58Z"
        }
    ]
}

```

```
2020-06-23T09:52:38.325Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "631013022",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-23T09:52:38.325Z - INFO - Time interval between two heartbeat request messages is: 60.146, limit
is: 65.0
2020-06-23T09:52:38.341Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "631013022",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-23T09:55:58Z"
    }
  ]
}
2020-06-23T09:53:10.911Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "631013022"
    }
  ]
}
2020-06-23T09:53:10.927Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "631013022",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-23T09:53:10.990Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016"
    }
  ]
}
2020-06-23T09:53:10.990Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

] }
}

2020-06-23T09:53:12.880Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-23T09:53:12.880Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :

2020-06-23T09:53:15.959Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y

2020-06-23T09:53:16.413Z - 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

2020-06-24T03:42:08.673Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T03:42:08.687Z - INFO - the selected test from the user : WINNF.FT.C.SCS.1 is starting now

2020-06-24T03:42:12.250Z - INFO - registration request from CBRS : {

```

"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "",
    "cbsdCategory": "A",
    "cbsdSerialNumber": "1912CW53000016",
    "cpiSignatureData": {
      "digitalSignature":
"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
GegIcdA",
      "encodedCpiSignedData":
"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNmliw
iYW50ZW5uYUdhaW4iOiJmSlmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
bnRlbn5hQmVhXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpb2F5QWVjY3kiOiJmSlmFudGVubmFB
emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
0aXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF0YSl6eyJjcGl0YW11Ijoilw
iawW5zdGFsbENlcnRpb2ZmYXRpb25UaW11Ijo1MjAyMC0wMy0xNlQxNDoyMj01MS4x
MTMwMDBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
Q",
      "protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
    },
    "fccl": "femto.i",
    "groupingParam": [
      {
        "groupId": "SERCOMM_111",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "XywyE9"
  }
]

```

2020-06-24T03:42:12.282Z - INFO - Registration message contains cpiSignatureData

2020-06-24T03:42:12.282Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-06-24T03:42:12.282Z - INFO - encodedCpiSignedData contents = {

```

"installationParam": {
  "eirpCapability": 27,
  "antennaAzimuth": 0,
  "heightType": "AMSL",

```

```
    "longitude": -105.024094,
    "antennaGain": 3,
    "indoorDeployment": false,
    "latitude": 31.30201,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "height": 18,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "",
    "installCertificationTime": "2020-03-16T14:22:51.113000Z",
    "cpild": ""
  },
  "fcclid": "femto.i",
  "cbsdSerialNumber": "Sercomm-1912CW53000016"
}
2020-06-24T03:42:12.344Z - INFO - verified signature on cpiSignatureData
2020-06-24T03:42:12.344Z - INFO - cbsdCategory= 'A', removing optional param from cpi_schema
2020-06-24T03:42:12.344Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-06-24T03:42:12.359Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-06-24T03:42:13.766Z - INFO - arrived to nstep starting question answer session with the technician
2020-06-24T03:42:13.766Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2020-06-24T03:42:20.344Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2020-06-24T03:42:20.671Z - INFO - The final result of the test : WINNF.FT.C.SCS.1 is - passed
```

7.2 WINNF.FT.C.SCS.2

2020-05-09T04:46:45.756Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-05-09T04:46:45.756Z - INFO - the selected test from the user : WINNF.FT.C.SCS.2 is starting now

7.3 WINNF.FT.C.SCS.3

2020-05-09T04:54:47.697Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-05-09T04:54:47.697Z - INFO - the selected test from the user : WINNF.FT.C.SCS.3 is starting now

7.4 WINNF.FT.C.SCS.4

2020-05-09T05:00:48.019Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-05-09T05:00:48.019Z - INFO - the selected test from the user : WINNF.FT.C.SCS.4 is starting now

7.5 WINNF.FT.C.SCS.5

2020-05-09T05:05:43.289Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-05-09T05:05:43.289Z - 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)

2020-06-24T03:15:54.681Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T03:15:54.681Z - INFO - Selected spectrum frequency is {'lowFrequency': 361500000L, 'highFrequency': 3635000000L}

