NOT FOR SALE

Republic of the Philippines
Department of Education
National Capital Region
Division of Pasig City
STA LUCIA HIGH SCHOOL
City of Pasig

Technical-Vocational and Livelihood Track
Information and Communications Technology (ICT) Strand

Grade 12

Computer Systems Servicing NC II

QUARTER 1

LO 1: SET UP USER ACCESS

SELF- LEARNING MODULE 1 :

Understanding Server-Client Networking

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COC 3 : SET UP COMPUTER SERVERS

Introductory Message

For the facilitator:

Welcome to the Technical Vocational Livelihood Education ICT Grade 12 CSS NC II Module on **Set-up User Access** :**Understanding Server-Client Networking**

This module was collaboratively designed, developed and reviewed by educators from Schools Division Office of Pasig City headed by its Officer-In-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin in partnership with the Local Government of Pasig through its Mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) while overcoming their personal, social, and economic constraints in schooling.

This learning material hopes to engage the learners into guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs namely: Communication, Collaboration, Creativity, Critical Thinking and Character while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:

Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the Technical Vocational Livelihood Education ICT Grade 12 CSS NC II Module on **Set-up User Access :Understanding Server-Client Networking .**The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:

Expectation - These are what you will be able to know after completing the lessons in the module

Pre-test - This will measure your prior knowledge and the concepts to be mastered throughout the lesson.

Recap - This section will measure what learnings and skills that you understand from the previous lesson.

Lesson- This section will discuss the topic for this module.

Activities - This is a set of activities you will perform.

Wrap Up- This section summarizes the concepts and applications of the lessons.

Valuing-this part will check the integration of values in the learning competency.

Post-test - This will measure how much you have learned from the entire module.

EXPECTATION

After completing the lesson the learners should be able to:
1. define Client-Server Network
2. diffentiate Client from Server
3. cite the importance of securing server for the client

PRE-TEST

Directions: Read each statement below carefully. Identify if the following statement is **CLIENT** or **SERVER.** Write your answer in the space provided before each number.

_____ 1. Powerful expensive machine

_____ 2. Checks authorization

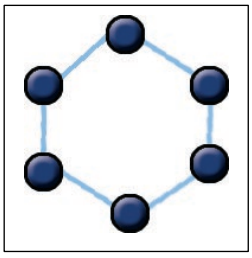
_____ 3. Performs query/update processing and transmits responses.

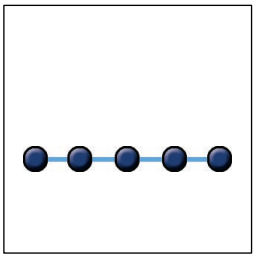
_____ 4. Supports single-log in at a time

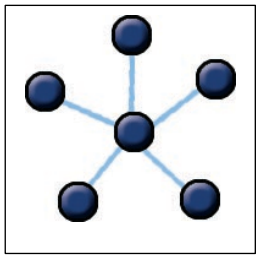
_____ 5. Delivers high performance

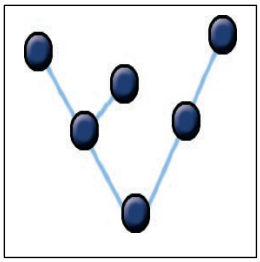
RECAP

IDENTIFICATION: Identify the following network topologies. Write your answer in the space provided below.









_____ _____ _____ _____

LESSON

UNDERSTANDING CLIENT-SERVER

Introduction

Client-server networking grew in popularity during the 1990s as personal computers became the alternative to mainframe computers. Client-server networking refers to a computer networking model that uses both client hardware devices and servers, each with specific functions. The client-server model can be used on the internet as well as on a local area network (LAN). Examples of client-server systems on the internet include web browsers and web servers, FTP clients and servers, and the DNS.

This lesson will broaden your understanding about server client networking.

Illustration below shows an example of server-client networking :

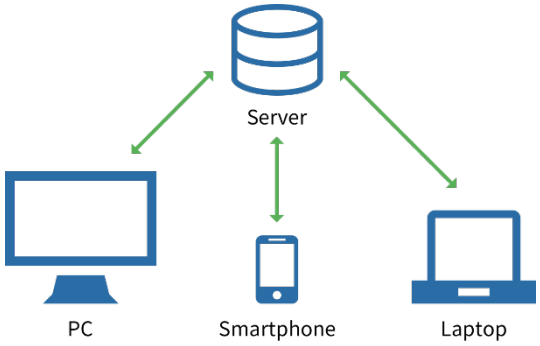


Fig 1. www.Tech Terms.com

Server-Client Networking Defined

Client-server denotes a relationship between cooperating programs in an application, composed of clients initiating requests for services and servers providing that function or service.

A client-server network is the medium through which clients access resources and services from a central computer, via either a local area network (LAN) or a wide-area network (WAN), such as the Internet. A unique server called a daemon may be employed for the sole purpose of awaiting client requests, at which point the network connection is initiated until the client request has been fulfilled.

Network traffic is categorized as client-to-server (north-south traffic) or server-to-server (east-west traffic). Popular network services include e-mail, file sharing, printing,

and the World Wide Web. A major advantage of the client-server network is the central management of applications and data.

https://www.omnisci.com/technical-glossary/client-server

In simple method definitions,

Client - any process that requests specific services from the Server.

Server - a process which provides requested services for the Client.

