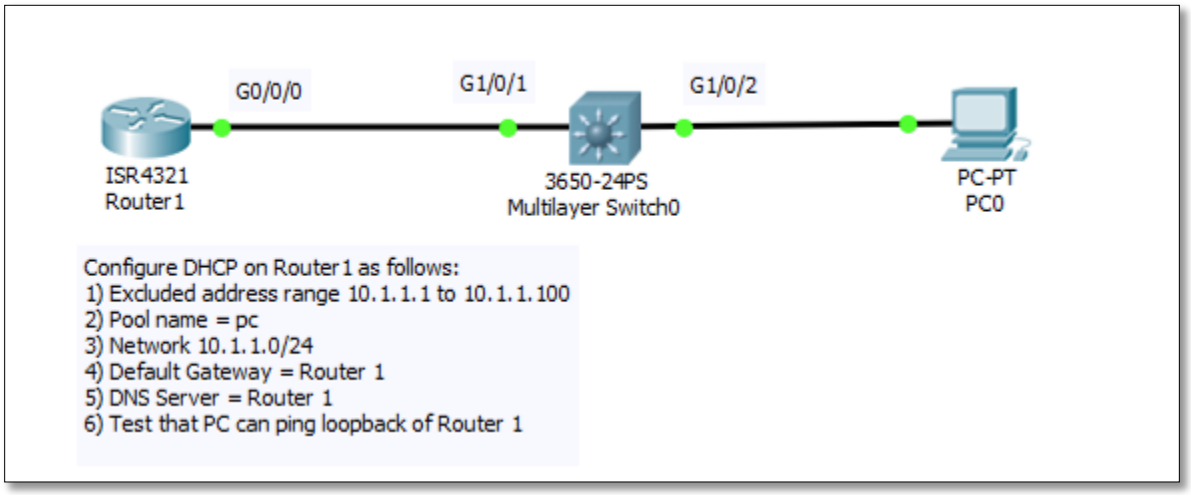
Setting up DHCP Lab




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

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## 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)

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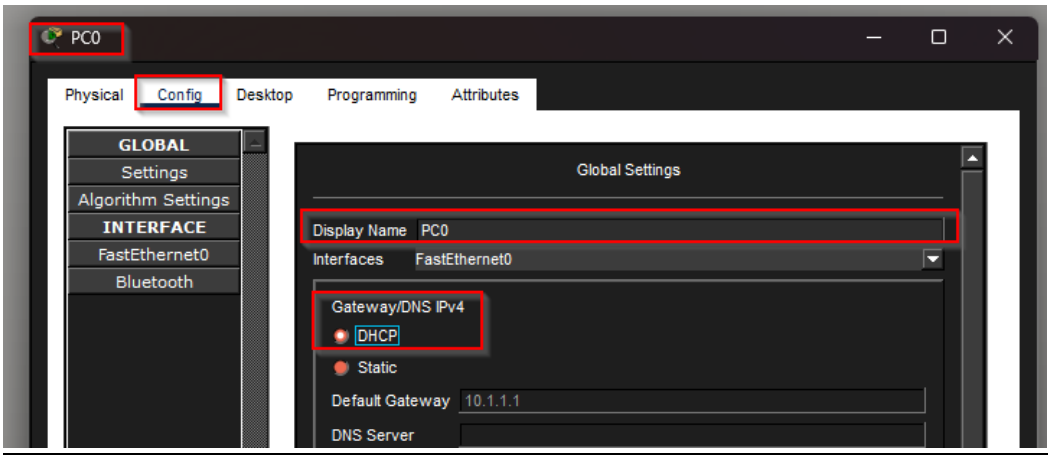
## PC0- Set to DHCP

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




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

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