

How to test the O1 interface

O1 interface tests uses [O1 simulators](#) to verify the O1 netconf functionality. Currently we can test O1 netconf interface in two ways, first one is automated test-suite and other one is manual verification.

Prerequisite:

docker, docker-compose

Automated test-suite

Test-suite does the following steps

- Brings up simulators(RU & DU)
- Brings up SDNR
- Add simulators to SDNR
- Checks connectivity status by fetching the capabilities
- Updates DU and RU config and prints the output
- Tear down the services

```
git clone -b dawn https://gerrit.o-ran-sc.org/r/smo/o1.git
cd o1/
./run_tests.sh
```

Manual verification

- Bring up the SMO o1 netconf client using [How to install the O1 interface](#).
- Bring up simulators using ["D" Release - Closed Loop Use Case: Simulation of O-RU and O-DU](#)
- Add the simulators to SDNR.

GUI : Simulators can be added on connect page

REST API:

Example adding DU simulator

```
curl -u admin:Kp8bJ4SXszM0WXlhak3eHlcse2gAw84vaoGGmJvUy2U -X POST "http://<HOST_IP>:8181/rests/operations/netconf-node-topology:create-device" -H "accept: */*" -H "Content-Type: application/json" -d '{"input":{"pass-through":{},"login-password":{"username":"netconf","password":"netconf!","host":"'"$HOST_IP"'',"port":"18310","node-id":"du_sim"}}}'
```

- Verify the configuration changes
- GUI** go to config page and select the required model and update with new values
- REST API**

```
curl -u admin:Kp8bJ4SXszM0WXlhak3eHlcse2gAw84vaoGGmJvUy2U -X PUT "http://<HOST_IP>:8181/rests/data/network-topology:network-topology/topology=topology-netconf/node=du_sim/yang-ext:mount/o-ran-sc-du-hello-world:network-function/du-to-ru-connection=O-RU-1" -H "accept: */*" -H "Content-Type: application/json" -d '{"du-to-ru-connection":[{"name":"O-RU-1","administrative-state":"UNLOCKED"}]}'
```

If there are no errors, then the config change is successful.