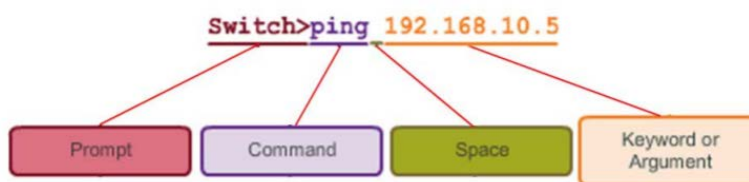


Network Essentials Chapter 2B Review

Name _____

1. NOS stands for Network Operating System. It has to be configured to detect and activate all devices in a computer network.
2. CLI stands for Command Line Interface. This is a screen where Cisco commands can be entered.
3. Network devices can be accessed via the console port, the AUX port, or through Telnet/SSH.
4. At the CLI, the prompt is : Switch>
5. A command line consists of a command, a space, and a keyword or argument.



6. To check what commands begin with c, enter the command `'c?'` at the prompt.
What is the command to check commands beginning with 'vl?' _____
7. The command `'clock set 22:33:44 July 2017'` sets the date and time of the NOS.
8. Commands at the CLI must followed a fixed **syntax**. If not, a help message will be displayed. The IOS returns a `"^"` to indicate where the command interpreter cannot decipher the command.
9. Hot Keys and Shortcuts
 - Tab – Completes the remainder of a partially typed command or keyword.
 - Ctrl-R – Redisplay a line.
 - Ctrl-A – **The cursor** moves to the beginning of the line.
 - Ctrl-Z – Exits the configuration mode and returns to user EXEC.
 - Down Arrow – Allows the user to scroll forward through former commands.
 - Up Arrow – Allows the user to scroll backward through former commands.
 - Ctrl-shift-6 – Allows the user to interrupt an IOS process such as ping or traceroute.
 - Ctrl-C – Exits the current configuration or aborts the current command
10. The `'show'` command provides information about configuration, operation and status of parts of a Cisco switch or router, eg
 - show version (hit [Enter] key)
 - show interfaces
 - show vlan
11. A **network switch** or switching hub receives data, processes the data then forward the data to the destination device.

12. Each device on a network requires a **name**. Some guidelines for naming conventions:

- Start with a letter
- Contains no spaces
- Ends with a letter or digit
- Uses only letters, digits, and dashes
- Be less than 64 characters in length
- Eg – Switch01, PC_01, etc.

13. A network **administrator** can give a hostname to each device. For instance, if he wants to name a switch 'SW01_Floor1", he enters the following commands:

```
Switch# configure terminal
Switch(config)#hostname SW01_Floor1
```

14. Each device on a network can be secured by **setting passwords** for access control, to prevent unauthorized access. Commands used are:

- enable password – Limits access to the privileged EXEC mode
- enable secret – Encrypted, limits access to the privileged EXEC mode; offers greater security
- console password – Limits device access using the console connection
- VTY password – Limits device access over Telnet

15. VTY ports allow access to a Cisco device via Telnet. Most routers have five VTY ports, numbered 0 to 4.

16. The command "service password-**encryption**" prevents the password to be displayed on screen when it is entered. (or '*' will be displayed in place of each character)

17. MOTD means Message Of The Day.

18. Banner messages allow us to display messages on screen.

19. Once some configuration has been done in the network, a **configuration file** is created. It contains all the details of device settings.

20. **NVRAM** means Non-Volatile Random Access Memory.

21. The command "**show running-config**" displays the configuration active in RAM.

22. To copy the configuration file to NVRAM, the command is "**copy running-config startup-config**".

23. "**Reload**" saves the config file.

24. "**erase startup-config**" deletes the config file. On a switch, the command "**delete vlan.dat**" must be issued.

25. Each end device on a network must be configured with an IP address.

26. An IPv4 address has a **dotted decimal** structure, with four decimal numbers. Each number must be between the value of 0 to 255, inclusive, eg, 255.0.0.255, 255.255.255.1,

27. Each IP address must have a subnet mask. Its structure is similar to an IP address.

(For more reading on subnet mask, go to this link: <https://www.iplocation.net/subnet-mask>)

28. A network can be divided in smaller parts called subnets. A subnet mask shows what subnet an IP belongs to.

29. Cisco devices have both **physical ports** and switch **virtual** interfaces (SVI) for connection. SVIs allow remote management of a switch.

30. To configure a SVI, an IP address and a subnet address are needed.

31. Loopback address is a special number (127.0.0.1) . It allows the loopback interface to test IP software. The command is "ping 127.0.0.1". This causes a device to ping itself.

32. A PC has an IP address 192.168.1.1. What command should you issue at the CLI of another PC to check if it is online?