Intracom Telecom S.A
ETSI 4th mWT Plugtest
(NETCONF XML)

INTRACOM
TELECOM

1 Table of Contents

2 Document Revision History

Revision	Affected Paragraphs	Author	Change Description	Date
0.1	All	Dimitris Mylonakis	NETCONF REQUEST AND RESPONSE XMLs for Network-Services Discovery and E2E L2 Service Provisioning	2/2/2023
0.2	All	Spyros KAnellopoulos	RPC Call Messages, XPATH filter additions, ncc client settings	6/2/2023
0.3	INV_PORT_01, LNCC Report	Dimitris Mylonakis	Updated for PVID,comp name, LNCC execution results	7/2/23

3 Introduction

This document describes ETSI 4th mWT Plugtest Use cases and shows Requested and Responded XMLs from each case.

Python ncc-client is in use and acts as Netconf Manager and captured requested and responded XMLs from Network Elements. The below cases (Link) are examined:

- Use case 1 Network and services auto-discovery.
  The application detects the network elements, their topology and interconnection, and the services already provisioned.
  1. HW/FW Inventory
  2. Carrier Inventory
  3. Port Inventory
  4. Services Inventory
  5. Network Discovery

- Use case 2 – E2E L2 Service Provisioning.
  An E-LINE service is configured E2E, traversing a chain of different Vendors' equipment.
  1. C-VLAN support
  2. S-VLAN/C-VLAN support

Note 1: Subtree filtering is in use for get and get_config operation , according to ETSI wiki.(Link).

Note 2: Netconf Manager authenticated to Network Elements (NEs) with username and ssh key.

4 Network and Services auto-discovery.

E2E L2 Service Provisioning Tests Summary	
Test ID	**Objective**
INV_HW_01	Requests the Hardware inventory from all NEs, using the YANG module ietf-hardware.
INV_FW_01	Requests the Software inventory from all NEs, using the YANG module ietf-system.
INV_CARRIER_01	Requests the microwave carrier inventory from all NEs, using the YANG module ietf-microwave-radio-link. Both RTLs and CTs are collected.
INV_PORT_01	Requests the Ethernet carrier inventory from all NEs.
INV_SRV_01	Requests the EVC service inventory from all NEs, using the YANG module ieee802-dot1q-bridge, in Customer Bridge mode.
INV_SRV_SC_01	*Requests the EVC service inventory from all NEs, using the YANG module ieee802-dot1q-bridge, in Provider Bridge mode (**optional**).*
INV_SRV_SC_02	*Requests the EVC service inventory from all NEs, using the YANG module ieee802-dot1q-bridge, in Provider Edge Bridge mode (**optional**).*
INV_NET_01	Build a network topology using LLDP adjacencies information: Requests the neighbors inventory from all NEs, using the YANG module ieee802-dot1ab-lldp.

4.1.1 INV_HW_01

Requests the Hardware inventory from all NEs, using the YANG module ietf-hardware.

Note: **we report hardware inventory under ietf-hardware, while ETSI xml (link) reuqests ietf-hardware-state**

4.1.1.1 get_config Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
            <hardware xmlns="urn:ietf:params:xml:ns:yang:ietf-hardware">
                <component>
                    <name>bbu1</name>
                </component>
            </hardware>
        </filter>
    </get-config>
</rpc>
```

4.1.1.2 get_config Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:4a6b8e5a-9ef1-495d-9b84-3e0a95354d0d" ncx:last-modified="2023-02-02T12:27:23Z"
ncx:etag="305">
    <data>
        <hardware xmlns="urn:ietf:params:xml:ns:yang:ietf-hardware">
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
<component>
        <name>bbu1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>fpga1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:cpu</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>thermo1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware">
                <thresholds>
                        <threshold-index>1</threshold-index>
                        <severity>major</severity>
                        <relation>less-than</relation>
                        <threshold-value>0</threshold-value>
                </thresholds>
                <thresholds>
                        <threshold-index>2</threshold-index>
                        <severity>major</severity>
                        <relation>greater-than</relation>
                        <threshold-value>40000</threshold-value>
                </thresholds>
        </sensor-threshold>
</component>
<component>
        <name>cpu1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:cpu</class>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>bluez</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>power1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:power-supply</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>modem1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>modem1-thermo1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
        <name>modem1-odu1</name>
        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
        <state/>
        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
</component>
<component>
```

```
                            <name>modem1-odu1-thermo1</name>
                            <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
                            <state/>
                            <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                        </component>
                        <hist-stats xmlns="urn:ietf:params:xml:ns:yang:icom-hardware">
                            <enabled>true</enabled>
                        </hist-stats>
                </hardware>
        </data>
</rpc-reply>
```

4.1.1.3 get Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
            <hardware xmlns="urn:ietf:params:xml:ns:yang:ietf-hardware">
            </hardware>
        </filter>
    </get>
</rpc>
```

4.1.1.4 get Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:dd44e968-2b2f-477e-869a-660c645192c0" ncx:last-modified="2023-02-02T12:27:23Z"
ncx:etag="305">
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
<data>
        <hardware xmlns="urn:ietf:params:xml:ns:yang:ietf-hardware">
                <component>
                        <name>bbu1</name>
                        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
                        <physical-index>1</physical-index>
                        <description>Base Band Unit</description>
                        <hardware-rev>2 v.0</hardware-rev>
                        <firmware-rev>6.17</firmware-rev>
                        <software-rev>8.30.0_4231_B.31.3.0.build_17x_etsi</software-rev>
                        <serial-num>322112483350</serial-num>
                        <mfg-name>Intracom Telecom S.A.</mfg-name>
                        <model-name>Z00-65F/10.31A</model-name>
                        <is-fru>false</is-fru>
                        <mfg-date>2023-02-02T13:21:56+00:00</mfg-date>
                        <state>
                                <state-last-changed>2023-02-02T13:21:56+00:00</state-last-changed>
                                <oper-state>unknown</oper-state>
                        </state>
                        <sensor-data/>
                        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                        <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                </component>
                <component>
                        <name>fpga1</name>
                        <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:cpu</class>
                        <physical-index>2</physical-index>
                        <description>BBU FPGA</description>
                        <hardware-rev/>
                        <firmware-rev>42001DA</firmware-rev>
                        <software-rev/>
                        <serial-num/>
                        <mfg-name>Intracom Telecom S.A.</mfg-name>
                        <model-name/>
```

```xml
                <is-fru>false</is-fru>
                <mfg-date>2023-02-02T13:21:56+00:00</mfg-date>

                <state>
                        <state-last-changed>2023-02-02T13:21:56+00:00</state-last-changed>
                        <oper-state>unknown</oper-state>
                </state>
                <sensor-data/>
                <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
        </component>
        <component>
                <name>thermo1</name>
                <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
                <physical-index>3</physical-index>
                <description>BBU Thermometer</description>
                <hardware-rev/>
                <firmware-rev/>
                <software-rev/>
                <serial-num/>
                <mfg-name>Intracom Telecom S.A.</mfg-name>
                <model-name/>
                <is-fru>false</is-fru>
                <mfg-date>2023-02-02T13:21:56+00:00</mfg-date>
                <state>
                        <state-last-changed>2023-02-02T13:21:56+00:00</state-last-changed>
                        <oper-state>unknown</oper-state>
                </state>
                <sensor-data>
                        <value>46000</value>
                        <value-type>celsius</value-type>
                        <value-scale>units</value-scale>
                        <value-precision>3</value-precision>
                        <oper-status>ok</oper-status>
                        <units-display/>
```

```xml
                            <value-update-rate>2000</value-update-rate>
                    </sensor-data>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware">
                            <thresholds>
                                    <threshold-index>1</threshold-index>
                                    <severity>major</severity>
                                    <relation>less-than</relation>
                                    <threshold-value>0</threshold-value>
                            </thresholds>
                            <thresholds>
                                    <threshold-index>2</threshold-index>
                                    <severity>major</severity>
                                    <relation>greater-than</relation>
                                    <threshold-value>40000</threshold-value>
                            </thresholds>
                    </sensor-threshold>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>cpu1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:cpu</class>
                    <physical-index>7</physical-index>
                    <description>BBU Host Processor</description>
                    <hardware-rev/>
                    <firmware-rev>Linux ul.gx80.47.100 4.9.10+ mi</firmware-rev>
                    <software-rev/>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:56+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:56+00:00</state-last-changed>
                            <oper-state>unknown</oper-state>
                    </state>
```

```xml
                    <sensor-data/>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>bluez</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
                    <physical-index>8</physical-index>
                    <description>BlueTooth Unit</description>
                    <hardware-rev/>
                    <firmware-rev/>
                    <software-rev/>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>unknown</oper-state>
                    </state>
                    <sensor-data/>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>power1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:power-supply</class>
                    <physical-index>9</physical-index>
                    <description>Power Supply</description>
                    <hardware-rev/>
                    <firmware-rev/>
                    <software-rev/>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>unknown</oper-state>
                    </state>
                    <sensor-data/>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>modem1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
                    <physical-index>1001</physical-index>
                    <description>Neptune</description>
                    <hardware-rev>PtPe</hardware-rev>
                    <firmware-rev/>
                    <software-rev>4002E6</software-rev>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>enabled</oper-state>
                    </state>
                    <sensor-data/>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>modem1-thermo1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
```

```xml
                    <physical-index>1003</physical-index>
                    <description/>
                    <hardware-rev/>
                    <firmware-rev/>
                    <software-rev/>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>enabled</oper-state>
                    </state>
                    <sensor-data>
                            <value>590</value>
                            <value-type>celsius</value-type>
                            <value-scale>units</value-scale>
                            <value-precision>1</value-precision>
                            <oper-status>ok</oper-status>
                            <units-display/>
                            <value-update-rate>30000</value-update-rate>
                    </sensor-data>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>modem1-odu1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:module</class>
                    <physical-index>1010</physical-index>
                    <description>UL-GX-80H</description>
                    <hardware-rev>0/0</hardware-rev>
                    <firmware-rev/>
                    <software-rev/>
                    <serial-num/>
```

```xml
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>enabled</oper-state>
                    </state>
                    <sensor-data/>
                    <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                    <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
            </component>
            <component>
                    <name>modem1-odu1-thermo1</name>
                    <class xmlns:ianahw="urn:ietf:params:xml:ns:yang:iana-hardware">ianahw:sensor</class>
                    <physical-index>1014</physical-index>
                    <description/>
                    <hardware-rev/>
                    <firmware-rev/>
                    <software-rev/>
                    <serial-num/>
                    <mfg-name>Intracom Telecom S.A.</mfg-name>
                    <model-name/>
                    <is-fru>false</is-fru>
                    <mfg-date>2023-02-02T13:21:57+00:00</mfg-date>
                    <state>
                            <state-last-changed>2023-02-02T13:21:57+00:00</state-last-changed>
                            <oper-state>enabled</oper-state>
                    </state>
                    <sensor-data>
                            <value>3880</value>
                            <value-type>celsius</value-type>
                            <value-scale>units</value-scale>
                            <value-precision>2</value-precision>
                            <oper-status>ok</oper-status>
```

```
                              <units-display/>
                              <value-update-rate>30000</value-update-rate>
                        </sensor-data>
                        <sensor-threshold xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                        <ecm-product-codes xmlns="urn:ietf:params:xml:ns:yang:icom-hardware"/>
                  </component>
                  <hist-stats xmlns="urn:ietf:params:xml:ns:yang:icom-hardware">
                        <enabled>true</enabled>
                  </hist-stats>
            </hardware>
      </data>
</rpc-reply>
```

4.1.2 INV_FW_01

Requests the Software inventory from all NEs, using the YANG module ietf-system.

4.1.2.1 get_config Request XML (system):

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
```

```
        <filter type="subtree">
            <system xmlns="urn:ietf:params:xml:ns:yang:ietf-system" />
        </filter>
    </get-config>
</rpc>
```

4.1.2.2 get_config Response XML(system):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:d37c035a-4141-40b5-a793-5e72469dd9d3" ncx:last-modified="2023-02-02T15:26:20Z"
ncx:etag="319">
        <data>
                <system xmlns="urn:ietf:params:xml:ns:yang:ietf-system">
                        <contact>dmilo@intracom-telecom.com</contact>
                        <hostname>ul-gx80-low</hostname>
                        <location>Greece-Athens-SVLAB</location>
                        <clock/>
                        <dns-resolver>
                                <options>
                                        <timeout>5</timeout>
                                        <attempts>2</attempts>
                                </options>
                        </dns-resolver>
                        <radius>
                                <options>
                                        <timeout>5</timeout>
                                        <attempts>2</attempts>
                                </options>
                        </radius>
                        <authentication>
                                <user-authentication-order xmlns:sys="urn:ietf:params:xml:ns:yang:ietf-system">sys:local-users</user-authentication-order>
```

```
                        <user-authentication-order xmlns:icom-sys="https://intracom-telecom.com/ns/yang/icom-system">icom-sys:tacacs-plus</user-
authentication-order>
                    </authentication>
                    <accouting xmlns="urn:ietf:params:xml:ns:yang:ietf-system-aaa">
                        <events/>
                    </accouting>
                    <authorization xmlns="urn:ietf:params:xml:ns:yang:ietf-system-aaa">
                        <events/>
                    </authorization>
                    <tacacs xmlns="urn:ietf:params:xml:ns:yang:ietf-aaa-tacacs">
                        <options>
                            <timeout>5</timeout>
                        </options>
                    </tacacs>
                    <tacacs xmlns="urn:ietf:params:xml:ns:yang:ietf-tacacs">
                        <enable>false</enable>
                        <tacacs-servers>
                            <timeout>5</timeout>
                            <quiet-time>5</quiet-time>
                        </tacacs-servers>
                    </tacacs>
                </system>
        </data>
</rpc-reply>
```

4.1.2.3 get Request XML(system):

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
            <system xmlns="urn:ietf:params:xml:ns:yang:ietf-system" />
```

```
        </filter>
    </get>
</rpc>
```

4.1.2.4 get Response XML(system):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:ce2d5b1f-2f52-4128-a6f5-c3dc0ccf23b5" ncx:last-modified="2023-02-02T15:26:20Z"
ncx:etag="319">
        <data>
                <system xmlns="urn:ietf:params:xml:ns:yang:ietf-system">
                        <contact>dmilo@intracom-telecom.com</contact>
                        <hostname>ul-gx80-low</hostname>
                        <location>Greece-Athens-SVLAB</location>
                        <clock/>
                        <dns-resolver>
                                <options>
                                        <timeout>5</timeout>
                                        <attempts>2</attempts>
                                </options>
                        </dns-resolver>
                        <radius>
                                <options>
                                        <timeout>5</timeout>
                                        <attempts>2</attempts>
                                </options>
                        </radius>
                        <authentication>
                                <user-authentication-order xmlns:sys="urn:ietf:params:xml:ns:yang:ietf-system">sys:local-users</user-authentication-order>
                                <user-authentication-order xmlns:icom-sys="https://intracom-telecom.com/ns/yang/icom-system">icom-sys:tacacs-plus</user-
authentication-order>
                        </authentication>
```

```
                    <tacacs xmlns="urn:ietf:params:xml:ns:yang:ietf-aaa-tacacs">
                            <options>
                                    <timeout>5</timeout>
                            </options>
                    </tacacs>
                    <authorization xmlns="urn:ietf:params:xml:ns:yang:ietf-system-aaa">
                            <events/>
                    </authorization>
                    <accouting xmlns="urn:ietf:params:xml:ns:yang:ietf-system-aaa">
                            <events/>
                    </accouting>
                    <tacacs xmlns="urn:ietf:params:xml:ns:yang:ietf-tacacs">
                            <enable>false</enable>
                            <tacacs-servers>
                                    <timeout>5</timeout>
                                    <quiet-time>5</quiet-time>
                            </tacacs-servers>
                    </tacacs>
            </system>
        </data>
</rpc-reply>
```

4.1.2.5 get Request XML(system-state):

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
            <system-state xmlns="urn:ietf:params:xml:ns:yang:ietf-system" />
        </filter>
    </get>
```

```
</rpc>
```

4.1.2.6 get Response XML(system-state):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:42af057a-8453-479b-b163-984fd84bb61c" ncx:last-modified="2023-02-02T15:26:20Z"
ncx:etag="319">
        <data>
                <system-state xmlns="urn:ietf:params:xml:ns:yang:ietf-system">
                        <platform>
                                <os-name>IcomOS</os-name>
                                <os-release>8.30.0</os-release>
                                <os-version>17x_etsi</os-version>
                                <machine>mips</machine>
                        </platform>
                        <clock>
                                <current-datetime>2023-02-02T16:16:20+00:00</current-datetime>
                                <boot-datetime>2023-02-01T20:08:23+00:00</boot-datetime>
                        </clock>
                </system-state>
        </data>
</rpc-reply>
```

4.1.3 INV_CARRIER_01
Requests the microwave carrier inventory from all NEs, using the YANG module ietf-microwave-radio-link. Both RTLs and CTs are collected.

