

TeraFlow
SDN
by ETSI

TeraflowSDN Hackfest #2: Challenges and Problems Encountered

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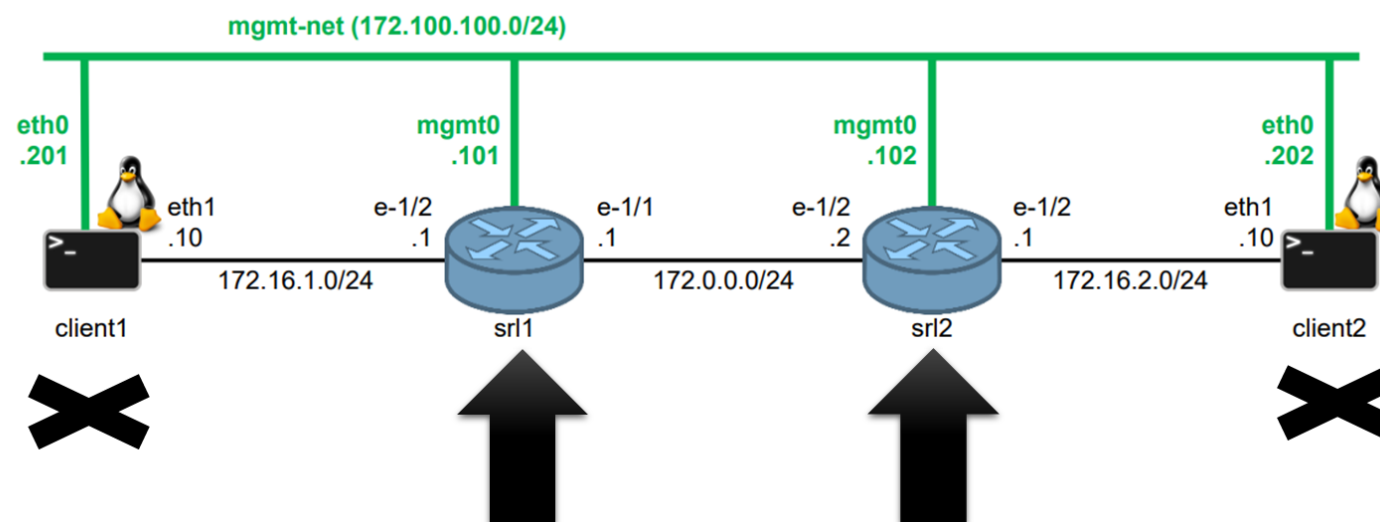
21/06/2022

Challenge

- ✔ Configuring TeraflowSDN VM
- ✔ Configuring ContainerLab environment
- ✔ Connection between VM and ContainerLab environment
- ✔ Deploying topology and services in WebUI
- ◆ Monitoring in Grafana
- ✔ Extend the basic 2 router scenario with additional clients
- ◆ Establish and monitor multiple parallel services

Problems Encountered

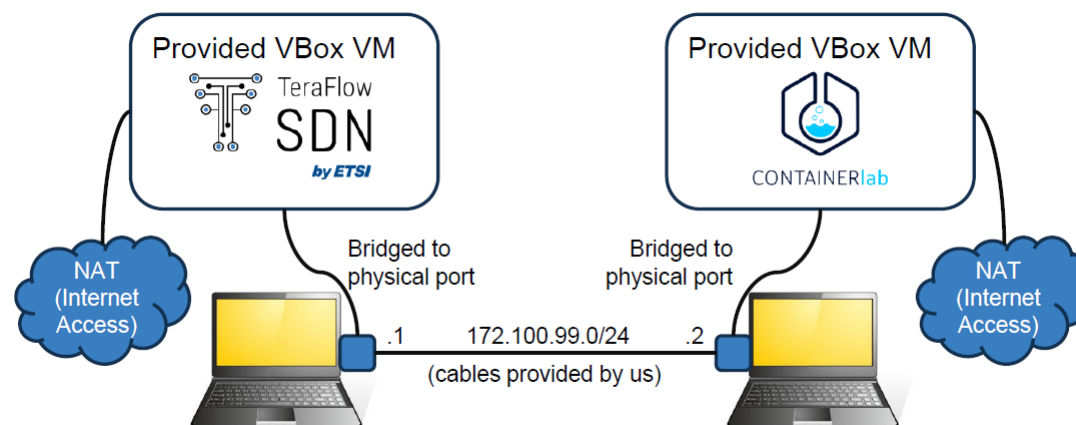
ContainerLab environment



- We added the static routes directly in the clients and routers SRL1 and SRL2
- We realized we could not ping from client to client (only from client to the first router) because the route was configured in the control plane but not in the data plane.
- We learned that for pinging from client to client we need to configure the route with Teraflow (via OpenConfig)

