@ FILE NAME: M_CTC_ID_014.txt

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for LPRU: v1.0.16

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

===

********* 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:192.168.174.37' 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   : 8

  Host   : 192.168.174.37

  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=61
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,valid
ate,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>false</active>
   <running>false</running>
   <access>READ_WRITE</access>
   <product-code>VVDN=O-RU</product-code>
   <vendor-code>VN</vendor-code>
   <build-id>factory_img</build-id>
   <build-name>Beta Release</build-name>
   <build-version>1.0.7</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>true</active>
   <running>true</running>
   <access>READ_WRITE</access>
   <product-code>VVDN O-RU</product-code>
```

```xml
<vendor-code>VN</vendor-code>
<build-id>90f0b6c</build-id>
<build-name>Beta Release</build-name>
<build-version>1.0.16</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>VVDN=O-RU</product-code>
 <vendor-code>VN</vendor-code>
 <build-id>factory_img</build-id>
 <build-name>Beta Release</build-name>
 <build-version>1.0.7</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 ********
==

```xml
<software-download xmlns="urn:o-ran:software-management:1.0">
<remote-file-path>sftp://root@192.168.174.42:22/home/vvdn/Downloads/lpru_logs/M_CTC_ID_016_16_42_19_21_11_2022.pdf</remote-file-path>
<password>
<password>vvdntech</password>
</password>
<server>
<keys>
<algorithm>secp256r1</algorithm>
<public-key>AAAAB3NzaC1yc2EAAAADAQABAAABAQC0EVfAv8Ml4ZsCWkGxxv36AwuOewJuHXxsiJDNYet2n02N9cbZgifa+Lt0ni4dG
jERFEq2YZCnaX4cuFnsLq8bUjBAuy0hyU2ACb5FohzIbZnMW4cUGkkFu453vTMA/SIZU47wK7Q5HbrTcJefuDkIUwPb+tnP7iT9T7YMx4c6
2h6I9O/wt2hq8RMAC8PT1JAeVebylIrKbcI5g3N2NI6D8OGD0Coick7iczIlor/9ylshjdgiQdi8Bxnq9NhzD0zA2WvQI9eytlvut/uA6KWaiwF9C+O
C7FhIf1O7jDoYXvZUlQa90c0EG4O962JB3SYxWchl4gYxmr6zAtu3TT4j</public-key>
</keys>
</server>
</software-download>
```

