

Assignment: 3

Q-1 Write down the steps to create a windows bootable disk.

- Follow these steps to make the CD/DVD bootable.
- ↳ Download & install ~~is~~ ISO Buster.
Insert the Windows Server CD into your CD drive & load ISO Buster.
- Expand CD drive in ISO Buster until you see a floppy disk icon with the Bootable CD label.
- Click on the bootable CD in the left pane, & in the right pane of ISO Buster you will see a file named Microsoft Corporation.IMG, which is the boot image file for the CD.
- Right click on the .IMG file & select Extract Bootimage.IMG. Remember the location where you save this file, then close ISO Buster.
- Open your CD-burning program. Click File/New CD Project/Bootable CD. A screen will pop up.
↳ Choose type of Bootable CD. There are few settings you need to know about on this screen.
- Customize the CD project properties

Q-2 write down steps to create domain controller.

- One of the first & most important roles of windows server is a Domain controller.
- To use the command, Click on Start-Run & Then write depromo & click OK.
- The system will start checking if Active directory Services (ADS) binaries are installed, then will start installing them.
- A Active Directory Domain Services installation wizard will start, either enable & checkbox beside use Advanced mode installation & click Next, or keep it unselected & click on Next.
- The OS compatibility page will be displayed, take a moment to read it & click Next.
- You are then prompted about what type of domain to create as shown in Fig.
- In this option you can create domain in existing domain or create a new domain in a new forest.

Q-3 Explain windows internal name
Server (WINS).

- windows Internet Naming Service (WINS service), which maps older S-type NetBIOS names to IP address in the network.
- Adding DHCP or WINS, you need a windows Server 2008 system already installed & configured with static IP address.
- To Start DHCP installation process, you can click Add roles from Server manager.
- The WINS Server handles name reg. req. from WINS Client, registers their names & IP addresses, & responds to NetBIOS name queries from client by returning the IP address of a queried name if it is listed in the Server database.
- You can configure your WINS server to replicate the address of contents of their databases to other WINS server.

Q-4 Discuss DIFFERENT IOS management commands.

→ IOS means INTERNETWORK operating SYSTEM.

→ List of IOS command:

- (1) → Show running-configuration.
- (2) → Show Interface.
- (3) → Show IP interface.
- (4) → Show version.
- (5) → Enable password.
- (6) → privilege level global.

→ 1) → Show running configuration: The Show running-config command shows the router, switch, or firewall's current configuration.

→ 2) → Show Interface: The Show interface command displays the status of the router's interfaces. Among other things, this output provides the following:

- Interface status (Up/Down).
- protocol status on the interface.
- utilization.
- Errors.
- MTU.

Q-5 Explain how to design a network

- Designing a network from the ground up is more the exception than the rule.
- Mostly networks start small & simply grow over time. Networks are almost like skin cells, where you are sure to replace each of them every few years, but only a few at a time.
- You are building or buying new network from scratch or renovating an existing network. The tools you are using are the same, & the process of designing the network is also much the same.
- Even in an evolving network, using network planning to formulate a long-term plan to renovate the network makes sense.
- Network design is not really an exact science, getting it exactly right the first time is nearly impossible, even with best design tools & resource available. This is because every network has different demand placed on it, & these demands often interact in surprising ways.

Q-7 List any 2 server or what is server? List the different types of server.

- File Server
- print Server

→ Server:- A Server is computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network. In Theory, whenever computers share resources with Client machines They are consider as Server.

- Types of Server
 - (1) → File Server
 - (2) → print Server
 - (3) → Application Server
 - (4) → DNS Server
 - (5) → Mail Server
 - (6) → web Server
 - (7) → Database Server
 - (8) → Virtual Server
 - (9) → proxy Server
 - (10) → monitoring & management servers

Q-8 List any 2 Network Application.

- Microsoft Office.
- Lotus Smart Suite.

Q-9 Explain Network Services.

- You should look at the services that the network must provide. These can vary widely in different companies.
- A common network service is file & print services, plus perhaps, Internet connectivity.
- A more complex network will need many additional services.
- Consider which of the following types of services the network you are designing will need to provide, as well as any others that are specific to the company.
 - File & print services.
 - Backup & restore services.
 - FTP & Telnet
 - Internet web browsing
 - Internet or External E-mail.
 - Dial-out from LAN through a modem pool.
 - Dial-out to LAN through a modem pool.
 - Fax into LAN.
 - Dynamic Host Configuration protocol (DHCP) services.

- Centralized Virus-protection services.
- WAN Services to other locations.
- Streaming Internet audio & other media.
- Voice Over IP (VoIP).

Q-10 List network types. Explain any one network type.

- (1) → personal Area Network (PAN).
- (2) → Local Area Network (LAN)
- (3) → wireless Local Area Network (WLAN).
- (4) → Campus Area Network (CAN).
- (5) → Metropolitan Area Network (MAN)
- (6) → Wide Area Network (WAN)
- (7) → Storage Area Network (SAN)
- (8) → System Area Network (also known as SAN)
- (9) → passive Optical Local Area Network (POLAN).
- (10) → Enterprise private Network (EPN).
- (11) → Virtual private Network (VPN).

