



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

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for Garuda\_RevD: v5.0.2

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



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

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

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> connect --ssh --host 192.168.4.40 --port 830 --login operator

Interactive SSH Authentication

Type your password:

Password:

> status

Current NETCONF session:

ID : 16

Host : 192.168.4.40

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 & also-supported = report-all-tagged, trim

 $urn: ietf: params: netconf: capability: notification: 1.0 \ urn: ietf: params: netconf: capability: interleave: 1.0 \ urn: ietf: params: netconf: netco$ 

urn: ietf: params: xml: ns: yang: ietf-yang-metadata? module = ietf-yang-metadata & revision = 2016-08-05 + 1000

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 = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, candidate, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, rollback-on-error, valid = ietf-netconf & revision = 2013-09-29 & features = writable-running, rollback-on-error, rollback-on-error,

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 + 100

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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======================================	
<pre></pre> <pre>&lt;</pre>	
<pre><data xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0"></data></pre>	
<users xmlns="urn:o-ran:user-mgmt:1.0"></users>	
<user></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>	
STEP 2. The TER NETCONF Client configures three new user accounts in addition to the default account already present and passwords these three accounts using o-ran-user.mgmt.yang	== sudo 
> edit-configtarget runningconfigdefop merge	
======================================	
<pre><config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"> <users xmlns="urn:o-ran:user-mgmt:1.0"></users></config></pre>	



```
<user>
            <name>operator363904219774937034226</name>
            <account-type>PASSWORD</account-type>
<password>zH1hq-Q6[D!$3h8%~.xQVmg~ZG+b.5nm9fzxvQQ63(jsSJNAs-0!V!PWA(3p^uy$)A~{GwM~SzK-H{wrK~yf9][fQITdqQvSFMrPD}}
5</password>
            <enabled>true</enabled>
          </user>
          <user>
            <name>operator0534452414116716545446</name>
            <account-type>PASSWORD</account-type>
<password>8PS592C4%k)9ATzR_0]c0^x9LBe.U7p6A~^M_^uWkS1A_D{_tGzril1NExCk%4Nf^lP7pIU}vmm2^DGZ9kuBkjy_Bx0rQZZ{twxc
QIBhg~es[QL1SOgx</password>
            <enabled>true</enabled>
          </user>
          <user>
            <name>operator6163823880175</name>
            <account-type>PASSWORD</account-type>
<password>uf}9iB30tUrShb3TFQH){sxKPPDz5md~gN+D3M3fci3U9zHXOO_wi%UJQP}vh)d{5bjeDwWOYAL(e92(xCh.kE9W8Gp~josO$pX
</password>
            <enabled>true</enabled>
          </user>
         </users>
        </config>
####### RPC Reply ########
   Ok
   ______
<?xml version="1.0" ?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
<eventTime>2022-08-19T12:27:03Z</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='operator36390421977493
7034226']</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='operator36390421977493
7034226']/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:users/o-ran-usermgmt:name='operator36390421977493
7034226']/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='operator36390421977493
7034226']/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:users/o-ran-usermgmt:name='operator36390421977493
7034226']/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='operator05344524141167
16545446']</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='operator05344524141167
16545446']/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='operator05344524141167
16545446']/o-ran-usermgmt:account-type</target>
 <operation>create</operation>
</edit>
<edit>
xmlns:o-ran-usermgmt="urn:o-ran:user-mgmt:1.0">/o-ran-usermgmt:users/o-ran-usermgmt:users/o-ran-usermgmt:name='operator05344524141167
16545446']/o-ran-usermgmt:password</target>
 <operation>create</operation>
</edit>
```



<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator05344524141167] = (1.00 - 1.00 -
16545446']/o-ran-usermgmt:enabled
<pre><operation>create</operation></pre>
<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator6163823880175'] = (1.00 + 1.00 +
<pre><operation>create</operation></pre>
<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator6163823880175'] = (1.00 + 1.00 +
/o-ran-usermgmt:name
<pre><operation>create</operation></pre>
<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator6163823880175'] = (1.00 + 1.00 +
/o-ran-usermgmt:account-type
<pre><operation>create</operation></pre>
<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator6163823880175'] = (1.00 + 1.00 +
/o-ran-usermgmt:password
<pre><operation>create</operation></pre>
<edit></edit>
<target< td=""></target<>
xmlns: o-ran-usermgmt = "urn: o-ran: user-mgmt: 1.0" > /o-ran-usermgmt: users/o-ran-usermgmt: user[o-ran-usermgmt: name='operator6163823880175'] = (1.00 + 1.00 +
/o-ran-usermgmt:enabled
<pre><operation>create</operation></pre>



