# ***Network Configuration***

## Topic: local area networking

1. What is network?

🡪A network, in the context of technology, typically refers to a collection of interconnected devices or nodes that can communicate with each other. These devices can include computers, servers, routers, switches, printers, and other hardware. The purpose of a network is to enable communication and the sharing of resources, such as files, applications, and internet connections, among the connected devices.

1. What is intranet and internet?

🡪Intranet: A private network within an organization that uses internet protocols and technologies for sharing information, collaboration, and communication among its members. It is accessible only to authorized users within the organization.

Internet: A global network that connects millions of computers worldwide, allowing them to communicate and share information. It facilitates various services such as email, web browsing, file transfer, and online gaming, accessible to users around the world.

1. How many types of networks we use?

🡪1. Local Area Network

2. Wide Area Network

3. Metropolitan Area Network

4. Personal Area Network

5. Home Area Network

6. Wireless Local Area Network

7. Cellular Network

8. Satellite Network

9. Sensor Network

10. Virtual Private Network

1. Differentiate between LAN and PAN.

🡪 LAN :

A LAN is a network that connects computers and other devices within a limited geographical area, such as a home, office building, or school campus.

It typically covers a small area, such as a single building or a group of nearby buildings.

Ethernet and Wi-Fi are common technologies used in LANs.

PAN :

A PAN is a network that connects devices within the immediate vicinity of an individual, typically within a range of about 10 meters

It is designed for personal use, connecting devices such as smartphones, tablets, laptops, and wearable technology.

PANs often use wireless technologies like Bluetooth and NFC.

1. Explain LAN

🡪 LAN stands for Local Area Network. It's a network that connects computers and other devices within a limited geographical area, such as a home, office, or school. LANs allow connected devices to communicate and share resources, like files and printers. They typically use Ethernet cables or Wi-Fi to connect devices, and they are commonly used in homes and businesses for local communication and resource sharing.

1. What are the different types of LAN devices?

🡪 LAN devices include switches, routers, network interface cards (NICs), access points, modems, hubs, and bridges.

Top of Form

## Topic: configured network

1. What is configured network?

🡪 A configured network refers to a network that has been set up and customized according to specific requirements, including IP addresses, subnet masks, gateways, DNS servers, and other settings necessary for devices to communicate effectively within the network.

1. How do we configure network?

🡪 Network configuration involves setting up various parameters on devices such as computers, routers, switches, and access points. This involves setting up network services and security configurations, as well as allocating IP addresses, subnet masks, gateways, and DNS servers. Configuration can be done manually through device interfaces or automatically using protocols like DHCP.

1. How to check IP address?

🡪Open the Command Prompt by typing "cmd" in the Windows search bar and pressing Enter.

In the Command Prompt window, type the command "ipconfig" and press Enter.

Look for the "IPv4 Address" under the network adapter you're using. This address is your IP address

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1. How can we enter static address in network adapter?

🡪 To enter a static IP address in a network adapter, access the adapter properties, select IPv4 settings, and manually input the desired IP address, subnet mask, default gateway, and DNS server addresses. Apply the changes and, if necessary, restart the network adapter.

Topic: wireless networking

1. What is the difference between WEP and WPA?

🡪WEP: Older, weaker security protocol for wireless networks. Uses static encryption keys, vulnerable to easy cracking, lacks robust authentication and key management.

WPA: Improved security protocol addressing WEP's weaknesses. Introduces dynamic encryption keys, stronger authentication methods, and better key management. Provides better security and compatibility compared to WEP.

1. What is wireless network?

🡪 A wireless network is a type of computer network that uses wireless data connections between network nodes. It enables devices to connect to the network without the need for physical wired connections, typically using radio frequency signals. Wireless networks are commonly used for internet access, data transmission, and communication between devices such as smartphones, laptops, and printers.

1. What is wireless network connection?

🡪Wireless Network Connection: The process of establishing a connection between a device and a wireless network, typically using Wi-Fi technology.

1. What are the basic concepts of networking?

🡪 The basic concepts of networking include protocols, IP addresses, routers and switches, network topology, DNS, firewalls, LANs and WANs, and wireless networking.

1. What do you need to know about networking?

🡪 You need to understand concepts such as protocols, IP addressing, routers, switches, network topology, DNS, firewalls, LANs, WANs, and wireless networking to grasp networking fundamentals effectively.

