



@ FILE NAME: M\_CTC\_ID\_018\_.txt

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for Garuda\_RevD: v5.0.0

**Test Description :** This scenario is **MANDATORY** for an O-RU supporting the Hybrid M-plane architecture model.

**This test validates that user management model can be used to add users to the O-RU**

**This scenario corresponds to the following chapters in [3]:**

**3.3 SSH Connection Establishment**

**3.4 NETCONF Access Control**

### STEP 1. The TER NETCONF Client establishes a connection with the O-RU NETCONF Server.

#### \*\*\*\*\* Connect to the NETCONF Server \*\*\*\*\*

```
> connect --ssh --host 192.168.4.46 --port 830 --login operator
```

```
Interactive SSH Authentication
```

```
Type your password:
```

```
Password:
```

```
> status
```

```
Current NETCONF session:
```

```
ID      : 16
```

```
Host    : 192.168.4.46
```

```
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,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 #####
```

```
> get --filter-xpath /o-ran-usermgmt:users/user
```

```
<?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">
  <users xmlns="urn:o-ran:user-mgmt:1.0">
    <user>
      <name>oranuser</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>observer</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>installer</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
  </users>
</data>
```

```
STEP 2. The TER NETCONF Client configures three new user accounts in addition to the default sudo
account already present and passwords these three accounts using o-ran-user.mgmt.yang
```

```
> edit-config --target running --config --defop merge
```

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

```
<config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <users xmlns="urn:o-ran:user-mgmt:1.0">
    <user>
      <name>operator5310619424927220</name>
      <account-type>PASSWORD</account-type>
      <password>-%QgSPbnaolAnFjZ[F36i)k-SbUDrR%cM3.iWvD4i0[bz~O1wWu$8941Ve.CA-ygLdVAI5fb6!oNL)</password>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator42009256600399182198</name>
      <account-type>PASSWORD</account-type>
      <password>9q4pQV.FbrA</password>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator900036241939705</name>
      <account-type>PASSWORD</account-type>
      <password>_qfDDi1%ykjn7Q{BoBCrvJwQ(zn_N)+QjXIDgNS8od3Z}</password>
      <enabled>true</enabled>
    </user>
  </users>
</config>
```

##### RPC Reply #####

Ok

##### NOTIFICATIONS #####

```
<?xml version="1.0" ?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>2022-08-02T18:44:32Z</eventTime>
  <netconf-config-change xmlns="urn:ietf:params:xml:ns:yang:ietf-netconf-notifications">
    <changed-by>
      <username>root</username>
      <session-id>16</session-id>
    </changed-by>
    <datastore>running</datastore>
    <edit>
      <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator53106194249272
20']</target>
      <operation>create</operation>
    </edit>
  </edit>
</notification>
```

```
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator53106194249272
20']/o-ran-usermgmt:name</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator53106194249272
20']/o-ran-usermgmt:account-type</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator53106194249272
20']/o-ran-usermgmt:password</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator53106194249272
20']/o-ran-usermgmt:enabled</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator42009256600399
182198']</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator42009256600399
182198']/o-ran-usermgmt:name</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator42009256600399
182198']/o-ran-usermgmt:account-type</target>
<operation>create</operation>
</edit>
<edit>
<target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator42009256600399
182198']/o-ran-usermgmt:password</target>
<operation>create</operation>
</edit>
```

```
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator42009256600399
182198']/o-ran-usermgmt:enabled</target>
    <operation>create</operation>
  </edit>
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator90003624193970
5']/</target>
    <operation>create</operation>
  </edit>
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator90003624193970
5']/o-ran-usermgmt:name</target>
    <operation>create</operation>
  </edit>
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator90003624193970
5']/o-ran-usermgmt:account-type</target>
    <operation>create</operation>
  </edit>
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator90003624193970
5']/o-ran-usermgmt:password</target>
    <operation>create</operation>
  </edit>
<edit>
  <target
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0"/>o-ran-usermgmt:users/o-ran-usermgmt:user[o-ran-usermgmt:name='operator90003624193970
5']/o-ran-usermgmt:enabled</target>
    <operation>create</operation>
  </edit>
</netconf-config-change>
</notification>
```

```
##### STEP 3. The TER NETCONF Client configures user account to group mappings for the
three
    new accounts using ietf-netconf-acm.yang respectively one with "nms", one with "fm-pm" and
one
    with "swm" privilege. #####
```

```
> edit-config --target running --config --defop merge
```