2020-06-24T03:15:54.681Z - INFO - Granted Spectrum Max Eirp = -23dBm/MHz

2020-06-24T03:15:54.681Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-06-24T03:15:59.884Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N390
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGExajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNMIiw
 iYW50ZW5uYUdhaW4iOjMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpbY2FsQWNjdXJhY3kiOjMslmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBs3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGU0i0jMxLjMwMjAxSwiZmNjSWQiOiJmZW10by5pliwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0Y
 Sl6eyJjcGlOYW1lIjoilw1aW5zdGFsbENlcnRpbZmljYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMjo1MS4x
 MTMwMDBBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcell": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T03:15:59.914Z - INFO - engine sent successfully, the response to CBRS : {

"registrationResponse": [

{

```
        "cbsdId": "femto.iMock-SAS1912CW53000016",
        "response": {
            "responseCode": 0
        }
    ]
}
2020-06-24T03:16:00.009Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            ]
        }
    ]
}
2020-06-24T03:16:00.009Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2020-06-24T03:16:00.009Z - 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
            }
        }
    ]
}
2020-06-24T03:16:00.039Z - INFO - grant request from CBRS : {
    "grantRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "operationParam": {
                "maxEirp": -23,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2020-06-24T03:16:00.039Z - INFO - engine sent successfully, the response to CBRS : {
```



```

"grantResponse": [
  {
    "cbsdId": "femto.iMock-SAS1912CW53000016",
    "channelType": "GAA",
    "grantExpireTime": "2020-07-01T03:16:00Z",
    "grantId": "42605555",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-06-24T03:16:00.134Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "42605555",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T03:16:00.150Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-06-24T03:22:00Z",
      "grantId": "42605555",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:19:20Z"
    }
  ]
}
2020-06-24T03:17:00.256Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "42605555",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T03:17:00.273Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "42605555",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:20:20Z"
    }
  ]
}

```

```
2020-06-24T03:18:00.378Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "42605555",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T03:18:00.378Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "42605555",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:21:20Z"
    }
  ]
}
```

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

2020-06-24T03:12:16.154Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T03:12:16.154Z - INFO - Selected spectrum frequency is {'lowFrequency': 361500000L, 'highFrequency': 3635000000L}

2020-06-24T03:12:16.154Z - INFO - Granted Spectrum Max Eirp = -2dBm/MHz

2020-06-24T03:12:16.154Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-06-24T03:12:44.529Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNMIiw
 iYW50ZW5uYUdhaW4iOjMlMhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRolj0zNjAsImhlaWdodCI6MTgslZlcnRyY2FsQWNjdXJhY3kiOjMlMfudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGU0i0jMxLjMwMjAxSwiZmNjSWQiOiJmZW10by5pliwiHJvZmVzZ2lVbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiaW5zdGFsbENlcnRyZmlyYXRpb25UaW1lIjoiMjAyMC0wMy0xNlQxNDoyMjo1MS4x
 MTMwMDBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmIhbE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T03:12:44.562Z - INFO - engine sent successfully, the response to CBRS : {

"registrationResponse": [

{

"cbsdId": "femto.iMock-SAS1912CW53000016",

"response": {

"responseCode": 0

}

```

    }
  ]
}
2020-06-24T03:12:44.654Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T03:12:44.654Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2020-06-24T03:12:44.654Z - 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
      }
    }
  ]
}
2020-06-24T03:12:44.687Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": -2,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T03:12:44.687Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",

```

```

    "grantExpireTime": "2020-07-01T03:12:44Z",
    "grantId": "337862440",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  ]
}
2020-06-24T03:12:44.749Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "337862440",
      "grantRenew": true,
      "operationState": "GRANTED"
    }
  ]
}
2020-06-24T03:12:44.749Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantExpireTime": "2020-06-24T03:18:44Z",
      "grantId": "337862440",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:16:04Z"
    }
  ]
}
2020-06-24T03:13:44.908Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "337862440",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-06-24T03:13:44.908Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "337862440",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:17:04Z"
    }
  ]
}
2020-06-24T03:14:45.020Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",

```

```
        "grantId": "337862440",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2020-06-24T03:14:45.020Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "grantId": "337862440",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-06-24T03:18:05Z"
    }
  ]
}
```

