Internetworking Essentials CSE307

Lab 0

Course details

Text Book

COMPUTER NETWORKS by ANDREW S. TANENBAUM, PEARSON

Course Assessment Model

- **4 CA Components**

POLL 1

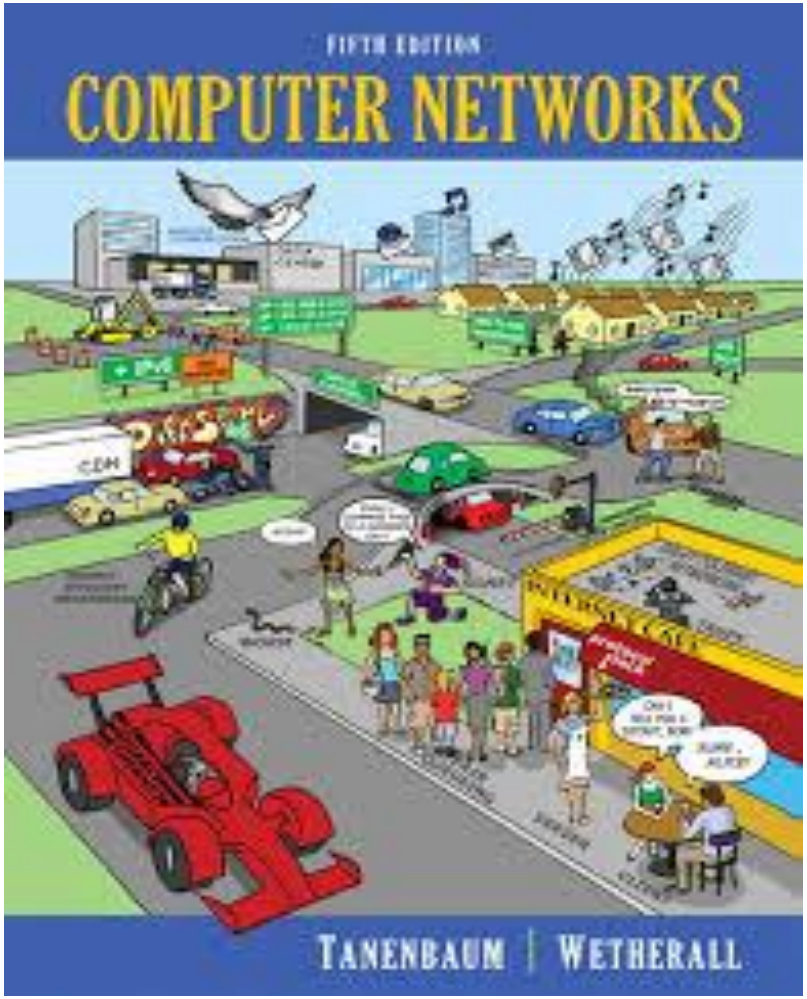
- How many CA components are is LAB CSE 307

