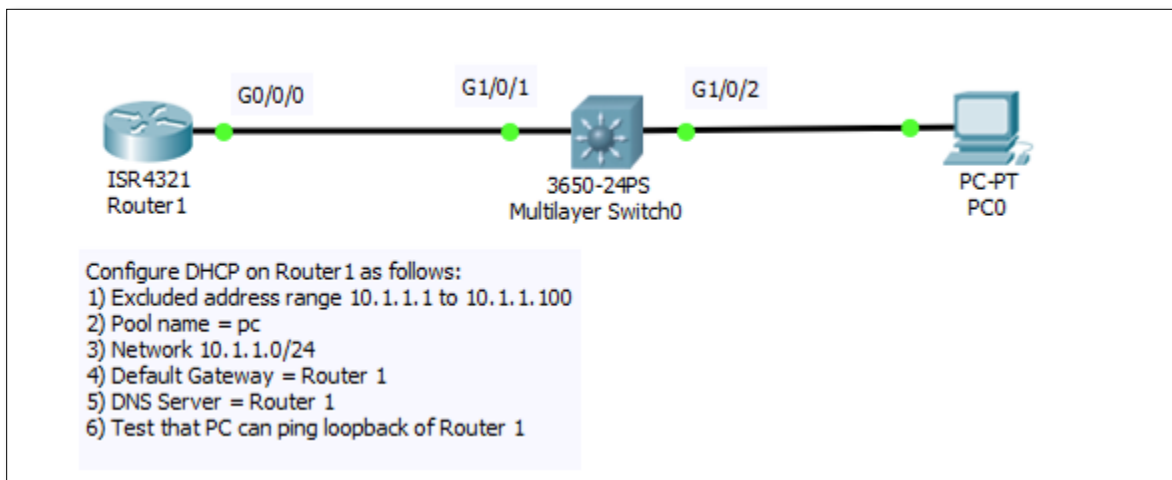


Setting up DHCP Lab



Note: Select the devices and connect the links to each device as shown below

Router1 initial configuration

Router1:

1. When asked "Would you like to enter the initial configuration dialog? No
2. Enter Global config mode
 - Enable
 - config t
3. Update hostname on Router1
 - Router(config)#hostname Router1
4. Enable Secret and Password
 - While in global config mode
 - Router1(config)#enable password cisco
 - Router1(config)#enable secret cisco123
5. Enable password on first 5 VTY lines 0 to cisco
 - While in global config mode
 - Router1(config)#line vty 0 4
 - Router1(config-line)#password cisco
 - Router1(config-line)#login
6. Enable password on Console
 - Router1(config-line)#line console 0
 - Router1(config-line)#password cisco
 - Router1(config-line)#login
7. Configure router interface
 - Router1(config)#int gig0/0/0
 - Router1(config-if)#ip address 10.1.1.1 255.255.255.0
 - Router1(config-if)#no shutdown

Setting up DHCP Lab

Router1 DHCP Configuration:

Router1:

1. Exclude IP range (10.1.1.1–10.1.1.100)
 - While in global config mode
 - ip dhcp excluded-address 10.1.1.1 10.1.1.100
2. Create DHCP pool named “pc”
 - Router1(config)#ip dhcp pool pc
 - Router1(dhcp-config)#network 10.1.1.0 255.255.255.0
 - Router1(dhcp-config)#default-router 10.1.1.1
Specifies the default gateway given to DHCP clients
3. Configure loopback on Router1
 - Router1(config)#interface loopback0
Creates a logical interface used for testing, management, or routing
 - Router1(config-if)#ip address 1.1.1.1 255.255.255.255
Assigns a /32 address that is always up unless the router is down
 - Router1(config-if)#exit

Multilayer Switch (3650) – Initial Setup

- Switch# enable
- Switch# config t
- hostname Switch1
- no ip domain-lookup

Multilayer Switch (3650) – interface config

- Switch# config t
- interface gig0/1
- description Uplink_to_Router1
- switchport mode access
- no shutdown

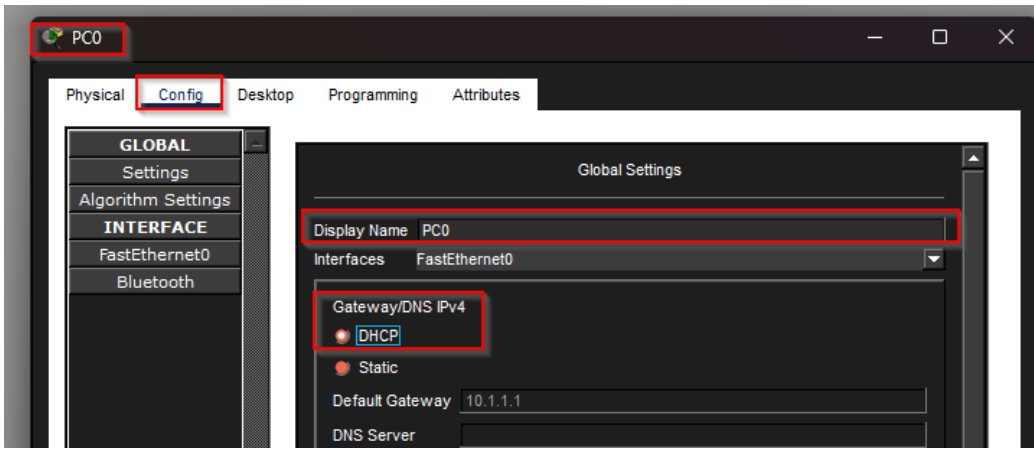
- interface fa0/1
- description PC0_Access
- switchport mode access
- spanning-tree portfast
- no shutdown

- # Allows the PC to bypass STP listening and learning states
- # Provides immediate network connectivity when the PC connects
- # Should ONLY be used on end-device ports (PCs, printers, phones)

Setting up DHCP Lab

PC0- Set to DHCP

- Click on the PC 0 icon
- On FastEthernet0 select DHCP



- Click on PC0 > Desktop > Command Prompt
- Ping 1.1.1.1
- ipconfig

Setting up DHCP Lab

PC0

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Giaco Packet Tracer PC Command Line 1.0
C:\>ping 1.1.1.1

Pinging 1.1.1.1 with 32 bytes of data:

Reply from 1.1.1.1: bytes=32 time<1ms TTL=255
Reply from 1.1.1.1: bytes=32 time<1ms TTL=255
Reply from 1.1.1.1: bytes=32 time<1ms TTL=255
Reply from 1.1.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 1.1.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ipconfig

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::2E0:F9FF:FEC8:5127
    IPv6 Address . . . . .: ::
    IPv4 Address. . . . .: 10.1.1.101
    Subnet Mask . . . . .: 255.255.255.0
    Default Gateway . . . . .: ::
                               10.1.1.1

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: ::
    IPv6 Address . . . . .: ::
    IPv4 Address. . . . .: 0.0.0.0
    Subnet Mask . . . . .: 0.0.0.0
    Default Gateway . . . . .: ::
                               0.0.0.0

C:\>
```

Testing loopback on Router1

IP address assigned 10.1.1.101 (starts after the excluded pool set)

Default Router as set on the DHCP config in Router1