Additional Program 1: Cisco Switch and Router Configuration basic commands in Packet Tracer.

Cisco Switch Configuration basic commands

A switch is a layer 2 device used to forward packet from one device to another within the network. It forwards the packet through one of its ports on the basis of destination MAC address and the entry in the MAC table.
Following basic commands are used to configure a new switch :

1. Changing the hostname of a switch to GfgSwitch :
It is used to set the name of the device.

switch(config)#hostname GfgSwitch

GfgSwitch(config)#

2. To add a banner message :
It provides a short message to the user who wants to access the switch.

GfgSwitch(config)#banner motd &

Enter Text message. End with character '&'

$ This is GeeksforGeeks floor Switch &

. To set IP address in Switch :
IP address is the address of device in network.

GfgSwitch(config)#interface vlan1

GfgSwitch(config-if)#ip address 172.16.10.1 255.255.255.0

GfgSwitch(config-if)#exit

GfgSwitch(config)#ip default-gateway 172.16.10.0

4. To set the current clock time :
This is set the current time stored in the switch.

GfgSwitch#clock set 3:03:14 June 25 2020

5. Apply password protection (enable password, secret password, console password and vty password) :

- **Enable password :**
  The enable password is used for securing privilege mode.

  GfgSwitch(config)#enable password GFGGFG

- **Enable secret password :**
  This is also used for securing privilege mode but the difference is that it will be displayed as ciphertext(***) on the configuration file.

  GfgSwitch(config)#enable secret GFGGFG

- **Line console password :**
  When a person will take access through console port then this password will be asked.

GfgSwitch(config)#line console 0

GfgSwitch(config-line)#password GFG

GfgSwitch(config-line)#login

- **Line VTY password :**
  When a person want to access a router through VTY lines (telnet or ssh) then this password will be asked.
  GfgSwitch(config)#line VTY 0 2

  GfgSwitch(config-line)#password GFGGFG

  GfgSwitch(config-line)#exit

6. Copy to startup-configuration file from running-configuration file :
GfgSwitch#copy running-config startup-config

7. To watch startup-configuration file and running-configuration file :
GfgSwitch#show startup-config

GfgSwitch#show running-config

8. Clear mac address table :
Switch stores MAC addresses in MAC address table

GfgSwitch#clear mac address-table

Basic Router Configuration

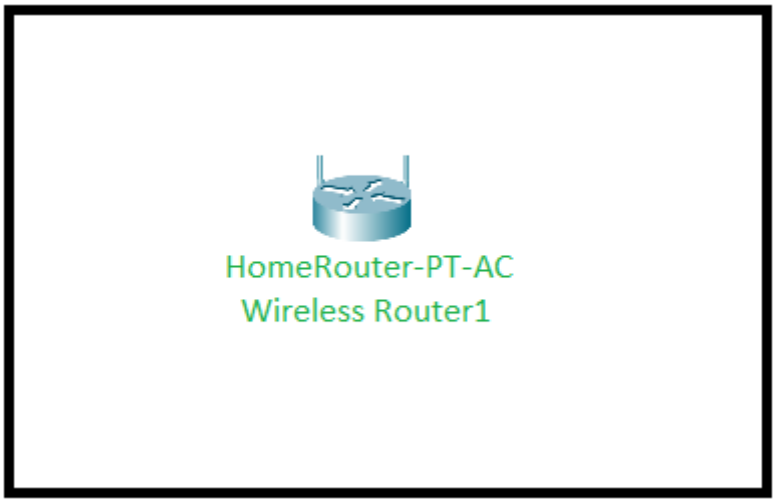
Command	Purpose	
Step 1	**configure terminal** **Example:** Router> enable Router# configure terminal	Enters global configuration mode, when using the console port.
Step 2	**hostname** *name* **Example:** Router(config)# hostname Router	Specifies the name for the router.
Step 3	**enable secret** *password* **Example:** Router(config)# enable secret cr1ny5ho	Specifies an encrypted password to prevent unauthorized access to the router.
Step 4	**no ip domain-lookup** **Example:** Router(config)# no ip domain-lookup	Disables the router from translating unfamiliar words (typos) into IP addresses.

