

# Basic and Connectivity Configuration Commands for Cisco Packet Tracer

## 1 Switch Configuration

Basic settings for configuring a Cisco switch in Packet Tracer.

- **Hostname:** Sets a unique name.

```
1 Switch>enable
2 Switch#configure terminal
3 Switch(config)#hostname S1
```

- **Enable Secret Password:** Secures privileged EXEC mode.

```
1 S1(config)#enable secret cisco
```

- **Console Access:** Configures console access with password and timeout.

```
1 S1(config)#line con 0
2 S1(config-line)#password ciscoconsole
3 S1(config-line)#login
4 S1(config-line)#exec-timeout 6 45
5 S1(config-line)#logging synchronous
6 S1(config-line)#history size 15
7 S1(config-line)#exit
```

- **Telnet Access:** Configures VTY lines for remote access.

```
1 S1(config)#line vty 0 4
2 S1(config-line)#password ciscotelnet
3 S1(config-line)#login
4 S1(config-line)#exec-timeout 8 20
5 S1(config-line)#logging synchronous
6 S1(config-line)#history size 15
7 S1(config-line)#exit
```

- **Password Encryption:** Encrypts plaintext passwords.

```
1 S1(config)#service password-encryption
```

- **MOTD Banner:** Sets a message of the day.

```
1 S1(config)#banner motd #Unauthorized access is forbidden#
```

- **VLAN 1 IP Address:** Assigns IP for management.

```
1 S1(config)#interface vlan 1
2 S1(config-if)#ip address 192.168.1.2 255.255.255.0
3 S1(config-if)#no shutdown
4 S1(config-if)#exit
```

- **Default Gateway:** Configures default gateway.

```
1 S1(config)#ip default-gateway 192.168.1.1
```

- **Disable Domain Lookup:** Prevents resolving mistyped commands.

```
1 S1(config)#no ip domain-lookup
```

- **Save Configuration:** Saves running configuration.

```
1 S1(config)#end
2 S1#write
```

- **DHCP Snooping:** Enables DHCP snooping to prevent rogue DHCP servers.

```
1 S1(config)#ip dhcp snooping
2 S1(config)#ip dhcp snooping vlan 1
3 S1(config)#interface FastEthernet0/1
4 S1(config-if)#ip dhcp snooping trust
5 S1(config-if)#exit
```

- **ARP Inspection:** Enables dynamic ARP inspection.

```
1 S1(config)#ip arp inspection vlan 1
2 S1(config)#interface FastEthernet0/1
3 S1(config-if)#ip arp inspection trust
4 S1(config-if)#exit
```

- **Ping:** Tests connectivity from the switch.

```
1 S1#ping 192.168.1.1
```

- **Traceroute:** Traces the route to a destination.

```
1 S1#traceroute 192.168.1.1
```

## 2 Router Configuration

Basic and connectivity settings for a Cisco router in Packet Tracer.

- **Hostname:** Sets a unique name.

```
1 Router>enable
2 Router#configure terminal
3 Router(config)#hostname R1
```

- **Enable Secret Password:** Secures privileged EXEC mode.

```
1 R1(config)#enable secret cisco
```

- **Console Access:** Configures console access with password.

```
1 R1(config)#line con 0
2 R1(config-line)#password ciscoconsole
3 R1(config-line)#login
4 R1(config-line)#exec-timeout 6 45
5 R1(config-line)#logging synchronous
6 R1(config-line)#history size 15
7 R1(config-line)#exit
```

- **Telnet Access:** Configures VTY lines for remote access.

```
1 R1(config)#line vty 0 4
2 R1(config-line)#password ciscotelnet
3 R1(config-line)#login
4 R1(config-line)#exec-timeout 8 20
5 R1(config-line)#logging synchronous
6 R1(config-line)#history size 15
7 R1(config-line)#exit
```

- **Password Encryption:** Encrypts plaintext passwords.

```
1 R1(config)#service password-encryption
```

- **MOTD Banner:** Sets a message of the day.

```
1 R1(config)#banner motd #Unauthorized access is forbidden#
```

- **Interface Configuration:** Configures IP on interfaces.

```
1 R1(config)#interface FastEthernet0/0
2 R1(config-if)#ip address 192.168.1.1 255.255.255.0
3 R1(config-if)#no shutdown
4 R1(config-if)#exit
5 R1(config)#interface Serial0/0/0
6 R1(config-if)#ip address 10.0.0.1 255.255.255.0
7 R1(config-if)#clock rate 64000
8 R1(config-if)#no shutdown
9 R1(config-if)#exit
```

- **Static Route:** Configures a static route.

```
1 R1(config)#ip route 192.168.2.0 255.255.255.0 10.0.0.2
```

- **Dynamic Routing (RIP):** Configures RIP for dynamic routing.

```

1 R1(config)#router rip
2 R1(config-router)#version 2
3 R1(config-router)#network 192.168.1.0
4 R1(config-router)#network 10.0.0.0
5 R1(config-router)#exit

```

- **DHCP Server:** Configures the router as a DHCP server.

```

1 R1(config)#ip dhcp pool LAN
2 R1(dhcp-config)#network 192.168.1.0 255.255.255.0
3 R1(dhcp-config)#default-router 192.168.1.1
4 R1(dhcp-config)#dns-server 8.8.8.8
5 R1(dhcp-config)#exit
6 R1(config)#ip dhcp excluded-address 192.168.1.1 192.168.1.10

```

- **Disable Domain Lookup:** Prevents resolving mistyped commands.

```

1 R1(config)#no ip domain-lookup

```

- **Ping:** Tests connectivity from the router.

```

1 R1#ping 192.168.1.2

```

- **Traceroute:** Traces the route to a destination.

```

1 R1#traceroute 192.168.1.2

```

- **Show ARP:** Displays the ARP table.

```

1 R1#show arp

```

- **Save Configuration:** Saves running configuration.

```

1 R1(config)#end
2 R1#write

```

### 3 PC Configuration

Basic and connectivity settings for a PC in Packet Tracer (via GUI).

- **Static IP Configuration:** Assigns IP address and subnet mask.

1. Click on the PC in Packet Tracer.
2. Go to **Desktop** tab.
3. Click **IP Configuration**.
4. Enter IP Address: 192.168.1.10, Subnet Mask: 255.255.255.0.

- **DHCP Configuration:** Configures PC to obtain IP via DHCP.

1. In **IP Configuration** window.
  2. Select **DHCP** radio button.
  3. Wait for IP assignment from DHCP server.
- **Default Gateway:** Specifies default gateway.
    1. In **IP Configuration** window.
    2. Enter `Default Gateway: 192.168.1.1`.
  - **DNS Server:** Configures DNS server.
    1. In **IP Configuration** window.
    2. Enter `DNS Server: 8.8.8.8`.
  - **Ping:** Tests connectivity.
    1. Go to **Desktop** tab.
    2. Click **Command Prompt**.
    3. Type `ping 192.168.1.1`.
  - **Traceroute:** Traces route to a destination.
    1. In **Command Prompt**.
    2. Type `tracert 192.168.1.1`.
  - **ARP Table:** Displays ARP cache.
    1. In **Command Prompt**.
    2. Type `arp -a`.