CON LAB - 1

Date: 3-11-2022

Introduction to CISCO Packet Tracer:

Packet Tracer is a medium fidelity, network-capable, simulation-based learning environment for networking novices to design, configure, and troubleshoot computer networks. Helps in visualizations, simulations and animations of networking phenomena.

* We can toggle between logical & physical Workspaces. And workspace is where the network will be created, watch simulations, view many kinds of info.
* We can also toggle between Realtime and Simulation Mode.
* Various devices and connections can be choosen from device-type selection box and Device-specific selection box contains specific devices which you want to put in the network.

Creating First Network:

Demonstration:

1) Pick 2 end devices from device-type selection box
2) connect these two devices (Automatically choose conn. type).
3) Config device 1 and modify the IP address to 10.0.0.1 ~~and~~ in the FastEthernet0.
4) For device 2 set the IP address to 10.0.0.2.
5) Add Simple PDU to the device.
6) Switch to the Simulation tab and click on Auto capture/play, to view the simulation.

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* Using command prompt:

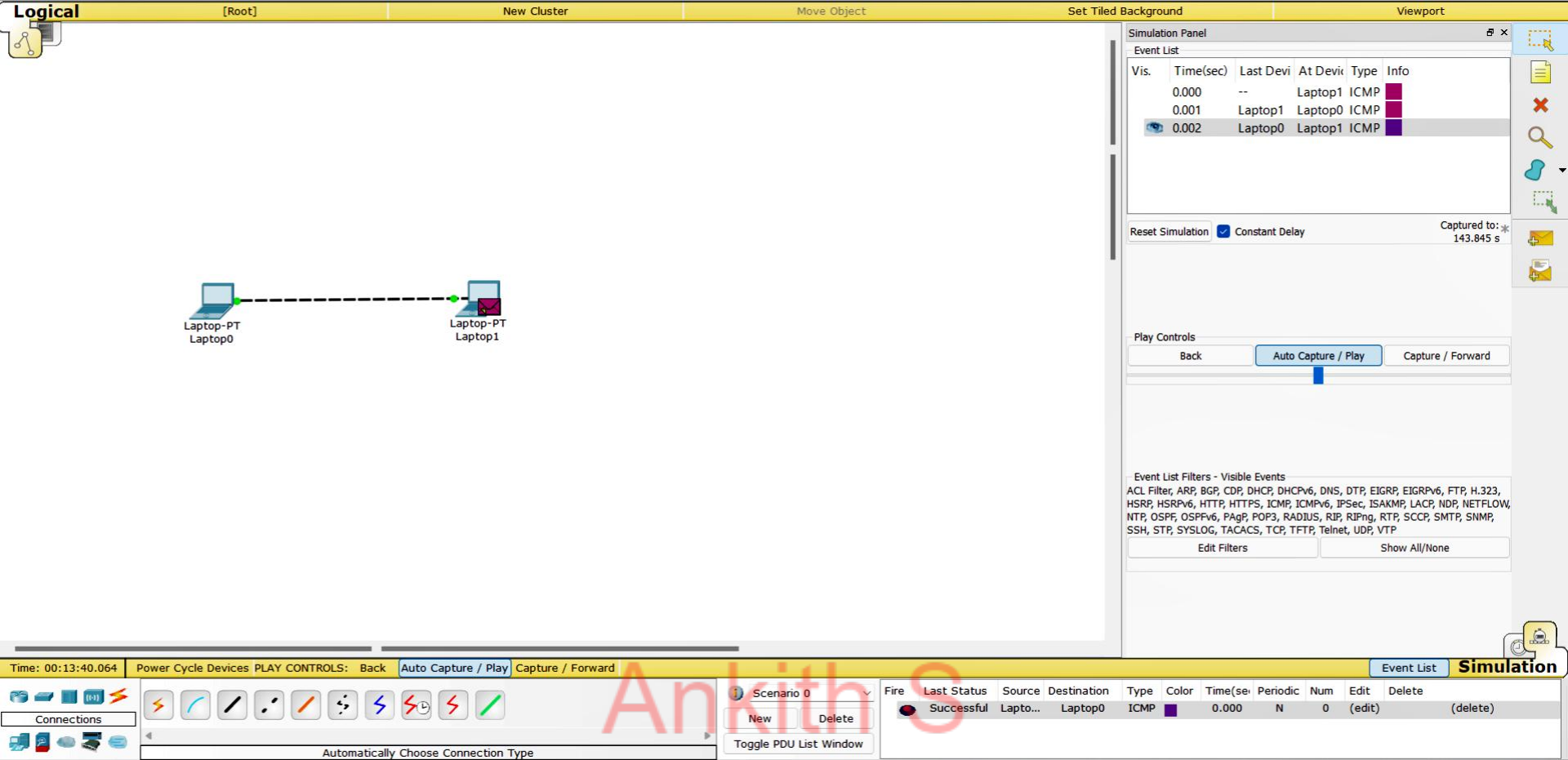
Use:

>>> ping IP_address

to send message to a particular device

Difference between

Hub	Switch	Router
Hub is a physical layer device i.e. layer 1	Switch is a data link layer device i.e. layer 2	Router is a network layer device i.e. layer 3
Hub works on the basis of broadcasting.	Switch works on the basis of MAC address	A router works on the basis of IP address
A Hub is a multi-port repeater in which a signal introduced at the input of any port appears at the output of all available ports	A switch is a telecommunication device which receives a message from any device connected to it and then transmits the message only to the device for which the message is intended.	A router reads the header of incoming packet and forward it to the port for which it is intended there by determines the route.
At least single network is required to connect	At least single network is required to connect.	Router needs at least two networks to connect
Cheaper compared to switch and router	Switch is an expensive device than hub.	Router is relatively much more expensive device than hub & switch.


Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Laptop-PT
Laptop0
Laptop-PT
Laptop1
Simulation Panel
Event List
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ICMP
Reset Simulation
Constant Delay
Captured to:
143.845 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP
Edit Filters
Show All/None
Time: 00:13:40.064
Power Cycle Devices
PLAY CONTROLS:
Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
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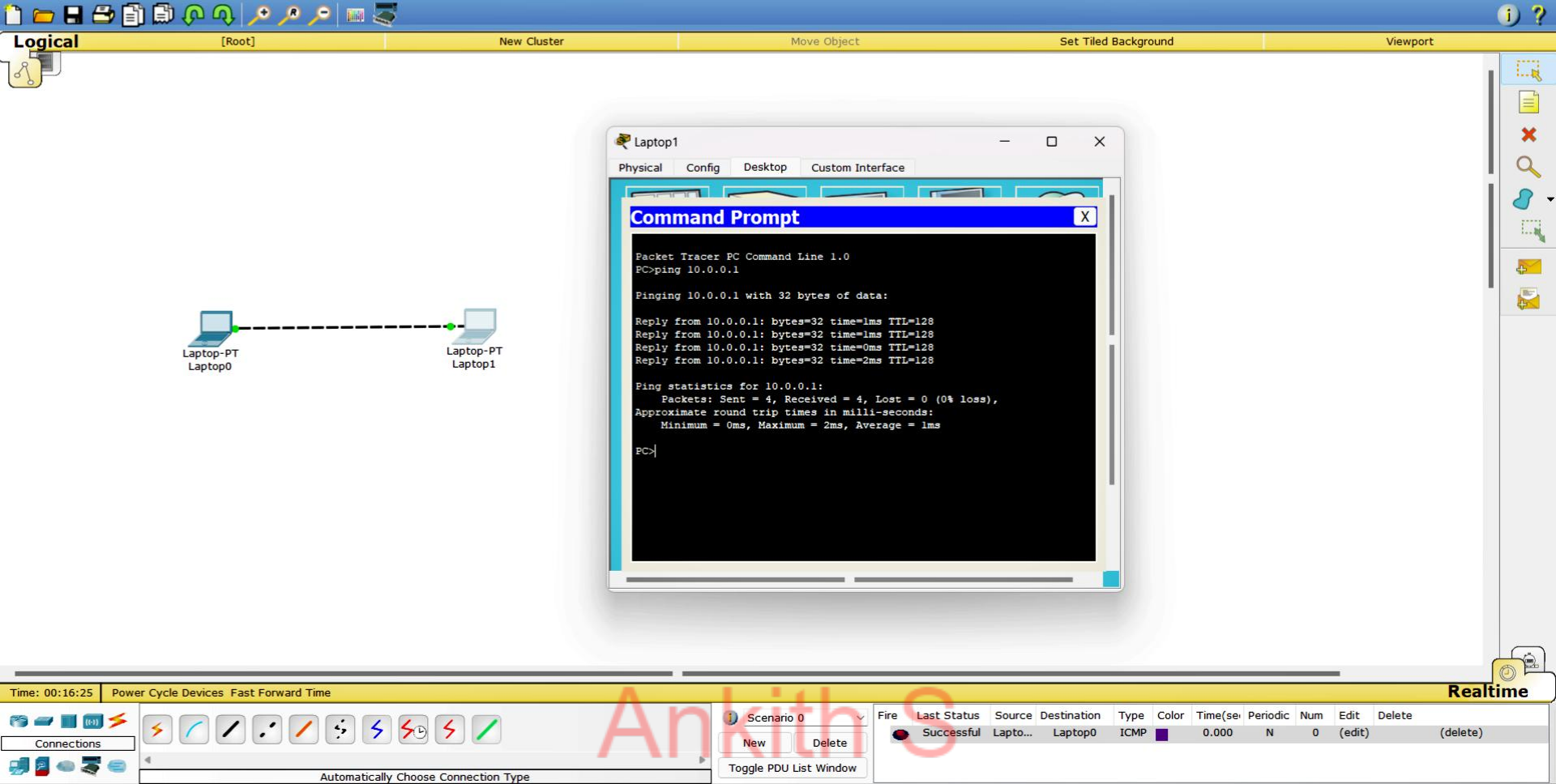
Logical
[Root]
New Cluster
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Laptop-PT
Laptop0
Laptop-PT
Laptop1
Laptop1
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=1ms TTL=128
Reply from 10.0.0.1: bytes=32 time=1ms TTL=128
Reply from 10.0.0.1: bytes=32 time=0ms TTL=128
Reply from 10.0.0.1: bytes=32 time=2ms TTL=128
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 1ms
PC>
Time: 00:16:25
Power Cycle Devices
Fast Forward Time
Realtime
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
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