Additional Program 2: Setting up a Basic Home Network using Packet Tracer

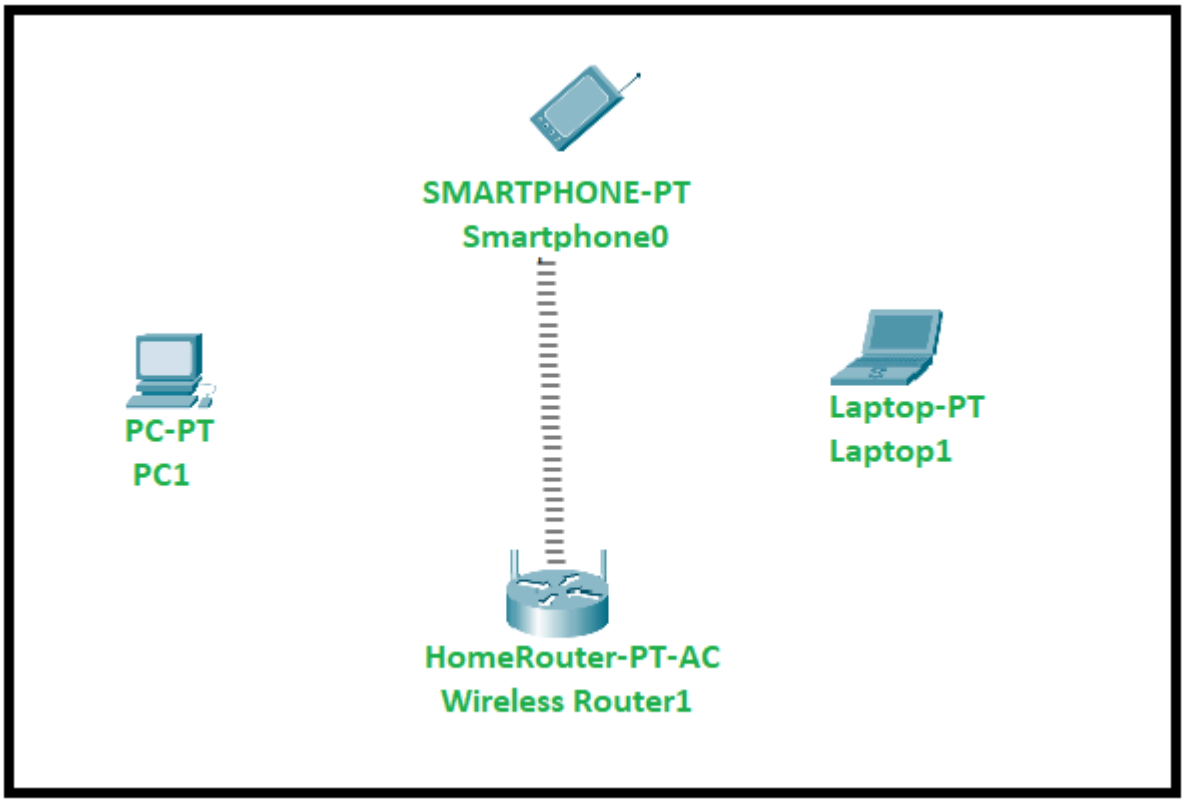
Setting up a Basic Home Network using Packet Tracer

Packet Tracer is a network simulation tool that allows us to create network topologies by building virtual networking devices. Packet Tracer is highly encouraged for network enthusiasts as it allows them to have keen in-depth knowledge of networking. Let us see how to easily create a simple home network using Packet Tracer.

Step-1:
Open Packet Tracer and pick Home Router from Wireless Devices and place it on the workspace.