4.1.3.1 get_config Request XML(CT):

```
<rpc message-id="101"
```

```
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                  <interface>
                    <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveCarrierTermination</type>
                  </interface>
                </interfaces>
        </filter>
    </get-config>
</rpc>
```

4.1.3.2 get_config Response XML (CT):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:0d02b1b8-1a1c-4647-83b1-f2e0a99f1d1b" ncx:last-modified="2023-02-02T18:19:45Z"
ncx:etag="326">
    <data>
            <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                    <interface>
                            <name>ct1</name>
                            <description>CT</description>
                            <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveCarrierTermination</type>
                            <enabled>true</enabled>
                            <adaptive xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
                                    <selected-max-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</selected-max-
acm>
                                    <selected-min-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-128</selected-min-
acm>
                            </adaptive>
```

```xml
<atpc xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <atpc-lower-threshold>-99.0</atpc-lower-threshold>
        <atpc-mode xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">atpc-max-snr</atpc-mode>
        <atpc-upper-threshold>-30.0</atpc-upper-threshold>
        <maximum-nominal-power>11.0</maximum-nominal-power>
        <minimum-power xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">2.0</minimum-power>
</atpc>
<carrier-id xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">A    </carrier-id>
<channel-separation xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">1500000</channel-separation>
<ct-configuration xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
        <encryption-adminstate>false</encryption-adminstate>
        <cryptographic-key>Cryptographic key not yet defined.</cryptographic-key>
        <profile>optimum-latency</profile>
        <mhs-state>false</mhs-state>
        <mhs-aging>10</mhs-aging>
        <mhs-robustness>off</mhs-robustness>
        <radio-update-mode>manual</radio-update-mode>
        <spectral-inversion>false</spectral-inversion>
        <ct-clock>air</ct-clock>
</ct-configuration>
<ct-performance-thresholds xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <received-level-alarm-threshold>-99.0</received-level-alarm-threshold>
        <transmitted-level-alarm-threshold>-99.0</transmitted-level-alarm-threshold>
        <ber-alarm-threshold>1e-6</ber-alarm-threshold>
        <ldpc-alarm-threshold xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">4294967295</ldpc-alarm-threshold>
        <snr-alarm-threshold xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">0.0</snr-alarm-threshold>
</ct-performance-thresholds>
<if-loop xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">disabled</if-loop>
<polarization xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">not-specified</polarization>
<rf-loop xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">disabled</rf-loop>
<rx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">0</rx-frequency>
<tx-enabled xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">true</tx-enabled>
<tx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">72000000</tx-frequency>
        </interface>
</interfaces>
```

```
        </data>
</rpc-reply>
```

4.1.3.3 get Request XML (CT):

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                  <interface>
                        <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveCarrierTermination</type>
                  </interface>
                </interfaces>
        </filter>
    </get>
</rpc>
```

4.1.3.4 get Response XML (CT):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:9564579e-4ffa-45a1-bfdd-2e184618310f" ncx:last-modified="2023-02-02T18:19:45Z"
ncx:etag="326">
        <data>
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                        <interface>
                                <name>ct1</name>
                                <description>CT</description>
                                <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveCarrierTermination</type>
```

```xml
<enabled>true</enabled>
<statistics>
        <in-octets>45376</in-octets>
        <in-unicast-pkts>0</in-unicast-pkts>
        <in-broadcast-pkts>0</in-broadcast-pkts>
        <in-multicast-pkts>709</in-multicast-pkts>
        <in-discards>0</in-discards>
        <in-errors>0</in-errors>
        <in-unknown-protos>0</in-unknown-protos>
        <out-octets>1365947</out-octets>
        <out-unicast-pkts>838</out-unicast-pkts>
        <out-broadcast-pkts>0</out-broadcast-pkts>
        <out-multicast-pkts>755</out-multicast-pkts>
        <out-discards>0</out-discards>
        <out-errors>0</out-errors>
        <eth-rx-rate xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">0</eth-rx-rate>
        <eth-tx-rate xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">0</eth-tx-rate>
</statistics>
<carrier-id xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">A      </carrier-id>
<tx-enabled xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">true</tx-enabled>
<tx-oper-status xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">on</tx-oper-status>
<tx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">72000000</tx-frequency>
<rx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">0</rx-frequency>
<actual-rx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">82000000</actual-rx-frequency>
<actual-duplex-distance xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">10000</actual-duplex-distance>
<channel-separation xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">1500000</channel-separation>
<polarization xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">not-specified</polarization>
<atpc xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <maximum-nominal-power>11.0</maximum-nominal-power>
        <atpc-lower-threshold>-99.0</atpc-lower-threshold>
        <atpc-upper-threshold>-30.0</atpc-upper-threshold>
        <minimum-power xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">2.0</minimum-power>
        <atpc-mode xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">atpc-max-snr</atpc-mode>
</atpc>
<actual-transmitted-level xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">10.9</actual-transmitted-level>
```

```xml
<actual-received-level xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">-32.0</actual-received-level>
<adaptive xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <selected-min-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-128</selected-min-acm>
        <selected-max-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</selected-max-acm>
</adaptive>
<actual-tx-cm xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link" xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</actual-tx-cm>
<actual-snir xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">36.9</actual-snir>
<actual-xpi xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">0.0</actual-xpi>
<ct-performance-thresholds xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <received-level-alarm-threshold>-99.0</received-level-alarm-threshold>
        <transmitted-level-alarm-threshold>-99.0</transmitted-level-alarm-threshold>
        <ber-alarm-threshold>1e-6</ber-alarm-threshold>
        <snr-alarm-threshold xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">0.0</snr-alarm-threshold>
        <ldpc-alarm-threshold xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">4294967295</ldpc-alarm-threshold>
</ct-performance-thresholds>
<if-loop xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">disabled</if-loop>
<rf-loop xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">disabled</rf-loop>
<capabilities xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <min-tx-frequency>71750000</min-tx-frequency>
        <max-tx-frequency>75250000</max-tx-frequency>
        <min-rx-frequency>71760000</min-rx-frequency>
        <max-rx-frequency>75260000</max-rx-frequency>
        <minimum-power>0.0</minimum-power>
        <maximum-available-power>23.0</maximum-available-power>
        <available-min-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-4</available-min-acm>
        <available-max-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</available-max-acm>
</capabilities>
<error-performance-statistics xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <bbe>0</bbe>
        <es>11</es>
```

```xml
                        <ses>11</ses>
                        <uas>59337</uas>
                        <eb xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">1795713</eb>
                        <total-blocks xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">2990464874</total-blocks>
                        <as xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">21258</as>
                </error-performance-statistics>
                <radio-performance-statistics xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
                        <min-tltm>0.0</min-tltm>
                        <max-tltm>0.0</max-tltm>
                </radio-performance-statistics>
                <ct-status xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
                        <link-status>lock</link-status>
                        <actual-rx-ldpc-stress>4228</actual-rx-ldpc-stress>
                        <actual-tx-symbol-rate>1400000000</actual-tx-symbol-rate>
                        <actual-rx-symbol-rate>1400000000</actual-rx-symbol-rate>
                        <lock-indicator>timing preamble_locked superframe-lock gfp-lock mse-minphymode-lock min-phymode-lock</lock-indicator>

                        <actual-rx-cm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</actual-rx-cm>
                        <encryption-operstate>false</encryption-operstate>
                        <radio-test-timer>0</radio-test-timer>
                        <radio-alarms-status/>
                        <radio-connection>true</radio-connection>
                        <ct-fail-status/>
                        <radio-activetest-type>no-test</radio-activetest-type>
                        <radio-activetest-timeout>0</radio-activetest-timeout>
                        <ct-activetest-type>no-test</ct-activetest-type>
                        <ct-activetest-timeout>0</ct-activetest-timeout>
                        <ct-test-timer>0</ct-test-timer>
                        <radio-update-status>updated</radio-update-status>
                        <ct-thresholds-status/>
                        <rx-air-capacity>10738360</rx-air-capacity>
                        <tx-air-capacity>10738360</tx-air-capacity>
                        <radio-unit-frequency-step>250</radio-unit-frequency-step>
                </ct-status>
                <ct-configuration xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
```

```xml
            <encryption-adminstate>false</encryption-adminstate>
            <cryptographic-key>Cryptographic key not yet defined.</cryptographic-key>
            <profile>optimum-latency</profile>
            <mhs-state>false</mhs-state>
            <mhs-aging>10</mhs-aging>
            <mhs-robustness>off</mhs-robustness>
            <radio-update-mode>manual</radio-update-mode>
            <spectral-inversion>false</spectral-inversion>
            <ct-clock>air</ct-clock>
    </ct-configuration>
    <ct-capabilities xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
            <air-throughput-rx>10738360</air-throughput-rx>
            <air-throughput-tx>10738360</air-throughput-tx>
            <tx-freq-band-position>high</tx-freq-band-position>
            <ct-type>npt</ct-type>
            <supported-freq-range>
                    <channel-separation>bw-7mhz</channel-separation>
                    <min-tx-frequency>0</min-tx-frequency>
                    <max-tx-frequency>0</max-tx-frequency>
            </supported-freq-range>
            <supported-freq-range>
                    <channel-separation>bw-14mhz</channel-separation>
                    <min-tx-frequency>0</min-tx-frequency>
                    <max-tx-frequency>0</max-tx-frequency>
            </supported-freq-range>
            <supported-freq-range>
                    <channel-separation>bw-28mhz</channel-separation>
                    <min-tx-frequency>0</min-tx-frequency>
                    <max-tx-frequency>0</max-tx-frequency>
            </supported-freq-range>
            <supported-freq-range>
                    <channel-separation>bw-56mhz</channel-separation>
                    <min-tx-frequency>0</min-tx-frequency>
                    <max-tx-frequency>0</max-tx-frequency>
            </supported-freq-range>
```

```xml
<supported-freq-range>
        <channel-separation>bw-40mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-20mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-14mhz-narrow</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-250mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-500mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-10mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-30mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
```

```xml
<supported-freq-range>
        <channel-separation>bw-50mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-112mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-750mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-1000mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-1500mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-100mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
<supported-freq-range>
        <channel-separation>bw-62point5mhz</channel-separation>
        <min-tx-frequency>0</min-tx-frequency>
        <max-tx-frequency>0</max-tx-frequency>
</supported-freq-range>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
                        <supported-freq-range>
                                <channel-separation>bw-125mhz</channel-separation>
                                <min-tx-frequency>0</min-tx-frequency>
                                <max-tx-frequency>0</max-tx-frequency>
                        </supported-freq-range>
                </ct-capabilities>
                <remote-ct-info xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
                        <link-status>locked</link-status>
                        <remote-ct-ipaddrs>
                                <remote-ct-ipaddr>2.2.2.2</remote-ct-ipaddr>
                        </remote-ct-ipaddrs>
                        <remote-ct-name>CT1</remote-ct-name>
                </remote-ct-info>
                <ct-performance-statistics xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
                        <seconds-out-service>59347</seconds-out-service>
                        <seconds-in-service>21252</seconds-in-service>
                        <total-blocks>28760268650</total-blocks>
                        <uncorrected-blocks>1795713</uncorrected-blocks>
                        <los-events>191</los-events>
                        <number-of-phy-changes>18</number-of-phy-changes>
                        <time-in-mod-4QAM>2</time-in-mod-4QAM>
                        <time-in-mod-4QAMStrong>3</time-in-mod-4QAMStrong>
                        <time-in-mod-4QAMLight>2</time-in-mod-4QAMLight>
                        <time-in-mod-16QAM>0</time-in-mod-16QAM>
                        <time-in-mod-16QAMStrong>0</time-in-mod-16QAMStrong>
                        <time-in-mod-16QAMLight>0</time-in-mod-16QAMLight>
                        <time-in-mod-32QAM>0</time-in-mod-32QAM>
                        <time-in-mod-32QAMStrong>0</time-in-mod-32QAMStrong>
                        <time-in-mod-32QAMLight>0</time-in-mod-32QAMLight>
                        <time-in-mod-64QAM>11</time-in-mod-64QAM>
                        <time-in-mod-64QAMStrong>0</time-in-mod-64QAMStrong>
                        <time-in-mod-64QAMLight>0</time-in-mod-64QAMLight>
                        <time-in-mod-128QAM>23</time-in-mod-128QAM>
                        <time-in-mod-128QAMStrong>0</time-in-mod-128QAMStrong>
                        <time-in-mod-128QAMLight>0</time-in-mod-128QAMLight>
```

```xml
<time-in-mod-256QAM>16</time-in-mod-256QAM>
<time-in-mod-256QAMStrong>0</time-in-mod-256QAMStrong>
<time-in-mod-256QAMLight>0</time-in-mod-256QAMLight>
<time-in-mod-512QAM>21190</time-in-mod-512QAM>
<time-in-mod-512QAMStrong>0</time-in-mod-512QAMStrong>
<time-in-mod-512QAMLight>0</time-in-mod-512QAMLight>
<time-in-mod-1024QAM>0</time-in-mod-1024QAM>
<time-in-mod-1024QAMStrong>0</time-in-mod-1024QAMStrong>
<time-in-mod-1024QAMLight>0</time-in-mod-1024QAMLight>
<time-in-mod-2048QAM>0</time-in-mod-2048QAM>
<time-in-mod-2048QAMStrong>0</time-in-mod-2048QAMStrong>
<time-in-mod-2048QAMLight>0</time-in-mod-2048QAMLight>
<time-in-mod-4096QAM>0</time-in-mod-4096QAM>
<time-in-mod-4096QAMStrong>0</time-in-mod-4096QAMStrong>
<time-in-mod-4096QAMLight>0</time-in-mod-4096QAMLight>
<changes-in-4QAM>4</changes-in-4QAM>
<changes-in-4QAMStrong>3</changes-in-4QAMStrong>
<changes-in-4QAMLight>4</changes-in-4QAMLight>
<changes-in-16QAM>1</changes-in-16QAM>
<changes-in-16QAMStrong>0</changes-in-16QAMStrong>
<changes-in-16QAMLight>0</changes-in-16QAMLight>
<changes-in-32QAM>1</changes-in-32QAM>
<changes-in-32QAMStrong>0</changes-in-32QAMStrong>
<changes-in-32QAMLight>0</changes-in-32QAMLight>
<changes-in-64QAM>1</changes-in-64QAM>
<changes-in-64QAMStrong>0</changes-in-64QAMStrong>
<changes-in-64QAMLight>0</changes-in-64QAMLight>
<changes-in-128QAM>2</changes-in-128QAM>
<changes-in-128QAMStrong>0</changes-in-128QAMStrong>
<changes-in-128QAMLight>0</changes-in-128QAMLight>
<changes-in-256QAM>2</changes-in-256QAM>
<changes-in-256QAMStrong>0</changes-in-256QAMStrong>
<changes-in-256QAMLight>0</changes-in-256QAMLight>
<changes-in-512QAM>4</changes-in-512QAM>
<changes-in-512QAMStrong>0</changes-in-512QAMStrong>
```

