@ **FILE NAME: M_CTC_ID_015.txt**

@ **TEST SCOPE: M PLANE O-RAN CONFORMANCE**

@ **Software Release for MC1:   v1.0.0**

Test Description : This test validates that the O-RU can successfully perform a software download and software install procedure.

This scenario corresponds the following chapters in [3]:

5. Software Management.

==

********** Connect to the NETCONF Server **********

==

> listen --ssh --login operator

    Waiting 60s for an SSH Call Home connection on port 4334...

    The authenticity of the host '::ffff:192.168.4.39' cannot be established.

    ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83

    Interactive SSH Authentication done.

> status

Current NETCONF session:

ID   : 1

Host   : 192.168.4.39

Port   : 830

Transport : SSH

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:candidate:1.0 urn:ietf:params:netconf:capability:rollback-on-error:1.0

urn:ietf:params:netconf:capability:validate:1.1 urn:ietf:params:netconf:capability:startup:1.0 urn:ietf:params:netconf:capability:xpath:1.0

urn:ietf:params:netconf:capability:with-defaults:1.0?basic-mode=explicit&also-supported=report-all,report-all-tagged,trim,explicit

urn:ietf:params:netconf:capability:notification:1.0 urn:ietf:params:netconf:capability:interleave:1.0

urn:ietf:params:xml:ns:yang:ietf-yang-metadata?module=ietf-yang-metadata&revision=2016-08-05

urn:ietf:params:xml:ns:yang:1?module=yang&revision=2017-02-20

urn:ietf:params:xml:ns:yang:ietf-inet-types?module=ietf-inet-types&revision=2013-07-15

urn:ietf:params:xml:ns:yang:ietf-yang-types?module=ietf-yang-types&revision=2013-07-15

urn:ietf:params:netconf:capability:yang-library:1.1?revision=2019-01-04&content-id=63

urn:sysrepo:plugind?module=sysrepo-plugind&revision=2020-12-10

urn:ietf:params:xml:ns:yang:ietf-netconf-acm?module=ietf-netconf-acm&revision=2018-02-14

urn:ietf:params:xml:ns:netconf:base:1.0?module=ietf-netconf&revision=2013-09-29&features=writable-running,candidate,rollback-on-error,validate,startup,url,xpath 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-netconf-notifications?module=ietf-netconf-notifications&revision=2012-02-06

urn:ietf:params:xml:ns:yang:ietf-netconf-monitoring?module=ietf-netconf-monitoring&revision=2010-10-04

urn:ietf:params:xml:ns:netconf:notification:1.0?module=notifications&revision=2008-07-14

urn:ietf:params:xml:ns:netmod:notification?module=nc-notifications&revision=2008-07-14

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:iana-crypt-hash?module=iana-crypt-hash&revision=2014-08-06 urn:notification_history?module=notification_history

