Module 3 [Network Configuration]

Topic: Local area networking

• Assignment level Basic:

1. What is Network?

Ans A **network** is a collection of computers, servers, mainframes, network devices, peripherals, or other devices connected to allow data sharing. An example of a network is the [Internet](https://www.computerhope.com/jargon/i/internet.htm), which connects millions of people all over the world. To the right is an example image of a home network with multiple computers and other **network devices** all connected.

1. What is Internet & Intranet?

Ans Almost everyone is using the Internet in this technological era. But when it comes to distinguishing the Internet and the Intranet, most people get confused because both the terms seem almost similar in words. Although there is just a difference of one alphabet in their terms, they have many noticeable differences in general.

• Assignment level Intermediate:

1. How many types of Network we used?

Ans A computer network is an interconnected system of devices, represented as network nodes, that share information, data and resources among each other.

Depending on the network type, devices can be as simple as computers or smartphones that connect into a network. Larger networks use devices like routers and switches to create the underlying network infrastructure.

1. Different between LAN & PAN?

* Ans This page compares LAN vs PAN and mentions difference between LAN and PAN. LAN stands for Local Area Network. PAN stands for Personal Area Network. As mentioned LAN is the short form of Local Area Network. It is basically a communication network which interconnects devices such as PCs, Laptops, Smartphones, tablets et. to exchange information.

• Assignment level advance:

* 1. Explain LAN?

Ans A local area network (LAN) is a collection of devices connected together in one physical location, such as a building, office, or home. A LAN can be small or large, ranging from a home network with one user to an enterprise network with thousands of users and devices in an office or school.

* 1. What are different types of LAN devices?
* Ans LANs are classified as below according to the methods used for sharing data: 1. Ethernet It is a network protocol that controls how data is transferred over a local area network. In this type of LAN, the user is able to transfer data at a rate of more than 10 megabits per second.

Topic: configured Network

• Assignment Level Basic

1. What is configured network?

* ans Network configuration is the process of assigning network settings, policies, flows, and controls. In a virtual network, it’s easier to make network configuration changes because physical network devices appliances are replaced by software, removing the need for extensive manual configuration.

1. How do we configure network?

* Ans If you’re thinking about a career in IT networking, understanding network configuration is a great first step. To start, network configuration means thinking about what policies you’d like to apply to your network. Do you want a more interconnected network? Or should clusters of computers be segregated from one another?

• Assignment level Intermediate.

1.How to check the ip address?

Ans The whois lookup will reveal the name of the ISP who owns that IP address, and the country where it originated from. If you're lucky, you might also find the city of origin.

2.How to check the ip address through cmd?

Ans In Command Prompt, enter ipconfig. You’ll see your IP address next to the IPv4 Address. In Command Prompt, enter ipconfig /all. You’ll see more detailed information in addition to your IP address. This article shows you how to use Command Prompt on your Windows computer to obtain your IP address.

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

Ans Right-click on the network adapter you want to assign an IP address and click Properties. Highlight Internet Protocol Version 4 (TCP/IPv4), then click the Properties button. Now change the IP, Subnet mask, Default Gateway, and DNS Server addresses. When you're finished, click OK.

• Assignment Level Advanced

* 1. Do a practical to release the packets from the adapter

Ans DONE

* 1. Do a practical to renew the lease of the ip address.

Ans DONE

* 1. Do a practical to check the connectivity to the google.

Ans DONE

Topic: Wireless networking

• Assignment level Basic:

* + 1. What is the difference between WEP and WPA?

Ans The acronyms WEP, WPA, WPA2, and WPA3 refer to wireless encryption protocols intended to protect the information you send and receive over a wireless network. Choosing which protocol to use for your network can be a bit confusing if you're not familiar with the differences.

* 1. What is Wireless Network?

Ans  A wired network employs wires to link devices to the Internet or another network, such as laptops or desktop PCs. (b) Wireless Network: “Wireless” means without wire, media that is made up of electromagnetic waves (EM Waves) or infrared waves.

• Assignment level Intermediate:

* + 1. What is a wireless network connection?

Ans computer networks that are not connected by cables

of any kind. The use of a wireless network enables

enterprises to avoid the costly process of introducing

cables into buildings or as a connection between

different equipment locations.