####### 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>operator363904219774937034226</user-name> </group> <group> <name>nms</name> <user-name>operator0534452414116716545446/user-name> </group> <group> <name>swm</name> <user-name>operator6163823880175</user-name> </group> </groups> </nacm> </config> STEP 4. The O-RU NETCONF Server confirms the operations for the above transactions. Ok <?xml version="1.0" ?> <notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0"> <eventTime>2022-08-19T12:27:03Z</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[.='ope
rator363904219774937034226']</target>
 <operation>create</operation>
 </edit>
 <edit>
 <target
xmlns:nacm="urn:ietf:params:xml:ns:yang:ietf-netconf-acm">/nacm:nacm/nacm:groups/nacm:groups/nacm:name='nms']/nacm:user-name[.='operat
or0534452414116716545446']</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[.='opera
tor6163823880175']</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>operator363904219774937034226</user-name>
</group>
<group>
<name>nms</name>
<user-name>installer</user-name>
<user-name>operator0534452414116716545446</user-name>
</group>
<group>
<name>swm</name>
<user-name>operator6163823880175</user-name>
```

</group>



<?xml version="1.0" ?>

</groups>
</nacm>
</data>

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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.

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

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```
<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>operator363904219774937034226</name>
 <account-type>PASSWORD</account-type>
 <enabled>true</enabled>
 </user>
<user>
 <name>operator0534452414116716545446</name>
 <account-type>PASSWORD</account-type>
 <enabled>true</enabled>
</user>
 <name>operator6163823880175</name>
 <account-type>PASSWORD</account-type>
```

<enabled>true</enabled>





</user>

</users>

</data>



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- Aug 19 12:26:58 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:26:58 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:26:58 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:26:58 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:26:59 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:26:59 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:26:59 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:26:59 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:00 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:00 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:00 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:00 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:01 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:01 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:01 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:01 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Accepted a connection on :::830.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Session 1616 (user "root", CID 1) created.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Received an SSH message "request-service" of subtype "ssh-userauth".
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Received an SSH message "request-auth" of subtype "password".
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: User "operator" authenticated.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Received an SSH message "request-channel-open" of subtype "session".
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Received an SSH message "request-channel" of subtype "subsystem".
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Session 1617 (user "root", CID 1) created.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: There are no subscribers for "ietf-netconf-notifications" notifications.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Generated new event (netconf-session-start).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/notifications:create-subscription" with ID 3 priority 0 for 1 subscribers.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Processing "/notifications:create-subscription" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 3 priority 0 succeeded.
- Aug 19 12:27:02 garuda daemon.info netopeer2-server[853]: Session 16: thread 3 event new RPC.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.



Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/ietf-netconf:get" with ID 686 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "/ietf-netconf:get" "rpc" event with ID 686 priority 0 (remaining 1 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 686 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 686 priority 0 succeeded.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Session 16: thread 4 event new RPC.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/ietf-netconf:edit-config" with ID 1 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "/ietf-netconf:edit-config" "rpc" event with ID 1 priority 0 (remaining 1 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: edit-config error-option "stop-on-error" not supported, rollback-on-error will be performed.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "change" "o-ran-usermgmt" with ID 1 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator363904219774937034226 added successfully!!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator363904219774937034226 enabled !!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator0534452414116716545446 added successfully!!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator0534452414116716545446 enabled !!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator6163823880175 added successfully !!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: operator6163823880175 enabled !!