```
                                    <changes-in-512QAMLight>0</changes-in-512QAMLight>
                                    <changes-in-1024QAM>0</changes-in-1024QAM>
                                    <changes-in-1024QAMStrong>0</changes-in-1024QAMStrong>
                                    <changes-in-1024QAMLight>0</changes-in-1024QAMLight>
                                    <changes-in-2048QAM>0</changes-in-2048QAM>
                                    <changes-in-2048QAMStrong>0</changes-in-2048QAMStrong>
                                    <changes-in-2048QAMLight>0</changes-in-2048QAMLight>
                                    <changes-in-4096QAM>0</changes-in-4096QAM>
                                    <changes-in-4096QAMStrong>0</changes-in-4096QAMStrong>
                                    <changes-in-4096QAMLight>0</changes-in-4096QAMLight>
                            </ct-performance-statistics>
                            <radio-unit-statistics xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">
                                    <radio-crc-errors>0</radio-crc-errors>
                                    <radio-totalcrc-errors>0</radio-totalcrc-errors>
                                    <idu-crc-errors>0</idu-crc-errors>
                                    <radio-disconnects>0</radio-disconnects>
                                    <radio-reset-commands>0</radio-reset-commands>
                            </radio-unit-statistics>
                    </interface>
            </interfaces>
      </data>
</rpc-reply>
```

4.1.3.5 get_config Request XML(RLT):

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
            <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
```

```
                <interface>
                  <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveRadioLinkTerminal</type>
                </interface>
              </interfaces>
        </filter>
    </get-config>
</rpc>
```

4.1.3.6 get_config Response XML (RLT):

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:7b31ee30-0f6e-4b4d-ae05-215373c241e3" ncx:last-modified="2023-02-02T18:19:45Z"
ncx:etag="326">
        <data>
            <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                  <interface>
                        <name>rlt1</name>
                        <description>RLT</description>
                        <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveRadioLinkTerminal</type>
                        <enabled>true</enabled>
                        <carrier-terminations xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">ct1</carrier-terminations>
                        <mode xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link" xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-
microwave-types">mw-types:one-plus-zero</mode>
                        <tx-jumbo-unfragmented xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">false</tx-jumbo-unfragmented>
                  </interface>
            </interfaces>
        </data>
</rpc-reply>
```

4.1.3.7 get Request XML (RLT):

```xml
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                  <interface>
                        <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveRadioLinkTerminal</type>
                  </interface>
                </interfaces>
        </filter>
    </get>
</rpc>
```

4.1.3.8 get Response XML (RLT):

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:11a1e56a-d4a0-40c8-9ba2-e12e0c8b7253" ncx:last-modified="2023-02-02T18:19:45Z"
ncx:etag="326">
        <data>
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                        <interface>
                                <name>rlt1</name>
                                <description>RLT</description>
                                <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:microwaveRadioLinkTerminal</type>
                                <enabled>true</enabled>
                                <statistics>
                                        <in-octets>0</in-octets>
                                        <in-unicast-pkts>0</in-unicast-pkts>
                                        <in-broadcast-pkts>0</in-broadcast-pkts>
                                        <in-multicast-pkts>0</in-multicast-pkts>
                                        <in-discards>0</in-discards>
```

```xml
                                        <in-errors>0</in-errors>
                                        <in-unknown-protos>0</in-unknown-protos>
                                        <out-octets>0</out-octets>
                                        <out-unicast-pkts>0</out-unicast-pkts>
                                        <out-broadcast-pkts>0</out-broadcast-pkts>
                                        <out-multicast-pkts>0</out-multicast-pkts>
                                        <out-discards>0</out-discards>
                                        <out-errors>0</out-errors>
                                </statistics>
                                <mode xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link" xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:one-plus-zero</mode>
                                <carrier-terminations xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">ct1</carrier-terminations>
                                <capabilities xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link"/>
                                <error-performance-statistics xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link"/>
                                <radio-performance-statistics xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link"/>
                                <tx-jumbo-unfragmented xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">false</tx-jumbo-unfragmented>
                                <ct-status xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"/>
                                <ct-capabilities xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"/>
                                <remote-ct-info xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"/>
                                <ct-performance-statistics xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"/>
                                <radio-unit-statistics xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"/>
                        </interface>
                </interfaces>
        </data>
</rpc-reply>
```

4.1.4 INV_PORT_01

Requests the Ethernet carrier inventory from all NEs.

4.1.4.1 get_config Request XML:

note: filtered for one port to minimize output.

```xml
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                  <interface>
                    <name>combo1</name>
                  </interface>
                </interfaces>
        </filter>
    </get-config>
</rpc>
```

4.1.4.2 get_config Response XML:

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:37e74be9-7888-4170-afb5-e06ca5626e15" ncx:last-modified="2023-02-03T12:07:09Z"
ncx:etag="342">
        <data>
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                        <interface>
                                <name>combo1</name>
                                <description>combo1</description>
```

```xml
<type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
<enabled>true</enabled>
<link-up-down-trap-enable>enabled</link-up-down-trap-enable>
<bridge-port xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
        <bridge-name>bridge-1</bridge-name>
        <component-name>component-1</component-name>
        <port-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-bridge-port</port-type>
        <pvid>1</pvid>
        <default-priority>0</default-priority>
        <priority-regeneration>
                <priority0>0</priority0>
                <priority1>1</priority1>
                <priority2>2</priority2>
                <priority3>3</priority3>
                <priority4>4</priority4>
                <priority5>5</priority5>
                <priority6>6</priority6>
                <priority7>7</priority7>
        </priority-regeneration>
        <pcp-selection>8P0D</pcp-selection>
        <pcp-decoding-table/>
        <pcp-encoding-table/>
        <use-dei>false</use-dei>
        <drop-encoding>false</drop-encoding>
        <service-access-priority-selection>false</service-access-priority-selection>
        <service-access-priority>
                <priority0>0</priority0>
                <priority1>1</priority1>
                <priority2>2</priority2>
                <priority3>3</priority3>
                <priority4>4</priority4>
                <priority5>5</priority5>
                <priority6>6</priority6>
                <priority7>7</priority7>
        </service-access-priority>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
                                            <traffic-class/>
                                            <transmission-selection-algorithm-table/>
                                            <acceptable-frame>admit-only-VLAN-tagged-frames</acceptable-frame>
                                            <enable-ingress-filtering>true</enable-ingress-filtering>
                                            <enable-restricted-vlan-registration>false</enable-restricted-vlan-registration>
                                            <enable-vid-translation-table>false</enable-vid-translation-table>
                                            <enable-egress-vid-translation-table>false</enable-egress-vid-translation-table>
                                    </bridge-port>
                                    <ethernet xmlns="urn:ieee:std:802.3:yang:ieee802-ethernet-interface">
                                            <auto-negotiation>
                                                    <enable>false</enable>
                                            </auto-negotiation>
                                            <duplex>full</duplex>
                                            <speed>10.0</speed>
                                            <flow-control>
                                                    <pause/>
                                                    <pfc/>
                                                    <force-flow-control>false</force-flow-control>
                                            </flow-control>
                                    </ethernet>
                            </interface>
                    </interfaces>
            </data>
</rpc-reply>
```

4.1.4.3 get Request XML:

note: filtered for one port to minimize output.

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
```

```
                    <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                      <interface>
                        <name>combo1</name>
                      </interface>
                    </interfaces>
              </filter>
        </get>
</rpc>
```

4.1.4.4 get Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:f6cfd2a0-8e13-41ae-a952-700101928609" ncx:last-modified="2023-02-03T12:07:09Z"
ncx:etag="342">
        <data>
                <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
                        <interface>
                                <name>combo1</name>
                                <description>combo1</description>
                                <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
                                <enabled>true</enabled>
                                <link-up-down-trap-enable>enabled</link-up-down-trap-enable>
                                <admin-status>up</admin-status>
                                <oper-status>up</oper-status>
                                <speed>10000000000</speed>
                                <statistics>
                                        <in-octets>2449903296</in-octets>
                                        <in-unicast-pkts>41880144</in-unicast-pkts>
                                        <in-broadcast-pkts>0</in-broadcast-pkts>
                                        <in-multicast-pkts>0</in-multicast-pkts>
                                        <in-discards>0</in-discards>
                                        <in-errors>0</in-errors>
                                        <out-octets>2776</out-octets>
```

```xml
                        <out-unicast-pkts>0</out-unicast-pkts>
                        <out-broadcast-pkts>0</out-broadcast-pkts>
                        <out-multicast-pkts>27</out-multicast-pkts>
                        <out-discards>0</out-discards>
                        <out-errors>0</out-errors>
                </statistics>
                <bridge-port xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                        <bridge-name>bridge-1</bridge-name>
                        <component-name>component-1</component-name>
                        <port-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-bridge-port</port-type>
                        <pvid>1</pvid>
                        <default-priority>0</default-priority>
                        <priority-regeneration>
                                <priority0>0</priority0>
                                <priority1>1</priority1>
                                <priority2>2</priority2>
                                <priority3>3</priority3>
                                <priority4>4</priority4>
                                <priority5>5</priority5>
                                <priority6>6</priority6>
                                <priority7>7</priority7>
                        </priority-regeneration>
                        <pcp-selection>8P0D</pcp-selection>
                        <pcp-decoding-table/>
                        <pcp-encoding-table/>
                        <use-dei>false</use-dei>
                        <drop-encoding>false</drop-encoding>
                        <service-access-priority-selection>false</service-access-priority-selection>
                        <service-access-priority>
                                <priority0>0</priority0>
                                <priority1>1</priority1>
                                <priority2>2</priority2>
                                <priority3>3</priority3>
                                <priority4>4</priority4>
                                <priority5>5</priority5>
```

ETSI 4th mWT Plugtest Request-Response XMLS

```xml
                    <priority6>6</priority6>
                    <priority7>7</priority7>
            </service-access-priority>
            <traffic-class/>
            <transmission-selection-algorithm-table/>
            <acceptable-frame>admit-only-VLAN-tagged-frames</acceptable-frame>
            <enable-ingress-filtering>true</enable-ingress-filtering>
            <enable-restricted-vlan-registration>false</enable-restricted-vlan-registration>
            <enable-vid-translation-table>false</enable-vid-translation-table>
            <enable-egress-vid-translation-table>false</enable-egress-vid-translation-table>
            <statistics/>
    </bridge-port>
    <ethernet xmlns="urn:ieee:std:802.3:yang:ieee802-ethernet-interface">
            <auto-negotiation>
                    <enable>false</enable>
                    <negotiation-status>no-negotiation</negotiation-status>
            </auto-negotiation>
            <duplex>full</duplex>
            <speed>10.0</speed>
            <flow-control>
                    <pause>
                            <statistics/>
                    </pause>
                    <pfc>
                            <statistics/>
                    </pfc>
                    <force-flow-control>false</force-flow-control>
            </flow-control>
            <capabilities/>
            <statistics>
                    <frame/>
                    <phy>
                            <lpi/>
                    </phy>
                    <mac-control/>
```

```
                              </statistics>
                          </ethernet>
                      </interface>
              </interfaces>  </data>
</rpc-reply>
```

4.1.5 INV_SRV_01

Requests the EVC service inventory from all NEs, using the YANG module ieee802-dot1q-bridge, in Customer Bridge mode.

4.1.5.1 get_config Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                </bridges>
        </filter>
    </get-config>
</rpc>
```

4.1.5.2 get_config Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:9190cb9a-0cf1-437b-99a4-d99e486ebcde" ncx:last-modified="2023-02-03T15:12:51Z"
ncx:etag="317">
        <data>
```

```xml
<bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
        <bridge>
                <name>bridge-1</name>
                <address>00-05-59-22-22-41</address>
                <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:customer-vlan-bridge</bridge-type>
                <component>
                        <name>component-1</name>
                        <id>1</id>
                        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-component</type>
                        <traffic-class-enabled>true</traffic-class-enabled>
                        <filtering-database>
                                <aging-time>300</aging-time>
                                <vlan-registration-entry>
                                        <database-id>1</database-id>
                                        <vids>450</vids>
                                        <entry-type>static</entry-type>
                                        <port-map>
                                                <port-ref>3</port-ref>
                                                <static-vlan-registration-entries>
                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                </static-vlan-registration-entries>
                                        </port-map>
                                        <port-map>
                                                <port-ref>6</port-ref>
                                                <static-vlan-registration-entries>
                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                </static-vlan-registration-entries>
                                        </port-map>
                                </vlan-registration-entry>
                                <vlan-registration-entry>
                                        <database-id>1</database-id>
                                        <vids>460</vids>
                                        <entry-type>static</entry-type>
                                        <port-map>
                                                <port-ref>4</port-ref>
```

```xml
                                        <static-vlan-registration-entries>
                                                <vlan-transmitted>tagged</vlan-transmitted>
                                        </static-vlan-registration-entries>
                                </port-map>
                                <port-map>
                                        <port-ref>6</port-ref>
                                        <static-vlan-registration-entries>
                                                <vlan-transmitted>tagged</vlan-transmitted>
                                        </static-vlan-registration-entries>
                                </port-map>
                        </vlan-registration-entry>
                </filtering-database>
                <permanent-database/>
                <bridge-vlan>
                        <vlan>
                                <vid>450</vid>
                                <name>e-line-450</name>
                        </vlan>
                        <vlan>
                                <vid>460</vid>
                                <name>e-line-460</name>
                        </vlan>
                </bridge-vlan>
                <bridge-mst/>
        </component>
</bridge>
<bridge>
        <name>Bridge-1</name>
        <address>00-05-59-21-32-45</address>
        <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:customer-vlan-bridge</bridge-type>
        <component>
                <name>component-1</name>
                <id>1</id>
                <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-component</type>
                <traffic-class-enabled>true</traffic-class-enabled>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
<filtering-database>
        <aging-time>300</aging-time>
        <vlan-registration-entry>
                <database-id>1</database-id>
                <vids>450</vids>
                <entry-type>static</entry-type>
                <port-map>
                        <port-ref>3</port-ref>
                        <static-vlan-registration-entries>
                                <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
        </vlan-registration-entry>
        <vlan-registration-entry>
                <database-id>1</database-id>
                <vids>460</vids>
                <entry-type>static</entry-type>
                <port-map>
                        <port-ref>4</port-ref>
                        <static-vlan-registration-entries>
                                <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                <vlan-transmitted>untagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
        </vlan-registration-entry>
        <vlan-registration-entry>
                <database-id>1</database-id>
                <vids>450,460</vids>
                <entry-type>static</entry-type>
                <port-map>
                        <port-ref>6</port-ref>
                        <static-vlan-registration-entries>
                                <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                <vlan-transmitted>tagged</vlan-transmitted>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
                                    </static-vlan-registration-entries>
                                </port-map>
                            </vlan-registration-entry>
                        </filtering-database>
                        <permanent-database/>
                        <bridge-vlan>
                            <vlan>
                                <vid>450</vid>
                                <name>service-450</name>
                            </vlan>
                            <vlan>
                                <vid>460</vid>
                                <name>service-460</name>
                            </vlan>
                        </bridge-vlan>
                        <bridge-mst/>
                    </component>
                </bridge>
            </bridges>
        </data>
</rpc-reply>
```

4.1.5.3 get Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
            <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
            </bridges>
        </filter>
    </get>
```

```
</rpc>
```