Problems Encountered

○ Connection between VM and ContainerLab environment

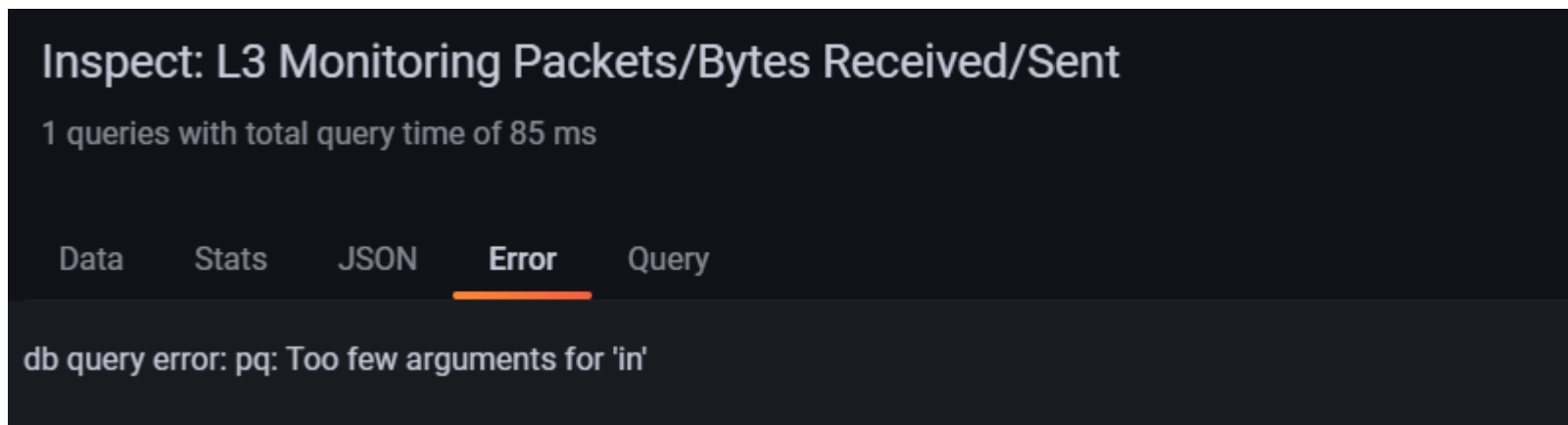


- For connecting VM and ContainerLab we added a second adapter as bridge adapter and then added a specific IP to each ethernet interface for setting the connection.
- We had to put UP the Ethernet interface in both laptops to set the connection.