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

```
<config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <nacm xmlns="urn:ietf:params:xml:ns:yang:ietf-netconf-acm">
    <groups>
      <group>
        <name>fm-pm</name>
        <user-name>operator5310619424927220</user-name>
      </group>
      <group>
        <name>nms</name>
        <user-name>operator42009256600399182198</user-name>
      </group>
      <group>
        <name>swm</name>
        <user-name>operator900036241939705</user-name>
      </group>
    </groups>
  </nacm>
</config>
```

```
STEP 4. The O-RU NETCONF Server confirms the operations for the above transactions.
```

Ok

```
##### NOTIFICATIONS #####
```

```
<?xml version="1.0" ?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>2022-08-02T18:44:32Z</eventTime>
  <netconf-config-change xmlns="urn:ietf:params:xml:ns:yang:ietf-netconf-notifications">
```

```
<changed-by>
<username>root</username>
<session-id>16</session-id>
</changed-by>
<datastore>running</datastore>
<edit>
  <target>
xmlns:nacm="urn:ietf:params:xml:ns:yang:ietf-netconf-acm"/>nacm:nacm/nacm:groups/nacm:group[nacm:name='fm-pm']/nacm:user-name[.='operator5310619424927220']</target>
    <operation>create</operation>
  </edit>
<edit>
  <target>
xmlns:nacm="urn:ietf:params:xml:ns:yang:ietf-netconf-acm"/>nacm:nacm/nacm:groups/nacm:group[nacm:name='nms']/nacm:user-name[.='operator42009256600399182198']</target>
    <operation>create</operation>
  </edit>
<edit>
  <target>
xmlns:nacm="urn:ietf:params:xml:ns:yang:ietf-netconf-acm"/>nacm:nacm/nacm:groups/nacm:group[nacm:name='swm']/nacm:user-name[.='operator900036241939705']</target>
    <operation>create</operation>
  </edit>
</netconf-config-change>
</notification>
```

```
=====
> get --filter-xpath /ietf-netconf-acm:nacm/groups
=====
```

```
<?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">
  <nacm xmlns="urn:ietf:params:xml:ns:yang:ietf-netconf-acm">
    <groups>
      <group>
        <name>sudo</name>
        <user-name>operator</user-name>
      </group>
      <group>
        <name>fm-pm</name>
        <user-name>observer</user-name>
        <user-name>operator5310619424927220</user-name>
      </group>
      <group>
        <name>nms</name>
        <user-name>installer</user-name>
        <user-name>operator42009256600399182198</user-name>
      </group>
    </groups>
  </nacm>
</data>
```



```
<group>
  <name>swm</name>
  <user-name>operator900036241939705</user-name>
</group>
</groups>
</nacm>
</data>
```

=====

**STEP 5. The TER NETCONF Client retrieves a list of users from O-RU NETCONF Server. The newly created user accounts and mappings are validated.**

=====

=====

**> get --filter-xpath /o-ran-usermgmt:users/user**

=====

```
<?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">
  <users xmlns="urn:o-ran:user-mgmt:1.0">
    <user>
      <name>oranuser</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>observer</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>installer</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator5310619424927220</name>
      <account-type>PASSWORD</account-type>
      <enabled>true</enabled>
    </user>
    <user>
      <name>operator42009256600399182198</name>
      <account-type>PASSWORD</account-type>
```

```
<enabled>true</enabled>
</user>
<user>
  <name>operator900036241939705</name>
  <account-type>PASSWORD</account-type>
  <enabled>true</enabled>
</user>
</users>
</data>
```

### ##### SYSTEM LOGS #####

```
Aug 2 18:44:27 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.
Aug 2 18:44:27 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).
Aug 2 18:44:28 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.
Aug 2 18:44:28 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).
Aug 2 18:44:29 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.
Aug 2 18:44:29 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).
Aug 2 18:44:30 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.
Aug 2 18:44:30 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Accepted a connection on :::830.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Session 1747 (user "root", CID 1) created.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Received an SSH message "request-service" of subtype "ssh-userauth".
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Received an SSH message "request-auth" of subtype "password".
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: User "operator" authenticated.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Received an SSH message "request-channel-open" of subtype "session".
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Received an SSH message "request-channel" of subtype "subsystem".
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Session 1748 (user "root", CID 1) created.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: There are no subscribers for "ietf-netconf-notifications" notifications.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Generated new event (netconf-session-start).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/notifications:create-subscription" with ID 3 priority 0 for 1 subscribers.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Processing "/notifications:create-subscription" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 3 priority 0 succeeded.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Session 16: thread 1 event new RPC.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/ietf-netconf:get" with ID 764 priority 0 for 1 subscribers.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Processing "/ietf-netconf:get" "rpc" event with ID 764 priority 0 (remaining 1 subscribers).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 764 priority 0 (remaining 0 subscribers).
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 764 priority 0 succeeded.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Session 16: thread 2 event new RPC.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.
Aug 2 18:44:31 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).
```