4.1.5.4 get Response XML:

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:fbd7d73d-7453-4ffc-8917-714a83d3e163" ncx:last-modified="2023-02-03T18:56:41Z"
ncx:etag="317">
        <data>
             <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                    <bridge>
                           <name>Bridge-1</name>
                           <address>00-05-59-21-32-45</address>
                           <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:customer-vlan-bridge</bridge-type>
                           <component>
                                  <name>component-1</name>
                                  <id>1</id>
                                  <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-component</type>
                                  <traffic-class-enabled>true</traffic-class-enabled>
                                  <capabilities/>
                                  <filtering-database>
                                         <aging-time>300</aging-time>
                                         <vlan-registration-entry>
                                                <database-id>1</database-id>
                                                <vids>450</vids>
                                                <entry-type>static</entry-type>
                                                <port-map>
                                                       <port-ref>3</port-ref>
                                                       <static-vlan-registration-entries>
                                                              <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                                              <vlan-transmitted>tagged</vlan-transmitted>
                                                       </static-vlan-registration-entries>
                                                </port-map>
                                         </vlan-registration-entry>
```

```xml
<vlan-registration-entry>
        <database-id>1</database-id>
        <vids>460</vids>
        <entry-type>static</entry-type>
        <port-map>
                <port-ref>4</port-ref>
                <static-vlan-registration-entries>
                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                        <vlan-transmitted>untagged</vlan-transmitted>
                </static-vlan-registration-entries>
        </port-map>
</vlan-registration-entry>
<vlan-registration-entry>
        <database-id>1</database-id>
        <vids>450,460</vids>
        <entry-type>static</entry-type>
        <port-map>
                <port-ref>6</port-ref>
                <static-vlan-registration-entries>
                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                        <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
        </port-map>
</vlan-registration-entry>
</filtering-database>
<permanent-database/>
<bridge-vlan>
        <vlan>
                <vid>450</vid>
                <name>service-450</name>
        </vlan>
        <vlan>
                <vid>460</vid>
                <name>service-460</name>
        </vlan>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

```
                                    </bridge-vlan>
                                    <bridge-mst/>
                            </component>
                    </bridge>
            </bridges>
        </data>
</rpc-reply>
```

4.1.6 INV_SRV_SC_01

Requests the EVC service inventory from all NEs, using the YANG module ieee802-dot1q-bridge, in Provider Bridge mode (optional).

4.1.6.1 get_config Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                </bridges>
        </filter>
    </get-config>
</rpc>
```

4.1.6.2 get_config Response XML:

```xml
<?xml version="1.0" ?>

<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:deedff4e-161b-4fe4-b34f-30ea0dae98a7" ncx:last-modified="2023-02-03T18:28:59Z"
ncx:etag="315">
        <data>
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                        <bridge>
                                <name>bridge-1</name>
                                <address>00-05-59-21-43-56</address>
                                <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:provider-bridge</bridge-type>
                                <component>
                                        <name>component-1</name>
                                        <id>1</id>
                                        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:s-vlan-component</type>
                                        <traffic-class-enabled>true</traffic-class-enabled>
                                        <filtering-database>
                                                <aging-time>300</aging-time>
                                                <vlan-registration-entry>
                                                        <database-id>1</database-id>
                                                        <vids>450</vids>
                                                        <entry-type>static</entry-type>
                                                        <port-map>
                                                                <port-ref>3</port-ref>
                                                                <static-vlan-registration-entries>
                                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                                </static-vlan-registration-entries>
                                                        </port-map>
                                                        <port-map>
                                                                <port-ref>6</port-ref>
                                                                <static-vlan-registration-entries>
                                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                                </static-vlan-registration-entries>
                                                        </port-map>
```

```xml
                                                        </vlan-registration-entry>
                                                        <vlan-registration-entry>
                                                                <database-id>1</database-id>
                                                                <vids>460</vids>
                                                                <entry-type>static</entry-type>
                                                                <port-map>
                                                                        <port-ref>4</port-ref>
                                                                        <static-vlan-registration-entries>
                                                                                <vlan-transmitted>tagged</vlan-transmitted>
                                                                        </static-vlan-registration-entries>
                                                                </port-map>
                                                                <port-map>
                                                                        <port-ref>6</port-ref>
                                                                        <static-vlan-registration-entries>
                                                                                <vlan-transmitted>tagged</vlan-transmitted>
                                                                        </static-vlan-registration-entries>
                                                                </port-map>
                                                        </vlan-registration-entry>
                                                </filtering-database>
                                                <permanent-database/>
                                                <bridge-vlan>
                                                        <vlan>
                                                                <vid>450</vid>
                                                                <name>service-100</name>
                                                        </vlan>
                                                        <vlan>
                                                                <vid>460</vid>
                                                                <name>service-200</name>
                                                        </vlan>
                                                </bridge-vlan>
                                                <bridge-mst/>
                                        </component>
                                </bridge>
                        </bridges>
                </data>
```

```
</rpc-reply>
```

4.1.6.3 get Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                </bridges>
        </filter>
    </get>
</rpc>
```

4.1.6.4 get Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:5eae85ea-61a1-44e0-8b9f-d861b94bf3a5" ncx:last-modified="2023-02-03T18:28:59Z"
ncx:etag="315">
        <data>
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                        <bridge>
                                <name>bridge-1</name>
                                <address>00-05-59-21-43-56</address>
                                <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:provider-bridge</bridge-type>
                                <component>
                                        <name>component-1</name>
                                        <id>1</id>
                                        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:s-vlan-component</type>
                                        <traffic-class-enabled>true</traffic-class-enabled>
                                        <capabilities/>
```

```xml
<filtering-database>
        <aging-time>300</aging-time>
        <vlan-registration-entry>
                <database-id>1</database-id>
                <vids>450</vids>
                <entry-type>static</entry-type>
                <port-map>
                        <port-ref>3</port-ref>
                        <static-vlan-registration-entries>
                                <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
                <port-map>
                        <port-ref>6</port-ref>
                        <static-vlan-registration-entries>
                                <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
        </vlan-registration-entry>
        <vlan-registration-entry>
                <database-id>1</database-id>
                <vids>460</vids>
                <entry-type>static</entry-type>
                <port-map>
                        <port-ref>4</port-ref>
                        <static-vlan-registration-entries>
                                <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
                <port-map>
                        <port-ref>6</port-ref>
                        <static-vlan-registration-entries>
                                <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                </port-map>
```

```
                                        </vlan-registration-entry>
                                </filtering-database>
                                <permanent-database/>
                                <bridge-vlan>
                                        <vlan>
                                                <vid>450</vid>
                                                <name>service-100</name>
                                        </vlan>
                                        <vlan>
                                                <vid>460</vid>
                                                <name>service-200</name>
                                        </vlan>
                                </bridge-vlan>
                                <bridge-mst/>
                        </component>
                </bridge>
        </bridges>
    </data>
</rpc-reply>
```

4.1.7 INV_NET_01

Build a network topology using LLDP adjacencies information: Requests the neighbors inventory from all NEs, using the YANG module ieee802-dot1ab-lldp.

4.1.7.1 get_config Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
```

```
        <filter type="subtree">
                <lldp xmlns="urn:ieee:std:802.1AB:yang:ieee802-dot1ab-lldp">
                </lldp>
        </filter>
    </get-config>
</rpc>
```

4.1.7.2 get_config Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:9090adb8-3cc9-48b1-b541-f154494512bf" ncx:last-modified="2023-02-03T18:56:41Z"
ncx:etag="317">
        <data>
                <lldp xmlns="urn:ieee:std:802.1AB:yang:ieee802-dot1ab-lldp">
                        <message-fast-tx>1</message-fast-tx>
                        <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                        <message-tx-interval>30</message-tx-interval>
                        <reinit-delay>2</reinit-delay>
                        <tx-credit-max>5</tx-credit-max>
                        <tx-fast-init>4</tx-fast-init>
                        <notification-interval>30</notification-interval>
                        <port>
                                <name>gbe1</name>
                                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                                <admin-status>tx-and-rx</admin-status>
                                <notification-enable>false</notification-enable>
                                <message-fast-tx>1</message-fast-tx>
                                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                                <message-tx-interval>30</message-tx-interval>
                                <reinit-delay>2</reinit-delay>
                                <tx-credit-max>5</tx-credit-max>
                                <tx-fast-init>4</tx-fast-init>
                                <notification-interval>30</notification-interval>
```

```xml
        </port>
        <port>
                <name>combo1</name>
                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                <admin-status>tx-and-rx</admin-status>
                <notification-enable>false</notification-enable>
                <message-fast-tx>1</message-fast-tx>
                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                <message-tx-interval>30</message-tx-interval>
                <reinit-delay>2</reinit-delay>
                <tx-credit-max>5</tx-credit-max>
                <tx-fast-init>4</tx-fast-init>
                <notification-interval>30</notification-interval>
        </port>
        <port>
                <name>combo2</name>
                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                <admin-status>tx-and-rx</admin-status>
                <notification-enable>false</notification-enable>
                <message-fast-tx>1</message-fast-tx>
                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                <message-tx-interval>30</message-tx-interval>
                <reinit-delay>2</reinit-delay>
                <tx-credit-max>5</tx-credit-max>
                <tx-fast-init>4</tx-fast-init>
                <notification-interval>30</notification-interval>
        </port>
        <port>
                <name>combo3</name>
                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                <admin-status>tx-and-rx</admin-status>
                <notification-enable>false</notification-enable>
                <message-fast-tx>1</message-fast-tx>
                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                <message-tx-interval>30</message-tx-interval>
```

```
                            <reinit-delay>2</reinit-delay>
                            <tx-credit-max>5</tx-credit-max>
                            <tx-fast-init>4</tx-fast-init>
                            <notification-interval>30</notification-interval>
                    </port>
                    <port>
                            <name>mwave1</name>
                            <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                            <admin-status>tx-and-rx</admin-status>
                            <notification-enable>false</notification-enable>
                            <message-fast-tx>1</message-fast-tx>
                            <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                            <message-tx-interval>30</message-tx-interval>
                            <reinit-delay>2</reinit-delay>
                            <tx-credit-max>5</tx-credit-max>
                            <tx-fast-init>4</tx-fast-init>
                            <notification-interval>30</notification-interval>
                    </port>
            </lldp>
        </data>
</rpc-reply>
```

4.1.7.3 get Request XML:

```
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get>
        <filter type="subtree">
                <lldp xmlns="urn:ieee:std:802.1AB:yang:ieee802-dot1ab-lldp">
                </lldp>
        </filter>
    </get>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
</rpc>
```

4.1.7.4 get Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:a0685621-fe0a-4130-88b4-ec01fc41dfd0" ncx:last-modified="2023-02-03T18:56:41Z"
ncx:etag="317">
        <data>
             <lldp xmlns="urn:ieee:std:802.1AB:yang:ieee802-dot1ab-lldp">
                    <message-fast-tx>1</message-fast-tx>
                    <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                    <message-tx-interval>30</message-tx-interval>
                    <reinit-delay>2</reinit-delay>
                    <tx-credit-max>5</tx-credit-max>
                    <tx-fast-init>4</tx-fast-init>
                    <notification-interval>30</notification-interval>
                    <remote-statistics/>
                    <local-system-data>
                           <chassis-id-subtype>mac-address</chassis-id-subtype>
                           <chassis-id>0005.59da.416c</chassis-id>
                    </local-system-data>
                    <port>
                           <name>gbe1</name>
                           <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                           <admin-status>tx-and-rx</admin-status>
                           <notification-enable>false</notification-enable>
                           <message-fast-tx>1</message-fast-tx>
                           <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                           <message-tx-interval>30</message-tx-interval>
                           <reinit-delay>2</reinit-delay>
                           <tx-credit-max>5</tx-credit-max>
                           <tx-fast-init>4</tx-fast-init>
                           <notification-interval>30</notification-interval>
```

```
                <port-id-subtype>mac-address</port-id-subtype>
                <port-id>0005.59da.416d</port-id>
                <tx-statistics/>
                <rx-statistics/>
        </port>
        <port>
                <name>combo1</name>
                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                <admin-status>tx-and-rx</admin-status>
                <notification-enable>false</notification-enable>
                <message-fast-tx>1</message-fast-tx>
                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                <message-tx-interval>30</message-tx-interval>
                <reinit-delay>2</reinit-delay>
                <tx-credit-max>5</tx-credit-max>
                <tx-fast-init>4</tx-fast-init>
                <notification-interval>30</notification-interval>
                <port-id-subtype>interface-name</port-id-subtype>
                <port-id>5</port-id>
                <tx-statistics/>
                <rx-statistics/>
        </port>
        <port>
                <name>combo2</name>
                <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                <admin-status>tx-and-rx</admin-status>
                <notification-enable>false</notification-enable>
                <message-fast-tx>1</message-fast-tx>
                <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                <message-tx-interval>30</message-tx-interval>
                <reinit-delay>2</reinit-delay>
                <tx-credit-max>5</tx-credit-max>
                <tx-fast-init>4</tx-fast-init>
                <notification-interval>30</notification-interval>
                <port-id-subtype>interface-name</port-id-subtype>
```

```xml
                    <port-id>5</port-id>
                    <tx-statistics/>
                    <rx-statistics/>
            </port>
            <port>
                    <name>combo3</name>
                    <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                    <admin-status>tx-and-rx</admin-status>
                    <notification-enable>false</notification-enable>
                    <message-fast-tx>1</message-fast-tx>
                    <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                    <message-tx-interval>30</message-tx-interval>
                    <reinit-delay>2</reinit-delay>
                    <tx-credit-max>5</tx-credit-max>
                    <tx-fast-init>4</tx-fast-init>
                    <notification-interval>30</notification-interval>
                    <port-id-subtype>interface-name</port-id-subtype>
                    <port-id>5</port-id>
                    <tx-statistics/>
                    <rx-statistics/>
            </port>
            <port>
                    <name>mwave1</name>
                    <dest-mac-address>01-80-C2-00-00-0E</dest-mac-address>
                    <admin-status>tx-and-rx</admin-status>
                    <notification-enable>false</notification-enable>
                    <message-fast-tx>1</message-fast-tx>
                    <message-tx-hold-multiplier>4</message-tx-hold-multiplier>
                    <message-tx-interval>30</message-tx-interval>
                    <reinit-delay>2</reinit-delay>
                    <tx-credit-max>5</tx-credit-max>
                    <tx-fast-init>4</tx-fast-init>
                    <notification-interval>30</notification-interval>
                    <port-id-subtype>interface-name</port-id-subtype>
                    <port-id>5</port-id>
```

```
                            <tx-statistics/>
                            <rx-statistics/>
                            <remote-systems-data>
                                    <time-mark>0</time-mark>
                                    <remote-index>1</remote-index>
                                    <chassis-id-subtype>mac-address</chassis-id-subtype>
                                    <chassis-id>0005.59da.423c</chassis-id>
                                    <port-id-subtype>interface-name</port-id-subtype>
                                    <port-id>mwave1</port-id>
                            </remote-systems-data>
                    </port>
            </lldp>
      </data>
</rpc-reply>
```

5 E2E L2 Service Provisioning.

The objective of use case 2 is to prove that multi-vendor service provisioning is possible using NETCONF and standard YANG models.

