



**@ 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 : 4

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

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## Initial Get Filter

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**> 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>AAAAB3NzaC1yc2EAAAADAQABAAQAC0EVfAv8MI4ZsCWkGxxv36AwuOewJuHXxsiJDNYet2n02N9cbZgifa+Lt0ni4dGjERFEq2YZCnaX4cuFnsLq8bUjBAuy0hyU2ACb5FohzIbZnMW4cUGkkFu453vTMA/SIZU47wK7Q5HbrTcJefuDkIUwPb+tnP7iT9T7YMx4c62h6I9O/wt2hq8RMAC8PT1JAeVebylIrKbcI5g3N2NI6D8OGD0Coick7iczIlor/9ylshjdgIQdi8Bxnq9NhZD0zA2WvQI9eytlvut/uA6KWaiwF9C+OC7FhIf1O7jDoYXvZUIQa90c0EG4O962JB3SYxWchl4gYxmr6zAtu3TT4j</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:a717ed98-6b1d-4b9c-b836-b84a35539831"><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>2103-04-12T16:41:15Z</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:c2999ad7-8f3e-42c4-88f1-d498d447fc28"><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>2103-04-12T16:41:15Z</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 16:41:06 garuda daemon.info netopeer2-server[860]: Trying to connect via IPv4 to 192.168.4.15:4334.
Apr 12 16:41:06 garuda daemon.info netopeer2-server[860]: getsockopt() error (Connection refused).
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Trying to connect via IPv4 to 192.168.4.15:4334.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Successfully connected to 192.168.4.15:4334 over IPv4.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Session 125 (user "root", CID 1) created.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-service" of subtype "ssh-userauth".
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-auth" of subtype "password".
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: User "operator" authenticated.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-channel-open" of subtype "session".
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Received an SSH message "request-channel" of subtype "subsystem".
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Call Home client "default-client" session 4 established.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Session 126 (user "root", CID 1) created.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: There are no subscribers for "ietf-netconf-notifications" notifications.
Apr 12 16:41:07 garuda daemon.info netopeer2-server[860]: Generated new event (netconf-session-start).
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 8 priority 0 for 1 subscribers.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 8 priority 0 (remaining 1 subscribers).
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 8 priority 0 (remaining 0 subscribers).
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 8 priority 0 succeeded.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Session 4: thread 2 event new RPC.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 9 priority 0 for 1 subscribers.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 9 priority 0 (remaining 1 subscribers).
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 10.
Apr 12 16:41:08 garuda user.notice fw_manager[930]: RPC #10 recieved. xpath -> /o-ran-software-management:software-inventory
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 10 succeeded.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
Apr 12 16:41:08 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 16:41:08 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 16:41:08 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 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 9 priority 0 (remaining 0 subscribers).
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 9 priority 0 succeeded.
Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...
```



Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 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 16:41:08 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 16:41:08 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 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Session 4: thread 2 event new RPC.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get-config" with ID 3 priority 0 for 1 subscribers.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get-config" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 3 priority 0 succeeded.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Session 4: thread 3 event new RPC.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/notifications:create-subscription" with ID 3 priority 0 for 1 subscribers.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Processing "/notifications:create-subscription" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 3 priority 0 succeeded.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Session 4: thread 2 event new RPC.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/ietf-netconf:get" with ID 10 priority 0 for 1 subscribers.

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Processing "/ietf-netconf:get" "rpc" event with ID 10 priority 0 (remaining 1 subscribers).

Apr 12 16:41:08 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 11.

Apr 12 16:41:08 garuda user.notice fw\_manager[930]: RPC #11 recieved. xpath -> /o-ran-software-management:software-inventory

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 11 succeeded.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 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 16:41:09 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 16:41:09 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 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Successful processing of "rpc" event with ID 10 priority 0 (remaining 0 subscribers).

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 10 priority 0 succeeded.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 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 16:41:09 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 16:41:09 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 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Session 4: thread 0 event new RPC.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/o-ran-software-management:software-download" with ID 3  
priority 0 for 1 subscribers.

Apr 12 16:41:09 garuda user.notice fw\_manager[930]: RPC #3 recieved. xpath -> /o-ran-software-management:software-download

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 3 priority 0 succeeded.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:09 garuda daemon.info netopeer2-server[860]: Session 4: thread 2 event new RPC.

Apr 12 16:41:15 garuda user.notice fw\_manager[930]: Function isDownloadCompleted setting error code 0

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Processing "notif" "o-ran-software-management" event with ID 1.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:15 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 16:41:15 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Published event "operational" "/o-ran-software-management:software-inventory" with  
ID 12.

Apr 12 16:41:15 garuda user.notice fw\_manager[930]: RPC #12 recieved. xpath -> /o-ran-software-management:software-inventory

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Event "operational" with ID 12 succeeded.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:15 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 16:41:15 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 16:41:15 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 16:41:15 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Published event "rpc" "/o-ran-software-management:software-install" with ID 3

priority 0 for 1 subscribers.

Apr 12 16:41:15 garuda user.notice fw\_manager[930]: RPC #3 recieved. xpath -> /o-ran-software-management:software-install

Apr 12 16:41:15 garuda user.notice fw\_manager[930]: swSlot2 selected

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Event "rpc" with ID 3 priority 0 succeeded.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:15 garuda daemon.info netopeer2-server[860]: Session 4: thread 0 event new RPC.

Apr 12 16:41:15 garuda user.err fw\_manager[930]: swInstall : Unzip failed with code 256

Apr 12 16:41:15 garuda user.err fw\_manager[930]: swInstall failed :Reason: unzip failed

Apr 12 16:41:15 garuda user.notice fw\_manager[930]: RPC #13 recieved. xpath -> /o-ran-software-management:software-inventory

Apr 12 16:41:16 garuda daemon.info netopeer2-server[860]: Resolving unresolved data nodes and their constraints...

Apr 12 16:41:16 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 16:41:16 garuda daemon.info netopeer2-server[860]: All data nodes and constraints resolved.

Apr 12 16:41:16 garuda daemon.info netopeer2-server[860]: Processing "notif" "o-ran-software-management" event with ID 2.

Apr 12 16:41:16 garuda daemon.info netopeer2-server[860]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).

Apr 12 16:41:17 garuda auth.info sshd[11335]: Accepted password for operator from 192.168.4.15 port 40412 ssh2

Apr 12 16:41:17 garuda authpriv.info sshd[11335]: 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** \*\*\*\*\*

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FILE\_ERROR

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**Supplemental Reset after Software Activation = FAIL**

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