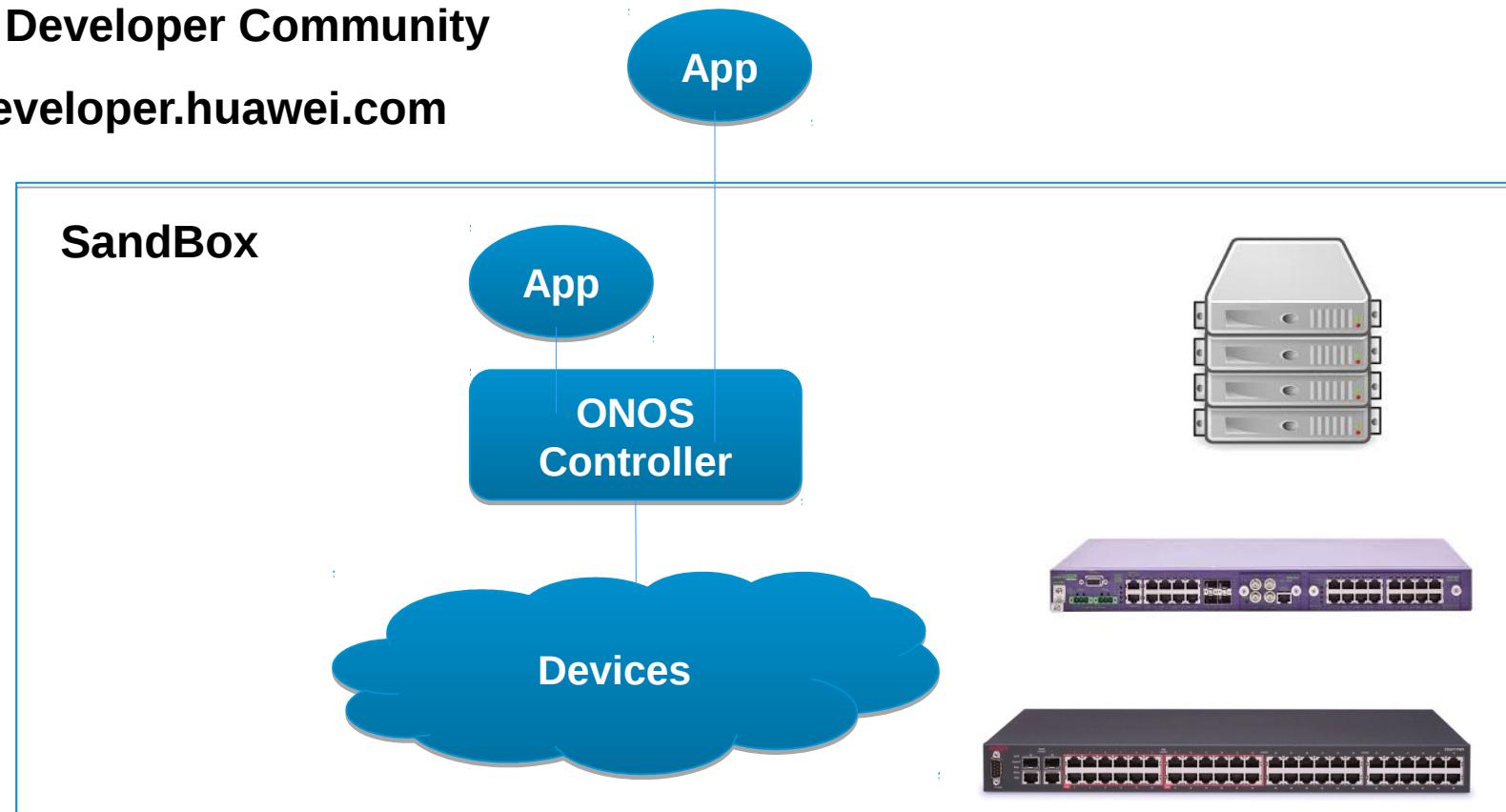


# IETF 95 Hackathon

# NEMO Language and ONOS SDN Controller

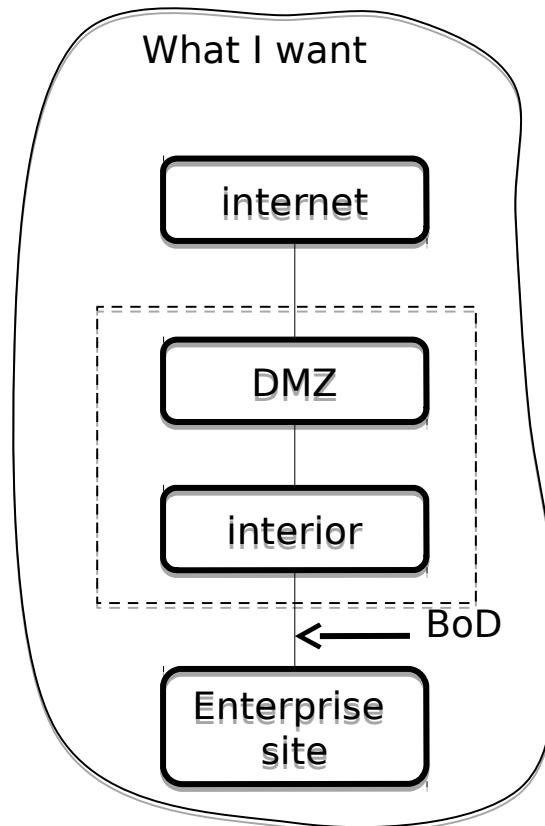
# Develop, Deploy, Test and Show Your Ideas in SandBox

Huawei Developer Community  