5.1.1 C-VLAN

Create a C-VLAN-based E-Line Service, crossing all NEs, in Customer Bridge mode.

5.1.1.1 edit_config Request XML:

```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1001">
    <edit-config>
        <target>
            <running/>
```

```xml
 </target>
<config>
<bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
 <bridge>
      <name>Bridge-1</name>
      <address>00-05-59-21-32-45</address>
      <bridge-type>customer-vlan-bridge</bridge-type>
      <component>
          <name>component-1</name>
          <id>1</id>
          <type>c-vlan-component</type>
          <bridge-vlan>
              <vlan>
                  <vid>450</vid>
                  <name>service-450</name>
              </vlan>
              <vlan>
                  <vid>460</vid>
                  <name>service-460</name>
              </vlan>
          </bridge-vlan>
          <filtering-database>
              <aging-time>300</aging-time>

              <vlan-registration-entry>
                  <database-id>1</database-id>
                  <vids>450</vids>
                  <entry-type>static</entry-type>
                  <port-map>
                      <port-ref>3</port-ref>
                      <static-vlan-registration-entries>
                          <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                          <vlan-transmitted>tagged</vlan-transmitted>
                      </static-vlan-registration-entries>
                  </port-map>
```

```xml
                </vlan-registration-entry>
                <vlan-registration-entry>
                    <database-id>1</database-id>
                    <vids>460</vids>
                    <entry-type>static</entry-type>
                    <port-map>
                        <port-ref>4</port-ref>
                        <static-vlan-registration-entries>
                            <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                            <vlan-transmitted>untagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                    </port-map>
                </vlan-registration-entry>
                <vlan-registration-entry>
                    <database-id>1</database-id>
                    <vids>450,460</vids>
                    <entry-type>static</entry-type>
                    <port-map>
                        <port-ref>6</port-ref>
                        <static-vlan-registration-entries>
                            <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                            <vlan-transmitted>tagged</vlan-transmitted>
                        </static-vlan-registration-entries>
                    </port-map>
                </vlan-registration-entry>
            </filtering-database>
        </component>
      </bridge>
    </bridges>
  </config>
 </edit-config>
</rpc>
```

5.1.1.2 edit_config Response :

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:9e0d1341-d49f-416e-90c5-31f601984366">
        <ok/>
</rpc-reply>
```

5.1.1.3 get_config Request XML:

```xml
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
            <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
            </bridges>
        </filter>
    </get-config>
</rpc>
```

5.1.1.4 get_config Response XML:

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:262cde16-82ca-4b36-8817-82494e39d248" ncx:last-modified="2023-02-03T19:26:12Z"
ncx:etag="315">
        <data>
            <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                <bridge>
                    <name>Bridge-1</name>
                    <address>00-05-59-21-32-45</address>
```

```xml
<bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:customer-vlan-bridge</bridge-type>
<component>
        <name>component-1</name>
        <id>1</id>
        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-component</type>
        <traffic-class-enabled>true</traffic-class-enabled>
        <filtering-database>
                <aging-time>300</aging-time>
                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>450</vids>
                        <entry-type>static</entry-type>
                        <port-map>
                                <port-ref>3</port-ref>
                                <static-vlan-registration-entries>
                                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                        <vlan-transmitted>tagged</vlan-transmitted>
                                </static-vlan-registration-entries>
                        </port-map>
                </vlan-registration-entry>
                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>460</vids>
                        <entry-type>static</entry-type>
                        <port-map>
                                <port-ref>4</port-ref>
                                <static-vlan-registration-entries>
                                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                        <vlan-transmitted>untagged</vlan-transmitted>
                                </static-vlan-registration-entries>
                        </port-map>
                </vlan-registration-entry>
                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>450,460</vids>
```

```xml
                                    <entry-type>static</entry-type>
                                    <port-map>
                                            <port-ref>6</port-ref>
                                            <static-vlan-registration-entries>
                                                    <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                                    <vlan-transmitted>tagged</vlan-transmitted>
                                            </static-vlan-registration-entries>
                                    </port-map>
                            </vlan-registration-entry>
                    </filtering-database>
                    <permanent-database/>
                    <bridge-vlan>
                            <vlan>
                                    <vid>450</vid>
                                    <name>service-450</name>
                            </vlan>
                            <vlan>
                                    <vid>460</vid>
                                    <name>service-460</name>
                            </vlan>
                    </bridge-vlan>
                    <bridge-mst/>
                </component>
            </bridge>
        </bridges>
    </data>
</rpc-reply>
```

5.1.1.5 get Request XML:

```xml
<bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
</bridges>
```

5.1.1.6 get Response XML:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:abc65488-586f-4275-a065-a6dbe543bb2a" ncx:last-modified="2023-02-03T19:27:08Z"
ncx:etag="319">
        <data>
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                        <bridge>
                                <name>Bridge-1</name>
                                <address>00-05-59-21-32-45</address>
                                <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:customer-vlan-bridge</bridge-type>
                                <component>
                                        <name>component-1</name>
                                        <id>1</id>
                                        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:c-vlan-component</type>
                                        <traffic-class-enabled>true</traffic-class-enabled>
                                        <capabilities/>
                                        <filtering-database>
                                                <aging-time>300</aging-time>
                                                <vlan-registration-entry>
                                                        <database-id>1</database-id>
                                                        <vids>450</vids>
                                                        <entry-type>static</entry-type>
                                                        <port-map>
                                                                <port-ref>3</port-ref>
                                                                <static-vlan-registration-entries>
                                                                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                                </static-vlan-registration-entries>
                                                        </port-map>
                                                </vlan-registration-entry>
```

```xml
<vlan-registration-entry>
        <database-id>1</database-id>
        <vids>460</vids>
        <entry-type>static</entry-type>
        <port-map>
                <port-ref>4</port-ref>
                <static-vlan-registration-entries>
                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                        <vlan-transmitted>untagged</vlan-transmitted>
                </static-vlan-registration-entries>
        </port-map>
</vlan-registration-entry>
<vlan-registration-entry>
        <database-id>1</database-id>
        <vids>450,460</vids>
        <entry-type>static</entry-type>
        <port-map>
                <port-ref>6</port-ref>
                <static-vlan-registration-entries>
                        <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                        <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
        </port-map>
</vlan-registration-entry>
</filtering-database>
<permanent-database/>
<bridge-vlan>
        <vlan>
                <vid>450</vid>
                <name>service-450</name>
        </vlan>
        <vlan>
                <vid>460</vid>
                <name>service-460</name>
        </vlan>
```

```
                              </bridge-vlan>
                              <bridge-mst/>
                        </component>
                  </bridge>
            </bridges>
      </data>
</rpc-reply>
```

5.1.1.7 delete with edit config Request XML:

```
<config>
      <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
            <bridge operation="delete">
                  <name>Bridge-1</name>
                  <address>00-05-59-21-32-45</address>
                  <bridge-type>customer-vlan-bridge</bridge-type>
                  <component>
                        <name>component-1</name>
                        <id>1</id>
                        <type>c-vlan-component</type>
                        <bridge-vlan>
                              <vlan>
                                    <vid>450</vid>
                                    <name>service-450</name>
                              </vlan>
                              <vlan>
                                    <vid>460</vid>
                                    <name>service-460</name>
                              </vlan>
                        </bridge-vlan>
                        <filtering-database>
                              <aging-time>300</aging-time>

                              <vlan-registration-entry>
```

```xml
            <database-id>1</database-id>
            <vids>450</vids>
            <entry-type>static</entry-type>
            <port-map>
                <port-ref>3</port-ref>
                <static-vlan-registration-entries>
                    <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
        </vlan-registration-entry>
        <vlan-registration-entry>
            <database-id>1</database-id>
            <vids>460</vids>
            <entry-type>static</entry-type>
            <port-map>
                <port-ref>4</port-ref>
                <static-vlan-registration-entries>
                    <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                    <vlan-transmitted>untagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
        </vlan-registration-entry>
        <vlan-registration-entry>
            <database-id>1</database-id>
            <vids>450,460</vids>
            <entry-type>static</entry-type>
            <port-map>
                <port-ref>6</port-ref>
                <static-vlan-registration-entries>
                    <registrar-admin-control>fixed-new-ignored</registrar-admin-control>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
        </vlan-registration-entry>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
                </filtering-database>
            </component>
        </bridge>
    </bridges>
</config>
```

5.1.1.8 delete with edit config Response:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:4040ff6d-534c-4119-a0fa-d535f492bd5d">
        <ok/>
</rpc-reply>
```

5.1.2 Provider Bridge.

Provision a S-VLAN-based E-Line Service carrying 2 C-VLANs, crossing all NEs, in Provider Bridge mode.

5.1.2.1 edit_config Request XML:

```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1001">
    <edit-config>
        <target>
            <running/>
        </target>
        <config>
        <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
            <bridge>
```

```xml
<name>bridge-1</name>
<address>00-05-59-21-43-56</address>
<bridge-type>provider-bridge</bridge-type>
<component>
        <name>component-1</name>
        <id>1</id>
        <type>s-vlan-component</type>
        <traffic-class-enabled>true</traffic-class-enabled>

        <bridge-vlan>
                <vlan>
                        <vid>450</vid>
                        <name>service-100</name>
                </vlan>
                <vlan>
                        <vid>460</vid>
                        <name>service-200</name>
                </vlan>
        </bridge-vlan>

        <filtering-database>
                <aging-time>300</aging-time>

                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>450</vids>
                        <entry-type>static</entry-type>
                        <port-map>
                                <port-ref>3</port-ref>
                                <static-vlan-registration-entries>
                                        <vlan-transmitted>tagged</vlan-transmitted>
                                </static-vlan-registration-entries>
                        </port-map>
                        <port-map>
                                <port-ref>6</port-ref>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
                                        <static-vlan-registration-entries>
                                                <vlan-transmitted>tagged</vlan-transmitted>
                                        </static-vlan-registration-entries>
                                </port-map>
                        </vlan-registration-entry>

                        <vlan-registration-entry>
                                <database-id>1</database-id>
                                <vids>460</vids>
                                <entry-type>static</entry-type>
                                <port-map>
                                        <port-ref>4</port-ref>
                                        <static-vlan-registration-entries>
                                                <vlan-transmitted>tagged</vlan-transmitted>
                                        </static-vlan-registration-entries>
                                </port-map>
                                <port-map>
                                        <port-ref>6</port-ref>
                                        <static-vlan-registration-entries>
                                                <vlan-transmitted>tagged</vlan-transmitted>
                                        </static-vlan-registration-entries>
                                </port-map>
                        </vlan-registration-entry>
                </filtering-database>

            </component>
          </bridge>
        </bridges>
      </config>
    </edit-config>
</rpc>
```

5.1.2.2 edit_config Response :

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:a4bc24e0-554a-433b-9768-8587acf06092">
        <ok/>
</rpc-reply>
```

5.1.2.3 get_config Request XML:

```xml
<rpc message-id="101"
    xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <get-config>
        <source>
            <running/>
        </source>
        <filter type="subtree">
            <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
            </bridges>
        </filter>
    </get-config>
</rpc>
```

5.1.2.4 get_config Response XML:

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:1011feed-b076-4362-9d99-754d4b005d15" ncx:last-modified="2023-02-03T19:35:17Z"
ncx:etag="321">
        <data>
            <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                <bridge>
                    <name>bridge-1</name>
```

```xml
<address>00-05-59-21-43-56</address>
<bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:provider-bridge</bridge-type>
<component>
        <name>component-1</name>
        <id>1</id>
        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:s-vlan-component</type>
        <traffic-class-enabled>true</traffic-class-enabled>
        <filtering-database>
                <aging-time>300</aging-time>
                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>450</vids>
                        <entry-type>static</entry-type>
                        <port-map>
                                <port-ref>3</port-ref>
                                <static-vlan-registration-entries>
                                        <vlan-transmitted>tagged</vlan-transmitted>
                                </static-vlan-registration-entries>
                        </port-map>
                        <port-map>
                                <port-ref>6</port-ref>
                                <static-vlan-registration-entries>
                                        <vlan-transmitted>tagged</vlan-transmitted>
                                </static-vlan-registration-entries>
                        </port-map>
                </vlan-registration-entry>
                <vlan-registration-entry>
                        <database-id>1</database-id>
                        <vids>460</vids>
                        <entry-type>static</entry-type>
                        <port-map>
                                <port-ref>4</port-ref>
                                <static-vlan-registration-entries>
                                        <vlan-transmitted>tagged</vlan-transmitted>
                                </static-vlan-registration-entries>
```

```
                                                </port-map>
                                                <port-map>
                                                        <port-ref>6</port-ref>
                                                        <static-vlan-registration-entries>
                                                                <vlan-transmitted>tagged</vlan-transmitted>
                                                        </static-vlan-registration-entries>
                                                </port-map>
                                        </vlan-registration-entry>
                                </filtering-database>
                                <permanent-database/>
                                <bridge-vlan>
                                        <vlan>
                                                <vid>450</vid>
                                                <name>service-100</name>
                                        </vlan>
                                        <vlan>
                                                <vid>460</vid>
                                                <name>service-200</name>
                                        </vlan>
                                </bridge-vlan>
                                <bridge-mst/>
                        </component>
                </bridge>
        </bridges>
    </data>
</rpc-reply>
```

5.1.2.5 get Request XML:

```
<bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
</bridges>
```

5.1.2.6 get Response XML:

```xml
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:ncx="http://netconfcentral.org/ns/yuma-ncx"
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:12cbe9f5-d2a2-4a68-abf9-2d0f2391e630" ncx:last-modified="2023-02-03T19:35:17Z"
ncx:etag="321">
        <data>
                <bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
                        <bridge>
                                <name>bridge-1</name>
                                <address>00-05-59-21-43-56</address>
                                <bridge-type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:provider-bridge</bridge-type>
                                <component>
                                        <name>component-1</name>
                                        <id>1</id>
                                        <type xmlns:dot1q="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">dot1q:s-vlan-component</type>
                                        <traffic-class-enabled>true</traffic-class-enabled>
                                        <capabilities/>
                                        <filtering-database>
                                                <aging-time>300</aging-time>
                                                <vlan-registration-entry>
                                                        <database-id>1</database-id>
                                                        <vids>450</vids>
                                                        <entry-type>static</entry-type>
                                                        <port-map>
                                                                <port-ref>3</port-ref>
                                                                <static-vlan-registration-entries>
                                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                                </static-vlan-registration-entries>
                                                        </port-map>
                                                        <port-map>
                                                                <port-ref>6</port-ref>
                                                                <static-vlan-registration-entries>
                                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                                </static-vlan-registration-entries>
                                                        </port-map>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```xml
                                </vlan-registration-entry>
                                <vlan-registration-entry>
                                        <database-id>1</database-id>
                                        <vids>460</vids>
                                        <entry-type>static</entry-type>
                                        <port-map>
                                                <port-ref>4</port-ref>
                                                <static-vlan-registration-entries>
                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                </static-vlan-registration-entries>
                                        </port-map>
                                        <port-map>
                                                <port-ref>6</port-ref>
                                                <static-vlan-registration-entries>
                                                        <vlan-transmitted>tagged</vlan-transmitted>
                                                </static-vlan-registration-entries>
                                        </port-map>
                                </vlan-registration-entry>
                        </filtering-database>
                        <permanent-database/>
                        <bridge-vlan>
                                <vlan>
                                        <vid>450</vid>
                                        <name>service-100</name>
                                </vlan>
                                <vlan>
                                        <vid>460</vid>
                                        <name>service-200</name>
                                </vlan>
                        </bridge-vlan>
                        <bridge-mst/>
                </component>
        </bridge>
    </bridges>
</data>
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
</rpc-reply>
```

