Assignment 4 Intro
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Subnetting

• You’re going to have to split up your /27 into blocks of FOUR IP Subnets. Not FOUR subnets, FOUR IPS per subnet.

• Document which network goes where and which is unused for the assignment.

• Pick two for links from the 3750s to the 2800’s

• Pick two more for links from the 2800’s to your Virtual Machines.
Layer3 and VMs

Uplink Switch

Tagged with Native VLAN

Your 3750

Tagged on Random VLAN#1

2800-1

Tagged out of 2800 on VM VLAN1

Traffic arrives/leaves VM1 Untagged on VM VLAN1

VM1

Tagged on Random VLAN#2

2800-2

Tagged out of 2800 on VM VLAN2

Traffic arrives/leaves VM1 Untagged on VM VLAN2

VM2

Internet
How Layer2 Really Looks

Uplink Switch
- Tagged with Native VLAN and TAGGED on VM VLANS

Your 3750
- Tagged on Random VLAN#1
- Tagged on VM VLAN1

2800-1
- Fa0/0
- Fa0/1

VM Switch
- Tagged on Random VLAN#2
- Tagged on VM VLAN2

2800-2
- Fa0/0
- Fa0/1

VM1
- Untagged on VM VLAN1

VM2
- Untagged on VM VLAN2
SVI = Switched Virtual Interfaces

- You’re going to have to create some SVIs on 3750
  - `int vlanABC`
    - `ip address A.B.C.D X.Y.Z.0`
    - `no shutdown`
  - Don’t forget to create the VLAN!
    - `vlanABC`
      - `name XYZ`
  - Watch your VTP. May want to set for Transparent!
IP Routing

- 3750 will have to have “ip routing” enabled.
- You’ll then have to add a default route:
  - ip route 0.0.0.0 0.0.0.0 <default_gateway>
- You’ll also have to static route the VM Subnets to your 2800s:
  - ip route A.B.C.D 255.255.255.X <2800_F0/0.VLAN-A IP>
Troubleshooting

- Layer2 (Chapter 10)
  - show vlan id <XYZ>
  - show mac address-table (int FaX/Y/Z) or (vlan Z)

- Layer3 (Chapter 16)
  - Can your VM ping your Router?  (check layer2)
  - Can your VM ping the Routers gateway (3750)? (check Layer3 route)
  - Can your VM get outside of your switch to the Internets?
Email me with Questions

• cbl@infowest.com

• Remember to put “IT4400” in the subject.

• Or Google Talk: alandaluz@gmail.com

  • Brandon loves to IM me :)

  • Oh and Brandon is an eager beaver and has already done it, so he’ll help you if you bring him brownies.

  • No… Not those kind of brownies.
Due Monday at 11:59pm