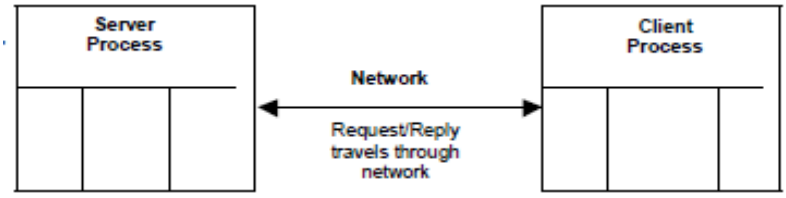


Fig 1. Server-client Networking :https://www.e-tesda.gov.ph

CLIENT vs SERVER

CLIENT	SERVER
A client machine is a small computer with a basic hardware configuration	Server machine is a high-end computer with an advanced hardware configuration
A client is a simple and less powerful machine	Server is a powerful expensive machine.
A client is used for simple tasks	Server is used for storing huge datafiles and applications.
A client performs based on user standard	Server delivers high performance
A client supports a single user log-in at a time.	A server supports simultaneous, multiple user log-ins

http://www.differencebetween.net

The main advantage of the client-server network is supporting a shared database or site to be obtained or updated by many computers while keeping only one control center for the operation. This makes it feasible for businesses to share information, upload data, or reach the program without being bound down to one particular computer site. As the information is obtained online, a client-server model gives more power and control over what is being kept.

Additionally, this model has improved security, usually with encryption, making sure that the data is only available to authorized people. A client-server model also makes it simpler to back up valuable information than if it was collected across many devices. A network administrator can easily configure a backup for the server, and if the first data were to be destroyed, he or she would only want to recover the single backup.

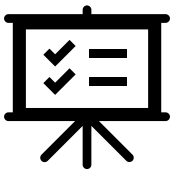
ACTIVITIES

Activity 1. My Client, My Server

Direction: Make an **ACRONYM** that will best describe or relevant to client and server

C - omputer	**S** -upport
L -	**E** -
I -	**R** -
E -	**V** -
N -	**E** -
T -	**R** -

NOTE: Answer the remaining letters.

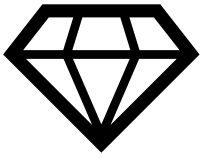


WRAP – UP

Client-server networking refers to a computer networking model that uses both client hardware devices and servers, each with specific functions. The client-server model can be used on the internet as well as on a local area network (LAN).

Client-server denotes a relationship between cooperating programs in an application, composed of clients initiating requests for services and servers providing that function or service. In simple definition, Client is any process that requests specific services from the Server while Server is a process which provides requested services for the Client. The main advantage of the client-server network is supporting a shared database or site to be obtained or updated by many computers while keeping only one control center for the operation. this model has improved security, usually with encryption, making sure that the data is only available to authorized people. A client

server model also makes it simpler to back up valuable information than if it was collected across many devices. A network administrator can easily configure a backup for the server, and if the first data were to be destroyed, he or she would only want to recover the single backup.



V A L U I N G

If you will become a Systems Administrator someday, how will you secure the server for your clients?

Answer:_____
_____
_____
_____
_____

P O S T T E S T

Multiple choice

Directions: Encircle the letter of the correct answer.

1. The following are using server for the clients, EXCEPT:
   A. Facebook C. Cinemas
   B. Banks D. Google
2. Any process that requests specific services from the server.
   A. Mobile Phone C. Server
   B. Client D. Webpage
3. Having a characteristic of being so powerful and expensive machine.
   A. CPU C. Client
   B. Personal Computer D. Server
4. Which of the following is NOT A CLIENT?
   A. Smartphone C. Satellites
   B. Personal Computer D. Tablet
5. Assuming that you are the Systems Administrator of the company, what is the best thing you should do to secure data on the server?
   A. Secure backup C. Record the data
   B. Implement encryption D. Secure anti-virus

POST TEST

1. C
2. B
3. D
4. C
5. A

ACTIVITY

(Suggested answers)

C OMPUTER	**S ECURED**
L AN	**E XPENSIVE**
I NTERNET	**R ESPONSIVE**
E MAIL	**V ARIETY**
N AVIGATE	**E NCRYPTION**

PRETEST :

1. SERVER
2. SERVER
3. SERVER
4. CLIENT
5. SERVER

RECAP

1. Ring Topology
2. Line Topology
3. Star Topology
4. Tree Topology

KEY TO CORRECTION

R E F E R E N CE S

Online Sites:

https://www.e-tesda.gov.ph/mod/book/view.php?id=1135&chapterid=1893
(accessed July 3, 2020)

https://www.omnisci.com/technical-glossary/client-server
(accessed July 6, 2020)

https://www.educba.com/types-of-network-topology
(accessed July 6, 2020)

https://www.iotworldtoday.com/2019/04/17/what-software-defined-networking-can-do-for-iot
(accessed July 6, 2020)

http://www.differencebetween.net/technology/difference-between-client-and-server-2
(accessed July 6, 2020)

Images:

Understanding Client/server
Cover Page :
https://www.computerhope.com/jargon/s/server.htm
(accessed June 20, 2020)

https://www.google.com/search?q=server+client+network&source=lnms&tbm=isch&sa=X&ved=2ahUKEwiP55WUmbPqAhVS2EKHShMC4cQ_AUoAXoECA4QAw&biw=1228&bih=896#imgrc=3E0YG_w_BeQ8jM
(accessed June 20, 2020)

Fig.1. https://techterms.com/definition/client-server_model
Fig 2.https://www.alctraining.com.au/blog/revolutionise-career-learn-cloud-computing