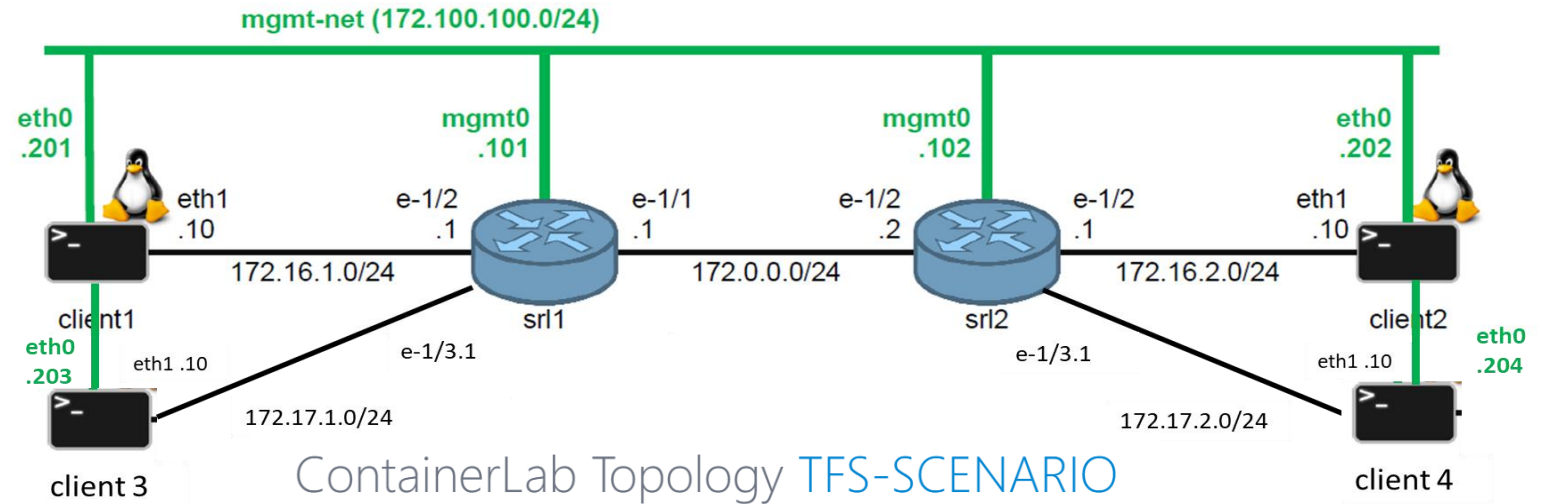
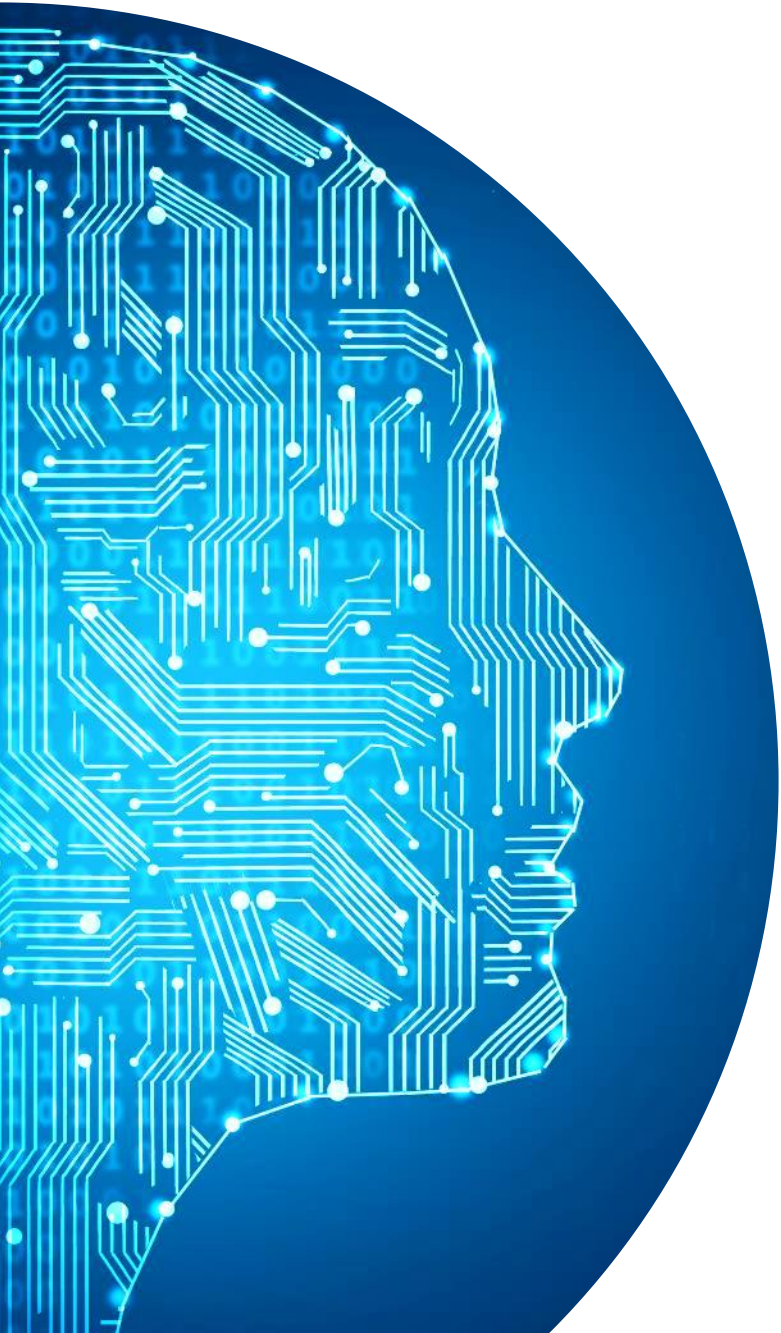
Problems Encountered

- ⦿ Deploying topology and services in WebUI
 - We realized that if you deploy one service and if you try to deploy the same service later a duplication error occurs.
 - To solve it, we got the network instance name through gNMI and then deleted the instance via gNMI.

