

# 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: */*"
```