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: END OF CHANGES

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "change" with ID 1 priority 0 succeeded.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "done" "o-ran-usermgmt" with ID 1 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda user.notice USERMGMT[919]: END OF CHANGES

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt: users/user [name='operator 363904219774937034226']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of



"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "notif" "ietf-netconf-notifications" event with ID 1.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "notif" event with ID 1 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "notif" "ietf-netconf-notifications" with ID 2 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 1 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 1 priority 0 succeeded.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Session 16: thread 4 event new RPC.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt: users/user [name='operator 363904219774937034226']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt: users/user[name='operator 363904219774937034226']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator363904219774937034226']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt: users/user[name='operator 0534452414116716545446']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator0534452414116716545446']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of



"/o-ran-usermgmt:users/user[name='operator6163823880175']/name", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/account-type", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/password", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/o-ran-usermgmt:users/user[name='operator6163823880175']/enabled", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "notif" "ietf-netconf-notifications" event with ID 2.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "notif" event with ID 2 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/ietf-netconf:edit-config" with ID 2 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "/ietf-netconf:edit-config" "rpc" event with ID 2 priority 0 (remaining 1 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: edit-config error-option "stop-on-error" not supported, rollback-on-error will be performed.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "done" "ietf-netconf-acm" with ID 3 priority 0 for 4 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "ietf-netconf-acm" "done" event with ID 3 priority 0 (remaining 4 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "done" event with ID 3 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "notif" "ietf-netconf-notifications" with ID 3 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/ietf-netconf-acm:nacm/groups/group[name='fm-pm']/user-name[.='operator363904219774937034226']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/ietf-netconf-acm:nacm/groups/group[name='nms']/user-name[.='operator0534452414116716545446']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: There is no instance of

"/ietf-netconf-acm:nacm/groups/group[name='swm']/user-name[.='operator6163823880175']", but it is not required.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "notif" "ietf-netconf-notifications" event with ID 3.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "notif" event with ID 3 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 2 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 2 priority 0 succeeded.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Session 16: thread 1 event new RPC.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/ietf-netconf:get-config" with ID 6 priority 0 for 1 subscribers.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "/ietf-netconf:get-config" "rpc" event with ID 6 priority 0 (remaining 1 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 6 priority 0 (remaining 0 subscribers).

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 6 priority 0 succeeded.

Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...



- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Session 16: thread 0 event new RPC.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Published event "rpc" "/ietf-netconf:get-config" with ID 7 priority 0 for 1 subscribers.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Processing "/ietf-netconf:get-config" "rpc" event with ID 7 priority 0 (remaining 1 subscribers).
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Successful processing of "rpc" event with ID 7 priority 0 (remaining 0 subscribers).
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Event "rpc" with ID 7 priority 0 succeeded.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Resolving unresolved data nodes and their constraints...
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: All data nodes and constraints resolved.
- Aug 19 12:27:03 garuda daemon.info netopeer2-server[853]: Session 16: thread 0 event new RPC.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: Session 16: thread 0 event new RPC.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: Session 16: thread 0 event session terminated.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: There are no subscribers for "ietf-netconf-notifications" notifications.
- Aug 19 12:27:04 garuda daemon.info netopeer2-server[853]: Generated new event (netconf-session-end).
- Aug 19 12:27:05 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:05 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:05 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:05 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:06 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:06 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:06 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:06 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:07 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:07 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:07 garuda user.notice SYNCMNGR[1176]: Received message from S-Plane
- Aug 19 12:27:07 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:07 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:08 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:08 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- $Aug\ 19\ 12:27:08\ garuda\ daemon. info\ net opeer 2-server [853]:\ Trying\ to\ connect\ via\ IPv4\ to\ 192.168.4.15:4334.$
- Aug 19 12:27:08 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:09 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:09 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:09 garuda daemon.info netopeer2-server[853]: Trying to connect via IPv4 to 192.168.4.15:4334.
- Aug 19 12:27:09 garuda daemon.info netopeer2-server[853]: getsockopt() error (Connection refused).
- Aug 19 12:27:09 garuda authpriv.debug sshd[7531]: pam\_unix(sshd:account): account operator has password changed in future
- Aug 19 12:27:09 garuda auth.info sshd[7531]: Accepted password for operator from 192.168.4.15 port 51414 ssh2
- Aug 19 12:27:09 garuda authpriv.info sshd[7531]: 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.	
******* Actual Result ************************************	
Sudo on Hybrid M-plane Architecture (positive case) = SUCCESS	