Lab 1: Objective:
Introduction to Packet Tracer

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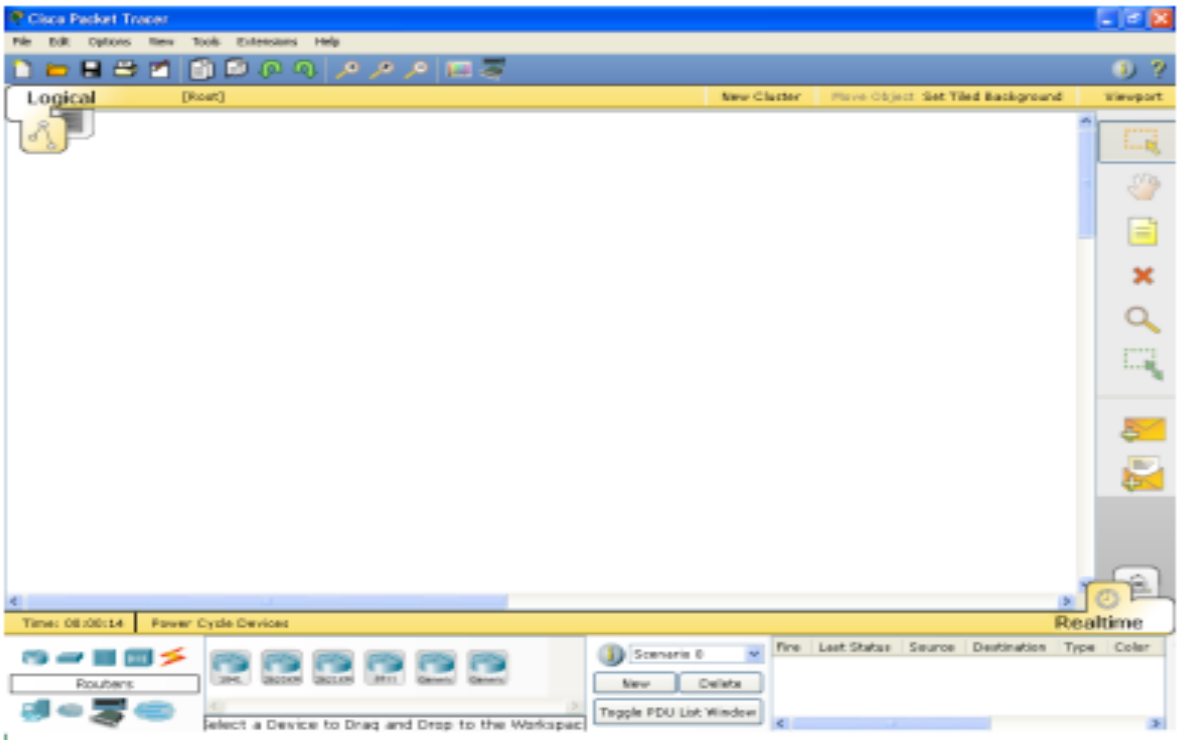
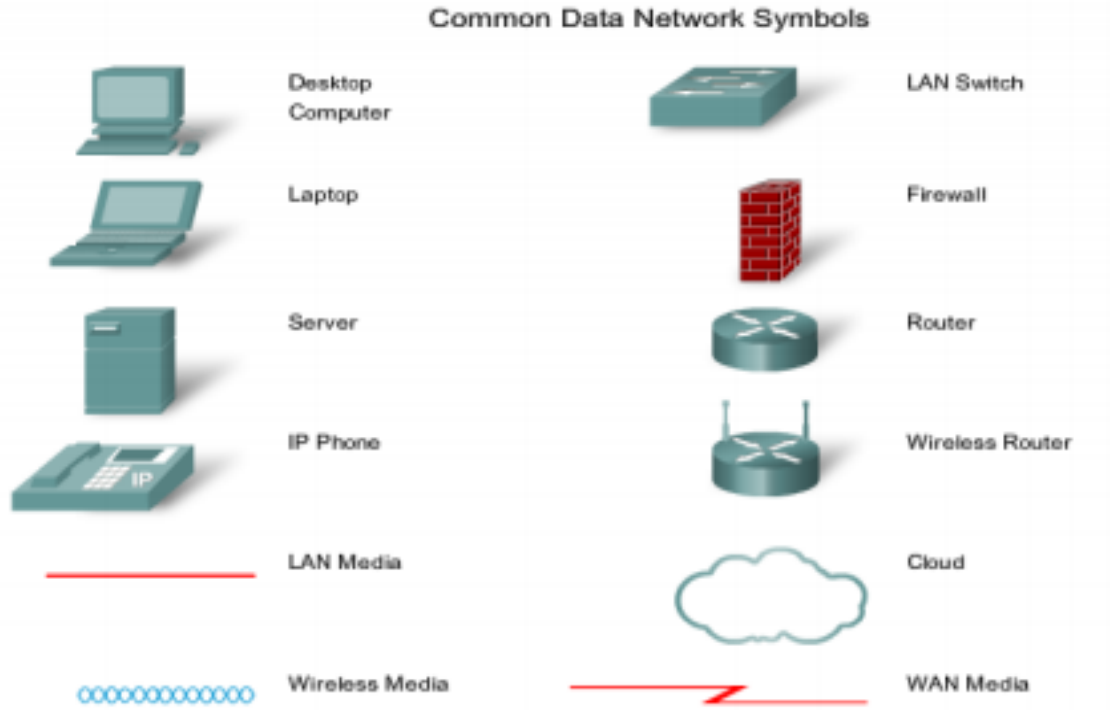


