@ FILE NAME: M_CTC_ID_011.txt

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for LPRU: v1.0.16

Test Description : This scenario validates that the O-RU NETCONF Server properly executes a get command with a filter applied.

==

********** Connect to the NETCONF Server ***********

==

> listen --ssh --login operator

 Waiting 60s for an SSH Call Home connection on port 4334...

 The authenticity of the host '::ffff:192.168.174.37' cannot be established.

 ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83

 Interactive SSH Authentication done.

 > status

 Current NETCONF session:

 ID : 5

 Host : 192.168.174.37

 Port : 830

 Transport : SSH

 Capabilities:

 urn:ietf:params:netconf:base:1.0 urn:ietf:params:netconf:base:1.1 urn:ietf:params:netconf:capability:writable-running:1.0 urn:ietf:params:netconf:capability:candidate:1.0 urn:ietf:params:netconf:capability:rollback-on-error:1.0 urn:ietf:params:netconf:capability:validate:1.1 urn:ietf:params:netconf:capability:startup:1.0 urn:ietf:params:netconf:capability:xpath:1.0 urn:ietf:params:netconf:capability:with-defaults:1.0?basic-mode=explicit&also-supported=report-all,report-all-tagged,trim,explicit urn:ietf:params:netconf:capability:notification:1.0 urn:ietf:params:netconf:capability:interleave:1.0 urn:ietf:params:xml:ns:yang:ietf-yang-metadata?module=ietf-yang-metadata&revision=2016-08-05 urn:ietf:params:xml:ns:yang:1?module=yang&revision=2017-02-20 urn:ietf:params:xml:ns:yang:ietf-inet-types?module=ietf-inet-types&revision=2013-07-15 urn:ietf:params:xml:ns:yang:ietf-yang-types?module=ietf-yang-types&revision=2013-07-15 urn:ietf:params:netconf:capability:yang-library:1.1?revision=2019-01-04&content-id=61 urn:sysrepo:plugind?module=sysrepo-plugind&revision=2020-12-10 urn:ietf:params:xml:ns:yang:ietf-netconf-acm?module=ietf-netconf-acm&revision=2018-02-14 urn:ietf:params:xml:ns:netconf:base:1.0?module=ietf-netconf&revision=2013-09-29&features=writable-running,candidate,rollback-on-error,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 --filter-xpath /ietf-netconf-notifications:*

==

Ok

===

 **********step 1 and 2 Retrival of ru information with filter **********

===

===

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>operator11879338448155316</name>
   <account-type>PASSWORD</account-type>
   <enabled>true</enabled>
  </user>
  <user>
   <name>operator35813916948</name>
   <account-type>PASSWORD</account-type>
   <enabled>true</enabled>
  </user>
  <user>
   <name>operator6221</name>
   <account-type>PASSWORD</account-type>
   <enabled>true</enabled>
  </user>
  <user>
   <name>operator9152751046350691512312</name>
   <account-type>PASSWORD</account-type>
```