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

```xml
<nc:rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:007a6df3-be84-4612-8e79-827a45796285"><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>2000-11-04T00:12:18Z</eventTime>
 <download-event xmlns="urn:o-ran:software-management:1.0">
  <file-name>M_CTC_ID_016_16_42_19_21_11_2022.pdf</file-name>
  <status>AUTHENTICATION_ERROR</status>
  <error-message>Credentials validation failed</error-message>
 </download-event>
</notification>

==
############ SYSTEM LOGS ##############
==

Nov 4 00:12:15 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:12:15 vvdn_lpru daemon.info netopeer2-server[859]: getsockopt() error (Connection refused).

Nov 4 00:12:16 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:12:16 vvdn_lpru daemon.info netopeer2-server[859]: getsockopt() error (Connection refused).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Successfully connected to 192.168.174.42:4334 over IPv4.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Session 166 (user "root", CID 1) created.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-service" of subtype "ssh-userauth".

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-auth" of subtype "password".

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: User "operator" authenticated.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-channel-open" of subtype "session".

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-channel" of subtype "subsystem".

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Call Home client "default-client" session 8 established.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Session 167 (user "root", CID 1) created.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There are no subscribers for "ietf-netconf-notifications" notifications.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Generated new event (netconf-session-start).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get" with ID 14 priority 0 for 1 subscribers.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get" "rpc" event with ID 14 priority 0 (remaining 1 subscribers).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 14 priority 0 (remaining 0 subscribers).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 14 priority 0 succeeded.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 1 event new RPC.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get" with ID 15 priority 0 for 1 subscribers.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get" "rpc" event with ID 15 priority 0 (remaining 1 subscribers).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 10.

Nov 4 00:12:17 vvdn_lpru user.notice fw_manager[928]: RPC #10 recieved. xpath -> /o-ran-software-management:software-inventory

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Event "operational" with ID 10 succeeded.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref
"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN=O-RU", but it is not required.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref
"/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN O-RU", but it is not required.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 15 priority 0 (remaining 0 subscribers).

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 15 priority 0 succeeded.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:17 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 2 event new RPC.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get-config" with ID 7 priority 0 for 1 subscribers.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get-config" "rpc" event with ID 7 priority 0 (remaining 1 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 7 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 7 priority 0 succeeded.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port0", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

"/ietf-hardware:hardware/ietf-hardware:component/ietf-hardware:name" with the value "ru-port0", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 4 event new RPC.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/notifications:create-subscription" with ID 4 priority 0 for 1 subscribers.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/notifications:create-subscription" "rpc" event with ID 4 priority 0 (remaining 1 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/sys_monitor", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 1.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 4 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 4 priority 0 succeeded.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 2 event new RPC.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get" with ID 16 priority 0 for 1 subscribers.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get" "rpc" event with ID 16 priority 0 (remaining 1 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 11.

Nov 4 00:12:18 vvdn_lpru user.notice fw_manager[928]: RPC #11 recieved. xpath -> /o-ran-software-management:software-inventory

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/nw_manager", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 2.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/log_manager", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 3.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 3 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Event "operational" with ID 11 succeeded.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN=O-RU", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN O-RU", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN=O-RU", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 16 priority 0 (remaining 0 subscribers).

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 16 priority 0 succeeded.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN=O-RU", but it is not required.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 2 event new RPC.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/o-ran-software-management:software-download" with ID 1 priority 0 for 1 subscribers.

Nov 4 00:12:18 vvdn_lpru user.notice fw_manager[928]: RPC #1 recieved. xpath -> /o-ran-software-management:software-download

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 1 priority 0 succeeded.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 4 event new RPC.

Nov 4 00:12:18 vvdn_lpru user.err fw_manager[928]: swDownload failed :Reason: Credentials validation failed

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "o-ran-software-management" event with ID 1.

Nov 4 00:12:18 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/fault_manager", but it is not required.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 4.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 4 priority 0 (remaining 0 subscribers).

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/radio_manager", but it is not required.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 5.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 5 priority 0 (remaining 0 subscribers).

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/um_manager", but it is not required.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 6.

Nov 4 00:12:19 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 6 priority 0 (remaining 0 subscribers).

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/fw_manager", but it is not required.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 7.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 7 priority 0 (remaining 0 subscribers).

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/sync_manager", but it is not required.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 8.

Nov 4 00:12:20 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 8 priority 0 (remaining 0 subscribers).

Nov 4 00:12:21 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:12:21 vvdn_lpru daemon.info netopeer2-server[859]: There is no instance of "/vvdn_lpru-wdm:system-apps/operations_manager", but it is not required.

Nov 4 00:12:21 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:12:21 vvdn_lpru daemon.info netopeer2-server[859]: Processing "notif" "ietf-netconf-notifications" event with ID 9.

Nov 4 00:12:21 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "notif" event with ID 9 priority 0 (remaining 0 subscribers).

Nov 4 00:12:22 vvdn_lpru user.err FAULT MANAGER[873]: sendData : Source ID: 17

Nov 4 00:12:22 vvdn_lpru user.err FAULT MANAGER[873]: sendData : Fault ID: 23

Nov 4 00:12:22 vvdn_lpru user.err FAULT MANAGER[873]: sendData : FAULT_IS_CLEARED: FALSE

Nov 4 00:12:22 vvdn_lpru user.err FAULT MANAGER[873]: sendData : FAULT_SEVERITY: 2

Nov 4 00:12:22 vvdn_lpru user.err FAULT MANAGER[873]: sendData : FAULT_TIME: 2000-11-04T00:12:22Z

Nov 4 00:12:23 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 3 event new RPC.

Nov 4 00:12:23 vvdn_lpru daemon.info netopeer2-server[859]: Session 8: thread 3 event session terminated.

Nov 4 00:12:24 vvdn_lpru daemon.info netopeer2-server[859]: There are no subscribers for "ietf-netconf-notifications" notifications.

Nov 4 00:12:24 vvdn_lpru daemon.info netopeer2-server[859]: Generated new event (netconf-session-end).

Nov 4 00:12:24 vvdn_lpru daemon.info netopeer2-server[859]: Call Home client "default-client" session terminated.

Nov 4 00:12:24 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:12:24 vvdn_lpru daemon.info netopeer2-server[859]: getsockopt() error (Connection refused).

Nov 4 00:12:24 vvdn_lpru authpriv.debug sshd[11765]: pam_unix(sshd:account): account operator has password changed in future

Nov 4 00:12:24 vvdn_lpru auth.info sshd[11765]: Accepted password for operator from 192.168.174.42 port 53066 ssh2

Nov 4 00:12:24 vvdn_lpru authpriv.info sshd[11765]: pam_unix(sshd:session): session opened for user operator by (uid=0)

Expected Result : The O-RU NETCONF Server sends

<notification><install-event><status> to the TER NETCONF Client. Field <status>

contains the value COMPLETED to indicate the successful installation of software to the

desired slot.

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


========================================================================
****************** FAIL_REASON ******************
========================================================================
AUTHENTICATION_ERROR
========================================================================
```

O-RU Software Update and Install   =   FAIL

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