	IRISET
इरिसेट नेटवर्क प्रयोगशाला प्रयोग नं: एन डब्लू एल - 03	**IRISET** **NETWORK LABORATORY** **EXPERIMENT NO.: NWL-03**

नाम
Name   : ---

अनुक्रमांक   प्रास अंक
Roll No   : ---   Marks Awarded   **:**

पाठ्यक्रम
Course   : ---

दिनांक   अनुदेशक का हस्ताक्षर   :
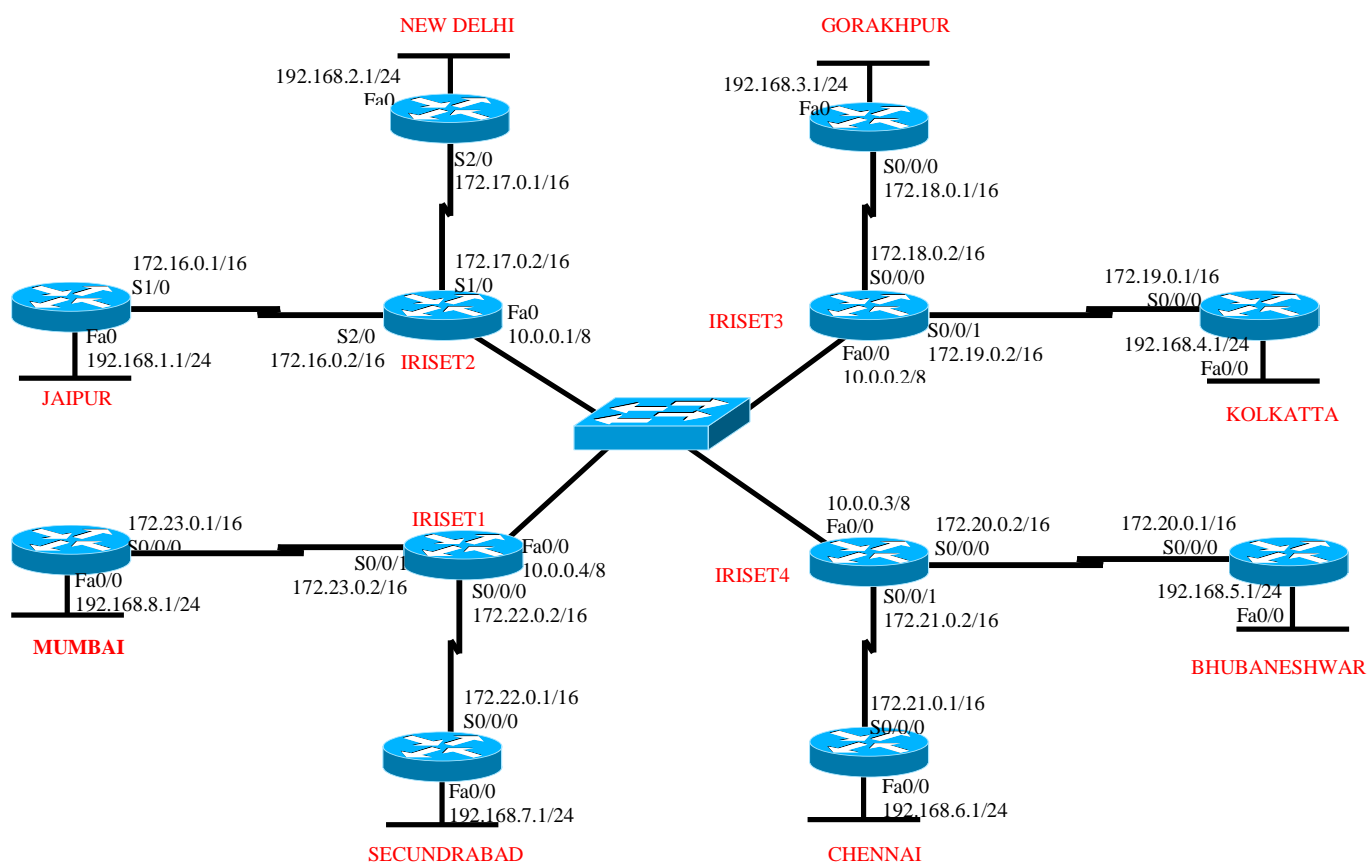Date   : ---   Instructor Initial

Name of the Experiment: **Initial Configuration of Router**

Object

Initial configuration of Router, as per the network connectivity diagram shown below.