a) 2

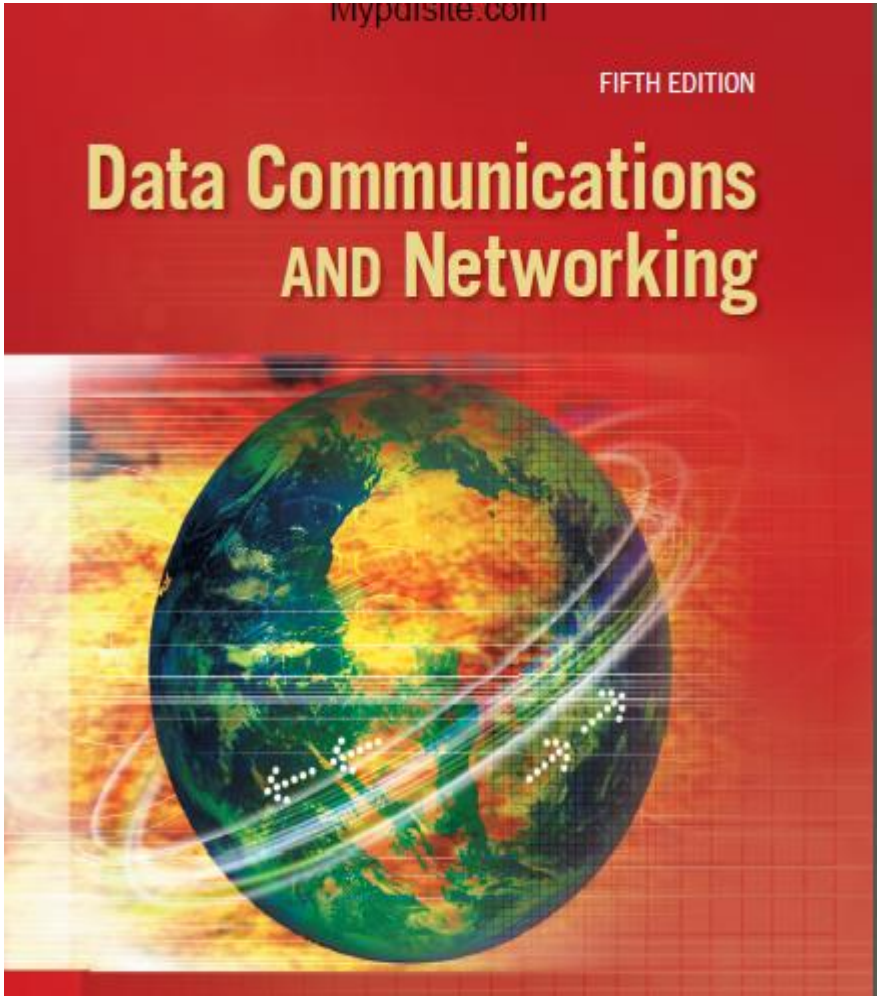
b) 3

c) 4

d) 5

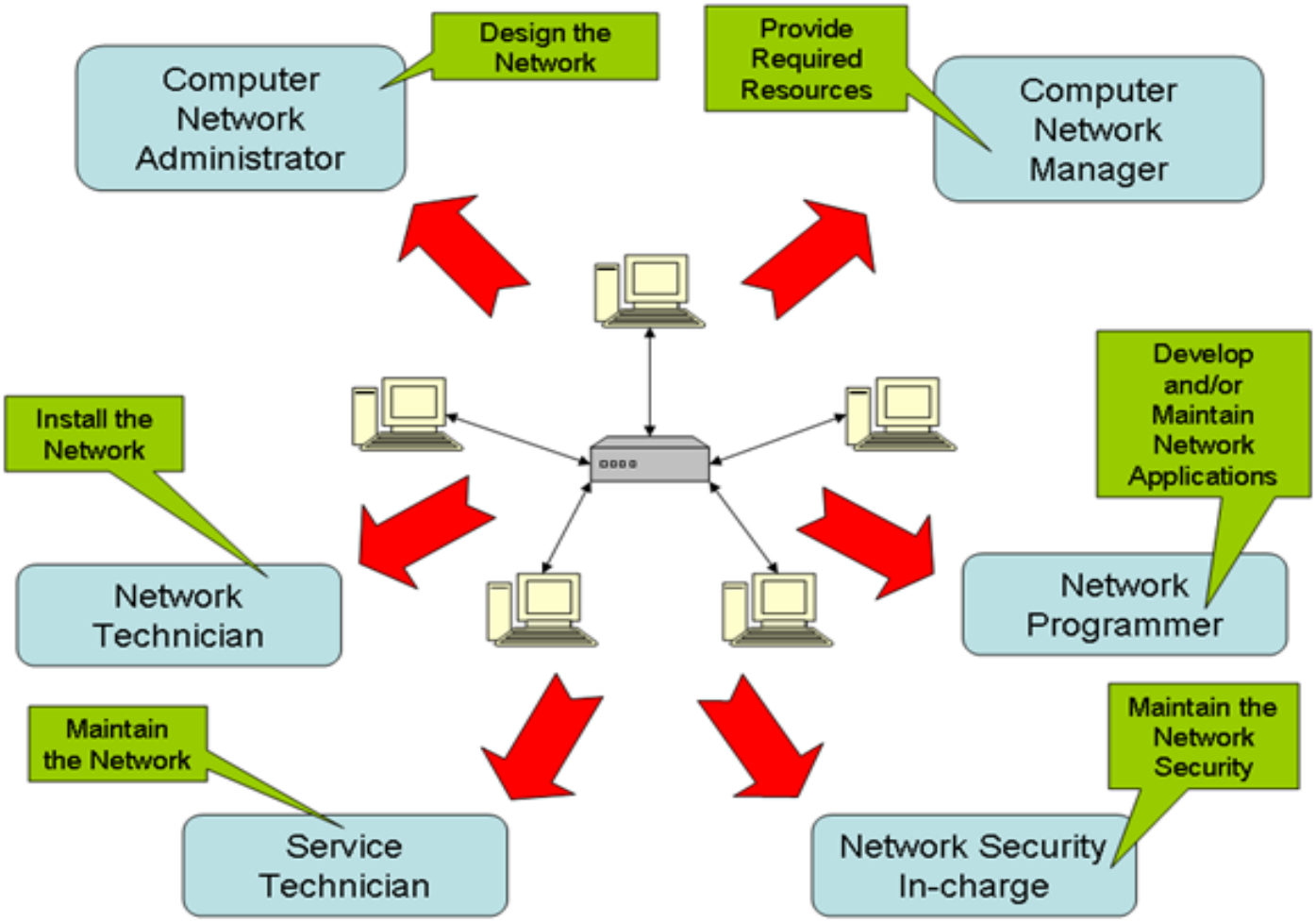


Text Book



Reference Book 1
Ed 5

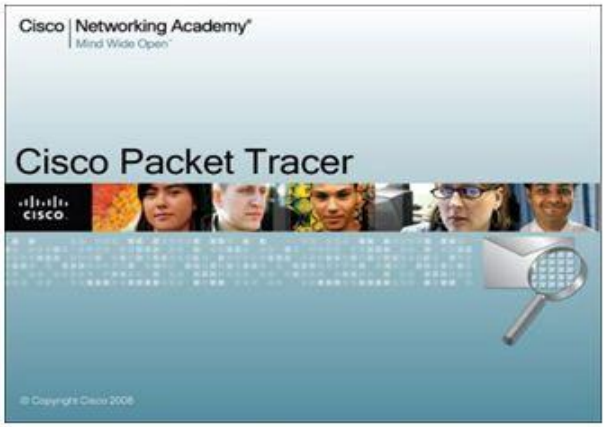
Why Study ?



(Career Avenues in Computer Networking)

What is Cisco Packet Tracer?

- Comprehensive networking technology teaching and learning software developed by Cisco Networking Academy



- Offers a unique combination of realistic simulation and visualization experiences, complex assessment and activity authoring capabilities, and opportunities for multiuser collaboration and competition

POLL 2

Packet tracer is simulation software offered by

a) Cisco

b) Dell

c) IBM

d) Hewlett Packard

syllabus

Network hardware and IP addressing concept

• Working of hub, switch and Router, Adding of interfaces in devices

• Cabling - Creation of straight and Cross cable using crimping tool

• IP addressing basics, configuration using CLI, VLSM and FLSM on single router

• Implementation of Star, Mesh, Bus and Hybrid Topology

Network Commands

• Ping, tracert, arp, netstat, ipconfig, ftp, nslookup, snmpget, snmpgetbulk and snmpset (use DOS and scenario based configuration)

Network layer routing protocols

• Implementation of Static Routing using Classfull and classless (FLSM)

• Implementation of Static Routing using VLSM

• Routing information Protocol(RIP) using classfull and classless (FLSM)

• Routing information rotocol(RIP) using VLSM

Server Configuration and LAN Setup

- Implementation of FTP, Implementation of HTTP and Email setup on server
- Implementation of DNS, Implementation of DHCP
- Implementation of LAN with configuration of inter-networking devices and any application layer protocol