5.1.2.7 delete with edit config Request XML:

```
<config>
<bridges xmlns="urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge">
<bridge operation="delete">
                <name>bridge-1</name>
                <address>00-05-59-21-43-56</address>
                <bridge-type>provider-bridge</bridge-type>

                <component>
                    <name>component-1</name>
                    <id>1</id>
                    <type>s-vlan-component</type>
                    <traffic-class-enabled>true</traffic-class-enabled>

                    <bridge-vlan>
                        <vlan>
                            <vid>450</vid>
                            <name>service-100</name>
                        </vlan>
                        <vlan>
                            <vid>460</vid>
                            <name>service-200</name>
                        </vlan>
                    </bridge-vlan>

                    <filtering-database>
                        <aging-time>300</aging-time>

                        <vlan-registration-entry>
                            <database-id>1</database-id>
```

```xml
            <vids>450</vids>
            <entry-type>static</entry-type>
            <port-map>
                <port-ref>3</port-ref>
                <static-vlan-registration-entries>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
            <port-map>
                <port-ref>6</port-ref>
                <static-vlan-registration-entries>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
        </vlan-registration-entry>

        <vlan-registration-entry>
            <database-id>1</database-id>
            <vids>460</vids>
            <entry-type>static</entry-type>
            <port-map>
                <port-ref>4</port-ref>
                <static-vlan-registration-entries>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
            <port-map>
                <port-ref>6</port-ref>
                <static-vlan-registration-entries>
                    <vlan-transmitted>tagged</vlan-transmitted>
                </static-vlan-registration-entries>
            </port-map>
        </vlan-registration-entry>
    </filtering-database>
```

```
                </component>
              </bridge>
          </bridges>
        </config>
```

5.1.2.8 delete with edit config Response:

```
<?xml version="1.0" ?>
<rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:6a76fa63-72b8-4eae-befd-88f2ac6f2f6f">
        <ok/>
</rpc-reply>
```

6 APPENDIX – INITIAL Configuration

6.1 CT edit_config

6.1.1 Edit_config XML

```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1001">
    <edit-config>
        <target>
            <running/>
```

```
        </target>
<config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
<interfaces    xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
    <interface>
    <name>ct1</name>
    <description>CT</description>
    <carrier-id xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">A </carrier-id>
        <channel-separation   xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">1500000</channel-separation>
    <ct-configuration xmlns="https://intracom-telecom.com/ns/yang/icom-microwave"><profile>optimum-latency</profile></ct-configuration>
    <adaptive xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <selected-max-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-512</selected-max-acm>
        <selected-min-acm xmlns:mw-types="urn:ietf:params:xml:ns:yang:ietf-microwave-types">mw-types:qam-128</selected-min-acm>
    </adaptive>
    <atpc xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">
        <atpc-lower-threshold>-99.0</atpc-lower-threshold>
        <atpc-mode xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">atpc-max-snr</atpc-mode>
        <atpc-upper-threshold>-30.0</atpc-upper-threshold>
        <maximum-nominal-power>11.0</maximum-nominal-power>
        <minimum-power xmlns="https://intracom-telecom.com/ns/yang/icom-microwave">2.0</minimum-power>
    </atpc>
    <tx-enabled xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">true</tx-enabled>
    <tx-frequency xmlns="urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link">72000000</tx-frequency>
    </interface>
</interfaces>
</config>
</edit-config>
</rpc>
```

NE Response:

```
<?xml version="1.0" encoding="UTF-8"?><rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:96bcf2f1-1bea-4273-8391-
00455dfd4416" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"><ok/></rpc-reply>
```

6.2 XPATH filtering

Verified Xpath Filtering

```
filter=('xpath',"/interfaces/interface[type='ianaift:ethernetCsmacd']")
filter=('xpath',"/interfaces/interface[type='microwaveCarrierTermination']")
filter=('xpath',"/interfaces/interface[type='microwaveRadioLinkTerminal']")
filter=('xpath',"system")
filter=('xpath',"hardware")
filter=('xpath',"lldp")

filter=("xpath", "/interfaces/interface[type='ethernetCsmacd' or type='microwaveCarrierTermination']")
filter=("xpath", "/system[hostname='gx80']")
filter=("xpath", "/interfaces/interface[tx-frequency=82000000]")
filter=("xpath", "/interfaces/interface[tx-frequency>80000000]")
filter=("xpath", "/interfaces/interface[tx-frequency<80000000]")
filter=("xpath", "/interfaces/interface[enabled=boolean(1)]")
filter=("xpath", "/interfaces/interface[2]")
```

6.3 Ncclient settings

Netconf open connect:

```
manager.connect(host="172.28.103.106", port=830, username="netconf", hostkey_verify=False, key_filename="xxx_keys/id_rsa" )
```

Get and Get-config requests with subtree filtering:

```
netconf.get(filter=( filter=("subtree", xml_filter ), with_defaults="report-all")
netconf.get_config(source="running", filter=("subtree", xml_filter), with_defaults="report-all")
```

Get and Get-config requests with xpath filtering:

```
netconf.get(filter=( filter=("xpath", "/interfaces" ), with_defaults="report-all")
netconf.get_config(source="running", filter=("xpath", "/interfaces" ), with_defaults="report-all")
```

Edit-config request:

```
netconf.lock(target = "running")
netconf.edit_config(target = "running", config = xml_config_file, default_operation="merge")
netconf.unlock(target = "running")
```

Delete-config request:

```
netconf.lock(target = "running")
netconf.edit_config(target = "running", config = xml_delete_file, default_operation="merge")
```

```
netconf.unlock(target = "running")
```

Netconf close session:

```
netconf.close_session()
```

6.4 Capabilities

```
urn:ietf:params:netconf:base:1.0
urn:ietf:params:netconf:base:1.1
urn:ietf:params:netconf:capability:writable-running:1.0
urn:ietf:params:netconf:capability:rollback-on-error:1.0
urn:ietf:params:netconf:capability:validate:1.0
urn:ietf:params:netconf:capability:validate:1.1
urn:ietf:params:netconf:capability:url:1.0?scheme=file
urn:ietf:params:netconf:capability:xpath:1.0
urn:ietf:params:netconf:capability:notification:1.0
urn:ietf:params:netconf:capability:interleave:1.0
urn:ietf:params:netconf:capability:partial-lock:1.0
urn:ietf:params:netconf:capability:with-defaults:1.0?basic-mode=explicit&also-supported=trim,report-all,report-all-tagged
urn:yumaworks:params:xml:ns:netconf:config-id?id=319
urn:ietf:params:xml:ns:netconf:base:1.0?module=ietf-netconf&revision=2011-06-01&features=writable-running,rollback-on-error,validate,url,xpath
```

```
urn:ietf:params:xml:ns:yang:iana-crypt-hash?module=iana-crypt-hash&revision=2014-08-06&features=crypt-hash-md5,crypt-hash-sha-256,crypt-hash-sha-512
urn:ietf:params:xml:ns:yang:iana-if-type?module=iana-if-type&revision=2019-07-16
https://intracom-telecom.com/ns/yang/icom-hist-stats?module=icom-hist-stats&revision=2020-10-27
urn:ieee:std:802.1AB:yang:ieee802-dot1ab-lldp?module=ieee802-dot1ab-lldp&revision=2021-09-14
urn:ieee:std:802.1Q:yang:ieee802-dot1ab-types?module=ieee802-dot1ab-types&revision=2021-07-21
urn:ieee:std:802.1Q:yang:ieee802-dot1q-bridge?module=ieee802-dot1q-bridge&revision=2022-05-19&features=ingress-filtering,extended-filtering-
services,port-and-protocol-based-vlan,flow-filtering,simple-bridge-port,flexible-bridge-port
urn:ieee:std:802.1Q:yang:ieee802-dot1q-pb?module=ieee802-dot1q-pb&revision=2020-06-04
urn:ieee:std:802.1Q:yang:ieee802-dot1q-types?module=ieee802-dot1q-types&revision=2022-05-19
urn:ieee:std:802.3:yang:ieee802-ethernet-interface?module=ieee802-ethernet-interface&revision=2019-06-21&features=ethernet-pfc,ethernet-pause
urn:ieee:std:802.1Q:yang:ieee802-types?module=ieee802-types&revision=2020-06-04
urn:ietf:params:xml:ns:yang:ietf-inet-types?module=ietf-inet-types&revision=2013-07-15
urn:ietf:params:xml:ns:yang:ietf-interfaces?module=ietf-interfaces&revision=2018-02-20&features=arbitrary-names,pre-provisioning,if-
mib&deviations=icom-microwave
urn:ietf:params:xml:ns:yang:ietf-ip?module=ietf-ip&revision=2018-02-22&features=ipv4-non-contiguous-netmasks,ipv6-privacy-autoconf
urn:ietf:params:xml:ns:yang:ietf-netconf-acm?module=ietf-netconf-acm&revision=2018-02-14
urn:ietf:params:xml:ns:yang:ietf-netconf-monitoring?module=ietf-netconf-monitoring&revision=2010-10-04
urn:ietf:params:xml:ns:yang:ietf-netconf-notifications?module=ietf-netconf-notifications&revision=2012-02-06
urn:ietf:params:xml:ns:netconf:partial-lock:1.0?module=ietf-netconf-partial-lock&revision=2009-10-19
urn:ietf:params:xml:ns:yang:ietf-netconf-with-defaults?module=ietf-netconf-with-defaults&revision=2011-06-01
urn:ietf:params:xml:ns:yang:ietf-restconf?module=ietf-restconf&revision=2017-01-26
urn:ietf:params:xml:ns:yang:ietf-restconf-monitoring?module=ietf-restconf-monitoring&revision=2017-01-26
urn:ietf:params:xml:ns:yang:ietf-routing?module=ietf-routing&revision=2018-03-13&features=multiple-ribs,router-id
urn:ietf:params:xml:ns:yang:ietf-yang-library?module=ietf-yang-library&revision=2016-06-21
urn:ietf:params:xml:ns:yang:ietf-yang-patch?module=ietf-yang-patch&revision=2017-02-22
urn:ietf:params:xml:ns:yang:ietf-yang-structure-ext?module=ietf-yang-structure-ext&revision=2020-06-17
urn:ietf:params:xml:ns:yang:ietf-yang-types?module=ietf-yang-types&revision=2013-07-15
urn:ietf:params:xml:ns:netmod:notification?module=nc-notifications&revision=2008-07-14
urn:ietf:params:xml:ns:netconf:notification:1.0?module=notifications&revision=2013-03-15
urn:ietf:params:xml:ns:yang:yang-data-ext?module=yang-data-ext&revision=2017-07-03
http://netconfcentral.org/ns/yuma-app-common?module=yuma-app-common&revision=2017-07-25
http://netconfcentral.org/ns/yuma-ncx?module=yuma-ncx&revision=2015-10-16
http://netconfcentral.org/ns/yuma-time-filter?module=yuma-time-filter&revision=2012-11-15
http://netconfcentral.org/ns/yuma-types?module=yuma-types&revision=2019-11-29
http://yumaworks.com/ns/yumaworks-app-common?module=yumaworks-app-common&revision=2021-08-24
```

```
http://yumaworks.com/ns/yumaworks-event-filter?module=yumaworks-event-filter&revision=2014-02-09
http://yumaworks.com/ns/yumaworks-event-stream?module=yumaworks-event-stream&revision=2021-05-15
http://yumaworks.com/ns/yumaworks-extensions?module=yumaworks-extensions&revision=2021-12-14
http://yumaworks.com/ns/yumaworks-getbulk?module=yumaworks-getbulk&revision=2021-08-07
http://yumaworks.com/ns/yumaworks-ids?module=yumaworks-ids&revision=2014-07-12
urn:ietf:params:xml:ns:yang:yumaworks-restconf?module=yumaworks-restconf&revision=2017-07-03
urn:ietf:params:xml:ns:yang:yumaworks-support-save?module=yumaworks-support-save&revision=2022-05-19
http://yumaworks.com/ns/yumaworks-system?module=yumaworks-system&revision=2022-03-08
http://yumaworks.com/ns/yumaworks-templates?module=yumaworks-templates&revision=2017-02-20
http://yumaworks.com/ns/yumaworks-term-msg?module=yumaworks-term-msg&revision=2019-05-05
http://yumaworks.com/ns/yumaworks-types?module=yumaworks-types&revision=2021-05-15
https://intracom-telecom.com/ns/yang/icom-microwave?module=icom-microwave&revision=2019-03-05
urn:ietf:params:xml:ns:yang:ietf-microwave-types?module=ietf-microwave-types&revision=2019-06-19
urn:ietf:params:netconf:capability:yang-library:1.0?revision=2016-06-21&module-set-id=12086
https://intracom-telecom.com/ns/yang/icom-license?module=icom-license&revision=2022-01-03
urn:ietf:params:xml:ns:yang:ietf-interface-protection?module=ietf-interface-protection&revision=2019-06-19
urn:ietf:params:xml:ns:yang:ietf-microwave-radio-link?module=ietf-microwave-radio-link&revision=2019-06-19&features=xpic,mimo,tdm&deviations=icom-
microwave
https://intracom-telecom.com/ns/yang/icom-microwave?module=icom-microwave&revision=2019-03-05&features=encryption,hist-stats
urn:ietf:params:xml:ns:yang:ietf-yang-schema-mount?module=ietf-yang-schema-mount&revision=2019-01-14
urn:ietf:params:xml:ns:yang:ietf-network-instance?module=ietf-network-instance&revision=2019-01-21
urn:ietf:params:xml:ns:yang:ietf-system?module=ietf-system&revision=2014-08-06&features=radius,authentication,local-users,radius-
authentication,ntp,ntp-udp-port,timezone-name,dns-udp-tcp-port
urn:ietf:params:xml:ns:yang:ietf-aaa-tacacs?module=ietf-aaa-tacacs&revision=2019-03-06&features=tacacs
urn:ietf:params:xml:ns:yang:ietf-ethertypes?module=ietf-ethertypes&revision=2019-03-04
urn:ietf:params:xml:ns:yang:ietf-packet-fields?module=ietf-packet-fields&revision=2019-03-04
urn:ietf:params:xml:ns:yang:ietf-access-control-list?module=ietf-access-control-list&revision=2019-03-04&features=match-on-eth,match-on-ipv4,match-on-
ipv6,match-on-tcp,match-on-udp,match-on-icmp,eth,ipv4,ipv6,mixed-eth-ipv4,mixed-eth-ipv6,mixed-eth-ipv4-ipv6,interface-stats,acl-aggregate-
stats,interface-attachment
urn:ietf:params:xml:ns:yang:ietf-admin-account-security?module=ietf-admin-account-security&revision=2018-10-16&features=account-security,pwd-
security,login-failed-block
urn:ietf:params:xml:ns:yang:ietf-ssh-common?module=ietf-ssh-common&revision=2019-04-29&features=ssh-ecc,ssh-x509-certs,ssh-dh-group-exchange,ssh-
ctr,ssh-sha2
urn:ietf:params:xml:ns:yang:ietf-crypto-types?module=ietf-crypto-types&revision=2019-04-29
urn:ietf:params:xml:ns:yang:ietf-keystore?module=ietf-keystore&revision=2019-04-29&features=keystore-supported,local-keys-supported
```

```
urn:ietf:params:xml:ns:yang:ietf-ssh-server?module=ietf-ssh-server&revision=2019-04-29&features=ssh-server-transport-params-config,ssh-server-
keepalives,local-client-auth-supported,external-client-auth-supported
urn:ietf:params:xml:ns:yang:ietf-tls-common?module=ietf-tls-common&revision=2019-04-29&features=tls-1_0,tls-1_1,tls-1_2,tls-1_3,tls-ecc,tls-dhe,tls-
3des,tls-gcm,tls-sha2
urn:ietf:params:xml:ns:yang:ietf-trust-anchors?module=ietf-trust-anchors&revision=2019-04-29&features=truststore-supported,local-trust-anchors-
supported,x509-certificates,ssh-host-keys
urn:ietf:params:xml:ns:yang:ietf-tls-server?module=ietf-tls-server&revision=2019-04-29&features=tls-server-hello-params-config,tls-server-
keepalives,local-client-auth-supported,external-client-auth-supported
urn:ietf:params:xml:ns:yang:ietf-admin-access-security?module=ietf-admin-access-security&revision=2018-10-16&features=web-interface,ip-block-
config,ssh-server-transport-params-config,tls-server-hello-params-config
urn:ietf:params:xml:ns:yang:ietf-dhcp?module=ietf-dhcp&revision=2018-10-11&features=server,client,relay
urn:ietf:params:xml:ns:yang:ietf-key-chain?module=ietf-key-chain&revision=2017-06-15&features=hex-key-string,accept-tolerance,independent-send-accept-
lifetime,crypto-hmac-sha-1-12,cleartext,aes-cmac-prf-128,aes-key-wrap,replay-protection-only
urn:ietf:params:xml:ns:yang:ietf-routing-types?module=ietf-routing-types&revision=2017-12-04
urn:ietf:params:xml:ns:yang:ietf-ntp?module=ietf-ntp&revision=2018-12-17&features=ntp-port,authentication,access-rules,unicast-configuration,broadcast-
server,broadcast-client,multicast-server,multicast-client,manycast-server,manycast-client
urn:ietf:params:xml:ns:yang:ietf-port-management-security?module=ietf-port-management-security&revision=2018-10-16
urn:ietf:params:xml:ns:yang:ietf-x509-cert-to-name?module=ietf-x509-cert-to-name&revision=2014-12-10
urn:ietf:params:xml:ns:yang:ietf-snmp?module=ietf-snmp&revision=2014-12-10&features=notification-filter,proxy,tsm,tlstm,sshtm
urn:ietf:params:xml:ns:yang:ietf-snmp-security?module=ietf-snmp-security&revision=2018-10-16&features=tsm
urn:ietf:params:xml:ns:yang:ietf-tls-client?module=ietf-tls-client&revision=2019-04-29&features=tls-client-hello-params-config,tls-client-keepalives
urn:ietf:params:xml:ns:yang:ietf-syslog?module=ietf-syslog&revision=2018-03-15&features=console-action,file-action,file-limit-size,file-limit-
duration,remote-action,remote-source-interface,select-adv-compare,select-match,structured-data,signed-messages
urn:ietf:params:xml:ns:yang:ietf-system-aaa?module=ietf-system-aaa&revision=2019-03-06&features=authorization,accouting
urn:ietf:params:xml:ns:yang:ietf-tacacs?module=ietf-tacacs&revision=2018-09-24&features=tacacs
https://intracom-telecom.com/ns/yang/icom-admin-access-security?module=icom-admin-access-security&revision=2019-04-19
https://intracom-telecom.com/ns/yang/icom-admin-account-security?module=icom-admin-account-security&revision=2019-04-23
https://intracom-telecom.com/ns/yang/icom-ntp?module=icom-ntp&revision=2019-04-09
https://intracom-telecom.com/ns/yang/icom-syslog?module=icom-syslog&revision=2019-04-09
https://intracom-telecom.com/ns/yang/icom-system?module=icom-system&revision=2019-04-09
urn:ietf:params:xml:ns:yang:iana-hardware?module=iana-hardware&revision=2018-03-13
urn:ietf:params:xml:ns:yang:ietf-hardware?module=ietf-hardware&revision=2018-03-13&features=entity-mib,hardware-state,hardware-sensor
urn:ietf:params:xml:ns:yang:icom-hardware?module=icom-hardware&revision=2018-09-30&features=hist-stats
```