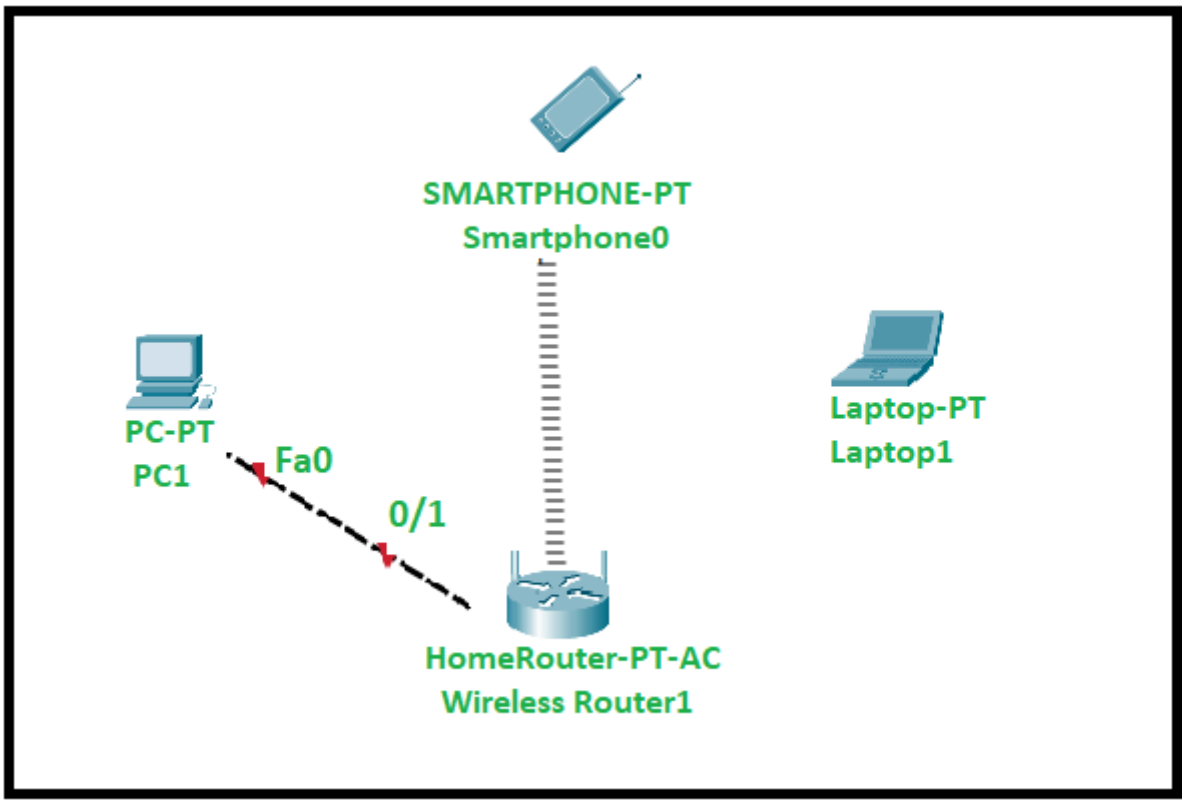


Step-2:
Place Smartphone, PC, Laptop from End Devices on Workspace.



Notice that Smartphone automatically connects to the home router after placing it on the workspace

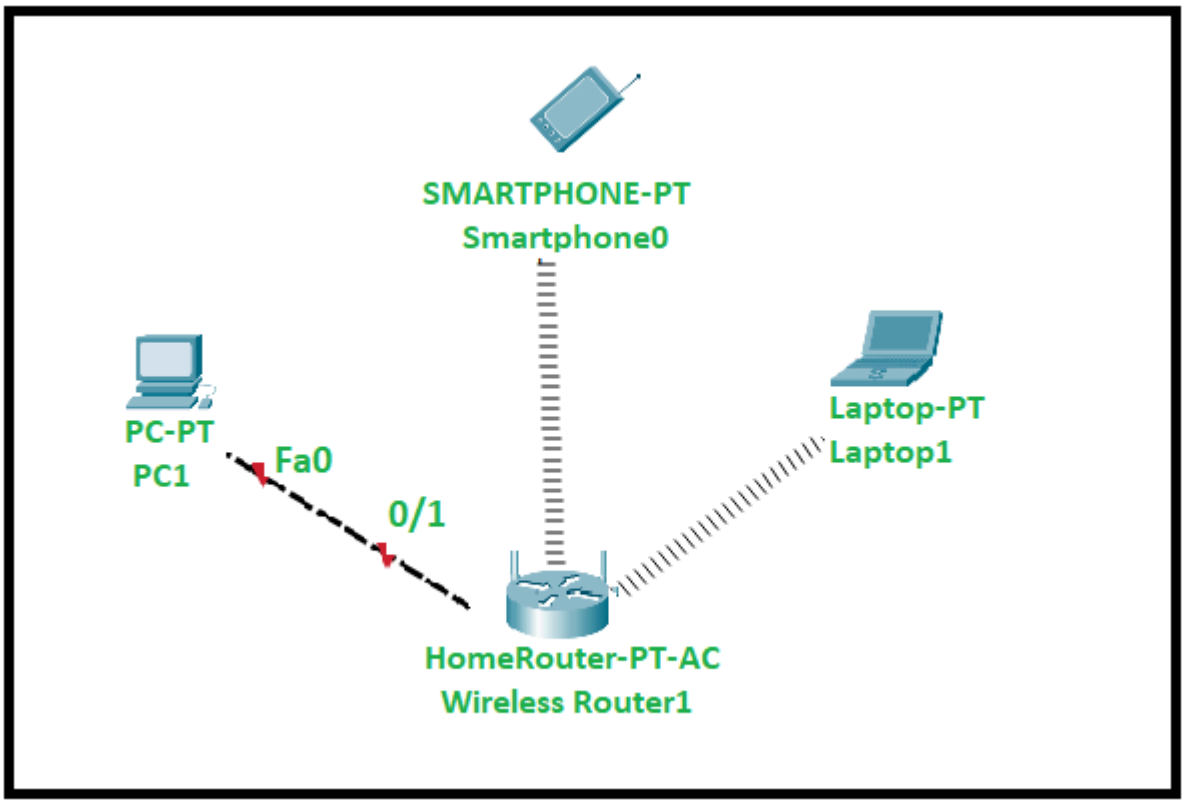
Step-3:
Connect the pc to the home router by using Copper Cross-Over wire available from Connections by configuring pc to FastEthernet0 and Home Router to GigabitEthernet 1.



Step-4:

To connect Laptop to Home Router we need to update a pin in the laptop's configuration, to do this click on the laptop and turn of the laptop and find the pin WPC300N and place it in the laptop.

Note : To update the pin with WPC300N, the laptop must be turned off.


SMARTPHONE-PT
Smartphone0
PC-PT
PC1
Fa0
0/1
Laptop-PT
Laptop1
HomeRouter-PT-AC
Wireless Router1