IPv6 addressing and routing

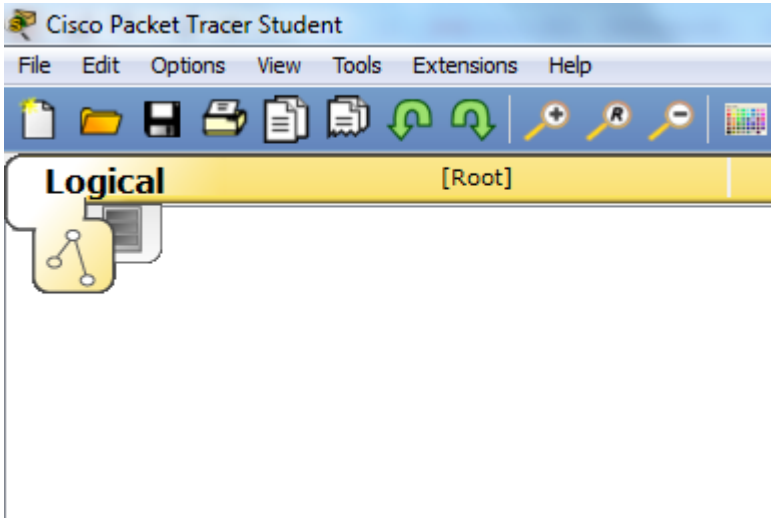
- IPv6 Addressing & Stateless Address Auto Configuration (SLAAC)
- IPv6 Neighbor Discovery
- IPv6 Static Routing
- IPv6 Dynamic Routing

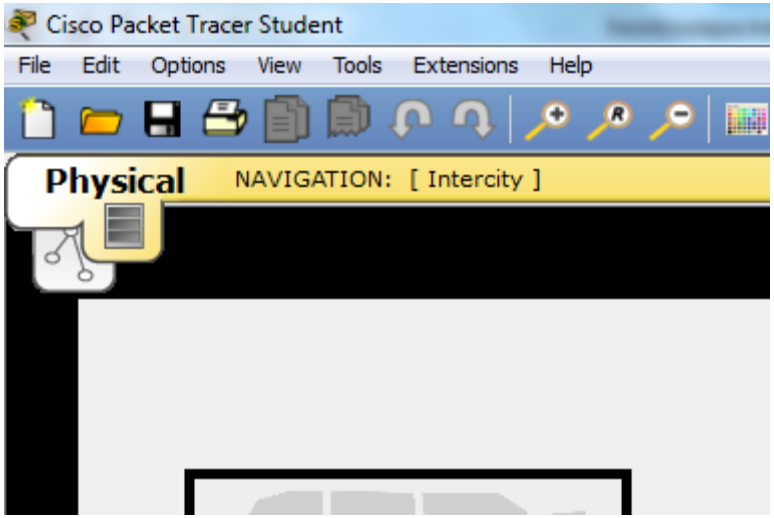
Link to download

- https://www.computernetworkingnotes.com/ccna-study-guide/download-packet-tracer-for-windows-and-linux.html