6.5 LNCC Test Results.

```
===============================================================================
INV_CARRIER_01 - CT
===============================================================================


cat INV_CARRIER_01_CT.txt


set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

# Get

netconf get --filter-file scripts/inventory/INV_CARRIER_01/interface_type_microwaveCarrierTermination_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_CARRIER_01/CT_transform.xsl

table concat

table to_excel scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get.xlsx

# Get-config

netconf --reply CT get-config --source running --filter-file scripts/inventory/INV_CARRIER_01/interface_type_microwaveCarrierTermination_filter.xml

table from_xml --reply CT --table CT --xsl-transform scripts/inventory/INV_CARRIER_01/CT_transform.xsl

table concat --table CT
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM T E L E C O M

Revision: 0.1

table to_excel scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get-config.xlsx --tables CT

netconf close-session

(Cmd) run_script INV_CARRIER_01_CT.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:07:51,389 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:07:52,137 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:07:52,149 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:07:52,788 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

New tables 'get' in each NE, build from XML stored in 'get'

Table 'get' available for group

Wrote Excel file scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get.xlsx, with 1 tabs: ['get']

2023-02-07 17:07:52,976 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:07:52,996 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

ETSI 4th mWT Plugtest Request-Response XMLS

Revision: 0.1

NETCONF <get-config> operation completed: 1 NEs, stored in 'CT'

New tables 'CT' in each NE, build from XML stored in 'CT'

Table 'CT' available for group

Wrote Excel file scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get-config.xlsx, with 1 tabs: ['CT']

2023-02-07 17:07:53,049 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:07:53,113 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

===

INV_CARRIER_01 - RLT

===

cat INV_CARRIER_01_RLT.txt

set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

Get

netconf get --filter-file scripts/inventory/INV_CARRIER_01/interface_type_microwaveRadioLinkTerminal_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_CARRIER_01/RLT_transform.xsl

table concat

table to_excel scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get.xlsx

Get-config

netconf --reply RLT get-config --source running --filter-file scripts/inventory/INV_CARRIER_01/interface_type_microwaveRadioLinkTerminal_filter.xml

table from_xml --reply RLT --table RLT --xsl-transform scripts/inventory/INV_CARRIER_01/RLT_transform.xsl

table concat --table RLT

table to_excel scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get-config.xlsx --tables RLT

netconf close-session

(Cmd) run_script INV_CARRIER_01_RLT.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:11:36,862 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:11:37,619 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:11:37,633 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:11:38,032 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

New tables 'get' in each NE, build from XML stored in 'get'

Table 'get' available for group

Wrote Excel file scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get.xlsx, with 1 tabs: ['get']

2023-02-07 17:11:38,226 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:11:38,240 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'RLT'

New tables 'RLT' in each NE, build from XML stored in 'RLT'

Table 'RLT' available for group

Wrote Excel file scripts/inventory/INV_CARRIER_01/INV_CARRIER_01_get-config.xlsx, with 1 tabs: ['RLT']

2023-02-07 17:11:38,285 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:11:38,355 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

==

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

INV_HW_01

===

cat INV_HW_01.txt

set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

Get

netconf get --filter-file scripts/inventory/INV_HW_01/hardware_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_HW_01/hardware_transform.xsl

table concat

table to_excel scripts/inventory/INV_HW_01/INV_HW_01_get.xlsx

Get-config

netconf --reply HW get-config --source running --filter-file scripts/inventory/INV_HW_01/hardware_filter.xml

table from_xml --reply HW --table HW --xsl-transform scripts/inventory/INV_HW_01/hardware_transform.xsl

table concat --table HW

table to_excel scripts/inventory/INV_HW_01/INV_HW_01_get-config.xlsx --tables HW

netconf close-session

ETSI 4th mWT Plugtest Request-Response XMLS INTRACOM TELECOM Revision: 0.1

(Cmd) run_script INV_HW_01.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:27:49,659 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:27:50,418 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:27:50,433 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:27:52,137 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

New tables 'get' in each NE, build from XML stored in 'get'

Table 'get' available for group

Wrote Excel file scripts/inventory/INV_HW_01/INV_HW_01_get.xlsx, with 1 tabs: ['get']

2023-02-07 17:27:52,341 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:27:52,445 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'HW'

New tables 'HW' in each NE, build from XML stored in 'HW'

Table 'HW' available for group

Wrote Excel file scripts/inventory/INV_HW_01/INV_HW_01_get-config.xlsx, with 1 tabs: ['HW']

2023-02-07 17:27:52,496 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:27:52,559 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'


```
================================================================================
INV_FW_01
================================================================================


cat INV_FW_01.txt


set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect
# System - Get

netconf get --filter-file scripts/inventory/INV_FW_01/system_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_FW_01/system_transform.xsl

table concat
```

ETSI 4th mWT Plugtest Request-Response XMLS

table to_excel scripts/inventory/INV_FW_01/INV_FW_01_system_get.xlsx

System - Get-config

netconf --reply system get-config --source running --filter-file scripts/inventory/INV_FW_01/system_filter.xml

table from_xml --reply system --table system --xsl-transform scripts/inventory/INV_FW_01/system_transform.xsl

table concat --table system

table to_excel scripts/inventory/INV_CARRIER_01/INV_FW_01_system_get-config.xlsx --tables system

System-state - Get

netconf get --filter-file scripts/inventory/INV_FW_01/system-state_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_FW_01/system-state_transform.xsl

table concat

table to_excel scripts/inventory/INV_FW_01/INV_FW_01_system-state_get.xlsx

(Cmd) run_script INV_FW_01.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

Error: NE GX80 already exist

2023-02-07 17:45:11,864 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:45:12,623 - lncc - DEBUG - Success: NETCONF connect() to GX80

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

1 new connections, 1 total: ['GX80']

2023-02-07 17:45:12,641 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:45:12,735 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

  File "lncc.py", line 729, in do_table

    args.func(self, args)

  File "lncc.py", line 683, in table_from_xml

    self.nes.table_from_xml(**kwargs)

  File "lncc.py", line 270, in table_from_xml

    n_e.table_from_xml(table, reply, xsl_transform)

  File "lncc.py", line 195, in table_from_xml

    self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

ETSI 4th mWT Plugtest Request-Response XMLS

Revision: 0.1

File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

  return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

  return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

  data_dicts = p.parse_data()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

  self._validate_path()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

  raise ValueError(msg)

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM T E L E C O M

Revision: 0.1

```
File "lncc.py", line 729, in do_table

  args.func(self, args)

File "lncc.py", line 690, in table_concat

  self.nes.table_concat(table=args.table)

File "lncc.py", line 276, in table_concat

  tmp_tb = state.tables[table].copy()

KeyError: 'get'

EXCEPTION of type 'KeyError' occurred with message: 'get'

Traceback (most recent call last):

  File "lncc.py", line 292, in table_to_excel

  self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'get'


During handling of the above exception, another exception occurred:


Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd
```

```
stop = func(statement)
```

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

```
return func(*args_list, **kwargs)  # type: ignore[call-arg]
```

File "lncc.py", line 729, in do_table

```
args.func(self, args)
```

File "lncc.py", line 698, in table_to_excel

```
self.nes.table_to_excel(args.file, args.tables)
```

File "lncc.py", line 292, in table_to_excel

```
self.tables[table].to_excel(writer, sheet_name=table)
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

```
self.close()
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

```
self._save()
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

```
self.book.save(self._handles.handle)
```

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

```
save_workbook(self, filename)
```

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

```
writer.save()
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save

  self.write_data()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

  archive.writestr(ARC_WORKBOOK, writer.write())

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

  self.write_views()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

  active = get_active_sheet(self.wb)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

  raise IndexError("At least one sheet must be visible")

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7ff8c2547d30>

Traceback (most recent call last):

  File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

    self.close()

  File "/usr/lib/python3.8/zipfile.py", line 1838, in close

    self.fp.seek(self.start_dir)

ValueError: seek of closed file

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

2023-02-07 17:45:12,778 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:45:12,846 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'system'

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

  File "lncc.py", line 729, in do_table

    args.func(self, args)

  File "lncc.py", line 683, in table_from_xml

    self.nes.table_from_xml(**kwargs)

  File "lncc.py", line 270, in table_from_xml

    n_e.table_from_xml(table, reply, xsl_transform)

  File "lncc.py", line 195, in table_from_xml

    self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

  File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

| ETSI 4th mWT Plugtest Request-Response XMLS | INTRACOM TELECOM | Revision: 0.1

```
    return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

    return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

    data_dicts = p.parse_data()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

    self._validate_path()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

    raise ValueError(msg)
```

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

```
File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs)  # type: ignore[call-arg]

File "lncc.py", line 729, in do_table
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
    args.func(self, args)

  File "lncc.py", line 690, in table_concat

    self.nes.table_concat(table=args.table)

  File "lncc.py", line 276, in table_concat

    tmp_tb = state.tables[table].copy()

KeyError: 'system'

EXCEPTION of type 'KeyError' occurred with message: 'system'

Traceback (most recent call last):

  File "lncc.py", line 292, in table_to_excel

    self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'system'


During handling of the above exception, another exception occurred:


Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)
```

```
File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs)  # type: ignore[call-arg]

File "lncc.py", line 729, in do_table

  args.func(self, args)

File "lncc.py", line 698, in table_to_excel

  self.nes.table_to_excel(args.file, args.tables)

File "lncc.py", line 292, in table_to_excel

  self.tables[table].to_excel(writer, sheet_name=table)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

  self.close()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

  self._save()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

  self.book.save(self._handles.handle)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

  save_workbook(self, filename)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

  writer.save()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save
```

```
  self.write_data()

 File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

  archive.writestr(ARC_WORKBOOK, writer.write())

 File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

  self.write_views()

 File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

  active = get_active_sheet(self.wb)

 File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

  raise IndexError("At least one sheet must be visible")

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7ff8c2547d30>

Traceback (most recent call last):

 File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

  self.close()

 File "/usr/lib/python3.8/zipfile.py", line 1838, in close

  self.fp.seek(self.start_dir)

ValueError: seek of closed file

2023-02-07 17:45:12,895 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']
```

| ETSI 4th mWT Plugtest Request-Response XMLS | INTRACOM TELECOM | Revision: 0.1 |

2023-02-07 17:45:12,977 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

  File "lncc.py", line 729, in do_table

    args.func(self, args)

  File "lncc.py", line 683, in table_from_xml

    self.nes.table_from_xml(**kwargs)

  File "lncc.py", line 270, in table_from_xml

    n_e.table_from_xml(table, reply, xsl_transform)

  File "lncc.py", line 195, in table_from_xml

    self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

  File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

    return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

  return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

  data_dicts = p.parse_data()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

  self._validate_path()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

  raise ValueError(msg)

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs) # type: ignore[call-arg]

 File "lncc.py", line 729, in do_table

  args.func(self, args)

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
T E L E C O M

Revision: 0.1

File "lncc.py", line 690, in table_concat

  self.nes.table_concat(table=args.table)

File "lncc.py", line 276, in table_concat

  tmp_tb = state.tables[table].copy()

KeyError: 'get'

EXCEPTION of type 'KeyError' occurred with message: 'get'

Traceback (most recent call last):

  File "lncc.py", line 292, in table_to_excel

  self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'get'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
return func(*args_list, **kwargs)  # type: ignore[call-arg]
```

