BCNET

Routing Workshop 2016

Juniper Lab

Toby Wong, Senior Network Analyst
toby.wong@bc.net

Blake Bridgewater, Network Analyst
blake.bridgewater@bc.net

Workshop Schedule

- Workshop will go from 9am – 5pm
- Coffee and snack breaks at 10:30am and 3:00pm
- Lunch at 12pm – 1pm
- Lab review and discussion around 4:30pm

**Lunch and snacks provided

Workshop Logistics

- Internet access using wireless-SSID EDUROAM
- Access to lab via credentials in handouts
- Team member and group details in handouts
- It is recommended to use one workstation for doing the lab and take turns making config changes

Objectives

- OSPF, BGP, route policies
- Logical-systems to setup virtual routers
- Configure interfaces, logical tunnels and vlans
- Setup ACL's

The Lab Hardware

Juniper MX480 and MX960

JUNOS

- Based on Linux: FreeBSD
- Junos support operational mode and configuration mode
- Configuration mode allows comparing config changes with a prior version
- JUNOS also supports rollbacks
- Also supports applying changes before commit

About Logical-Systems

During the Lab, groups will create 4x logical-systems

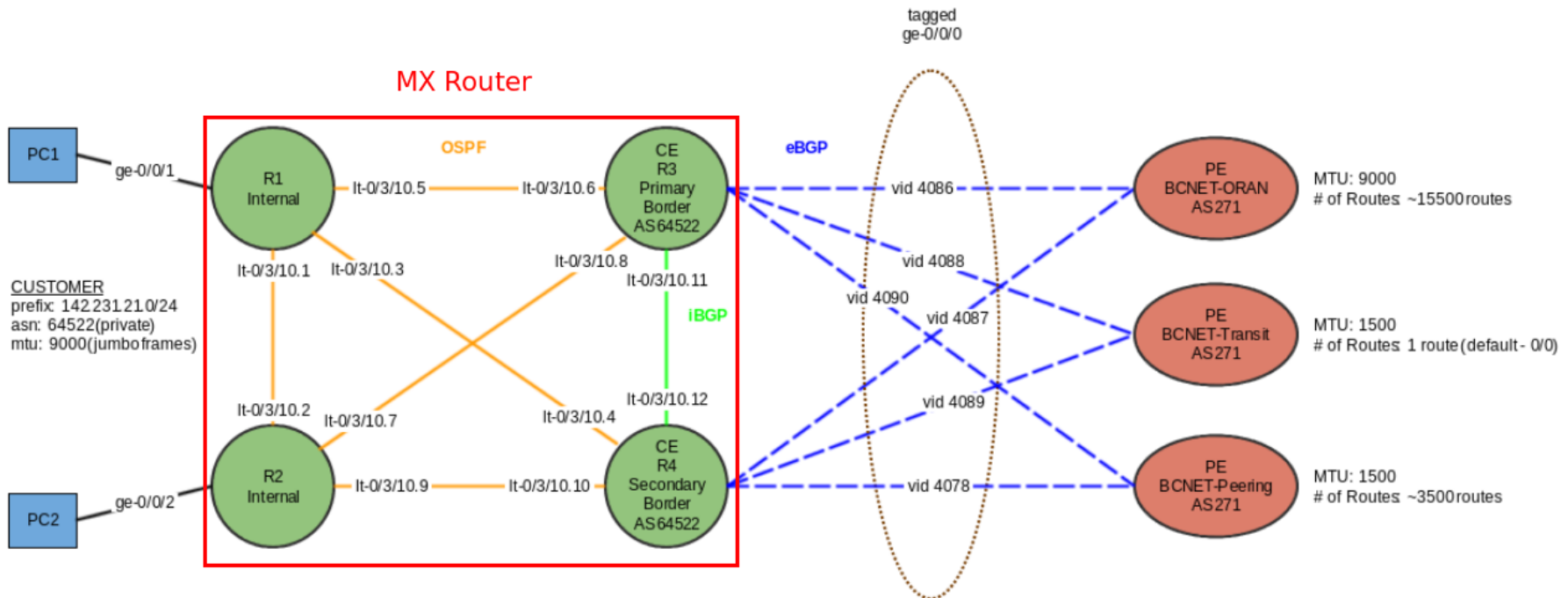Logical-systems will be interconnected via logical tunnels

Two of the logical-systems represent the "core" campus routers

The other two logical-systems represent the boarder routers that connect to BCNET

Logical-systems are very convenient and allow BCNET to provide "managed" routing services to members.

Lab Topology

Lab Schedule and Breakdown

Assignment 1a Subnet for interfaces, loopbacks and PC1/PC2 IP allocation. – 30 Mins

Assignment 1b Configure all physical interfaces and logical tunnel interfaces (which interconnect virtual routers) – 1 Hr

Assignment 2 Provision the OSPF/iBGP routing protocols – 2 Hrs

Assignment 3 Provision eBGP connections to BCNET core network – 2.5 Hrs

Assignment 4 Configure ACL's to lockdown SSH on the loopbacks. – 30 Mins

Survey!

http://surveys.bc.net/s/workshop-survey-2016/

QR Code to Survey