```xml
  <enabled>true</enabled>
 </user>
 <user>
  <name>operator1930927930649</name>
  <account-type>PASSWORD</account-type>
  <enabled>true</enabled>
 </user>
 <user>
  <name>operator213245180307904</name>
  <account-type>PASSWORD</account-type>
  <enabled>true</enabled>
 </user>
 <user>
  <name>operator429298006246159886060</name>
  <account-type>PASSWORD</account-type>
  <enabled>true</enabled>
 </user>
 <user>
  <name>operator92526982514</name>
  <account-type>PASSWORD</account-type>
  <enabled>true</enabled>
 </user>
 </users>
</data>
```

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

Nov 4 00:09:23 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:09:23 vvdn_lpru daemon.info netopeer2-server[859]: getsockopt() error (Connection refused).

Nov 4 00:09:24 vvdn_lpru user.notice SYNCMNGR[1174]: Received message from S-Plane

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Successfully connected to 192.168.174.42:4334 over IPv4.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Session 143 (user "root", CID 1) created.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-service" of subtype "ssh-userauth".

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-auth" of subtype "password".

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: User "operator" authenticated.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-channel-open" of subtype "session".

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Received an SSH message "request-channel" of subtype "subsystem".

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Call Home client "default-client" session 5 established.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Session 144 (user "root", CID 1) created.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: There are no subscribers for "ietf-netconf-notifications" notifications.

Nov 4 00:09:24 vvdn_lpru daemon.info netopeer2-server[859]: Generated new event (netconf-session-start).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get" with ID 7 priority 0 for 1 subscribers.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get" "rpc" event with ID 7 priority 0 (remaining 1 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 7 priority 0 (remaining 0 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 7 priority 0 succeeded.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 0 event new RPC.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get" with ID 8 priority 0 for 1 subscribers.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get" "rpc" event with ID 8 priority 0 (remaining 1 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Published event "operational" "/o-ran-software-management:software-inventory" with ID 7.

Nov 4 00:09:25 vvdn_lpru user.notice fw_manager[928]: RPC #7 recieved. xpath -> /o-ran-software-management:software-inventory

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Event "operational" with ID 7 succeeded.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN=O-RU", but it is not required.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref "/ietf-hardware:hardware/ietf-hardware:component/o-ran-hardware:product-code" with the value "VVDN O-RU", but it is not required.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 8 priority 0 (remaining 0 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 8 priority 0 succeeded.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 4 event new RPC.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get-config" with ID 3 priority 0 for 1 subscribers.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get-config" "rpc" event with ID 3 priority 0 (remaining 1 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 3 priority 0 (remaining 0 subscribers).

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 3 priority 0 succeeded.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: There is no leafref

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

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:25 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 0 event new RPC.

Nov 4 00:09:34 vvdn_lpru user.notice SYNCMNGR[1174]: Received message from S-Plane

Nov 4 00:09:44 vvdn_lpru user.notice SYNCMNGR[1174]: Received message from S-Plane

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/notifications:create-subscription" with ID 2 priority 0 for 1 subscribers.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/notifications:create-subscription" "rpc" event with ID 2 priority 0 (remaining 1 subscribers).

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 2 priority 0 (remaining 0 subscribers).

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 2 priority 0 succeeded.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 0 event new RPC.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Published event "rpc" "/ietf-netconf:get-config" with ID 4 priority 0 for 1 subscribers.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Processing "/ietf-netconf:get-config" "rpc" event with ID 4 priority 0 (remaining 1 subscribers).

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Successful processing of "rpc" event with ID 4 priority 0 (remaining 0 subscribers).

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Event "rpc" with ID 4 priority 0 succeeded.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Resolving unresolved data nodes and their constraints...

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: All data nodes and constraints resolved.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 4 event new RPC.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 4 event new RPC.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Session 5: thread 4 event session terminated.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: There are no subscribers for "ietf-netconf-notifications" notifications.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Generated new event (netconf-session-end).

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Call Home client "default-client" session terminated.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: Trying to connect via IPv4 to 192.168.174.42:4334.

Nov 4 00:09:45 vvdn_lpru daemon.info netopeer2-server[859]: getsockopt() error (Connection refused).

Nov 4 00:09:45 vvdn_lpru authpriv.debug sshd[9202]: pam_unix(sshd:account): account operator has password changed in future

Nov 4 00:09:45 vvdn_lpru auth.info sshd[9202]: Accepted password for operator from 192.168.174.42 port 46930 ssh2

Nov 4 00:09:45 vvdn_lpru authpriv.info sshd[9202]: pam_unix(sshd:session): session opened for user operator by (uid=0)

Expected Result : The O-RU NETCONF Server responds with <rpc-reply><data> where <data> contains details for objects as conforming to the <filter>.

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


============================================================================
Retrieval with filter applied               =          SUCCESS

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