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/ietf-netconf:edit-config" with ID 1 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "/ietf-netconf:edit-config" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: edit-config error-option "stop-on-error" not supported, rollback-on-error will be performed.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "change" "o-ran-usermgmt" with ID 1 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator5310619424927220 added successfully !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator5310619424927220 enabled !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator42009256600399182198 added successfully !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator42009256600399182198 enabled !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator900036241939705 added successfully !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: operator900036241939705 enabled !!

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: END OF CHANGES

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Event "change" with ID 1 priority 0 succeeded.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "done" "o-ran-usermgmt" with ID 1 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda user.notice USERMGMT[903]: END OF CHANGES

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "notif" "ietf-netconf-notifications" event with ID 1.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "notif" "ietf-netconf-notifications" with ID 2 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 1 priority 0 succeeded.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 2 event new RPC.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator5310619424927220']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator42009256600399182198']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/name", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/account-type", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/password", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/o-ran-usermgmt:users/user[name='operator900036241939705']/enabled", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "notif" "ietf-netconf-notifications" event with ID 2.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/ietf-netconf:edit-config" with ID 2 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "/ietf-netconf:edit-config" "rpc" event with ID 2 priority 0 (remaining 1 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: edit-config error-option "stop-on-error" not supported, rollback-on-error will be performed.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "done" "ietf-netconf-acm" with ID 3 priority 0 for 4 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "ietf-netconf-acm" "done" event with ID 3 priority 0 (remaining 4 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "done" event with ID 3 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "notif" "ietf-netconf-notifications" with ID 3 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/ietf-netconf-acm:nacm/groups/group[name='fm-pm']/user-name[.='operator5310619424927220']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/ietf-netconf-acm:nacm/groups/group[name='nms']/user-name[.='operator42009256600399182198']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: There is no instance of "/ietf-netconf-acm:nacm/groups/group[name='swm']/user-name[.='operator900036241939705']", but it is not required.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "notif" "ietf-netconf-notifications" event with ID 3.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "notif" event with ID 3 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 2 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 2 priority 0 succeeded.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 3 event new RPC.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/ietf-netconf:get-config" with ID 6 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "/ietf-netconf:get-config" "rpc" event with ID 6 priority 0 (remaining 1 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 6 priority 0 (remaining 0 subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 6 priority 0 succeeded.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 4 event new RPC.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Published event "rpc" "/ietf-netconf:get-config" with ID 7 priority 0 for 1 subscribers.

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Processing "/ietf-netconf:get-config" "rpc" event with ID 7 priority 0 (remaining 1 subscribers).

subscribers).

Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Successful processing of "rpc" event with ID 7 priority 0 (remaining 0 subscribers).  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Event "rpc" with ID 7 priority 0 succeeded.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Resolving unresolved data nodes and their constraints...  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: All data nodes and constraints resolved.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 4 event new RPC.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 4 event new RPC.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Session 16: thread 4 event session terminated.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:32 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:33 garuda daemon.info netopeer2-server[846]: There are no subscribers for "ietf-netconf-notifications" notifications.  
Aug 2 18:44:33 garuda daemon.info netopeer2-server[846]: Generated new event (netconf-session-end).  
Aug 2 18:44:33 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:33 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:34 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:34 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:35 garuda user.notice SYNCMNGR[1160]: Received message from S-Plane  
Aug 2 18:44:35 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:35 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:36 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:36 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:37 garuda daemon.info netopeer2-server[846]: Trying to connect via IPv4 to 192.168.4.15:4334.  
Aug 2 18:44:37 garuda daemon.info netopeer2-server[846]: getsockopt() error (Connection refused).  
Aug 2 18:44:38 garuda auth.info sshd[8710]: Accepted password for operator from 192.168.4.15 port 59698 ssh2  
Aug 2 18:44:38 garuda authpriv.info sshd[8710]: pam\_unix(sshd:session): session opened for user operator by (uid=0)

**Expected Result : The TER NETCONF Client retrieves a list of users from O-RU NETCONF Server. The newly created user accounts and mappings are validated.**

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**\*\*\*\*\* Actual Result \*\*\*\*\***

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**Sudo on Hybrid M-plane Architecture (positive case) = SUCCESS**

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