Network Connectivity diagram

S0/0/1

Introduction

A brand new Router does not have any configuration. Initial configuration has to be done first. Initial configuration is done from terminal using emulation software's like hyper terminal (or) putty. In the Initial configuration we assign hostname to the Router & we configure only LAN (Ethernet) interface and passwords for Telnet, Enable & Console interfaces.

Apparatus Required

1. Desktop PC with a serial port (or) COM port
2. Console cable
3. Router (CISCO 1841)

Procedure

Enter the global configuration mode and configure the hostname as labeled on your desktop. Then configure the Ethernet (LAN) interface, assign passwords for virtual terminal, Console interface, Auxiliary interface & enable.

Assigning hostname to Router:

Syntax
Router>*en* ↵
Router#*config terminal* ↵
Router(config)#*hostname <hostname>* ↵
Router(config)#*exit* ↵

Configuring Fast Ethernet (LAN) interface:

Syntax
Router>*en* ↵
Router#*config terminal* ↵
Router(config)# *interface <type> <no.>* ↵
Router(config-if)#*ip address <ip address> <subnet mask>* ↵
Router(config-if)#*no shutdown* ↵
Router(config-if)#*exit* ↵

Assigning password for Virtual terminal:

Syntax
Router>*en* ↵
Router#*config terminal* ↵
Router(config)# *line vty <no.> <no.>* ↵
Router(config-line)# *password <password>* ↵
Router(config-line)#*login* ↵
Router(config-line)#*exit* ↵

Assigning password for Console port:

<u>**Syntax**</u>
Router>*en*↵
Router#*config terminal* ↵
Router(config)#*line con 0* ↵
Router(config-line)# *password <password>* ↵
Router(config-line)#*login* ↵
Router(config-line)#*exit* ↵
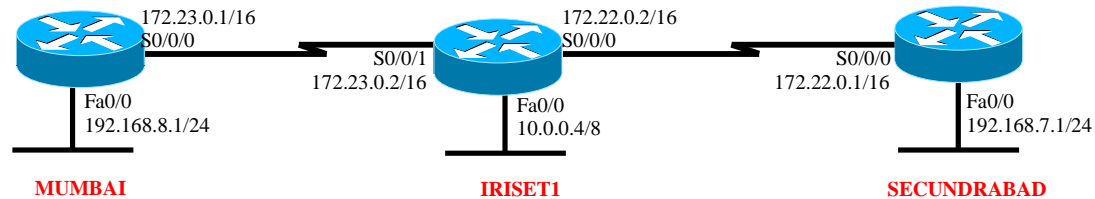

Assigning password for Auxiliary port:

<u>**Syntax**</u>
Router>*en* ↵
Router#*config terminal* ↵
Router(config)#*line aux 0* ↵
Router(config-line)# *password <password>* ↵
Router(config-line)#*login* ↵
Router(config-line)#*exit* ↵

Assigning password for Enable:

<u>**Syntax**</u>
Router>*en* ↵
Router#*config terminal* ↵
Router(config)#*enable password <password>* ↵
Router(config-line)# *enable secret <password>* ↵
Router(config-line)#*exit* ↵

