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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
#
```

Privileged EXEC password

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

Privileged 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
```