<http://developer.huawei.com>



# NEMO language for Service level Network Programming

The hybrid cloud use case described by NEMO language



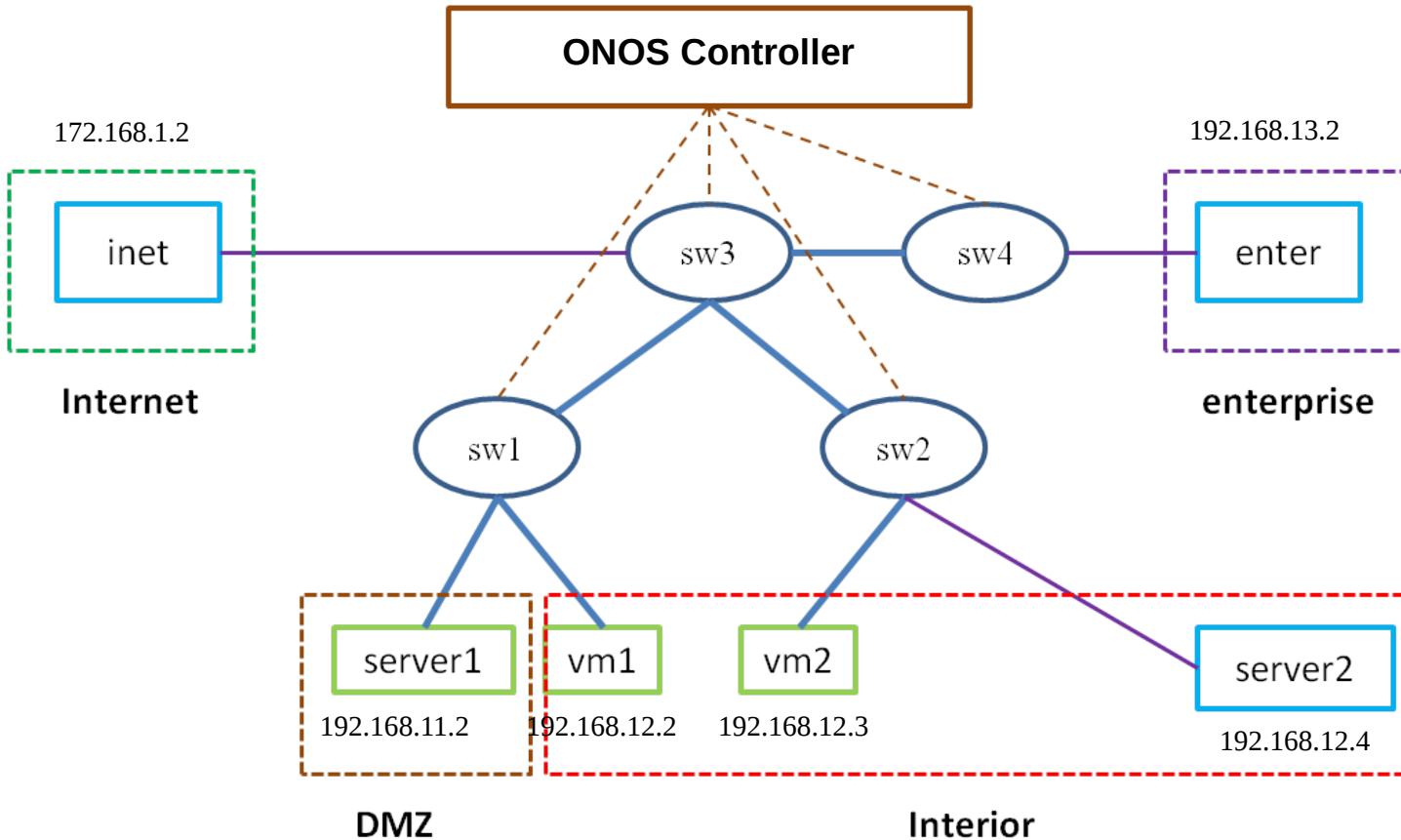
A language editor in Eclipse with Syntax highlighting and auto completion.