- Packet Tracer is a powerful router simulator created by Cisco Systems. It provides virtual interfaces to interact with physical environment.
- The purpose of Packet Tracer is to offer students and teachers a tool to learn the principles of networking as well as develop Cisco Technology specific skills.
- Packet Tracer is a simple Drag & Drop simulator that provides user-friendly environment.

- One of the biggest advantages of packet tracer is that when implementing a large scale of network in a physical environment it helps to establish the whole scenario in the simulator.
- Packet Tracer creates **.pkt& .pka** Extension when saving files.
- Packet Tracer **Include Routers, Switches, Hub, Servers, End Devices, Firewalls, And Multi user environment support**, so one can easily perform a large activity with its group members or partners on two computers. After completing of an activity both can merge a single Lab in one activity.



Difference between End & Intermediate devices:

Intermediary devices:

A device that connects directly to end user devices or provides end user routing to other networks, for instance, a router is an example of intermediary devices Intermediary devices connect the individual hosts to the network and can connect multiple individual networks to form an internet-work.

End Devices:

The network devices that people are most familiar with are called end devices. These devices form the interface between the human network and the underlying communication network.

Some examples of end devices are:

Computers (work stations, laptops, file servers, web servers)

Network printers, VoIP phones, Security cameras, Mobile handheld devices (such as wireless barcode scanners, PDAs)

Selecting Connection Type

Difference between Twisted Pair & Unshielded Twisted Pair:

Twisted pair:Twisted pair cabling is a type of wiring in which two conductors (the forward and return conductors of a single circuit) are twisted together for the purposes of canceling out electromagnetic interference (EMI) from external sources.

UTP: is a four –pair medium used in verity of networks. UTP does not require fixed spacing connection that is necessary with coaxial type connection. UTP is also finding increasing use in video applications, primarily in security cameras. Much middle to high-end cameras includes a UTP output with setscrew terminals. This is made possible by the fact that UTP cable bandwidth has improved to match the baseband of television signals.

Symbols of Cable Type:


Console Cable (used to connect with a router)


Straight through Cable (Used to Connect Different Devices)


Copper Crossover cable (Used to connect with the same devices)


Fiber (used in WAN environment)


Phone (used in VOIP Phone)


Coaxial cable (used in WAN emulation)

Serial DCE Cable (Used in WAN links where clock rate is required)

Serial DTE Cable (used in WAN link where clock rate is not required)

Lab-1 Exercise:

1- What is the purpose of End Devices?

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_____

2- What is the purpose of Intermediate Devices?

_____

_____

3- Some examples of both are

_____and_____

4- Where we can use Cross Cable?

_____

5- Where we can use Straight Cable?

_____

6- These above two cables are derived from Ethernet Cable. (True/False)

7- What do we mean by Remote Access?

_____

8- We can use Console Cable for Remote Access. (True/False).