urn:ietf:params:xml:ns:yang:iana-if-type?module=iana-if-type&revision=2017-01-19

==

> subscribe

==

Ok

==

Initial Get Filter

==

==

> get --filter-xpath /o-ran-software-management:software-inventory
==

```xml
<?xml version="1.0" ?>
<data xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0">
 <software-inventory xmlns="urn:o-ran:software-management:1.0">
  <software-slot>
   <name>swSlot1</name>
   <status>VALID</status>
   <active>true</active>
   <running>true</running>
   <access>READ_WRITE</access>
   <product-code>STL=O-RU</product-code>
   <vendor-code>VN</vendor-code>
   <build-id>factory_img</build-id>
   <build-name>Beta Release</build-name>
   <build-version>1.0.0</build-version>
   <files>
    <name>boot</name>
    <version>1.0.0</version>
    <local-path>/media/sd-mmcblk0p1/BOOT0001.BIN</local-path>
    <integrity>OK</integrity>
   </files>
   <files>
    <name>kernel</name>
    <version>1.0.0</version>
    <local-path>/media/sd-mmcblk0p1/image0001.ub</local-path>
    <integrity>OK</integrity>
   </files>
   <files>
    <name>rootfs</name>
    <version>1.0.0</version>
    <local-path>/media/sd-mmcblk0p2/</local-path>
    <integrity>OK</integrity>
   </files>
  </software-slot>
  <software-slot>
   <name>swSlot2</name>
   <status>VALID</status>
   <active>false</active>
   <running>false</running>
   <access>READ_WRITE</access>
   <product-code>STL=O-RU</product-code>
```

```xml
<vendor-code>VN</vendor-code>
<build-id>factory_img</build-id>
<build-name>Beta Release</build-name>
<build-version>1.0.0</build-version>
<files>
 <name>boot</name>
 <version>1.0.0</version>
 <local-path>/media/sd-mmcblk0p1/BOOT0002.BIN</local-path>
 <integrity>OK</integrity>
</files>
<files>
 <name>kernel</name>
 <version>1.0.0</version>
 <local-path>/media/sd-mmcblk0p1/image0002.ub</local-path>
 <integrity>OK</integrity>
</files>
<files>
 <name>rootfs</name>
 <version>1.0.0</version>
 <local-path>/media/sd-mmcblk0p3/</local-path>
 <integrity>OK</integrity>
</files>
</software-slot>
<software-slot>
 <name>swRecoverySlot</name>
 <status>VALID</status>
 <active>false</active>
 <running>false</running>
 <access>READ_ONLY</access>
 <product-code>STL=O-RU</product-code>
 <vendor-code>VN</vendor-code>
 <build-id>factory_img</build-id>
 <build-name>Beta Release</build-name>
 <build-version>1.0.0</build-version>
 <files>
  <name>boot</name>
  <version>1.0.0</version>
  <local-path>/media/sd-mmcblk0p1/BOOT0003.BIN</local-path>
  <integrity>OK</integrity>
 </files>
 <files>
  <name>kernel</name>
  <version>1.0.0</version>
  <local-path>/media/sd-mmcblk0p1/golden.ub</local-path>
  <integrity>OK</integrity>
 </files>
 <files>
  <name>rootfs</name>
  <version>1.0.0</version>
```

```
    <local-path>/media/sd-mmcblk0p1/golden.ub</local-path>
    <integrity>OK</integrity>
   </files>
  </software-slot>
 </software-inventory>
</data>
```

===

Step 1 : TER NETCONF Client triggers <rpc><software-download>

===

==

> user-rpc

==

==

******* Replace with below xml ********
==

```
<software-download xmlns="urn:o-ran:software-management:1.0">
<remote-file-path>/home/vvdn/Software_release/B1/RADI_BN28v1.0.4.zip</remote-file-path>
<password>
<password>vvdn</password>
</password>
<server>
<keys>
<algorithm>secp256r1</algorithm>
<public-key>AAAAB3NzaC1yc2EAAAADAQABAAABAQDuVt6Rlu+fBupZHnws6xDNkK7k2lmQrjtYrJG6M+yQnpKQL/yqRcnLkSdQYJWJ
+Zlz3oPipBBTcUq9GqIobokfogL/SQnwqscISIV97TFvmPwN6iVNl4ogWjf+McWr7ZWjU3rrLjB1y/dIlpSQDV9g+b+IayIZN3hxH0HijKQSG/8q
45B5uFQAPEr3+s5k4DuZXP5il81iSbhzq0f7/uG/VeA2cKBrum+adqI3mvM/GCqfvoE2+S+ghK5Mtgx9gnNUQDvN8JcZRFm9C0ING66U73d+w
OgbaFF5VKT0X3iDWHj9AEW1j8sE8Q5ymtlW5gyVs/4mDZH7d1eCWiawOiiv</public-key>
</keys>
</server>
</software-download>
```

==
******* RPC Reply ********
==

```
<nc:rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:4dd6b7d4-cd06-4a5a-8558-52cf8f23a4c0"><status
xmlns="urn:o-ran:software-management:1.0">STARTED</status><notification-timeout
xmlns="urn:o-ran:software-management:1.0">30</notification-timeout></nc:rpc-reply>
```

==
Step 2 : **O-RU NETCONF Server sends <notification><download-event> with status COMPLETED to TER NETCONF Client**
==

<?xml version="1.0" ?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
 <eventTime>2103-10-28T10:01:46Z</eventTime>
 <download-event xmlns="urn:o-ran:software-management:1.0">
  <file-name>FILE_NOT_PROCESSED</file-name>
  <status>PROTOCOL_ERROR</status>
  <error-message>sw download performed using sftp only</error-message>
 </download-event>
</notification>

==
   ############# SYSTEM LOGS #############
==
Oct 28 10:01:42 mcb1 daemon.info netopeer2-server[985]: Trying to connect via IPv4 to 192.168.4.15:4334.

