## Basic Configuration of Switch

**Overview:** Switch is a device who works with the device’s mac address. It works with only specified devices. It does not allow to exchange data outside it’s own network. Switch has three mode to configure

1. **Normal User Mode :** Here user only can log in. Normal user mode looks like

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1. **Privilized Mode:** The other name of this mode is administrative mode. A user can show different types of configure such as configuration of ram,nvram,hostname,password,secrete-password and others in this mode.

A user can save the configuration on nvram in administrative mode.

Privilized mode looks like ->

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1. **Configuration Mode:**  In this stage user configure the switch by using different types of commands. User can set hostname,password,secrete-password,port-configure,interface-configure and so on.

Configuration mode looks like:

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**How to change mode :**

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| normal user mode |

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| Config mode |

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| Admin mode |

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| **configure**  **terminal** |  |

**enable**

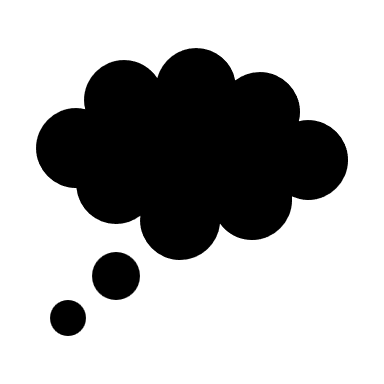
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| --- |
| normal user mode |

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| Admin mode |

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| Config mode |

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| **exit** |  |

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| **exit** |  |

 **Tips:** If we forget the spelling of commands,we can click on **tab** button of our keyboard. Tab button will complete your rest of latters of your command on your command line.

**Set Hostname & password&secrete:**

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| 1. **Set username for swith login**     **2. set password for user**    **3.enable secret** |

**See changes on RAM & NVRAM:**  To see the changes of configuration we use these commands on command line interface(CLI).

**RAM->** <show running-config>

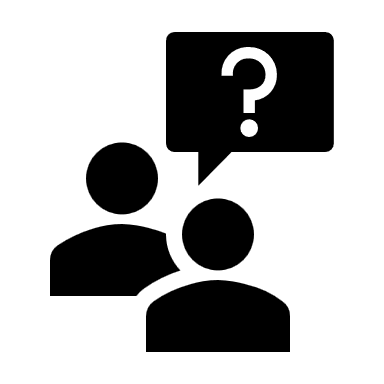
**NVRAM->** <Show startup-config>

**RAM:**

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**NVRAM:** We are not save any configuration, that’s why there is no configuration save.

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**What is NVRAM?**

= Full forms of NVRAM-> Non-volatile random access memory. NVRAM acts as a storage in the switch, where every changes locates even though your device is starting on after shutdown.

**Save configuration:** If we save anything on switch, that save will store on the NVRAM. For saving anything, we use

* write

or

* copy

write command will write the changes on NVRAM.

Copy command will copy the changes on RAM TO NVRAM.

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**Set Consol port’s Password:** When we try to set password on consol port, we must need to go to the console port. To go to the console port we use

<line console 0 > command.

For setting password we use password <“password that you want to make”>

Then we use <login local> command.

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**Delete all save-work from NVRAM:** To delete all changes from the NVRAM we use <erase startup-config> command.After run this command all data that are stored on nvram, will be delete.

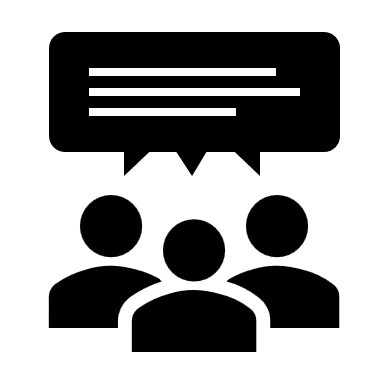
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**Show Current Interface Status:** On interface we can see which device connected through which port . We can check connected device able or disable status. We use <show interfaces status> on admin mode.

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**Disconnect device from switch:** To disconnect any device that you want from the switch, run this command <interface fastEthernet <port no.>> after that run <shutdown> command . you must run these command on configure mode.

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| Check whether the port I want to disconnect is really connected or disabled? |

**why I use do command?**

= In this case, I don’t want to logout from the configure mode. If you want to see any interface status from the config mode, you must use “do”.

**Connect the disconnected device:**

If you accidently disable any device, don’t worry you can again connec this device by running <no sh > command on interface.

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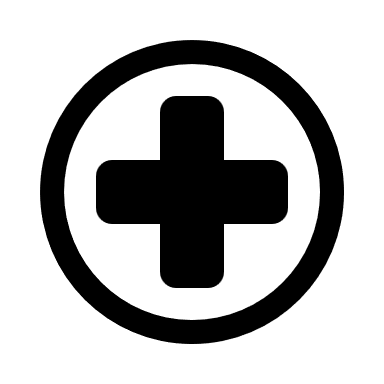
**Make Duplex Mode:**

A duplex mode is a mode where a sender and receiver can send and receive packet conditionally. There are 2 types of duplex mode. one is Full-duplex and half-duplex is another one.Though nowadays maximum switch use auto mode. For making duplex mode, we use <duplex full >/ <duplex half> command on the interface.

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**Speed Declaretion:**

You can set how much speed a device can get. If you want decrease or increase any device’s speed, you need to run command on the interface.

** We see three types of port for network cable on switch.**

1. Ethernet cable : which is > 10 mbps
2. Fast-Ethernet cable: which is >100mbps
3. Giga-Ethernet cable: which is > 1gbps

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**Description:**

You can initialize anything that you want for devices from the switch. By writing any description you need run <description “write description”> command on interface.

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**Set ip VLan on switch :** VLan means virtual lan. Using vlan you can access switch remotely.

why we use ip in switch?

= We use ip vlan for showing the Mac Address Table through ARP. ARP means Address resulation protocol.

For setting ip we need some basic ideas of ip address, it’s class& it’s subnet mask.

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| Output from command prompt: |

**Telnet work:**

Telnet indicates how much devices access the switch remotely. Maximum 16 user can access switch remotely.

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**Password Encryption:**

We want our password encrypt as like as secrete. For this we just run command <service password-encryption> on configure mode.

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# Thank You

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