* + 1. What are the basic concepts of networking?

Ans  A Network Node can be illustrated as Equipment for Data Communication like a Modem, Router, etc., or Equipment of a Data Terminal like connecting two computers or more. Link in Computer Networks can be defined as wires or cables or free space of wireless networks.

• Assignment level advance:

* 1. What do you need to know about networking

Ans As a professional working in computer networking, here are 9 basic concepts you typically should know: 1. Switches A switch is essential to computer networking. It serves as a controller, helping connect all your devices to a network in a home, office, building or area like computers, servers, printers and wireless devices.

* 1. How do you explain computer networking?

Ans Another way to classify computer networks is by the set of protocols they support. Networks often implement multiple protocols and each network supports specific applications. Popular protocols include TCP/IP—the one commonly found on the internet and in home networks.

Topic: THE Internet

• Assignment level Basic:

1. What do you mean by the term URL?

Ans  In theory, each valid URL points to a unique resource. Such resources can be an HTML page, a CSS document, an image, etc. In practice, there are some exceptions, the most common being a URL pointing to a resource that no longer exists or that has moved.

1. Term which is used to see web pages is called what?

Ans  All the pages or webpages of tutorialsinhand domain combined together is a e-learning website. Every website has a landing page. It is the page where a user is redirected to first when user visits the website.

• Assignment level Intermediate:

1. In the Ethernet which topology is used?

Ans Bus topology is used with Ethernet. The most used network topology is this one. Bus and star topologies, as well as coax, twisted-pair, or fibre optic cable, are options. The topology of the Ethernet is a logical bus

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

Ans  National Highway Traffic Security Administration (NHTSA) These aren't the only agencies of the Government responsible for that. Each agency regulates over their own intellectual properties based on the country's rules.

• Assignment level advance:

1. What do you mean by RAS?

Ans  RAS: Renin-Angiotensin System: RAS: Rien a Signaler (French: Nothing to Report) RAS: Robotics and Automation Society: RAS: River Analysis System: RAS

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

* Ans While Google is the most popular search engine, with over 80% of the global market, there are plenty of Google alternatives out there. This post will highlight the 15 best search engines, some of which may surprise you. But first, have you ever stopped to think about what a search engine is?

3 What does the PROTOCOL consist of?

* Ans A protocol is a set of rules and guidelines for communicating data. Rules are defined for each step and process during communication between two or more computers. Networks have to follow these rules to successfully transmit data.

Topic: Virtualization

• Assignment level Basic:

* 1. What is Virtualization?

Ans Virtualization uses software to create an abstraction layer over computer hardware that allows the hardware elements of a single computer—processors, memory, storage and more—to be divided into multiple virtual computers, commonly called virtual machines (VMs).

* 1. What is the Difference between Full Virtualization and Para Virtualization?

Ans Conversely, in paravirtualization, the hypercalls are used in place of non-virtualizable OS instructions and this whole process takes place at the compile time where these instructions are handled. Before understanding the terminologies in detail we must consider understanding the term like hypervisor and how these concepts are generated.

• Assignment level Intermediate:

1. What is Hyper-visor?

Ans Hyper-V installs on Windows but runs directly on the physical hardware, inserting itself underneath the host OS. All guest operating systems then run through the hypervisor, but the host operating system gets special access to the hardware, giving it a performance advantage.

1. What are different hypervisors available in Linux?

* Ans The hypervisor is a hardware virtualization technique that allows multiple guest operating systems (OS) to run on a single host system at the same time. A hypervisor is sometimes also called a virtual machine manager(VMM). Types of Hypervisor – TYPE-1 Hypervisor: The hypervisor runs directly on the underlying host system.

3. What is Virtualization and what are its types?

## Ans ****Types of Virtualization****

1. Application Virtualization
2. Network Virtualization
3. Desktop Virtualization
4. Storage Virtualization
5. Server Virtualization
6. Data virtualization

• Assignment level advance:

1. Name the components that are used in VMware infrastructure What is benefits of Virtualization?

Ans There are several components that makeup VMware infrastructure. The following individual components represent powerful pieces of your virtual infrastructure. VMware ESX Server is the virtualization layer run on physical servers that abstracts processor, memory, storage, and networking resources into multiple virtual machines.