Screenshot of the Eclipse IDE interface. The title bar says "Java - vpc/src/low.nemo - Eclipse". The central area shows a code editor with the file "low.nemo" open, containing the following NEMO script:

```
1 Engines: 127.0.0.1;
2 CREATE "user2" "abc" "tenant";
3 IMPORT Node enterprise Type ext-group Property location:"o
4 IMPORT Node internet Type ext-group Property location:"ope
5 IMPORT Node video-server1 Type host;
6 CREATE Node dmz Type l2-group Contain video-server1 Property
7 IMPORT Node video-server2 Type host;
8 IMPORT Node vm2 Type host;
9 IMPORT Node vm1 Type host;
10 CREATE Node interior Type l2-group Contain video-server2,vm
11 CREATE Connection c1 Type p2p Endnodes enterprise,interior
12 CREATE Connection c2 Type p2p Endnodes interior,dmz;
13 CREATE Connection c3 Type p2p Endnodes dmz,internet;
```

The left side shows the project structure with "src" selected. The right side shows the "Outline" view with nodes like "low", "user2", "enterprise", etc. The bottom status bar shows "B/M of 522M".

# NEMO Intent Execution



Low bandwidth



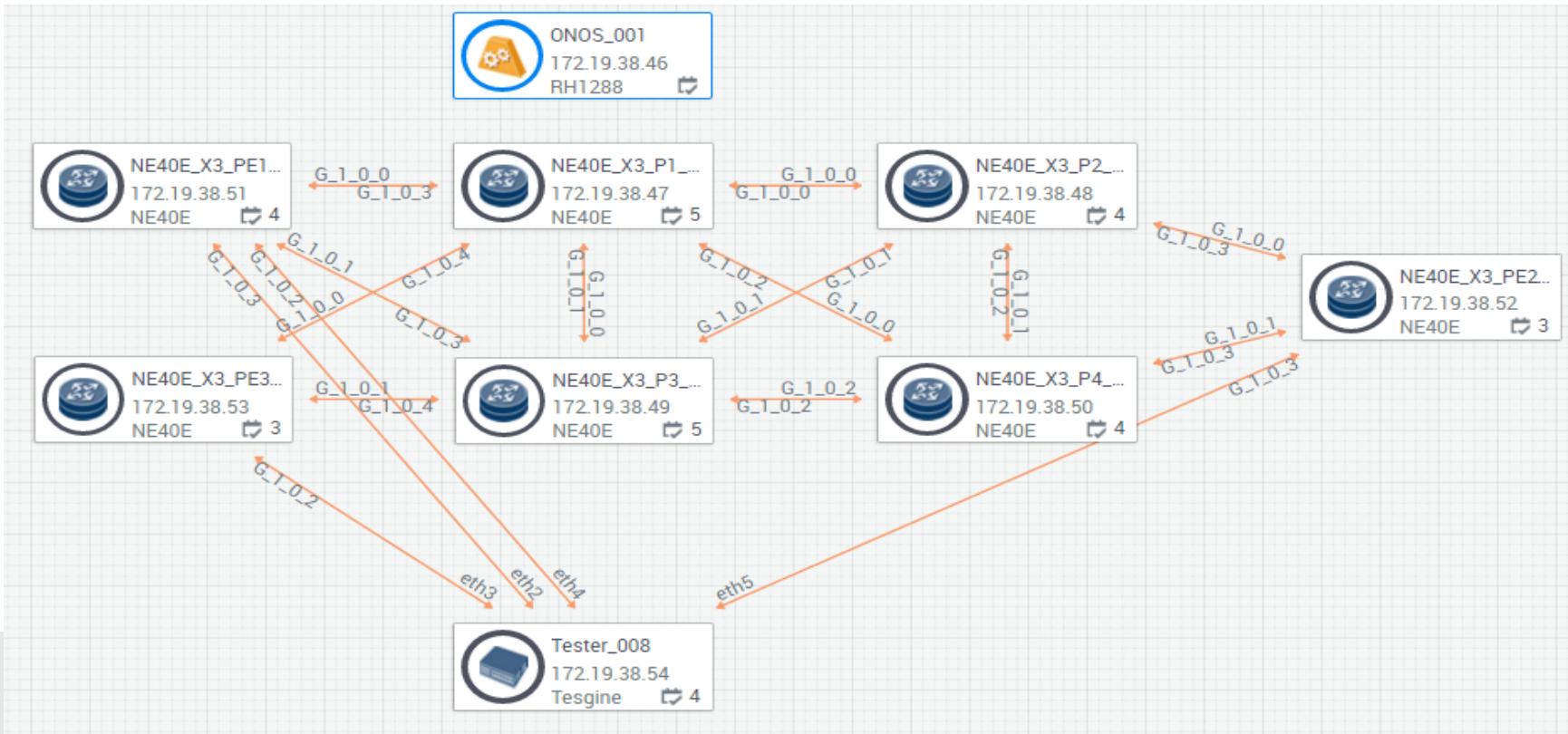
High bandwidth



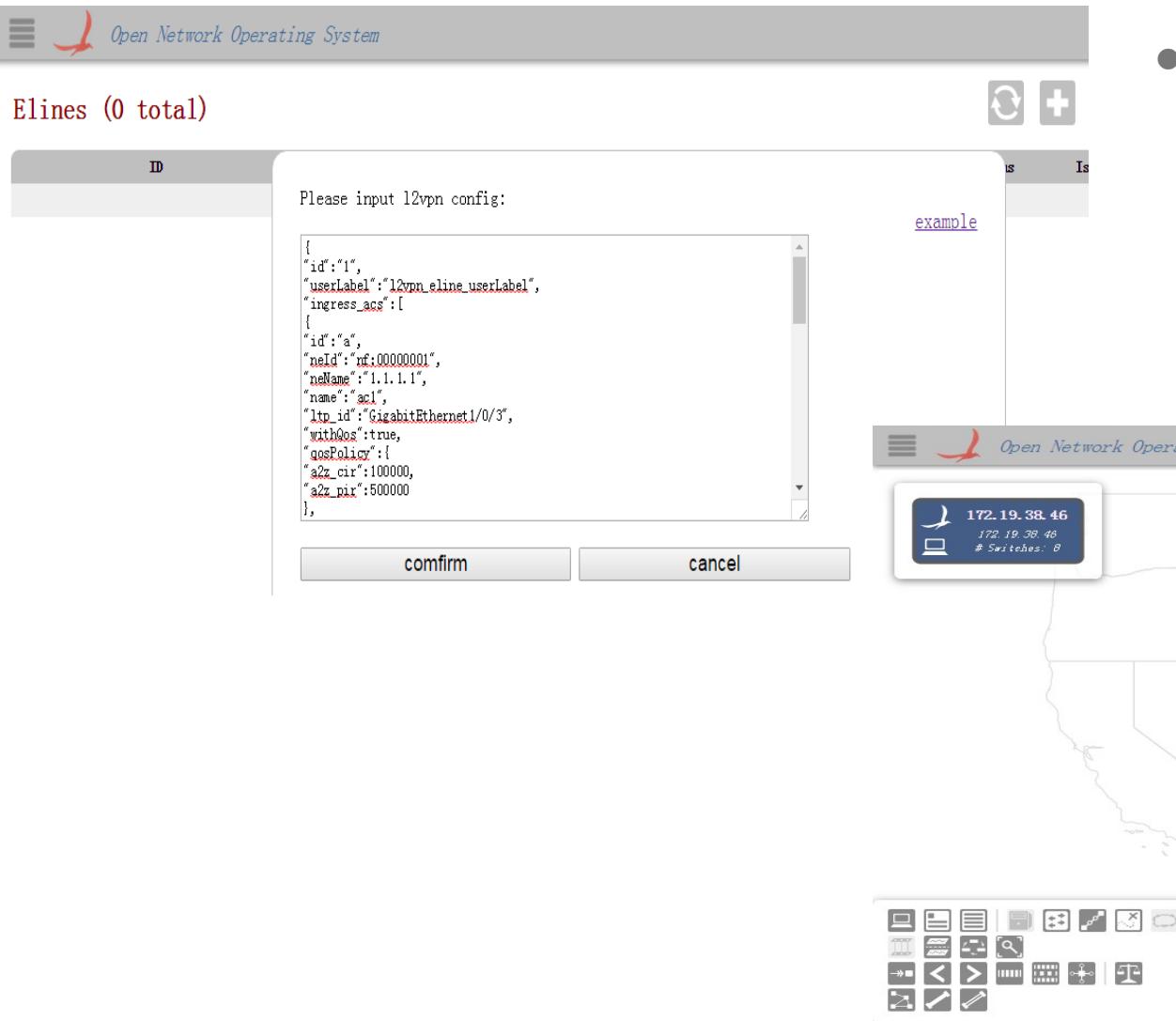
And now, we've become brothers and sisters

# ONOS L2VPN

- An application of ONOS
  - Create L2VPN (Eline) service using restful API
  - Controller maps service model to device configurations
- Deployed in the sandbox environment with real devices



# L2VPN Creation and Instantiation



- Tested ONOS L2VPN application with sandbox environment
  - Fix some bug in service templates
  - Verify the performance of remote sandbox

# Thank You