172.23.0.1/16 S0/0/0 — MUMBAI — Fa0/0 192.168.8.1/24

S0/0/1 172.23.0.2/16 — 172.22.0.2/16 S0/0/0 — IRISET1 — Fa0/0 10.0.0.4/8

S0/0/0 172.22.0.1/16 — SECUNDRABAD — Fa0/0 192.168.7.1/24

On MUMBAI	On IRISET1	On SECUNDRABAD
Assigning Name to the Router:	**Assigning Name to the Router:**	**Assigning Name to the Router:**
Router>*en* ↵	Router>*en* ↵	Router>*en* ↵
Router*I#config t* ↵	Router*I#config t* ↵	Router*I#config t* ↵
Router*config)#hostname **MUMBAI*** ↵	Router*config)#hostname **IRISET1*** ↵	Router*config)#hostname **SECUNDRABAD*** ↵
Router(config)#*exit* ↵	Router(config)#*exit* ↵	Router(config)#*exit* ↵
Configuring Fast Ethernet (LAN) interface:	**Configuring Fast Ethernet (LAN) interface:**	**Configuring Fast Ethernet (LAN) interface:**
MUMBAI>*en* ↵	IRISET1>*en* ↵	SECUNDRABAD>*en* ↵
MUMBAI#*config t* ↵	IRISET1#*config t* ↵	SECUNDRABAD#*config t* ↵
MUMBAI(config)#*int fa0/0* ↵	IRISET1(config)#*int fa0/0* ↵	SECUNDRABAD(config)#*int fa0/0* ↵
MUMBAI(config-if)#*ip add 192.168.8.1 255.255.255.0* ↵	IRISET1(config-if)#*ip add 10.0.0.4 255.0.0.0* ↵	SECUNDRABAD(config-if)#*ip add 192.168.7.1 255.255.255.0* ↵
MUMBAI(config-if)#*no shut* ↵	IRISET1(config-if)#*no shut* ↵	SECUNDRABAD(config-if)#*no shut* ↵
MUMBAI(config-if)#*exit* ↵	IRISET1(config-if)#*exit* ↵	SECUNDRABAD(config-if)#*exit* ↵
Assigning password for Virtual Terminal:	**Assigning password for Virtual Terminal:**	**Assigning password for Virtual Terminal:**
MUMBAI>*en* ↵	IRISET1>*en* ↵	SECUNDRABAD>*en* ↵
MUMBAI#*config t* ↵	IRISET1#*config t* ↵	SECUNDRABAD#*config t* ↵
MUMBAI(config)#*line vty 0 4* ↵	IRISET1(config)#*line vty 0 4* ↵	SECUNDRABAD(config)#*line vty 0 4* ↵
MUMBAI(config-line)# *password **nwlab*** ↵	IRISET1(config-line)# *password **nwlab*** ↵	SECUNDRABAD(config-line)# *password **nwlab*** ↵
MUMBAI(config-line)#*login* ↵	IRISET1(config-line)#*login* ↵	SECUNDRABAD(config-line)#*login* ↵
MUMBAI(config-line)#*exit* ↵	IRISET1(config-line)#*exit* ↵	SECUNDRABAD(config-line)#*exit* ↵