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

2020-06-24T03:08:32.401Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-06-24T03:08:32.401Z - INFO - Selected spectrum frequency is {'lowFrequency': 361500000L, 'highFrequency': 3635000000L}

2020-06-24T03:08:32.401Z - INFO - Granted Spectrum Max Eirp = 20dBm/MHz

2020-06-24T03:08:32.401Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-06-24T03:08:37.838Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E_UTRA",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "A",

"cbsdSerialNumber": "1912CW53000016",

"cpiSignatureData": {

"digitalSignature":

"qaCiqMQMnGOOf1ME7G592j9crhbKkfoZ_z4uioCOyLzDqlpTghKM3-fMF6VXaHZUENnAN4YrO9miuLT4tz
 DKSwOGSYgH5GjQ6JfGDITCnxUerKI-KfxE4sELumxFDMAKGMfNV10CDwZ_Vjvu9A35Z_yKthd_qX0N39O
 qqCuFOz5PTDpneiFxuZtSnMnp4Xi-S--l6N2qHnXasi12k58dn7NOMS80il2iRpGEXajSisDO8KeAG5SnTYWbi
 6sohVOBvsD1tg_DHpsM1gzN6NpRqC38f569hSU_v6dqIhua4TF3-myrCrA71zGjw00lil-VweicDgtmX7sH0b_
 GeglCdA",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGI0eSI6MjcsImhlaWdodFR5cGU0iJBTvNMIiw
 iYW50ZW5uYUdhaW4iOjMslmhvcml6b250YWxBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0lJowLCJh
 bnRlbn5hQmVhbXdpZHRoljozNjAsImhlaWdodCI6MTgslncnRpbjY2FzQWNjdXJhY3kiOjMslmFudGVubmFB
 emltdXRoljowLCJsb25naXR1ZGU0i0xMDUuMDI0MDk0LzJpbmRvb3JEZXBsb3ltZW50lJpmYWxzZSwibGF
 0aXR1ZGU0i0jMxLjMwMjAxSWiZmNjSWQiOiJmZW10by5pliwiHJvZmVzZ2lVbmFsSW5zdGFsbGVyRGF0Y
 SI6eyJjcGLOYW1lIjoilwiawW5zdGFsbENlcnRpbjYXRpb25UaW1lIjoiMjAyMC0wMy0xNIQxNDoyMj01MS4x
 MTMwMDBBaliwiY3BpSWQiOiIifSwiY2JzZFNlcmhE51bWJlciI6IiNlcmNvbW0tMTkxMkNXNTMwMDAwMTYif
 Q",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcellId": "femto.i",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "XywyE9"

}

]

}

2020-06-24T03:08:37.884Z - INFO - engine sent successfully, the response to CBRS : {

"registrationResponse": [

{

"cbsdId": "femto.iMock-SAS1912CW53000016",

"response": {

"responseCode": 0

}

```

    }
  ]
}
2020-06-24T03:08:37.947Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "inquiredSpectrum": [
        {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      ]
    }
  ]
}
2020-06-24T03:08:37.963Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code
is 0
2020-06-24T03:08:37.963Z - 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
      }
    }
  ]
}
2020-06-24T03:08:38.025Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "operationParam": {
        "maxEirp": 20,
        "operationFrequencyRange": {
          "highFrequency": 3635000000,
          "lowFrequency": 3615000000
        }
      }
    }
  ]
}
2020-06-24T03:08:38.025Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "femto.iMock-SAS1912CW53000016",
      "channelType": "GAA",

```



```
        "grantExpireTime": "2020-07-01T03:08:38Z",
        "grantId": "188794650",
        "heartbeatInterval": 60,
        "response": {
            "responseCode": 0
        }
    ]
}
2020-06-24T03:08:38.134Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "188794650",
            "grantRenew": true,
            "operationState": "GRANTED"
        }
    ]
}
2020-06-24T03:08:38.134Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantExpireTime": "2020-06-24T03:14:38Z",
            "grantId": "188794650",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2020-06-24T03:11:58Z"
        }
    ]
}
2020-06-24T03:09:38.265Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "188794650",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2020-06-24T03:09:38.265Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "femto.iMock-SAS1912CW53000016",
            "grantId": "188794650",
            "response": {
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