

NET2000 Review – Configuration

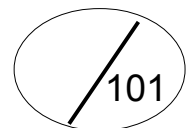
Student Name: _____

Switches: (SW1)_____ (SW2)_____

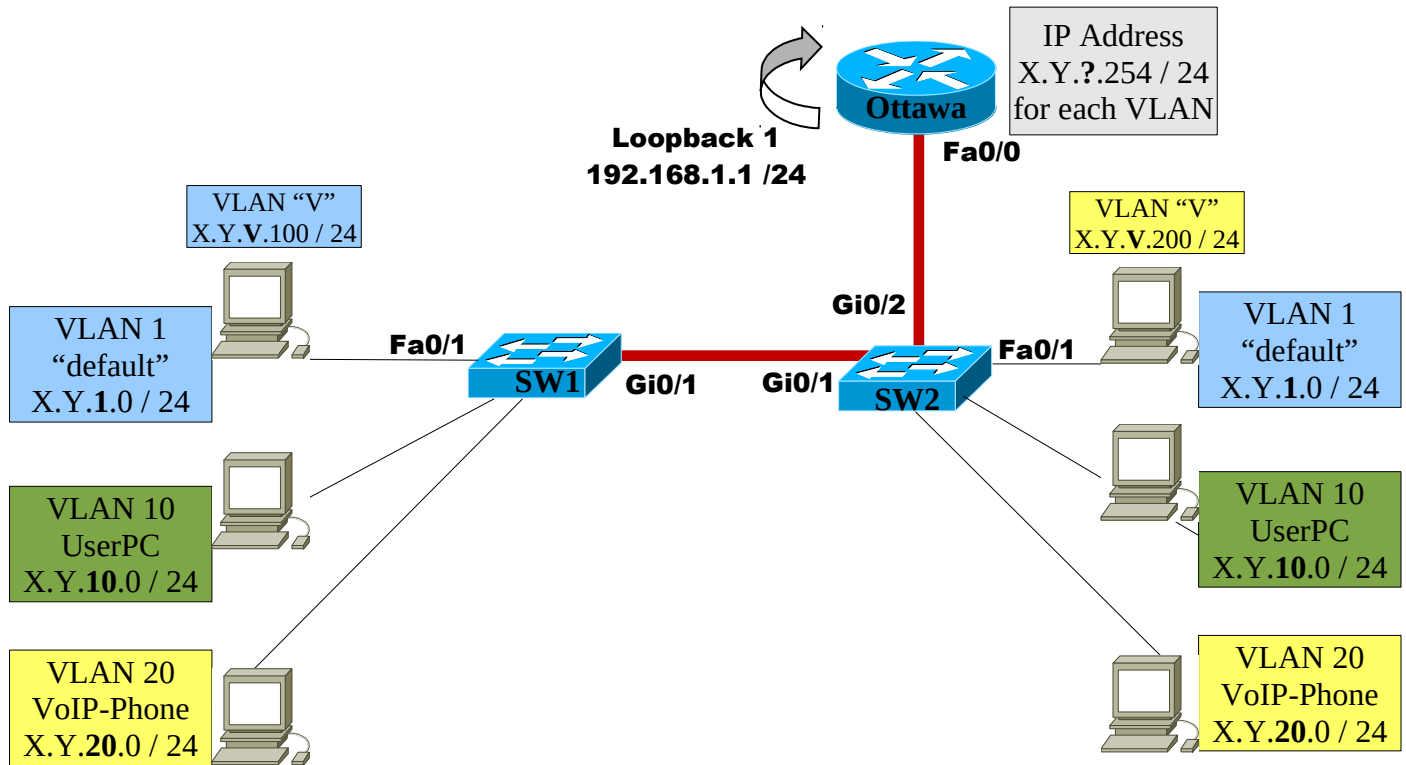
Router: (Ottawa)_____

IP network: _____ (instead of X.Y. ... in topology)

