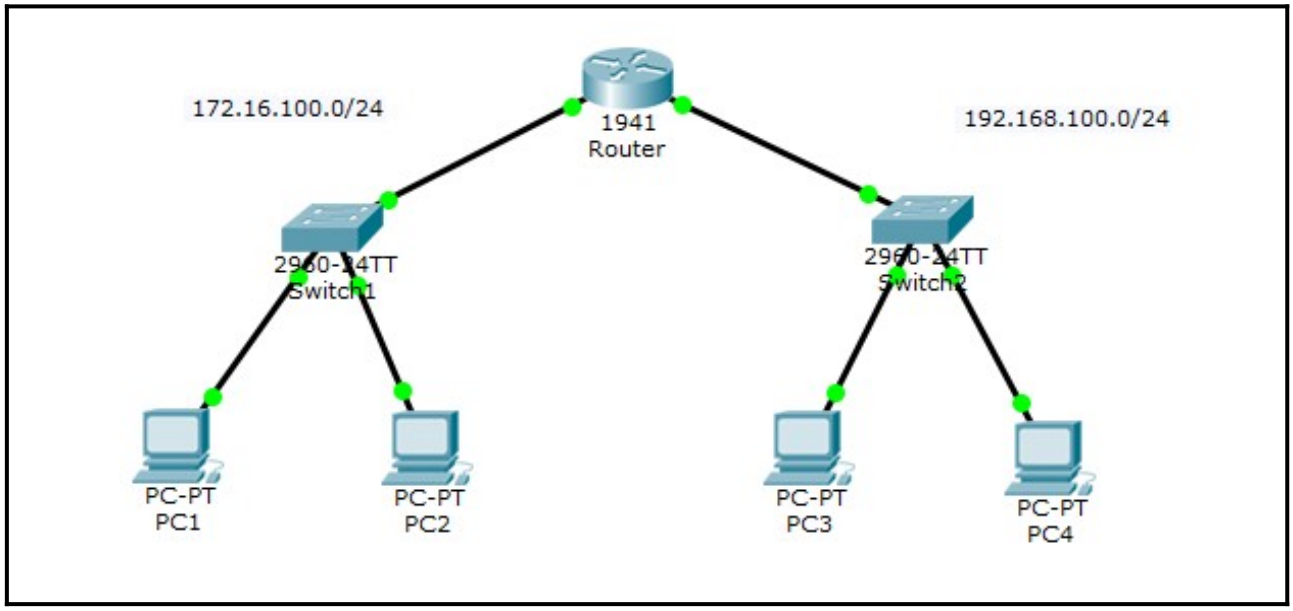
CFY Introduction to Networking Lab Exam [80 Minutes]

Student Name		**Lab Instructor**	**Kevin Conway**
Student ID		**Final Marks (/100)**	
Student Group			
Date/Time			

Instructions:

- **Duration: 80 minutes**
- Use Packet Tracer
- Label all devices clearly & put your name/ID in PT file
- Save your configuration

Topology



Addressing Table

Device	Interface	Address	Subnet Mask	Default Gateway
Router	G0/0	172.16.100.1	255.255.255.0	N/A
	G0/1	192.168.100.1	255.255.255.0	N/A
Switch1	VLAN 1	172.16.100.2	255.255.255.0	
Switch2	VLAN 1	192.168.100.252	255.255.255.0	
PC1	NIC	172.16.100.11	255.255.255.0	
PC2	NIC	172.16.100.12	255.255.255.0	
PC3	NIC	192.168.100.12	255.255.255.0	
PC4	NIC	192.168.100.13	255.255.255.0	

Passwords

Device	Security Type	Password
Switch1, Switch2, Router	All	**cisco/cisco1**

Assessment Objectives

Part 1: Complete Addressing Table & Cable Network **(20 points)**

Part 2: Configure Switch **(30 points)**

Configure switch name & disable domain lookup
Secure access to all configuration lines of the switch
Secure access to the device configurations of the switch using the encrypted password
Ensure that all plain text passwords on the switch are encrypted.
Configure an appropriate banner on the switch
Configure addressing for all devices according to the Addressing Table. Most values are provided in the table, others you must determine
Document interfaces with descriptions on the switch virtual interface

