**What is SOHO Network?**

A SOHO (Small Office/Home Office) network is a local area network (LAN) designed for small businesses or home offices. It typically includes devices such as computers, printers, and internet connections to enable business operations.

**What is NAT?**

NAT (Network Address Translation) is a method used to modify network address information in IP packet headers while in transit, allowing multiple devices on a local network to share a single public IP address.

**What is PAT?**

PAT (Port Address Translation), a type of NAT, maps multiple private IP addresses to a single public IP address or a few addresses by using different ports. It's often used in home networks to allow many devices to share one public IP address.

**Difference between NAT & PAT?**

NAT translates private IP addresses to a public IP address, while PAT extends this by using port numbers to differentiate between multiple devices sharing a single public IP address.

**What Is ACL?**

An ACL (Access Control List) is a set of rules used to control network traffic and restrict access to and from network resources. It can filter packets based on IP address, port numbers, and other criteria.

**Types of ACL and Wildcard Mask?**

Standard ACL is Filters traffic based only on the source IP address.

Extended ACL is Filters traffic based on both source and destination IP addresses, as well as port numbers and protocols.

Wildcard Mask is Used in ACLs to specify a range of IP addresses. It allows bits to be matched or ignored, enhancing flexibility in defining IP address ranges.

**Explain Circuit Switching**

Circuit switching is a method of communication where a dedicated communication path is established between two endpoints for the duration of a session. It's commonly used in traditional telephone networks.

**Difference between Leased Line and Broadband?**

Leased Line: A dedicated, private connection between two locations, offering consistent bandwidth and reliability.

Broadband: A high-speed internet connection that is shared among multiple users, leading to variable speeds based on network congestion.

**Difference between POTS Line and Leased Line?**

POTS Line is traditional Plain Old Telephone Service, providing analog voice communication.

Leased Line is digital connection offering dedicated bandwidth for data transfer, often used for internet and private network connections.

**Practice on Printer Sharing**

Printer sharing involves configuring a printer on a network so multiple users can print to it. This can be set up using the operating system's sharing features, like Windows Printer Sharing or macOS Printer Sharing.

**Use of IIS**

IIS (Internet Information Services) is a web server software package designed for Windows Server, used to host and manage websites, web applications, and services.

**Create FTP Server**

An FTP (File Transfer Protocol) server allows users to upload and download files over a network. Setting one up involves installing FTP server software, configuring user accounts, and setting permissions.

**Difference between Cloud and Virtualization**?

Cloud Computing: Provides scalable and elastic IT resources over the internet, allowing on-demand access to computing power, storage, and services.

Virtualization: Creates virtual instances of physical hardware, enabling multiple operating systems and applications to run on a single physical server.

**Why are Network Monitoring Tools Used?**

Network monitoring tools are used to continuously observe a network's performance, detect issues, and ensure that the network is running optimally. They help in troubleshooting and maintaining network health.

**What is Ping?**

Ping is a network utility used to test the reachability of a host on an IP network. It measures the round-trip time for messages sent from the originating host to a destination computer.

**What is Traceroute?**

Traceroute is a network diagnostic tool that tracks the path packets take from one IP address to another. It helps identify points of failure and delays in the network.

**What is Nslookup?**

Nslookup (Name Server Lookup) is a network utility used to query Domain Name System (DNS) to obtain domain name or IP address mapping.

**Explain Core Switches**

Core switches are high-capacity switches located in the backbone of a network, providing central connectivity for various network segments and ensuring high-speed data transfer.

**What is Network Management?**

Network management involves the administration, operation, maintenance, and provisioning of networked systems, ensuring efficient and reliable network performance.

**Explain Event Viewer**

Event Viewer is a Windows utility that logs system, security, and application events, allowing administrators to troubleshoot issues and monitor system health.

Practice Parental Control or Family Safety Option in Control Panel

Parental control or family safety features allow users to set restrictions on internet usage, monitor online activity, and control access to websites and applications for family members.

**What are Network Vulnerabilities?**

Network vulnerabilities are weaknesses in a network that can be exploited by threats to gain unauthorized access or cause harm, such as software bugs, misconfigured hardware, or unsecured communication channels.

**Types of Network Security Attacks?**

Phishing: Fraudulent attempts to obtain sensitive information by disguising as a trustworthy entity.

DDoS (Distributed Denial of Service): Overloading a network with traffic to disrupt services.

Man-in-the-Middle Attack: Intercepting and altering communication between two parties.

Malware: Malicious software designed to damage, disrupt, or gain unauthorized access to systems.

SQL Injection: Exploiting vulnerabilities in a database to execute malicious SQL statements.

Ransom attack,

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