Step	Task Summary (See next page for full instructions)	Marks	Check
Task #0: Network Setup			
1	Cable your network	/ 16	
2	Setup host IP addresses	/ 18	
Task 1: Basic Switch Configuration			
1	Set hostname and passwords for SW1 & SW2	/ 4	
2	Set SW1 & SW2 IP address & default-gateway	/ 8	
Task 2: Configure SW2 as Root Bridge - STP			
1	Guarantee SW2 is the Root Bridge	/ 1	
Task 3: Configure VTP			
1	Set domain as NET2000 – password net2000	/ 4	
2	Set: SW1 as server - SW2 as client	/ 2	
Task 4: Configure VLANs			
1	Configure VLAN 1, 10, 20 (only on server; will be propagated to client)	/ 2	
2	Configure access port for VLANs	/ 4	
3	Configure port security	/ 24	
Task 5: Configure Trunking			
1	Configure all the trunking links	/ 2	
Task 6: Configure Inter-vlan routing			
1	Configure all subinterfaces	/ 16	
Task 7: Connectivity			
1	Connectivity between same VLANs across trunk link	/ 0	
2	Connectivity between different VLANs across trunk link	/ 0	
3	Connectivity between PCs to Ottawa loopback	/ 0	



Topology



Switch Configuration & Port Assignment

	Hostname	VLAN 10	VLAN 20	VLAN 1	IP Address (of SW)	Trunk Port
SW1	T108West	Fa0/10	Fa0/20	All remaining ports	X.Y.1.1/24	Gi0/1
SW2	T108East	Fa0/10	Fa0/20	All remaining ports	X.Y.1.2/24	Gi0/1, Gi0/2

Instructions

- ❑ You must complete this in PT as an individual exercise. Download the PT from the course site.
- ❑ You **must** identify your PT file **before doing any configuration**:
 1. For the User Profile, put your **Algonquin Network ID** in the "Name" field and your **Algonquin email** in the "Email" field.
 2. change the file name (Save As ...) to **Lastname-Firstname-Lab1.pka**
- ❑ You may use what ever resources you like, including the internet
- ❑ Use the IP address given to you for your network
- ❑ Submit your completed PT file for grading **before** the end of the lab period
(submit via Blackboard, or by saving to the Professor's USB stick if the college network is down)

Task #0: Network Setup

- ▶ Cable all network devices as shown in the topology diagram
- ▶ Clear any pre-existing configuration in the network devices
- ▶ Setup the IP configuration for all six (6) hosts
 - ▲ Setup the PCs in VLAN **1** using the IP X.Y.1.100 / 24 & X.Y.1.200, connect to port **Fa0/1**
 - ▲ Setup the PCs in VLAN **10** using the IP X.Y.10.100 / 24 & X.Y.10.200, connect to port **Fa0/10**
 - ▲ Setup the PCs in VLAN **20** using the IP X.Y.20.100 / 24 & X.Y.20.200, connect to port **Fa0/20**

Task #1: Basic Switch Configuration

- ▶ For each switch, set the hostname (as per topology sheet) and a *secure* password ("cisco")
- ▶ For each switch, set an IP address and default gateway
 - ▲ Use IP: X.Y.1.S / 24, where S is the switch number

Task #2: Configure SW2 as Root Bridge

- ▶ Guarantee that SW2 will always be the root bridge.

Task #3: Configure VTP

- ▶ Set domain as NET2000
- ▶ Set password as net2000
- ▶ Configure SW1 for VTP server mode
- ▶ Configure SW2 for VTP client mode

Task #4: Configure VLANs

- ▶ For the VTP server, configure the VLAN ID and name
- ▶ For each switch, configure the VLAN ports as in the topology diagram
- ▶ Configure port security on ports Fa0/5 through Fa0/8 on both switches to allow three hosts and if the port security is violated then protect the network by simply dropping frames from "excess" clients.

Task #5: Configure Trunking

- ▶ Configure all trunk links shown in the topology diagram.
- ▶ Confirm what trunking protocol is in use: ISL or 802.1Q?
- ▶ Confirm that the VLAN config has propagated from server to client

Task #6: Configure the Ottawa router for inter-vlan routing

- ▶ Configure interfaces for inter-vlan routing
- ▶ Configure the loopback interface shown in the topology diagram.

Task #7: Test Connectivity

- ▶ Test connectivity between same VLANs across trunk line
- ▶ Test connectivity between different VLANs across trunk line
- ▶ Test connectivity between PC (any VLAN) and Ottawa – use loopback as per the topology diagram