Packet Tracer has two different views

- Logical Workspace
- Physical Workspace





POLL 3

Which of the workspace we will use more in lab

a) logical

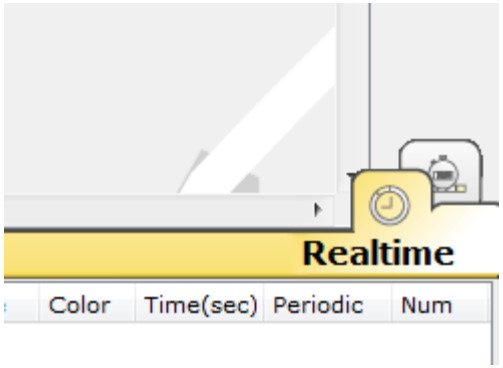
b) physical

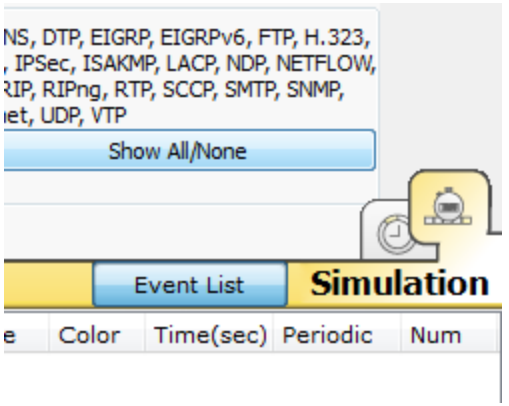
c) Both

d) None of the above

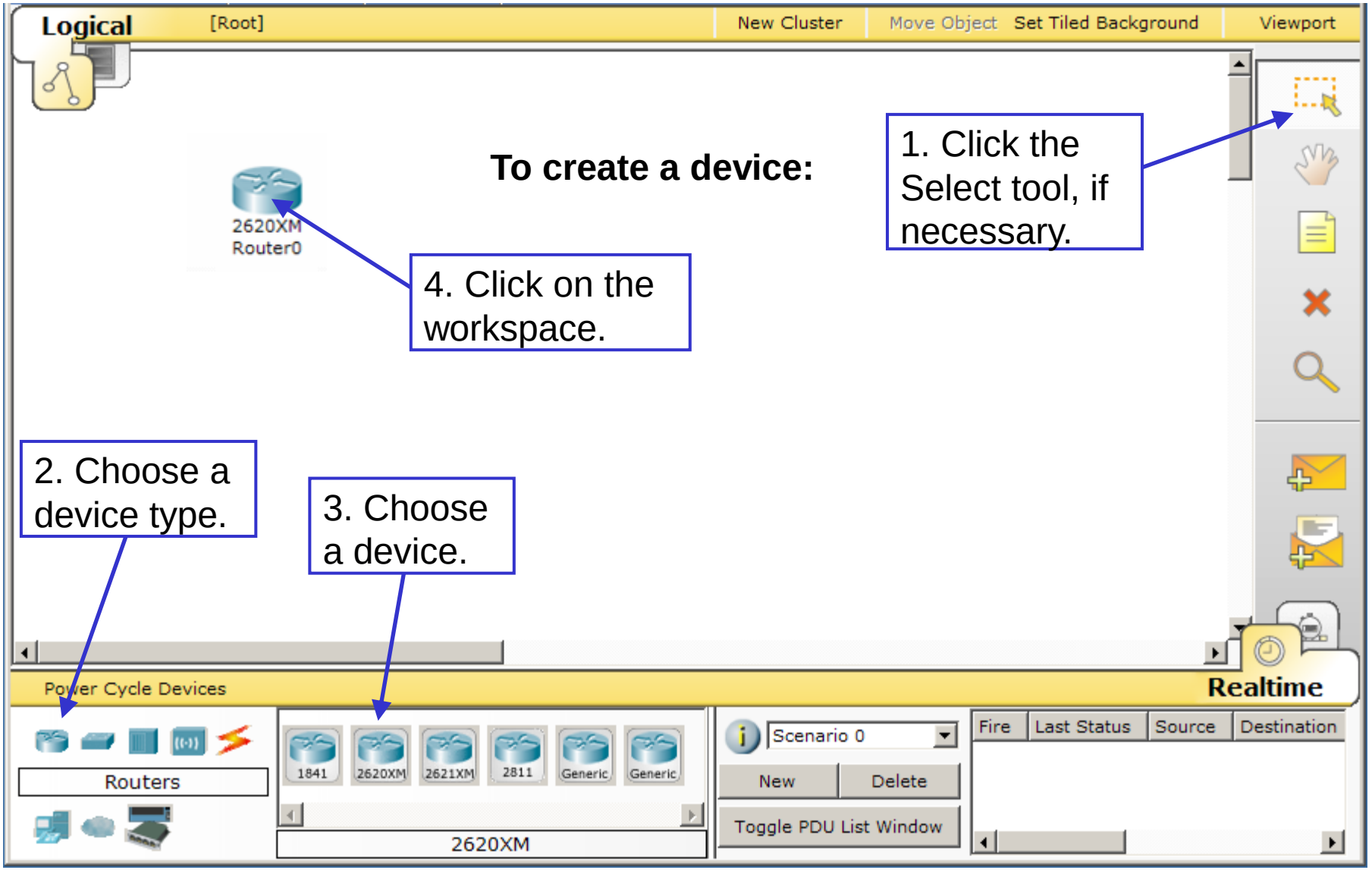
Packet Tracer also has two modes of operation

