

Hardware Networking

## TERM-1 Comptia A+ N+ Assignment

#### Module 3 [Network Configuration]

**Topic: Local area networking**

##### Assignment level Basic:

1. What is Network?

A network, in computing, is a group of two or more devices or nodes that can communicate. The devices or nodes in question can be connected by physical or wireless connections. The key is that there are at least two separate components, and they are connected

1. What is Internet & Intranet?

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. An intranet is internal and only accessible to members of an organization

##### Assignment level Intermediate:

1. How many types of Network we used?

Mainly there are three types of computer networks: LAN(Local Area Network), WAN(Wide Area Network) and MAN(Metropolitan Area Network). LAN is used to connect devices in a small area like a building, office, etc.

1. Different between LAN & PAN?

PANs and LANs are unique in their own ways. The major difference between these networks is that 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. Similar to a PAN, a LAN can be both wired and wireless.

##### Assignment level advance:

1. Explain LAN?

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?

There are several types of connection device to consider:

hub.

switch.

wireless access point (WAP)

router.

gateway.

bridge.

#### Topic: configured Network

##### Assignment Level Basic

1. What is configured network?

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?

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.

##### Assignment level Intermediate.

1. How to check the ip address?

Find your IP address in Windows

Select Start > Settings > Network & internet > Wi-Fi and then select the Wi-Fi network you're connected to.

Under Properties, look for your IP address listed next to IPv4 address.

1. How to check the ip address through cmd?

From the desktop, navigate through; Start > Run> type "cmd.exe". A command prompt window will appear.

At the prompt, type "ipconfig /all". All IP information for all network adapters in use by Windows will be displayed.

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

How to Set a Static IP Address

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. ...

##### Assignment Level Advanced

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

done

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

done

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

done

#### Topic: Wireless networking

##### Assignment level Basic:

* 1. [What is the difference between WEP and WPA?](https://www.proprofsdiscuss.com/q/1709494/what-is-the-difference-between-wep-and-wpa)

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. WPA also uses the Temporal Key Integrity Protocol (TKIP), which dynamically generates a new key for each packet, or unit of data.

* 1. What is Wireless Network?

A wireless network refers to a computer network that makes use of Radio Frequency (RF) connections between nodes in the network. Wireless networks are a popular solution for homes, businesses, and telecommunications networks.

##### Assignment level Intermediate:

1. What is a wireless network connection?

A wireless network refers to a computer network that makes use of Radio Frequency (RF) connections between nodes in the network. Wireless networks are a popular solution for homes, businesses, and telecommunications networks.

1. What are the basic concepts of networking?

Computer networks connect nodes like computers, routers, and switches using cables, fiber optics, or wireless signals. These connections allow devices in a network to communicate and share information and resources. Networks follow protocols, which define how communications are sent and received.

##### Assignment level advance:

1. What do you need to know about networking?

The foundations of networking: switches, routers, and wireless access points. Switches, routers, and wireless access points are the essential networking basics. Through them, devices connected to your network can communicate with one another and with other networks, like the Internet.

1. How do you explain computer networking?

Computer networking refers to interconnected computing devices that can exchange data and share resources with each other. These networked devices use a system of rules, called communications protocols, to transmit information over physical or wireless technologies.

#### Topic: THE Internet

##### Assignment level Basic:

1. What do you mean by the term URL?

: URL is an acronym for Uniform Resource Locator and is a reference (an address) to a resource on the Internet.

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

A browser is a software program used to view web pages.

##### Assignment level Intermediate:

1. In the Ethernet which topology is used?

The two possible topologies for Ethernet are bus and star.

The bus is the simplest (and the traditional) topology. Standard Ethernet (10BASE5) and Thin Ethernet (10BASE2), both based on coax cable systems, use the bus.

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

A protocol is a set of rules that governs the communications between computers on a network.

##### Assignment level advance:

1. What do you mean by RAS?

the network in the reticular formation that serves an alerting or arousal function. synonyms: reticular activating system. type of: neural net, neural network. any network of neurons or nuclei that function together to perform some function in the body.

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

Top Search Engines

Google.

Bing.

Yahoo!

Yandex.

DuckDuckGo.

Baidu.

Ask.com.

Naver.

1. What does the PROTOCOL consist of?

a set of rules or procedures for transmitting data between electronic devices, such as computers. In order for computers to exchange information, there must be a preexisting agreement as to how the information will be structured and how each side will send and receive it.