* Personal Area Network (PAN).

↳ The Smallest & most basic type of network. A PAN is made up of a wireless modem, a computer or two, phones, printer, tablets, etc... & resides around one person in one building. These types of networks are typically found in small offices or residences, & are managed by one person or organization from single device.

Q-11 Explain Network needs.

- Once you complete your assessment, you can then start working on finding ways to meet all needs you have identified.
- This process is largely heuristic & is not worked through by following a series of steps & ending up with a single answer, like an equation.
- Instead, you should start by mapping out the various parts of the network considering the three main topics discussed in this section, & "build a picture" of the network design.
- The design that you create will incorporate all you've learned during the assessment process, taking into account your experience & the advice you get to devise a concrete design that results in an equipment list, specification & a configuration.
- Seeking analysis of your design from other network professionals, who might have valuable experience that you can then factor into your design.

Q-12 Explain installation of windows Server.

→ Here we can Explain installation process of windows Server 2008. Follow this step to install windows Server 2008.

Step 1: Insert The windows server 2008 installation media into your DVD drive
& Set First boot device DVD drive
in CMOS Setup.

Step 2: Reboot The Computer, Now your computer boot from windows Server 2008 bootable media.

Step 3: In This prompt, Select Lang. to insert keyboard or input method & Click Next.

Step 4: press install now to begin The installation process of windows Server 2008.

Step 5: Product Activation is now also identical with That found in windows Vista. Enter your product key in The next window, & If you want to automatically activate windows The moment installation finishes click Next.

Q-13 What is Network Administration?

- Network administration involves a wide array of operational tasks that help a network to run smoothly & efficiently. Without network administration, it would be difficult for all but the smallest network to maintain network operations.
- The main tasks associated with network administration include:
- ↳ Design, installation & Evaluation of the network.
 - ↳ Execution & Administration of regular backups.
 - ↳ Creation of precise technical documentation, such as network diagram, network cabling documents etc.
 - ↳ Provision for precise authentication to access network resources.
 - ↳ Provision for troubleshooting assistance.
 - ↳ Administration of network security, including intrusion detection.

Q-14 Explain ipconfig & ping command.

- Ipconfig & ping can be used to Analyze, Test, troubleshoot, & configure TCP/IP & IPX/SPX connections.

Before moving to more advanced TCP/IP commands, it is important to master these commands by learning what each of the commands & their options do; as well as why you would use those options in real-world scenario.

- The Ipconfig & Ping commands are probably the two most commonly used commands when analyzing & troubleshooting networking issues.
- Although ipconfig displays information, it can also be used to make basic configuration changes & reset certain facets of DHCP & DNS. Ping is used to test connectivity to other hosts, here command line results tell you whether a remote host is "alive" on the network.
- * Analyze & configure with ipconfig & ping.
 - (1) → Type the command ipconfig
 - (2) → Type the command ipconfig /all
 - (3) → Type the command ipconfig /?.
 - (4) → Type the command ipconfig /allcompr
 - (5) → work with dynamically assigned address
 - (6) → Type the command "ping localhost"
 - (7) → Type the cmd Ping loopback.
 - (8) → Type the cmd Ping 127.0.0.1

Q-15 Define network management ?
Network Administration.

* Network Management:- is a The process of administering & managing computer Network

↳ Services provided by this discipline include fault analysis, performance management, provisioning of network & maintaining Quality of Service.

↳ Network Management Software is used by network administrators to help perform these functions.

* Network Administrator:- is The person designated in an organization who responsibility includes managing computer infrastructure with emphasis on networking. Responsibility may vary between organizations, but on-site server, software, network interactions as well as network integrity presence are the key areas of focus.

Q-16 List Out criteria For choosing Server

→ A Network is a collection of computers & related devices connected

together to perform a specific function. An example of a network is the bank ATM-network - which is a collection of connected ATM's & computers to enable account holder to perform transaction on their account.

→ Criteria for choosing server

- ↳ (1) Budget.
- (2) Capacity.
- (3) Applications.
- (4) Compatibility.

Q-17 Explain Safety, growth & capacity planning for network.

→ Safety :-

↳ Security & Safety concern. The company need to keep information secure both inside & outside a company & to keep the company's data safe from loss.

↳ you need to know how important these two issues are before attempting to set down a network design on a paper.

↳ For both these considerations, a trade off exists between cost & effectiveness.

→ Growth & Capacity :-

↳ The final area to consider is the expected growth of the network particularly if the company expects this growth to be extensive.

↳ A network designed for a rapidly growing company looks different from one for a slowly growing company, even if both companies start out at the same size.

↳ In former case, you want to design that you can quickly & easily expand without having to replace much of the existing hardware & software. In the latter case, you can get by with a simpler network design.