172.23.0.1/16 S0/0/0 — MUMBAI
Fa0/0 192.168.8.1/24

172.22.0.2/16 S0/0/0 — IRISET1
S0/0/1 172.23.0.2/16
Fa0/0 10.0.0.4/8

S0/0/0 172.22.0.1/16 — SECUNDRABAD
Fa0/0 192.168.7.1/24
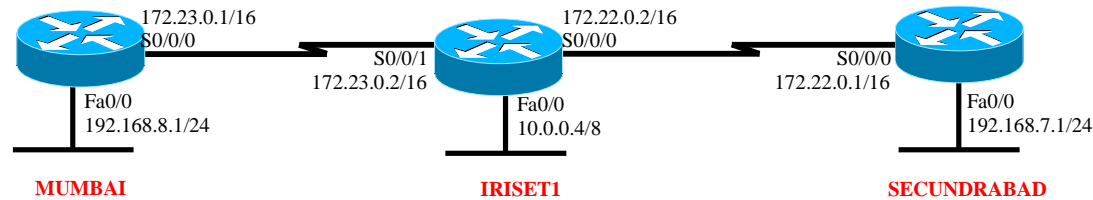
On MUMBAI	On IRISET1	On SECUNDRABAD
Assigning password for Console port:	**Assigning password for Console port:**	**Assigning password for Console port:**
MUMBAI>*en* ↵	IRISET1>*en* ↵	SECUNDRABAD>*en* ↵
MUMBAI#*config t*↵	IRISET1#*config t*↵	SECUNDRABAD#*config t*↵
MUMBAI(config)#*line con 0* ↵	IRISET1(config)#*line con 0* ↵	SECUNDRABAD(config)#*line con 0* ↵
MUMBAI(config-line)#*password **iriset*** ↵	IRISET1(config-line)#*password **iriset***↵	SECUNDRABAD(config-line)#*password **iriset***↵
MUMBAI(config-line)#*exit*↵	IRISET1(config-line)#*exit*↵	SECUNDRABAD(config-line)#*exit*↵
Assigning password for AUX port:	**Assigning password for AUX port:**	**Assigning password for AUX port:**
MUMBAI>*en* ↵	IRISET1>*en* ↵	SECUNDRABAD>*en* ↵
MUMBAI#*config t* ↵	IRISET1#*config t*↵	SECUNDRABAD#*config t*↵
MUMBAI(config)#*line aux 0* ↵	IRISET1(config)#*line aux 0* ↵	SECUNDRABAD(config)#*line aux 0*↵
MUMBAI(config-line)#*password **iriset*** ↵	IRISET1(config-line)#*password **iriset***↵	SECUNDRABAD(config-line)#*password **iriset***↵
MUMBAI(config-line)#*exit* ↵	IRISET1(config-line)#*exit*↵	SECUNDRABAD(config-line)#*exit*↵
Assigning password for Enable:	**Assigning password for Enable:**	**Assigning password for Enable:**
MUMBAI>*en* ↵	IRISET1>*en* ↵	SECUNDRABAD>*en* ↵
MUMBAI#*config t* ↵	IRISET1#*config t*↵	SECUNDRABAD#*config t*↵
MUMBAI(config)#*enable password **iriset*** ↵	IRISET1(config)#*enable password **iriset*** ↵	SECUNDRABAD(config)#*enable password **iriset*** ↵
MUMBAI(config)#*enable secret **nwlab*** ↵	IRISET1(config)#*enable secret **nwlab***↵	SECUNDRABAD(config)#*enable secret **nwlab***↵
MUMBAI(config)#*exit* ↵	IRISET1(config)#*exit*↵	SECUNDRABAD(config)#*exit*↵

Verification of Configuration:

Syntax
Iriset1#*show running-config* ⏎

Running Configuration:

E.g. **The Running configuration on IRISET1 Router is shown below**

Building configuration...
Current configuration : 3955 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname *iriset1*
!
boot-start-marker
boot-end-marker
!
logging buffered 51200 warnings
enable secret *5 1fltb$3M3rzNQFu1v2WTYqbEoiL/*
enable password *iriset*
!
line con 0
 password iriset
 login
line aux 0
 password iriset
 login
line vty 0 4
 access-class 23 in
 privilege level 15
 password nwlab
 login
 transport input telnet ssh
line vty 5 15

interface **FastEthernet0/0**
 description $ETH-LAN$$ETH-SW-LAUNCH$$INTF-INFO-FE 0$
 ip address 10.0.0.4 255.255.0.0
 duplex auto
 speed auto

<u>Saving the Configuration:</u>

<u>Syntax</u>
[Iriset1#*copy running-config startup-config* ↵
(OR)
Iriset1#*write memory* ↵
(OR)
Iriset1#*wr* ↵

[*Saves the running configuration into startup configuration*]

<u>Exercise:</u>

1. What is relevance of Default gateway?

2. Write the parameters relevant while configuring Ethernet (LAN) ports?

3. Write the IOS command to see the Ethernet (LAN) port details?

4. Name the administrative ports in a Router?