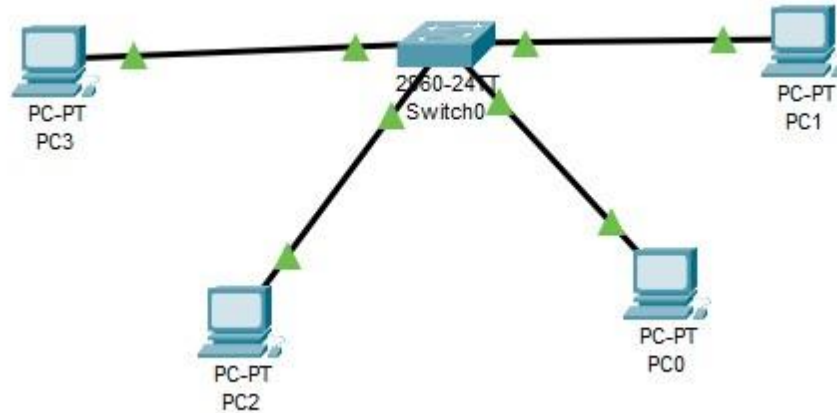


MAC-ADDRESS Configuration



Important points:

- Router work on IP-Address while switch work on Mac-Address (Mac-Address Table)
- Switch learn by the passage of time
- Hub is non-intelligent device while switch is intelligent device
- Mac-Address is in Hexa-decimal form
- In start Mac-Address table is empty
- Mac-Address data is coming called Brain have source Address and Destination Address
- By sending data gets mac-address which port send data to which other port called fluding this process.
- Broad cast and multi-cast did not learn by switch

Command:

Show mac-address-table

Configuration

//Start mac-address table is empty

```
Switch>enable
Switch#show mac-addr
Switch#show mac-address-table
      Mac Address Table
-----
Vlan  Mac Address      Type      Ports
---  -

```

//Assign IP-address to the PCs

<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	1.1.1.1
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

#enable

#show mac-address-table

Vlan	Mac Address	Type	Ports
----	-----	-----	-----
1	0004.9ab0.59d5	DYNAMIC	Fa0/1
1	0060.47e3.ad16	DYNAMIC	Fa0/2

Switch#

\$ping 1.1.1.2

```
C:\>ping 1.1.1.2

Pinging 1.1.1.2 with 32 bytes of data:

Reply from 1.1.1.2: bytes=32 time=3ms TTL=128
Reply from 1.1.1.2: bytes=32 time=1ms TTL=128
Reply from 1.1.1.2: bytes=32 time<1ms TTL=128
Reply from 1.1.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 1.1.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 1.1.1.3

Pinging 1.1.1.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 1.1.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

\$ping 1.1.1.4

```

C:\>ping 1.1.1.4

Pinging 1.1.1.4 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 1.1.1.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>

```

//Did not assign IP PC 3 so cannot be connected with it

<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	<input type="text"/>
Subnet Mask	<input type="text"/>
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

```

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

Pinging 1.1.1.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 1.1.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 1.1.1.2

Pinging 1.1.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 1.1.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>

```

//All packets will be lost when data is send to not assigned IP PC

// Assign IP to them

```
Switch#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0001.c9cc.5aa8    DYNAMIC   Fa0/3
1       0004.9ab0.59d5    DYNAMIC   Fa0/1
1       0060.47e3.ad16    DYNAMIC   Fa0/2
Switch#show mac-a
Switch#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0007.ece0.db27    DYNAMIC   Fa0/4
Switch#
```

//All ports Mac-Address is Dynamic that will be lost by passing of time or reboot a system

```
Switch#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0001.c9cc.5aa8    DYNAMIC   Fa0/3
1       0004.9ab0.59d5    DYNAMIC   Fa0/1
1       0007.ece0.db27    DYNAMIC   Fa0/4
1       0060.47e3.ad16    DYNAMIC   Fa0/2
Switch#
```

Static Mac-Address

First copy physical address of PC

Which you wanted to static mac-address

Command:

#configure terminal

#mac-address-table static (physical address) vlan 4 interface FastEthernet 0/1

#exit

#show mac-Address-table

Showing Table:

```

C:\>ipconfig /all

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Physical Address.....: 0007.ECE0.DB27
    Link-local IPv6 Address.....: FE80::207:ECFF:FEE0:DB27
    IP Address.....: 1.1.1.4
    Subnet Mask.....: 255.0.0.0
    Default Gateway.....: 0.0.0.0
    DNS Servers.....: 0.0.0.0
    DHCP Servers.....: 0.0.0.0
    DHCPv6 Client DUID.....: 00-01-00-01-BE-19-DA-7B-00-07-
    EC-E0-DB-27

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Physical Address.....: 0030.A338.DDA2
    Link-local IPv6 Address.....: ::
    IP Address.....: 0.0.0.0
    Subnet Mask.....: 0.0.0.0
    Default Gateway.....: 0.0.0.0
    DNS Servers.....: 0.0.0.0
    --More--

```

```

Switch#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0001.c9cc.5aa8    DYNAMIC   Fa0/3
1       0004.9ab0.59d5    DYNAMIC   Fa0/1
1       0007.ece0.db27    STATIC    Fa0/4
1       0060.47e3.ad16    DYNAMIC   Fa0/2
Switch#

```

Reload the system

#write

#reload

Did you want reload → yes

Loading

Press return

Tap enter

```

Switch#reload
System configuration has been modified. Save? [yes/no]:yes
Building configuration...
[OK]
Proceed with reload? [confirm]
C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(25r)FX, RELEASE SOFTWARE (fc4)
Cisco WS-C2960-24TT (RC32300) processor (revision C0) with 21039K bytes of memory.
2960-24TT starting...
Base ethernet MAC Address: 0050.0F31.0D83
Xmodem file system is available.
Initializing Flash...
flashfs[0]: 2 files, 0 directories
flashfs[0]: 0 orphaned files, 0 orphaned directories
flashfs[0]: Total bytes: 64016384
flashfs[0]: Bytes used: 4416074
flashfs[0]: Bytes available: 59600310
flashfs[0]: flashfs fsck took 1 seconds.
...done Initializing Flash.

Boot Sector Filesystem (bs:) installed, fsid: 3
Parameter Block Filesystem (pb:) installed, fsid: 4

Loading "flash:/c2960-lanbase-mz.122-25.FX.bin"...
##### [OK]
          Restricted Rights Legend

```

#show mac-address-table

```

Switch>enable
Switch#show mac-
Switch#show mac-address-table
          Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0007.ece0.db27   STATIC    Fa0/4
Switch#

```