- ⦿ Monitoring in Grafana
 - We did not manage to view monitoring data in Grafana. Questdb DNS address was replaced by the IP address but still we faced the following error:

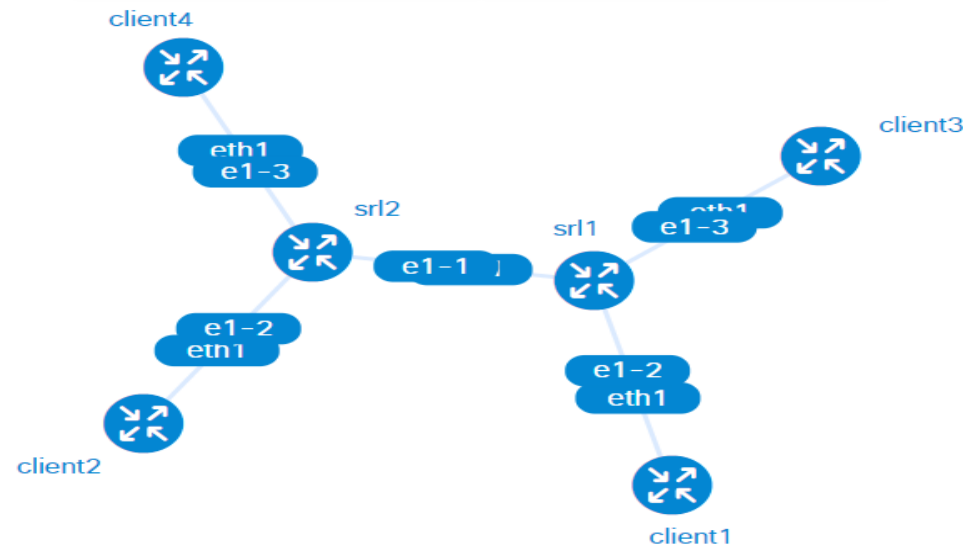


Extend the basic 2 router scenario with additional clients



ContainerLab Topology TFS-SCENARIO

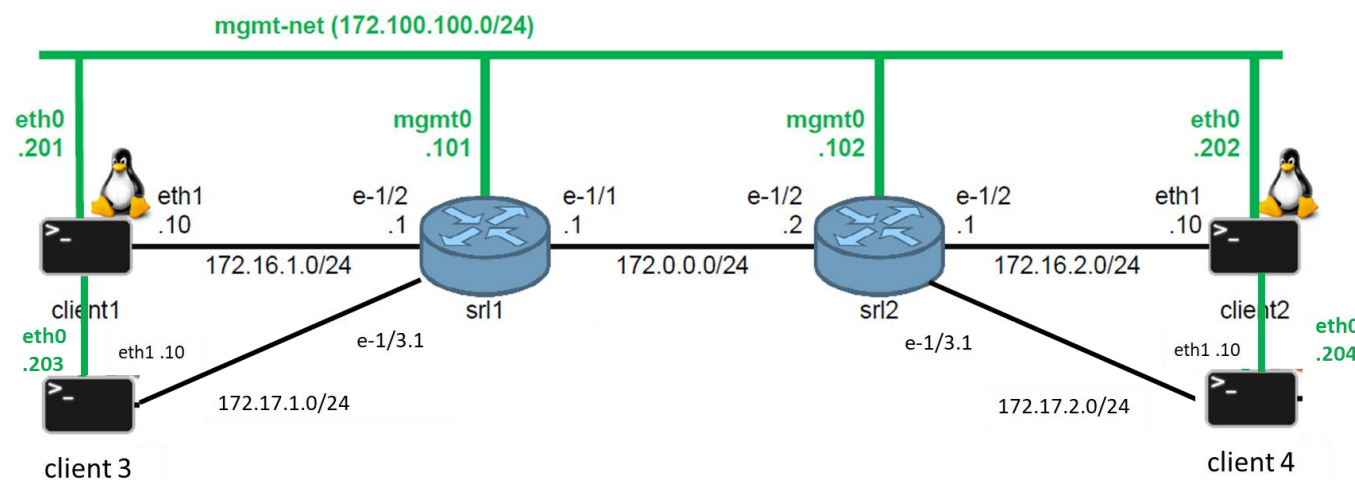
Horizontal Layout Vertical Layout

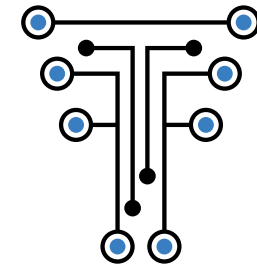


Problems Encountered

Establish and monitor multiple parallel services

- To add two parallel services we first created two separate descriptors including only the clients involved in each service.
- It didn't work and then we tried to create a single descriptor including both services.
- It didn't work, and then we tried to create again two separate descriptors avoiding the overlap between the two services.
- And... it didn't work.





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Thank You!