2 Basic Switch and End Device Configuration

Access Methods

- **Console:** This is a physical management port that provides out-of-band access to a Cisco device. Out-of-band access refers to access via a dedicated management channel that is used for device maintenance purposes only. The advantage of using a console port is that the device is accessible even if no networking services are configured, such as performing the initial configuration.
- **SSH:** This is an in-band and recommended method for remotely establishing a secure CLI connection, through a virtual interface, over a network. Unlike a console connection, SSH connections require active networking services on the device, including an active interface configured with an address.
- **Telnet:** This is an insecure, in-band method of remotely establishing a CLI session, through a virtual interface, over a network. Unlike SSH, Telnet does not provide a secure, encrypted connection and should only be used in a lab environment. User authentication, passwords, and commands are sent over the network in plaintext.

Commands Mode

- **User EXEC Mode:** Mode allows access to only a limited number of basic monitoring commands. It is often referred to as "view-only" mode. |
- **Privileged EXEC Mode:** Mode allows access to all commands and features. The user can use any monitoring commands and execute configuration and management commands. |

2.4 Basic Device Configuration

Set a name

```
# configure terminal
(config)# hostname <name>
<name>#
```

User EXEC password

```
# configure terminal
(config)# line console 0
(config-line)# password <password>
(config-line)# login
(config-line)# end
#
```

Priviliged EXEC password

    # configure terminal
    (config)# enable password <password>
    (config)# exit

Priviliged EXEC password with encryption

    # configure terminal
    (config)# enable secret <password>
    (config)# exit

Secure VTY lines

    # configure terminal
    (config)# line vty 0 15
    (config-line)# password <password>
    (config-line)# login
    (config-line)# end

Encrypt passwords

    # configure terminal
    (config)# service password-encryption

Configuration in the current session

    # show running-config

Banner messages

    # configure terminal
    (config)# banner motd #<message>#

2.5 Save Configurations

Save configurations

    # copy running-config startup-config

2.7 Configure IP Addressing

Configure IP address

```
# configure terminal
(config)# interface vlan 1
(config-if)# ip address <IP Address> <subnet mask>
(config-if)# no shutdown
(config-if)# exit
```

Show IP configuration

```
# show ip interface brief
```

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