File "lncc.py", line 729, in do_table

```
args.func(self, args)
```

File "lncc.py", line 698, in table_to_excel

```
self.nes.table_to_excel(args.file, args.tables)
```

File "lncc.py", line 292, in table_to_excel

```
self.tables[table].to_excel(writer, sheet_name=table)
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

```
self.close()
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

```
self._save()
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

```
self.book.save(self._handles.handle)
```

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

```
save_workbook(self, filename)
```

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

```
writer.save()
```

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save

```
self.write_data()
```

```
File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

  archive.writestr(ARC_WORKBOOK, writer.write())

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

  self.write_views()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

  active = get_active_sheet(self.wb)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

  raise IndexError("At least one sheet must be visible")

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7ff8c2547d30>

Traceback (most recent call last):

  File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

    self.close()

  File "/usr/lib/python3.8/zipfile.py", line 1838, in close

    self.fp.seek(self.start_dir)

ValueError: seek of closed file

2023-02-07 17:45:13,020 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:45:13,094 - lncc - DEBUG - Success: NETCONF <close-session> on GX80
```

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

```
============================================================================

INV_NET_01

============================================================================


cat INV_NET_01.txt


set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

# Get

netconf get --filter-file scripts/inventory/INV_NET_01/lldp_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_NET_01/lldp_transform.xsl

table concat

table to_excel scripts/inventory/INV_NET_01/INV_NET_01_get.xlsx

# Get-config
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

netconf --reply LLDP get-config --source running --filter-file scripts/inventory/INV_NET_01/lldp_filter.xml

table from_xml --reply LLDP --table LLDP --xsl-transform scripts/inventory/INV_NET_01/lldp_transform.xsl

table concat --table LLDP

table to_excel scripts/inventory/INV_NET_01/INV_NET_01_get-config.xlsx --tables LLDP

netconf close-session

(Cmd) run_script INV_FW_01.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:48:32,727 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:48:33,485 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:48:33,501 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:48:33,593 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

ETSI 4th mWT Plugtest Request-Response XMLS

Revision: 0.1

```
stop = self.onecmd(statement, add_to_history=add_to_history)

File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs)  # type: ignore[call-arg]

File "lncc.py", line 729, in do_table

  args.func(self, args)

File "lncc.py", line 683, in table_from_xml

  self.nes.table_from_xml(**kwargs)

File "lncc.py", line 270, in table_from_xml

  n_e.table_from_xml(table, reply, xsl_transform)

File "lncc.py", line 195, in table_from_xml

  self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

  return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

  return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

  data_dicts = p.parse_data()
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

  self._validate_path()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

  raise ValueError(msg)

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs) # type: ignore[call-arg]

 File "lncc.py", line 729, in do_table

  args.func(self, args)

 File "lncc.py", line 690, in table_concat

  self.nes.table_concat(table=args.table)

 File "lncc.py", line 276, in table_concat

  tmp_tb = state.tables[table].copy()

ETSI 4th mWT Plugtest Request-Response XMLS Revision: 0.1

KeyError: 'get'

EXCEPTION of type 'KeyError' occurred with message: 'get'

Traceback (most recent call last):

  File "lncc.py", line 292, in table_to_excel

    self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'get'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

  File "lncc.py", line 729, in do_table

    args.func(self, args)

  File "lncc.py", line 698, in table_to_excel

```
self.nes.table_to_excel(args.file, args.tables)

File "lncc.py", line 292, in table_to_excel

self.tables[table].to_excel(writer, sheet_name=table)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

self.close()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

self._save()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

self.book.save(self._handles.handle)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

save_workbook(self, filename)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

writer.save()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save

self.write_data()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

archive.writestr(ARC_WORKBOOK, writer.write())

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

self.write_views()
```

```
File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

  active = get_active_sheet(self.wb)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

  raise IndexError("At least one sheet must be visible")
```

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7f728a9e8d30>

Traceback (most recent call last):

```
File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

  self.close()

File "/usr/lib/python3.8/zipfile.py", line 1838, in close

  self.fp.seek(self.start_dir)
```

ValueError: seek of closed file

2023-02-07 17:48:33,781 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:48:33,802 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'system'

Traceback (most recent call last):

```
File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)
```

File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs) # type: ignore[call-arg]

File "lncc.py", line 729, in do_table

  args.func(self, args)

File "lncc.py", line 683, in table_from_xml

  self.nes.table_from_xml(**kwargs)

File "lncc.py", line 270, in table_from_xml

  n_e.table_from_xml(table, reply, xsl_transform)

File "lncc.py", line 195, in table_from_xml

  self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

  return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

  return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

  data_dicts = p.parse_data()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
TELECOM

Revision: 0.1

self._validate_path()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

raise ValueError(msg)

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

stop = self.onecmd(statement, add_to_history=add_to_history)

File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

stop = func(statement)

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

return func(*args_list, **kwargs) # type: ignore[call-arg]

File "lncc.py", line 729, in do_table

args.func(self, args)

File "lncc.py", line 690, in table_concat

self.nes.table_concat(table=args.table)

File "lncc.py", line 276, in table_concat

tmp_tb = state.tables[table].copy()

KeyError: 'system'

EXCEPTION of type 'KeyError' occurred with message: 'system'

Traceback (most recent call last):

  File "lncc.py", line 292, in table_to_excel

    self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'system'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

    stop = func(statement)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

    return func(*args_list, **kwargs) # type: ignore[call-arg]

  File "lncc.py", line 729, in do_table

    args.func(self, args)

  File "lncc.py", line 698, in table_to_excel

    self.nes.table_to_excel(args.file, args.tables)

ETSI 4th mWT Plugtest Request-Response XMLS

File "lncc.py", line 292, in table_to_excel

  self.tables[table].to_excel(writer, sheet_name=table)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

  self.close()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

  self._save()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

  self.book.save(self._handles.handle)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

  save_workbook(self, filename)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

  writer.save()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save

  self.write_data()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

  archive.writestr(ARC_WORKBOOK, writer.write())

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

  self.write_views()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

active = get_active_sheet(self.wb)

  File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

    raise IndexError("At least one sheet must be visible")

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7f728a9e8d30>

Traceback (most recent call last):

  File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

    self.close()

  File "/usr/lib/python3.8/zipfile.py", line 1838, in close

    self.fp.seek(self.start_dir)

ValueError: seek of closed file

2023-02-07 17:48:33,846 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:48:33,932 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

Traceback (most recent call last):

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

    stop = self.onecmd(statement, add_to_history=add_to_history)

  File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

```
stop = func(statement)

File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

 return func(*args_list, **kwargs)  # type: ignore[call-arg]

File "lncc.py", line 729, in do_table

 args.func(self, args)

File "lncc.py", line 683, in table_from_xml

 self.nes.table_from_xml(**kwargs)

File "lncc.py", line 270, in table_from_xml

 n_e.table_from_xml(table, reply, xsl_transform)

File "lncc.py", line 195, in table_from_xml

 self.tables[table] = pandas.read_xml(self.replies[reply].data_xml,

File "/usr/local/lib/python3.8/dist-packages/pandas/util/_decorators.py", line 331, in wrapper

 return func(*args, **kwargs)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 1088, in read_xml

 return _parse(

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 827, in _parse

 data_dicts = p.parse_data()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 557, in parse_data

 self._validate_path()
```

File "/usr/local/lib/python3.8/dist-packages/pandas/io/xml.py", line 588, in _validate_path

  raise ValueError(msg)

ValueError: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

EXCEPTION of type 'ValueError' occurred with message: xpath does not return any nodes. Be sure row level nodes are in xpath. If document uses namespaces denoted with xmlns, be sure to define namespaces and use them in xpath.

Traceback (most recent call last):

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

  stop = self.onecmd(statement, add_to_history=add_to_history)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

  stop = func(statement)

 File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

  return func(*args_list, **kwargs) # type: ignore[call-arg]

 File "lncc.py", line 729, in do_table

  args.func(self, args)

 File "lncc.py", line 690, in table_concat

  self.nes.table_concat(table=args.table)

 File "lncc.py", line 276, in table_concat

  tmp_tb = state.tables[table].copy()

KeyError: 'get'

EXCEPTION of type 'KeyError' occurred with message: 'get'

Traceback (most recent call last):

　File "lncc.py", line 292, in table_to_excel

　　self.tables[table].to_excel(writer, sheet_name=table)

KeyError: 'get'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

　File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2399, in onecmd_plus_hooks

　　stop = self.onecmd(statement, add_to_history=add_to_history)

　File "/usr/local/lib/python3.8/dist-packages/cmd2/cmd2.py", line 2852, in onecmd

　　stop = func(statement)

　File "/usr/local/lib/python3.8/dist-packages/cmd2/decorators.py", line 382, in cmd_wrapper

　　return func(*args_list, **kwargs) # type: ignore[call-arg]

　File "lncc.py", line 729, in do_table

　　args.func(self, args)

　File "lncc.py", line 698, in table_to_excel

　　self.nes.table_to_excel(args.file, args.tables)

　File "lncc.py", line 292, in table_to_excel

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM
T E L E C O M

Revision: 0.1

```
  self.tables[table].to_excel(writer, sheet_name=table)

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1476, in __exit__

  self.close()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_base.py", line 1480, in close

  self._save()

File "/usr/local/lib/python3.8/dist-packages/pandas/io/excel/_openpyxl.py", line 109, in _save

  self.book.save(self._handles.handle)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/workbook.py", line 386, in save

  save_workbook(self, filename)

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 304, in save_workbook

  writer.save()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 286, in save

  self.write_data()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/writer/excel.py", line 100, in write_data

  archive.writestr(ARC_WORKBOOK, writer.write())

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 150, in write

  self.write_views()

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 137, in write_views

  active = get_active_sheet(self.wb)
```

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

File "/usr/local/lib/python3.8/dist-packages/openpyxl/workbook/_writer.py", line 35, in get_active_sheet

  raise IndexError("At least one sheet must be visible")

IndexError: At least one sheet must be visible

EXCEPTION of type 'IndexError' occurred with message: At least one sheet must be visible

Exception ignored in: <function ZipFile.__del__ at 0x7f728a9e8d30>

Traceback (most recent call last):

  File "/usr/lib/python3.8/zipfile.py", line 1821, in __del__

    self.close()

  File "/usr/lib/python3.8/zipfile.py", line 1838, in close

    self.fp.seek(self.start_dir)

ValueError: seek of closed file

2023-02-07 17:48:33,973 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:48:34,050 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

===

INV_PORT_01

| ETSI 4th mWT Plugtest Request-Response XMLS | **INTRACOM** TELECOM | Revision: 0.1

```
================================================================================


cat INV_PORT_01.txt


set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

# Get

netconf get --filter-file scripts/inventory/INV_PORT_01/ethernet_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_PORT_01/ethernet_transform.xsl

table concat

table to_excel scripts/inventory/INV_PORT_01/INV_PORT_01_get.xlsx

# Get-config

netconf --reply ethernet get-config --source running --filter-file scripts/inventory/INV_PORT_01/ethernet_filter.xml

table from_xml --reply ethernet --table ethernet --xsl-transform scripts/inventory/INV_PORT_01/ethernet_transform.xsl

table concat --table ethernet

table to_excel scripts/inventory/INV_PORT_01/INV_PORT_01_get-config.xlsx --tables ethernet

netconf close-session
```

| ETSI 4th mWT Plugtest Request-Response XMLS | INTRACOM TELECOM | Revision: 0.1

(Cmd) run_script INV_PORT_01.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:35:40,306 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:35:41,056 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:35:41,070 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:35:43,215 - lncc - DEBUG - Success: NETCONF <get> on GX80

NETCONF <get> operation completed: 1 NEs, stored in 'get'

New tables 'get' in each NE, build from XML stored in 'get'

Table 'get' available for group

Wrote Excel file scripts/inventory/INV_PORT_01/INV_PORT_01_get.xlsx, with 1 tabs: ['get']

2023-02-07 17:35:43,422 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:35:43,523 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'ethernet'

New tables 'ethernet' in each NE, build from XML stored in 'ethernet'

Table 'ethernet' available for group

ETSI 4th mWT Plugtest Request-Response XMLS

Revision: 0.1

Wrote Excel file scripts/inventory/INV_PORT_01/INV_PORT_01_get-config.xlsx, with 1 tabs: ['ethernet']

2023-02-07 17:35:43,570 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:35:43,640 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

==

INV_SRV_01

==

cat INV_SRV_01.txt

set logging_config logging_config.yaml

ne add GX80 --host 172.28.103.107 --username netconf --password netconf --port 830

connect

Get

netconf get --filter-file scripts/inventory/INV_SRV_01/bridge_filter.xml

table from_xml --xsl-transform scripts/inventory/INV_SRV_01/vlans_transform.xsl

table concat

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

table to_excel scripts/inventory/INV_SRV_01/INV_SRV_01_get.xlsx

Get-config

netconf --reply SRV get-config --source running --filter-file scripts/inventory/INV_SRV_01/bridge_filter.xml

table from_xml --reply SRV --table SRV --xsl-transform scripts/inventory/INV_SRV_01/vlans_transform.xsl

table concat --table SRV

table to_excel scripts/inventory/INV_SRV_01/INV_SRV_01_get-config.xlsx --tables SRV

netconf close-session

(Cmd) run_script INV_SRV_01.txt

logging_config - was: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

now: <_io.TextIOWrapper name='logging_config.yaml' mode='r' encoding='UTF-8'>

NE GX80 added, current: 1 NEs

2023-02-07 17:40:39,538 - lncc - DEBUG - Start: NETCONF connect() to GX80

2023-02-07 17:40:40,296 - lncc - DEBUG - Success: NETCONF connect() to GX80

1 new connections, 1 total: ['GX80']

2023-02-07 17:40:40,312 - lncc - DEBUG - Start: NETCONF <get> on GX80, args: ['filter']

2023-02-07 17:40:40,428 - lncc - DEBUG - Success: NETCONF <get> on GX80

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1

NETCONF <get> operation completed: 1 NEs, stored in 'get'

New tables 'get' in each NE, build from XML stored in 'get'

Table 'get' available for group

Wrote Excel file scripts/inventory/INV_SRV_01/INV_SRV_01_get.xlsx, with 1 tabs: ['get']

2023-02-07 17:40:40,623 - lncc - DEBUG - Start: NETCONF <get-config> on GX80, args: ['source', 'filter']

2023-02-07 17:40:40,637 - lncc - DEBUG - Success: NETCONF <get-config> on GX80

NETCONF <get-config> operation completed: 1 NEs, stored in 'SRV'

New tables 'SRV' in each NE, build from XML stored in 'SRV'

Table 'SRV' available for group

Wrote Excel file scripts/inventory/INV_SRV_01/INV_SRV_01_get-config.xlsx, with 1 tabs: ['SRV']

2023-02-07 17:40:40,693 - lncc - DEBUG - Start: NETCONF <close-session> on GX80, args: []

2023-02-07 17:40:40,754 - lncc - DEBUG - Success: NETCONF <close-session> on GX80

NETCONF <close-session> operation completed: 1 NEs, stored in 'close-session'

ETSI 4th mWT Plugtest Request-Response XMLS

INTRACOM TELECOM

Revision: 0.1