Module 3 (Networking Configuration)

Topic :Local area networking

1) A network is a group of two or more devices or nodes that can communicate.
2) The Internet is a global computer network that allows for information exchange between devices.

- An intranet is a private network that is only accessible to members of an organization.

3) Mainly there are three types of computer networks: LAN (Local Area Network), WAN (Wide Area Network), and MAN (Metropolitan Area Network).
4) A PAN connects the devices within the short range of an individual person, whereas a LAN connects devices at a single site, typically an office building.

5) A local area network (LAN) is a collection of devices connected together in one physical location, such as a building, office, or home.
6) Types of Lan devices

- Router
- Network switch
- Modem
- Gateway
- Wireless access point
- Ethernet hub
- Network bridge
- WLAN

Topic : Configured Network

1) Network configuration is the process of assigning network settings, policies, flows, and controls.
2) Configure network

- IP address—for identification.
- Password—for added security.
- Channel and band selection—to improve performance.
- Default gateway—to make the device visible to network management tools.
- Neighbor discovery—for added visibility.

3) First, click on your Start Menu and type cmd in the search box and press enter. A black and white window will open where you will type ip config /all and press enter.
4) Right-click the Windows Start menu and select Run.

- Type cmd in the search field and click OK.
- In Command Prompt, type ip config and hit Enter. Scroll to IPv4 Address to see your local IP address.

5) Access the Control Panel. In the Windows search bar, type in “ncpa.cpl” and then press enter.

- Select the Network Adapter.
- Select Properties.
- Select Internet Protocol Version 4 (TCP/IPv4) .
- Manually enter IP address and subnet mask.
- Save Settings.
- Revert Back to DHCP.

Topic : Wireless networking

1) The WPA Wi-Fi protocol is more secure than WEP, because it uses a 256-bit key for encryption, which is a major upgrade from the 64-bit and 128-bit keys used by the WEP system.

2) The transfer of information (telecommunication) between two or more points without the use of an electrical conductor, optical fiber or other continuous guided medium for the transfer.
3) A wireless network refers to a computer network that makes use of Radio Frequency (RF) connections between nodes in the network.
4) Computer networks connect nodes like computers, routers, and switches using cables, fiber optics, or wireless signals.
5) Switches.

- Ethernet (cabling).
- Network hubs.
- Routers.
- Firewall.
- Internet protocol (IP) addresses.
- Client and server.

- Wireless access points (WAPs).

6) Computer networking refers to interconnected computing devices that can exchange data and share resources with each other.

Topic : The Internet

1) A URL (Uniform Resource Locator) is a unique identifier used to locate a resource on the Internet.
2) A browser is a software program used to view web pages.
3) In the ethernet bus topology is used.
4) Protocol term is used.
5) The network in the reticular formation that serves an alerting or arousal function.
6) Bing

- Google Search
- DuckDuckGo

- Gigablast
- Yahoo!Search
- Amazon

7) A protocol is a set of rules for formatting and processing data.

Topic : Virtualization

1) Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines.
2) Full virtualization enables the Guest operating system to run independently. In contrast, paravirtualization enables the Guest OS to interact with the hypervisor.
3) A hypervisor is a software that you can use to run multiple virtual machines on a single physical machine.
4) Hypervisor in linux

- Kernel-based Virtual Machine
- Virtual box
- QEMU
- VMware ESXi
- Red Hat Virtualization
- Red Hat Software

5) Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines.

6) Virtual SMP (which allows a guest operating system to "see" up to four CPUs in the virtual machine).

- VMware vCenter version 2 (formally VMware VirtualCenter)
- VMware ESXi version 3. x.
- VMware ESX Server version 3.