1. What do u know about computer networking?

🡪 Computer networking involves connecting and communicating between multiple computers and devices to share resources and information. It encompasses various concepts such as protocols, IP addressing, routers, switches, network topology, DNS, firewalls, LANs, WANs, and wireless networking.

## Topic: the internet

1. What do u mean by the term URL?

🡪"URL" stands for Uniform Resource Locator, and it is a web address used to locate a specific resource on the internet. When you refer to "URL in short," you might be asking for a shortened URL, which is a condensed version of a longer URL that directs users to the same web page. Services like Bitly or Tiny URL are commonly used to create shortened URLs.

1. Term which is use to see web pages is called?

🡪The term commonly used to refer to viewing web pages is "browsing" or "web browsing." When someone accesses a website or navigates through different pages on the internet, they are said to be browsing the web.

1. In the Ethernet which topology is used?

🡪In Ethernet networks, the most commonly used topology is the "star" topology. In a star topology, each network device (such as computers, printers, etc.) is connected directly to a central hub or switch. This central hub or switch manages the network traffic by routing data between the connected devices. The star topology offers advantages such as easy scalability, simplified troubleshooting, and the ability to isolate network issues to specific segments.

1. Set of rules and regulations while working on internet, which term is used?

🡪a protocol refers to a set of rules or conventions that govern how data is transmitted and received between devices or systems. Various protocols, such as TCP/IP, HTTP, DNS, SMTP, POP, IMAP, and FTP, facilitate different types of communication and tasks on the internet.

1. What do u mean by RAS?

🡪RAS stands for Remote Access Service. It is a technology that enables users to connect remotely to a network or computer system over a telecommunications network. RAS allows users to access resources such as files, printers, and applications as if they were directly connected to the network or computer system. This technology is commonly used for telecommuting, remote administration, and providing remote support to users.

1. What are the main search engines to get more website URL on internet?

🡪 Google

Bing

Yahoo

DuckDuckGo

Baidu

Yandex

1. What does the protocol consist of?

🡪 Protocols consist of rules and standards governing communication between devices on a network. They define formats for data packets, methods for error detection and correction, and procedures for initiating, maintaining, and terminating communication sessions.

## Topc: virtualization

1. What is virtualization?

🡪Virtualization is a technology that creates virtual versions of hardware, operating systems, storage, or networks. It allows multiple virtual instances to run on a single physical machine, improving resource utilization, flexibility, and management.

1. What is the difference between full virtualization and para virtualization?

🡪Full virtualization:

Guest operating systems run without any modifications.

The virtualization layer (hypervisor) fully abstracts and mimics the underlying hardware.

Provides broad compatibility but may incur overhead due to emulating hardware.

Examples include VMware ESXi, Microsoft Hyper-V, and KVM.

Para-virtualization:

Requires modifications to the guest operating system.

Guests are aware of the virtualization layer and interact with it directly.

Can offer better performance as it avoids some overhead of full virtualization.

Requires special support from the host hardware and operating system.

Examples include Xen and Linux Containers

1. What is difference between hypervisor available in Linux?

🡪In short, Linux offers two main types of hypervisors: Type 1, which includes Xen and KVM, runs directly on hardware; Type 2, such as VirtualBox and QEMU, runs on top of a host operating system. Type 1 is suited for server virtualization, while Type 2 is often used for desktop or testing purposes.

1. What is Virtualization and its types?

🡪In short, virtualization is the technology of creating virtual versions of hardware, software, storage, or networks. Its main types are:

1. Server Virtualization: Divides a physical server into multiple virtual servers.

2. Desktop Virtualization: Enables multiple virtual desktop instances on a single physical machine.

3. Storage Virtualization: Abstracts physical storage into a virtual pool of resources.

4. Network Virtualization: Creates virtual networks independent of physical infrastructure. Each type enhances resource utilization, flexibility, and management in computing environments.

1. Name the components used in VMware infrastructure what are benefit of virtualization?

🡪In short, components used in a VMware infrastructure include ESXi, vCenter Server, vSphere Client, vSphere Web Client, vSphere Distributed Switch, vSphere HA, and vSphere DRS. Benefits of virtualization in VMware infrastructure include resource optimization, flexibility, scalability, improved disaster recovery, reduced downtime, centralized management, and enhanced security.