- Realtime Mode
- Simulation Mode

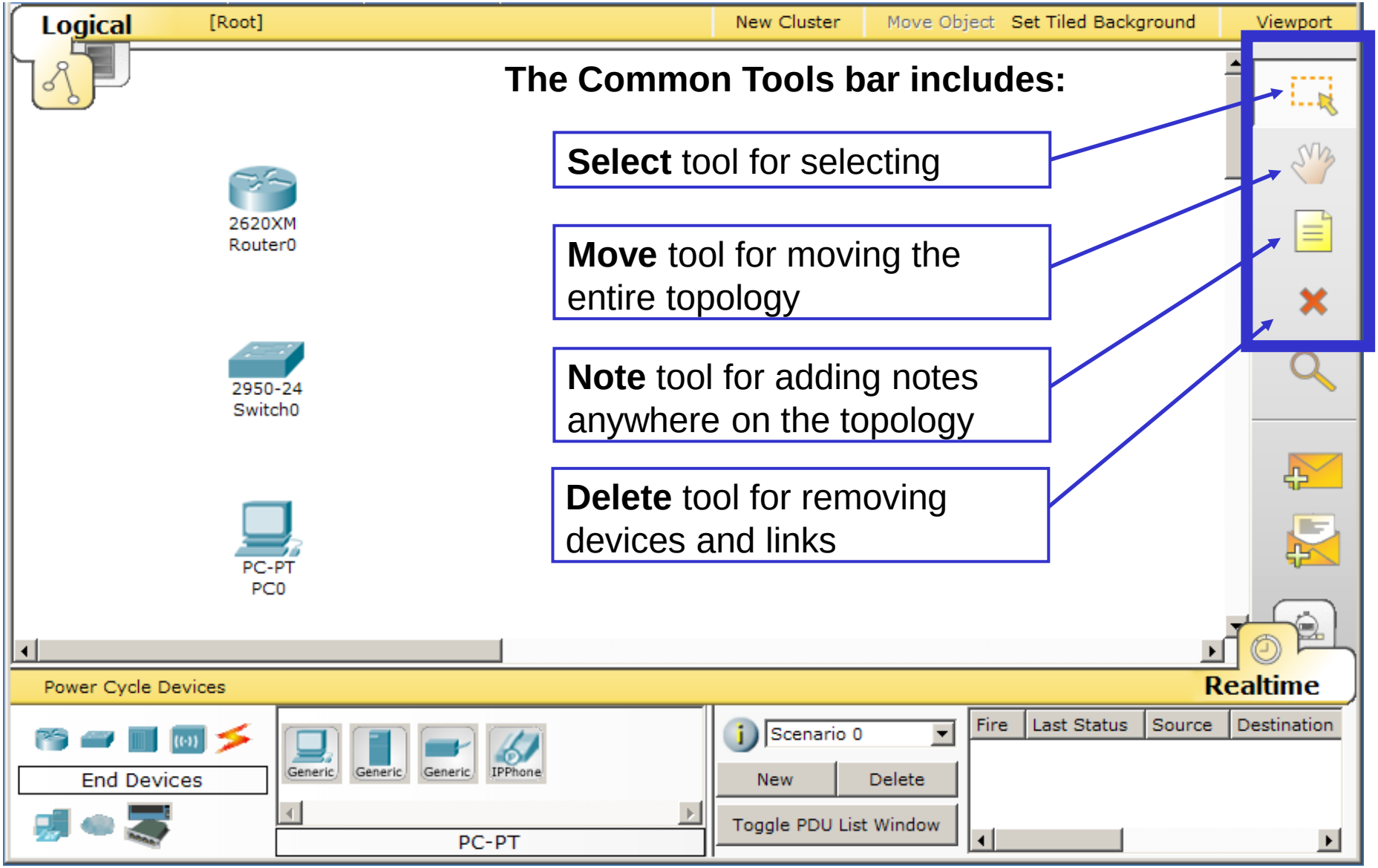




