Sim-01 YANG model verification

A framework is deployed in the OSC Lab, allowing a user to validate configuration data in the form of XML/JSON, based on the O-RAN-FH YANG models against a simulated NETCONF Server.

Demo Video

Your browser does not support the HTML5 video element

Delivery Status

DO NOT EDIT

Only the Integration PTL should edit the delivery status table to track the release validation progress

		OTF	OAM	NONRTRIC	RICP	RICAPP	O-DU	O-CU	Test Result	Notes
Deployment Artifacts	Docker Container									Containers are locally built
	Helm Charts									Docker compose*
	Deployment scripts		N/A							
E2E Flows	Mount FH simulator									
	O-RAN-FH Simulator through ODL									

Limited SMO deliverables

* As a new project, the SMO project delivers multiple tools that have not been integrated into a unified platform in the Cherry release. Therefore, helm charts and deployment scripts are not provided yet.

Usage from sources

1. Clone the OAM repository in gerrit.
2. Navigate into the validator folder

```
cd solution/dev/smo/yang-validator
```

3. Configure any parameters in the docker-compose.yml or in the .env files (like exposed ports etc.)
4. Start the services of of the validator

```
docker-compose up
```

This starts two services currently:

   a. a O-RAN-FH Simulator exposing the O1 interface YANG models (NETCONF username/password is "netconf/netconf" and port is 18300)
   b. a vanilla OpenDaylight Aluminium SR0 version, acting as the SMO (ODL username/password is "admin/admin" and port is 8181)

5. Mount the O-RAN-FH Simulator into the vanilla ODL:

```
curl -X PUT "http://<VM_IP>:8181/rests/data/network-topology:network-topology/topology=topology-netconf
/node=ntsim-ng-o-ran-fh" -u admin:admin -H "accept: */*" -H "Content-Type: application/xml" -d "<node xmlns=\"
urn:TBD:params:xml:ns:yang:network-topology\"><node-id>ntsim-ng-o-ran-fh</node-id><host xmlns=\"urn:
opendaylight:netconf-node-topology\"><VM_IP></host><port xmlns=\"urn:opendaylight:netconf-node-topology\">18300<
/port><username xmlns=\"urn:opendaylight:netconf-node-topology\">netconf</username><password xmlns=\"urn:
opendaylight:netconf-node-topology\">netconf</password></node>"
```

API call

You need to change two places in the above API call. Use your VM's IP in the following API call.

That's it! Now the mount-point named **ntsim-ng-o-ran-fh** can be used in the ODL Aluminium SR0 to test XML/JSON. configuration data against the YANG definition.

Usage from OSC Lab

The framework is deployed in a VM inside OSC Lab: 192.168.130.90

One which has access to OSC Lab could use directly the SMO (OpenDaylight Aluminium) to address the O-RAN-FH Simulator (having the mount-point name **ntsim-ng-o-ran-fh**). E.g. of a GET request:

```
curl -X GET "http://192.168.130.90:8181/rests/data/network-topology:network-topology/topology=topology-netconf
/node=ntsim-ng-o-ran-fh/yang-ext:mount" -u admin:admin -H "accept: */*"
```