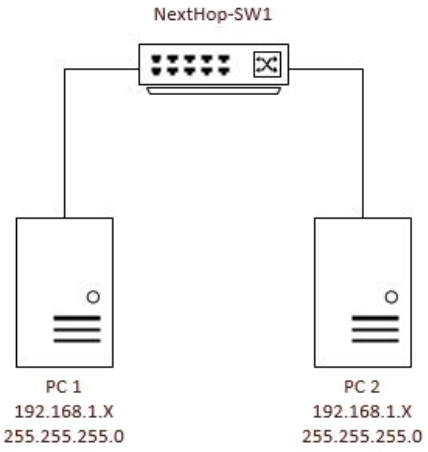
An Introduction to Networking

Topology:



The topology above can be used as a reference. Please use the Cisco 3550 switches for this lab.

Switch setup:

1. Console into your switch using Putty
2. Run *write erase* followed by *reload* on the switch CLI (command line interface). This will wipe any previous configuration and will reboot your switch.
3. When the switch reboots you will be in "User EXEC mode"[1] denoted by the prompt **Switch>**
4. Enter *enable* in the CLI to move to "Privileged EXEC mode"[2] denoted by the prompt **Switch#**
5. Enter *configure terminal* to move to "Global Configuration mode"[3] denoted by the prompt **Switch(config)#**
6. Give your switch a local hostname

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[1] User EXEC Mode: Allows the user to connect to remote devices, change terminal line settings temporarily, and list basic system information.
[2] Privileged EXEC Mode: Allows the user to run a wider set of commands and set some operating parameters. Normally, this mode is password protected.
[3] Global Configuration Mode: Allows the user to configure the global device settings and enter other configuration modes (interfaces, protocols, etc).

7. Save your configuration so on the next reboot your hostname will persist

PC setup:

1. Connect 2 bench PCs to your switch
2. Configure your PCs with a static IP address 192.168.1.X (where X is your PC#)
3. Configure the subnet mask as 255.255.255.0 (/24)
4. Leave the other fields blank
5. Save your settings
6. Open *Command Prompt* on one of the PCs and run *ipconfig*
7. Confirm your PC has the IP address you assigned under *Ethernet adapter Local Area Connection*
8. Run *ping 192.168.1.X* (where X is your PC#)

Wireshark:

1. Open Wireshark on one of your bench PCs
2. Start a capture on the local Ethernet NIC
3. Ping the other bench PC again
4. Stop the Wireshark capture and view the captured packets
5. Use the filters to find your ping

What other protocols do you see and why?
Can you find the frame and packet?

Bonus:

1. Prove your bench PCs are connected to the switch