Part 3: Configure Router **(25 points)**

Configure addressing for all devices according to the Addressing Table
Secure access to all configuration lines of the router
Secure access to the device configurations of the router using the encrypted password
Ensure that all plain text passwords on the router are encrypted.
Configure an appropriate banner on the router

Document interfaces with descriptions on the router interfaces

Part 4: Configure PCs **(10 points)**
Configure addressing for PCs according to the Addressing Table. Most values are provided in the table, others you must determine

Part 5: Test Network (15 points)

Verify connectivity between all devices. All devices should be able to ping all of the other devices. Troubleshoot any connectivity problems.

Scenario

In this Skills Assessment (SA) you will configure the devices in a small network. You must configure router, switches and PCs to support IPv4 connectivity. You will configure security on the devices. You will test and document the network using common CLI commands. Finally, you will save the router configuration to NVRAM.

Required Resources

- 1 Router (Cisco 1941)
- 2 Switches (Cisco 2960)
- 4 PCs
- Console cable to configure the Cisco IOS devices via the console ports
- Ethernet cables as shown in the topology

Part 1: Complete Addressing Table & Cable Network

- Complete the Addressing Table:

Total points: 12 = 6x2

Device	Interface	Address	Subnet Mask	Default Gateway
Router	G0/0	172.16.100.1	255.255.255.0	N/A
	G0/1	192.168.100.1	255.255.255.0	N/A
Switch1	VLAN 1	172.16.100.2	255.255.255.0	
Switch2	VLAN 1	192.168.100.252	255.255.255.0	
PC1	NIC	172.16.100.11	255.255.255.0	
PC2	NIC	172.16.100.12	255.255.255.0	
PC3	NIC	192.168.100.12	255.255.255.0	
PC4	NIC	192.168.100.13	255.255.255.0	

- Cable the network:

Total points: 8 = (Router=2, Switches/PCs=6x1)

Instructor Sign-off Part 1: _____

Part 2: Configure the Switch

Total points: 30

- Configure **both** switches

- Configure switch with name given in addressing table & disable domain lookup
- Secure access to all configuration lines of the switch
- Secure access to the device configurations of the switch using the encrypted password
- Ensure that all plain text passwords on the switch are encrypted.
- Configure an appropriate banner on the switch
- Configure addressing for all devices according to the Addressing Table. Most values are provided in the table, others you must determine
- Document interfaces with descriptions on the switch virtual interface

Task	Specification	IOS Commands	Points (30)
Config switch name	S1/S2		(3 points)
Disable DNS	S1/S2		(3 points)
Secure access to switch	S1/S2		(14 points)
Encrypt text password	S1/S2		(3 points)
Config banner	S1/S2		(2 points)
Config switch interface	S1		(3 points)
Config switch interface	S2		(3 points)
Document switch interfaces	S1/S2		(3 points)

Points: _____ of 30

Part 3: Configure the Router

Total points: 25

- Configure addressing for router according to the Addressing Table
- Document interfaces with descriptions on the router interfaces

Task	Specification	IOS Commands	Points (25)
Config router interface	Router		(7 points)
Config router interface	Router		(7 points)
Secure access to router	Router		(5 points)
Encrypt text password	Router		(3 points)
Config banner	Router		(3 points)

Points: _____ of 25

Part 4: Configure the PCs

Total points: 10 = 4x2.5

- Configure addressing for PCs according to the Addressing Table. Most values are provided in the table, others you must determine

Points: _____ of 10

Device	Type	IP	SNM	Default G/W
PC1	NIC	172.16.100.11	255.255.255.0	
PC2	NIC	172.16.100.12	255.255.255.0	
PC3	NIC	192.168.100.12	255.255.255.0	
PC4	NIC	192.168.100.13	255.255.255.0	

Part 5: Test Connectivity

Total points: 15 = 3*5

- **Verify connectivity between all devices. All devices should be able to ping all of the other devices.**
- **Troubleshoot any connectivity problems.**

From	To	Command	Results	Points
PC-1	S1 Management Address			(5 points)
PC-1	PC-2			(5 points)
PC-3	PC-2			(5 points)

Points: _____ of 15

Instructor Check/Sign-off: _____