#### Topic: Virtualization

##### Assignment level Basic:

1. What is Virtualization

Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines. Virtual software mimics the functions of physical hardware to run multiple virtual machines simultaneously on a single physical machine.

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

. In Full virtualization, virtual machines permit the execution of the instructions with the running of unmodified OS in an entirely isolated way. In paravirtualization, a virtual machine does not implement full isolation of OS but rather provides a different API which is utilized when OS is subjected to alteration.

##### Assignment level Intermediate:

1. What is Hyper-visor?

A hypervisor, also known as a virtual machine monitor or VMM, is software that creates and runs virtual machines (VMs). A hypervisor allows one host computer to support multiple guest VMs by virtually sharing its resources, such as memory and processing.

1. What are different hypervisors available in Linux?

VMware is a popular choice for virtualization, and offers the ESXi hypervisor and vSphere virtualization platform. Kernel-based Virtual Machine (KVM) is an open source option and is built into the Linux® kernel. Additional options include Xen, which is open source, and Microsoft Hyper-V.

1. What is Virtualization and what are its types?

Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines. Virtual software mimics the functions of physical hardware to run multiple virtual machines simultaneously on a single physical machine

##### Assignment level advance:

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

ESX server host.

Virtual Centre Server.

Virtual Infrastructure (VI) client.

Web Browser.

License Server.

Database.

#### Module 4: Troubleshooting and Helpdesk Topic: Troubleshoot security

##### Assignment level Basic:

1. What is troubleshooting?

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and explain how to resolve the problem. The first step in the troubleshooting process is to describe the problem completely.

1. what is the need of troubleshooting security?

The goal of troubleshooting is to determine why something does not work as expected and explain how to resolve the problem.

##### Assignment level Intermediate:

1. Do a practical to change the password.

done

1. Do a practical to change the user account password.

done

##### Assignment level advance:

1. How do you troubleshoot a computer?

What's Wrong? Determine the who, what, and when of the issue you're experiencing. ...

Consult Google. ...

Reboot. ...

Check Connections. ...

Look for Program Updates. ...

Close Background Tasks. ...

Clean Up Your Hard Drive. ...

Run an Antivirus Program.

1. How to troubleshoot common computer problems?

Consult Google. Search engines can be your best friend when it comes to error codes or detailed problems. ...

Reboot. ...

Check Connections. ...

Look for Program Updates. ...

Close Background Tasks. ...

Clean Up Your Hard Drive. ...

Run an Antivirus Program.

1. Your computer turns on, but still doesn’t work?

If all you see is a black screen after pressing the power button, try pressing the power button for 10 seconds to force shut down your PC, then turn it on. Doing this repeatedly for three times, the Windows Startup repair should launch automatically

1. You get the blue screen of death?

The blue screen of death is usually caused by improperly installed, damaged, or aging hardware, or by buggy or incompatible software. Driver updates for your graphics card or other hardware components can also cause a blue screen of death if they fail to integrate properly with the rest of your system.

#### Topic: OS Troubleshooting

##### Assignment level Basic:

1. What are the basic of troubleshooting?

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and explain how to resolve the problem. The first step in the troubleshooting process is to describe the problem completely.

1. Write down the steps of os troubleshooting.

Basic Troubleshooting Process for Operating Systems.

Applying the Troubleshooting Process to Operating Systems. ...

Establish a Theory of Probable. ...

Test the Theory to Determine. ...

Establish a plan of Action to Resolve the Problem and Implement the. ...

Verify Full System. ...

Document Findings,

##### Assignments level Advance:

1. Do a practical to repair OS.

done

1. Do a practical to repair boot file.

done

1. 3.DO a practical to repair bootmgr.

done

##### Topic: Recovery Assignment level Basic:

1. What is recovery?

.getting back something that was lost, stolen or missing

1. Why do we need recovery?

Recovery may be required due to physical damage to the storage devices or logical damage to the file system that prevents it from being mounted by the host operating system (OS). Logical failures occur when the hard drive devices are functional but the user or automated-OS cannot retrieve or access date stored in it.

##### Assignment level Intermediate:

1. DO a practical to recover deleted file.

done

1. Do a practical to recover the formatted file

done

1. Do practical to recover data from the os Corrupted file.

done