Oct 28 10:01:42 mcb1 daemon.info netopeer2-server[985]: getsockopt() error (Connection refused).

Oct 28 10:01:43 mcb1 daemon.info netopeer2-server[985]: Trying to connect via IPv4 to 192.168.4.15:4334.

Oct 28 10:01:43 mcb1 daemon.info netopeer2-server[985]: getsockopt() error (Connection refused).

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Trying to connect via IPv4 to 192.168.4.15:4334.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Successfully connected to 192.168.4.15:4334 over IPv4.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Session 89 (user "root", CID 1) created.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Received an SSH message "request-service" of subtype "ssh-userauth".

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Received an SSH message "request-auth" of subtype "password".

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: User "operator" authenticated.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Received an SSH message "request-channel-open" of subtype "session".

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Received an SSH message "request-channel" of subtype "subsystem".

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Call Home client "default-client" session 1 established.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Session 90 (user "root", CID 1) created.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There are no subscribers for "ietf-netconf-notifications" notifications.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Generated new event (netconf-session-start).

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/ietf-netconf:get" with ID 1 priority 0 for 1 subscribers.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Processing "/ietf-netconf:get" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 1 priority 0 succeeded.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 1 event new RPC.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/ietf-netconf:get" with ID 2 priority 0 for 1 subscribers.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Processing "/ietf-netconf:get" "rpc" event with ID 2 priority 0 (remaining 1 subscribers).

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref
"/ietf-keystore:keystore/ietf-keystore:asymmetric-keys/ietf-keystore:asymmetric-key/ietf-keystore:name" with the value "genkey", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref
"/ietf-keystore:keystore/ietf-keystore:asymmetric-keys/ietf-keystore:asymmetric-key/ietf-keystore:name" with the value "genkey", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-interfaces:interfaces/ietf-interfaces:interface/ietf-interfaces:name" with the value "eth1.100", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-interfaces:interfaces/ietf-interfaces:interface[ietf-interfaces:name = current()/../../interface-name]/o-ran-interfaces:vlan-id" with the value "100", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/o-ran-processing-element:processing-elements/o-ran-processing-element:ru-elements/o-ran-processing-element:name" with the value "element1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-tx-endpoints/name" with the value "slltx-endpoint0", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-tx-endpoints/name" with the value "slltx-endpoint1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-tx-endpoints/name" with the value "slltx-endpoint2", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-tx-endpoints/name" with the value "slltx-endpoint3", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-rx-endpoints/name" with the value "sllrx-endpoint0", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-rx-endpoints/name" with

the value "sllrx-endpoint1", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-rx-endpoints/name" with the value "sllrx-endpoint2", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/user-plane-configuration/static-low-level-rx-endpoints/name" with the value "sllrx-endpoint3", but it is not required.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:44 mcb1 daemon.info netopeer2-server[985]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 1.

Oct 28 10:01:44 mcb1 user.notice fw_manager[1066]: RPC #1 recieved. xpath -> /o-ran-software-management:software-inventory

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Event "operational" with ID 1 succeeded.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Successful processing of "rpc" event with ID 2 priority 0 (remaining 0 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 2 priority 0 succeeded.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 3 event new RPC.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/ietf-netconf:get-config" with ID 1 priority 0 for 1 subscribers.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Processing "/ietf-netconf:get-config" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 1 priority 0 succeeded.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port1", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port1", but it is not required.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 2 event new RPC.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/notifications:create-subscription" with ID 1 priority 0 for 1 subscribers.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Processing "/notifications:create-subscription" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 1 priority 0 succeeded.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 3 event new RPC.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/ietf-netconf:get" with ID 3 priority 0 for 1 subscribers.

