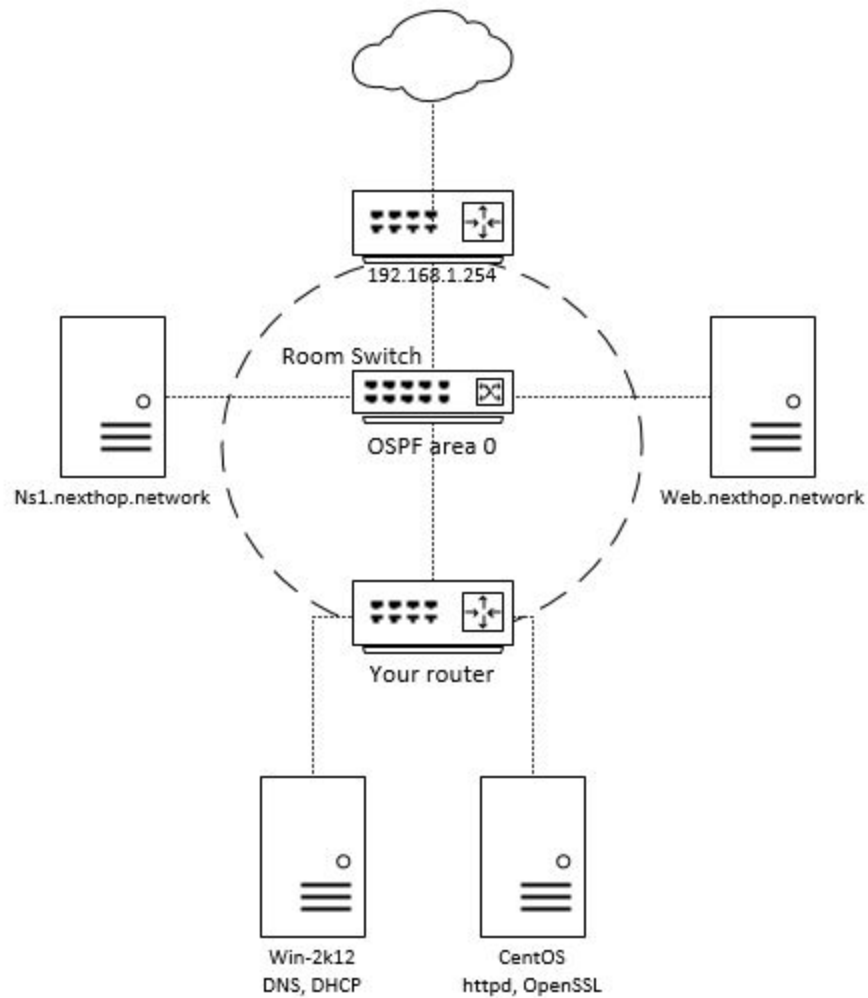




Network Services

Topology:



IP Scheme: 172.16.X.H/24 (X is your bench/pod number, H is for hosts)

PC setup:

1. Launch VMWare workstation
2. Make sure VM's are set to bridge to physical network
3. Boot base VM's necessary to this lab
 - a. Passwords: student

Windows Server (DHCP, DNS): you can do linux DNS and DHCP if you want...

1. Login and let Server Manager Load
2. Change your hostname to *ns1.<yourdomain>.nexthop.network*
3. Install DHCP, DNS
4. Configure DHCP pool
5. Configure DHCP to pass out domain suffix you plan to use in step x
6. Check DHCP is working properly on your Windows 7 host
7. Create reservation for your Windows 7 host
8. Configure DNS domain with yourname.com
9. Check DNS is working properly on your Windows 7 host

CentOS:

1. Assign a static IP Address of 172.16.X.50 and exclude it in your DHCP pool
2. Install a web server (apache, nginx, etc)
3. Configure your web server and start the service
4. Browse to your website
5. Configure your index.html file to personalize your website

Routing:

1. **USE THE Cisco 2911!!**
2. Add a router to your topology and set the Default Gateway (or default router) DHCP option for your pool
3. Connect your router to the room switch
4. Ensure you obtain an IP address via DHCP of 192.168.1.X
5. Exchange routing information with us and other groups using OSPF (all area 0 for now)
6. Verify you can reach our network (ping 192.168.1.254)
7. Set up a default route to 192.168.1.254 and get Internet connectivity

DNS Delegation:

1. Come see us
2. Delegate your subdomain to your DNS server
3. Set your Windows 7 machine to use your DNS server
4. Set up DNS forwarding to *ns1.nexthop.network*

Built-It-Night #2 Lab

9/13/16

5. Add a CNAME record of *www.<yourdomain>.nexthop.network*
6. Browse to your website *www.<yourdomain>.nexthop.network*
7. Browse to *web.nexthop.network*
8. Browse to another person's web site

HTTPS:

1. Set up SSL for your website (Hint: Use a self signed certificate)
2. HTTPS is fairly straightforward, luckily for us Digital Ocean creates amazing guides
3. Change hostname of your web server
4. Accept security certificate when browsing to it (since it is a self signed certificate, your PC/browser does not trust it)