



@ FILE NAME: Firmware_Upgrade.txt

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for LPRU: v5.0.4

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:192.168.4.56' 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      : 2
```

```
Host     : 192.168.4.56
```

```
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 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>90f0b6c</build-id>
      <build-name>Beta Release</build-name>
      <build-version>5.0.4</build-version>
      <files>
        <name>boot</name>
        <version>1.0.0</version>
        <local-path>/media/sd-mmcb1k0p1/BOOT0001.BIN</local-path>
        <integrity>OK</integrity>
      </files>
      <files>
        <name>kernel</name>
        <version>1.0.0</version>
        <local-path>/media/sd-mmcb1k0p1/image0001.ub</local-path>
        <integrity>OK</integrity>
      </files>
      <files>
        <name>rootfs</name>
        <version>1.0.0</version>
        <local-path>/media/sd-mmcb1k0p2/</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>VVDN O-RU</product-code>
```

```
<vendor-code>VN</vendor-code>
<build-id>90f0b6c</build-id>
<build-name>Beta Release</build-name>
<build-version>1.0.14</build-version>
<files>
  <name>boot</name>
  <version>1.0.0</version>
  <local-path>/media/sd-mmcb1k0p1/BOOT0002.BIN</local-path>
  <integrity>OK</integrity>
</files>
<files>
  <name>kernel</name>
  <version>1.0.0</version>
  <local-path>/media/sd-mmcb1k0p1/image0002.ub</local-path>
  <integrity>OK</integrity>
</files>
<files>
  <name>rootfs</name>
  <version>1.0.0</version>
  <local-path>/media/sd-mmcb1k0p3/</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-mmcb1k0p1/BOOT0003.BIN</local-path>
    <integrity>OK</integrity>
  </files>
  <files>
    <name>kernel</name>
    <version>1.0.0</version>
    <local-path>/media/sd-mmcb1k0p1/golden.ub</local-path>
    <integrity>OK</integrity>
  </files>
  <files>
    <name>rootfs</name>
    <version>1.0.0</version>
```

```
<local-path>/media/sd-mmcbk0p1/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>sftp://vvdn@192.168.4.15:22/home/vvdn/Videos/ORAN-Automation/CI_CD/LOGS/LPRU/Firmware_Upgrade_12_40_23_2_2
_2023.pdf</remote-file-path>
<password>
<password>vvdntech</password>
</password>
<server>
<keys>
<algorithm>secp256r1</algorithm>
<public-key>AAAAB3NzaC1yc2EAAAADAQABAAQCAQC0EVfAv8MI4ZsCWkGxxv36AwuOewJuHXxsiJDNYet2n02N9cbZgifa+Lt0ni4dG
jERFEq2YZCnaX4cuFnsLq8bUjBAuy0hyU2ACb5FohzIbZnMW4cUGkkFu453vTMA/SIZU47wK7Q5HbrTcJefuDkIUwPb+tnP7iT9T7YMx4c6
2h6I9O/wt2hq8RMAC8PT1JAeVebylIrKbcI5g3N2NI6D8OGD0Coick7iczIlor/9ylshjdgIQdi8Bxnq9NhZD0zA2WvQI9eytlvut/uA6KWaiwF9C+O
C7FhIf1O7jDoYXvZUIQa90c0EG4O962JB3SYxWchl4gYxmr6zAtu3TT4j</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:dc11df80-2983-4b7a-a08a-cb700d7c93bd"><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>2103-04-12T16:39:35Z</eventTime>
  <download-event xmlns="urn:o-ran:software-management:1.0">
    <file-name>Firmware_Upgrade_12_40_23_2_2_2023.pdf</file-name>
    <status>COMPLETED</status>
  </download-event>
</notification>
```

=====

> user-rpc

=====

=====

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

=====

```
<software-install xmlns="urn:o-ran:software-management:1.0">
  <slot-name>swSlot2</slot-name>
  <file-names>/home/vvvn/Videos/ORAN-Automation/CI_CD/LOGS/LPRU/Firmware_Upgrade_12_40_23_2_2_2023.pdf</file-names>
</software-install>
```

=====

******* RPC Reply *******

=====

```
<nc:rpc-reply xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="urn:uuid:4ede1f82-78d6-4ff1-a315-57a992694a61"><status
xmlns="urn:o-ran:software-management:1.0">STARTED</status></nc:rpc-reply>
```

=====

Step 4 and 5 : O-RU NETCONF Server sends <notification><install-event> with status COMPLETED to TER NETCONF Client

=====

```
<?xml version="1.0" ?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>2103-04-12T16:39:36Z</eventTime>
  <install-event xmlns="urn:o-ran:software-management:1.0">
    <slot-name>swSlot2</slot-name>
    <status>FILE_ERROR</status>
    <error-message>unzip failed</error-message>
  </install-event>
</notification>
```

=====

SYSTEM LOGS