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Processing "/ietf-netconf:get" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).

Oct 28 10:01:45 mcb1 daemon.info netopeer2-server[985]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 2.

Oct 28 10:01:45 mcb1 user.notice fw_manager[1066]: RPC #2 recieved. xpath -> /o-ran-software-management:software-inventory

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Event "operational" with ID 2 succeeded.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 3 priority 0 succeeded.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "STL=O-RU", but it is not required.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 3 event new RPC.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Published event "rpc" "/o-ran-software-management:software-download" with ID 1 priority 0 for 1 subscribers.

Oct 28 10:01:46 mcb1 user.notice fw_manager[1066]: RPC #1 recieved. xpath -> /o-ran-software-management:software-download

Oct 28 10:01:46 mcb1 user.err fw_manager[1066]: swDownload failed :Reason: sw download performed using sftp only

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Event "rpc" with ID 1 priority 0 succeeded.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 2 event new RPC.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "o-ran-software-management" event with ID 1.

Oct 28 10:01:46 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:47 mcb1 user.notice SYNCMNGR[1312]: Received message from S-Plane

Oct 28 10:01:48 mcb1 user.info FAULT MANAGER[1000]: sendData : Source ID: 21

Oct 28 10:01:48 mcb1 user.info FAULT MANAGER[1000]: sendData : Fault ID: 23

Oct 28 10:01:48 mcb1 user.info FAULT MANAGER[1000]: sendData : FAULT_IS_CLEARED: False

Oct 28 10:01:48 mcb1 user.info FAULT MANAGER[1000]: sendData : FAULT_SEVERITY: 2

Oct 28 10:01:48 mcb1 user.info FAULT MANAGER[1000]: sendData : FAULT_TIME: 2103-10-28T10:01:48Z

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: There is no instance of

"/notification_history:history/module-notification[module-name='Module']", but it is not required.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: There is no instance of

"/notification_history:history/module-notification[module-name='Module']/module-name", but it is not required.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "ietf-netconf-notifications" event with ID 1.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: There is no instance of

"/notification_history:history/module-notification[module-name='Module']/notif-error", but it is not required.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "ietf-netconf-notifications" event with ID 2.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: There is no instance of

"/notification_history:history/module-notification[module-name='Module']/alert", but it is not required.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "ietf-netconf-notifications" event with ID 3.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 3 priority 0 (remaining 0 subscribers).

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "o-ran-fm" event with ID 1.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Resolving unresolved data nodes and their constraints...

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: There is no instance of

"/notification_history:history/module-notification[module-name='Module']/epochtime", but it is not required.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: All data nodes and constraints resolved.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Processing "notif" "ietf-netconf-notifications" event with ID 4.

Oct 28 10:01:48 mcb1 daemon.info netopeer2-server[985]: Successful processing of "notif" event with ID 4 priority 0 (remaining 0 subscribers).

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 2 event new RPC.

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: Session 1: thread 2 event session terminated.

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: There are no subscribers for "ietf-netconf-notifications" notifications.

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: Generated new event (netconf-session-end).

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: Call Home client "default-client" session terminated.

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: Trying to connect via IPv4 to 192.168.4.15:4334.

Oct 28 10:01:51 mcb1 daemon.info netopeer2-server[985]: getsockopt() error (Connection refused).

Oct 28 10:01:51 mcb1 auth.info sshd[5174]: Accepted password for operator from 192.168.4.15 port 42886 ssh2

Oct 28 10:01:51 mcb1 authpriv.info sshd[5174]: pam_unix(sshd:session): session opened for user operator by (uid=0)

Expected Result : The O-RU NETCONF Server determines that the software file is invalid and sends <notification><install event><status> to the TER NETCONF Client. The Field <status> is correctly updated with one of the following status: FILE_ERROR or INTEGRITY_ERROR.

```
=====================================================================
  ***************** Actual Result *****************
=====================================================================


=====================================================================
***************** FAIL_REASON *****************
=====================================================================
PROTOCOL_ERROR
=====================================================================
```

O-RU Software Update (negative case)   =   FAIL

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