

MIT WORLD PEACE UNIVERSITY

Computer Networks  
Second Year B. Tech, Semester 3

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DHCP, DNS AND WEB SERVER CONFIGURATION

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PRACTICAL REPORT  
ASSIGNMENT 10

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## 1 Aim and Objectives

### Aim

To Configure network using Dynamic Host Configuration Protocol (DHCP), DNS and Web server Use Ping utility to test connectivity

### Objectives

1. To learn the DHCP installation and understand the practical use of DHCP, DNS and Web server.
2. To learn the mechanism to access the remote machine by using ping utility to test connectivity.

## 2 Devices

### 2.1 Devices Used

1. 1 Generic Switch
2. 2 Switch 2960 with 24 LAN Ports
3. 6 Generic PCs
4. 4 Laptops

### 2.2 Device Info and IP Addresses

Subnet Mask: 255.255.255.0

Name	Type	IP
PC0	PC	192.168.10.1
PC1	PC	192.168.10.2
PC2	PC	192.168.10.3
PC3	PC	192.168.10.4
PC4	PC	192.168.10.5
PC5	PC	192.168.10.6
Laptop0	Laptop	192.168.10.7
Laptop1	Laptop	192.168.10.8
Laptop2	Laptop	192.168.10.9
Laptop3	Laptop	192.168.10.10
Switch0	2950-24 Switch	None
Switch1	2950-24 Switch	None
Switch2	Generic Switch	None

## 3 Cables

1. Straight LAN Cable to connect unlike Devices
2. Crossover LAN Cable to connect like Devices

## 4 Procedure to Configure LAN

1. All 3 switches are connected with each other using crossover cables, as they are similar.
2. 4 PCs are connected to The first Switch
3. 4 Laptops are connected to the Second switch
4. 2 More computers are connected to another Switch.
5. Check the connection by opening the command prompt, and entering the commands ipconfig, and pinging the other computers.

## 5 Commands

1. **ipconfig:**

In Windows, ipconfig is a console application designed to run from the Windows command prompt. This utility allows you to get the IP address information of a Windows computer. It also allows some control over your network adapters, IP addresses (DHCP-assigned specifically), even your DNS cache. Ipconfig replaced the older winipcfg utility.

2. **ping <ip addr>:**

The ping command is a Command Prompt command used to test the ability of the source computer to reach a specified destination computer. It's a simple way to verify that a computer can communicate with another computer or network device.

The ping command operates by sending Internet Control Message Protocol (ICMP) Echo Request messages to the destination computer and waiting for a response. The two major pieces of information that the ping command provides are how many of those responses are returned and how long it takes for them to return.

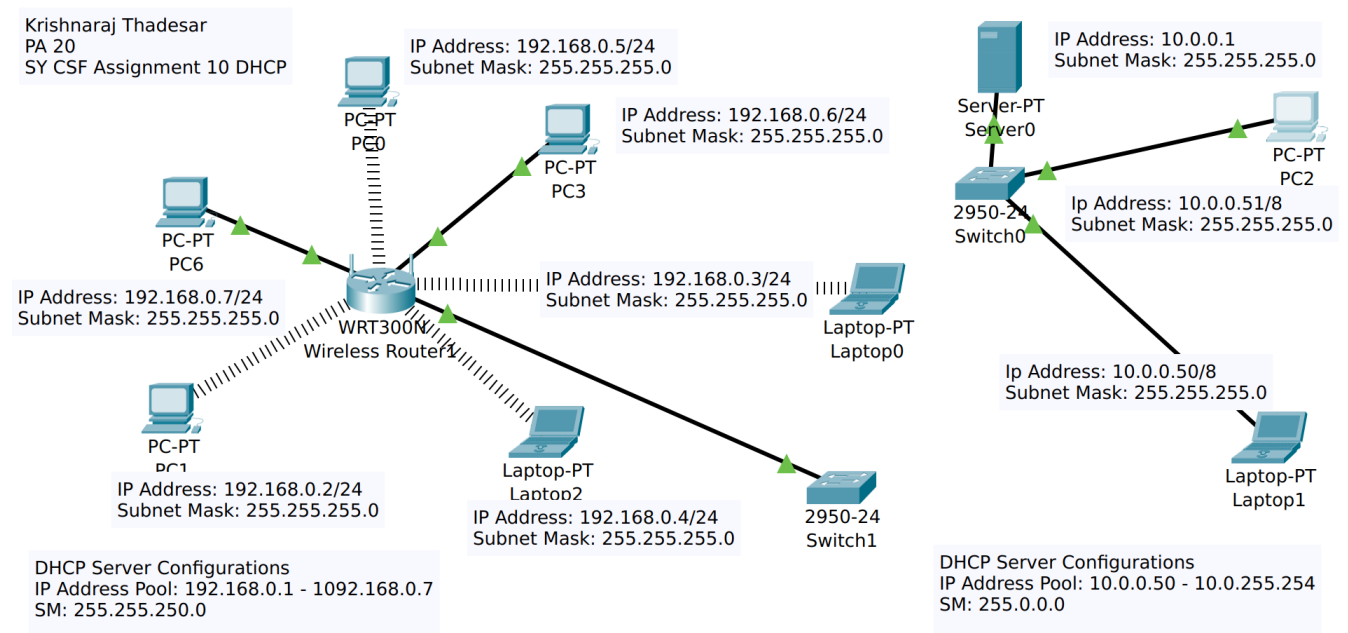
## 6 Platform

**Operating System:** Arch Linux x86-64

**IDEs or Text Editors Used:** Visual Studio Code

**Programs Used:** Cisco Packet Tracer v8.2

## 7 Connection Screenshot



## 8 Conclusion

DHCP, DNS and Web Server configurations were implemented and understood successfully.