```
=====
Apr 12 16:39:26 garuda daemon.info netopeer2-server[860]: Trying to connect via IPv4 to 192.168.4.15:4334.
Apr 12 16:39:26 garuda daemon.info netopeer2-server[860]: getsockopt() error (Connection refused).
Apr 12 16:39:26 garuda user.notice SYNCMNGR[1176]: Received message from S-Plane
Apr 12 16:39:27 garuda daemon.info netopeer2-server[860]: Trying to connect via IPv4 to 192.168.4.15:4334.
Apr 12 16:39:27 garuda daemon.info netopeer2-server[860]: getsockopt() error (Connection refused).
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Trying to connect via IPv4 to 192.168.4.15:4334.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Successfully connected to 192.168.4.15:4334 over IPv4.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Session 73 (user "root", CID 1) created.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-service" of subtype "ssh-userauth".
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-auth" of subtype "password".
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: User "operator" authenticated.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-channel-open" of subtype "session".
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-channel" of subtype "subsystem".
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Call Home client "default-client" session 2 established.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Session 74 (user "root", CID 1) created.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: There are no subscribers for "ietf-netconf-notifications" notifications.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Generated new event (netconf-session-start).
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 2 priority 0 for 1 subscribers.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 2 priority 0 (remaining 1 subscribers).
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 2 priority 0 (remaining 0 subscribers).
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 2 priority 0 succeeded.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Session 2: thread 2 event new RPC.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 3 priority 0 for 1 subscribers.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 2.
Apr 12 16:39:28 garuda user.notice fw_manager[930]: RPC #2 recieved. xpath -> /o-ran-software-management:software-inventory
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 2 succeeded.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
```


Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 3 priority 0 succeeded.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Session 2: thread 1 event new RPC.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get-config" with ID 1 priority 0 for 1 subscribers.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get-config" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 1 priority 0 succeeded.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:28 garuda daemon.info netopeer2-server[860]: Session 2: thread 4 event new RPC.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/notifications:create-subscription" with ID 1 priority 0 for 1 subscribers.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Processing "/notifications:create-subscription" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 1 priority 0 succeeded.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Session 2: thread 1 event new RPC.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 4 priority 0 for 1 subscribers.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 4 priority 0 (remaining 1 subscribers).

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 3.

Apr 12 16:39:29 garuda user.notice fw_manager[930]: RPC #3 recieved. xpath -> /o-ran-software-management:software-inventory

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: There is no instance of "/stli_giru-wdm:system-apps/operations_manager", but it is not required.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Processing "notif" "ietf-netconf-notifications" event with ID 1.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 3 succeeded.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 4 priority 0 (remaining 0 subscribers).

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 4 priority 0 succeeded.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: 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.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Session 2: thread 3 event new RPC.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/o-ran-software-management:software-download" with ID 1 priority 0 for 1 subscribers.

Apr 12 16:39:29 garuda user.notice fw_manager[930]: RPC #1 recieved. xpath -> /o-ran-software-management:software-download

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 1 priority 0 succeeded.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:29 garuda daemon.info netopeer2-server[860]: Session 2: thread 1 event new RPC.

Apr 12 16:39:35 garuda user.notice fw_manager[930]: Function isDownloadCompleted setting error code 0

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: Processing "notif" "o-ran-software-management" event with ID 1.

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: Must condition "/software-inventory/software-slot[name = current()][active = 'false' and running = 'false']" not satisfied, but it is not required.

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:39:35 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 4.

Apr 12 16:39:35 garuda user.notice fw_manager[930]: RPC #4 recieved. xpath -> /o-ran-software-management:software-inventory

Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 4 succeeded.

Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: 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.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/o-ran-software-management:software-install" with ID 1
priority 0 for 1 subscribers.
Apr 12 16:39:36 garuda user.notice fw_manager[930]: RPC #1 recieved. xpath -> /o-ran-software-management:software-install
Apr 12 16:39:36 garuda user.notice fw_manager[930]: swSlot2 selected
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 1 priority 0 succeeded.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Session 2: thread 2 event new RPC.
Apr 12 16:39:36 garuda user.err fw_manager[930]: swInstall : Unzip failed with code 256
Apr 12 16:39:36 garuda user.err fw_manager[930]: swInstall failed :Reason: unzip failed
Apr 12 16:39:36 garuda user.notice fw_manager[930]: RPC #5 recieved. xpath -> /o-ran-software-management:software-inventory
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: There is no leafref "/software-inventory/software-slot/name" with the value
"swSlot2", but it is not required.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Processing "notif" "o-ran-software-management" event with ID 2.
Apr 12 16:39:36 garuda daemon.info netopeer2-server[860]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).
Apr 12 16:39:37 garuda auth.info sshd[8267]: Accepted password for operator from 192.168.4.15 port 58290 ssh2
Apr 12 16:39:37 garuda authpriv.info sshd[8267]: pam_unix(sshd:session): session opened for user operator by (uid=0)

```

Expected Result : 1. The status of the software slot used for software activation remains VALID (it is unchanged) and the parameter "active" remains "True". The parameter "running" is set to True.

2. Status of the software slot containing the previous version of software used by device remains VALID, the parameter "active" remains False. The parameter "running" is set to False.

```

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

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```

=====
***** FAIL_REASON *****
=====

```

```

FILE_ERROR
=====

```

Supplemental Reset after Software Activation	=	FAIL
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