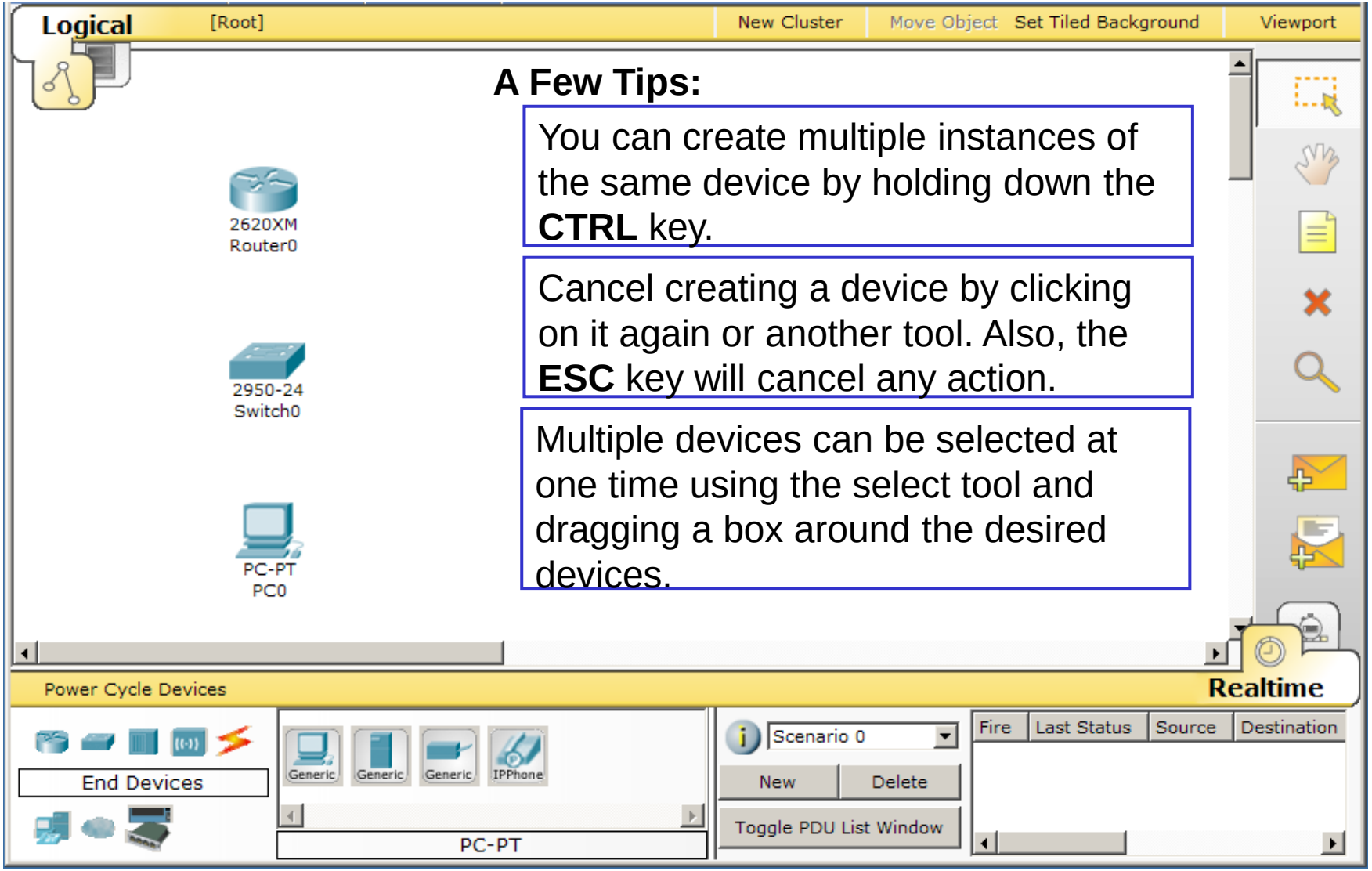
Basics to Create the Devices



Common Tools

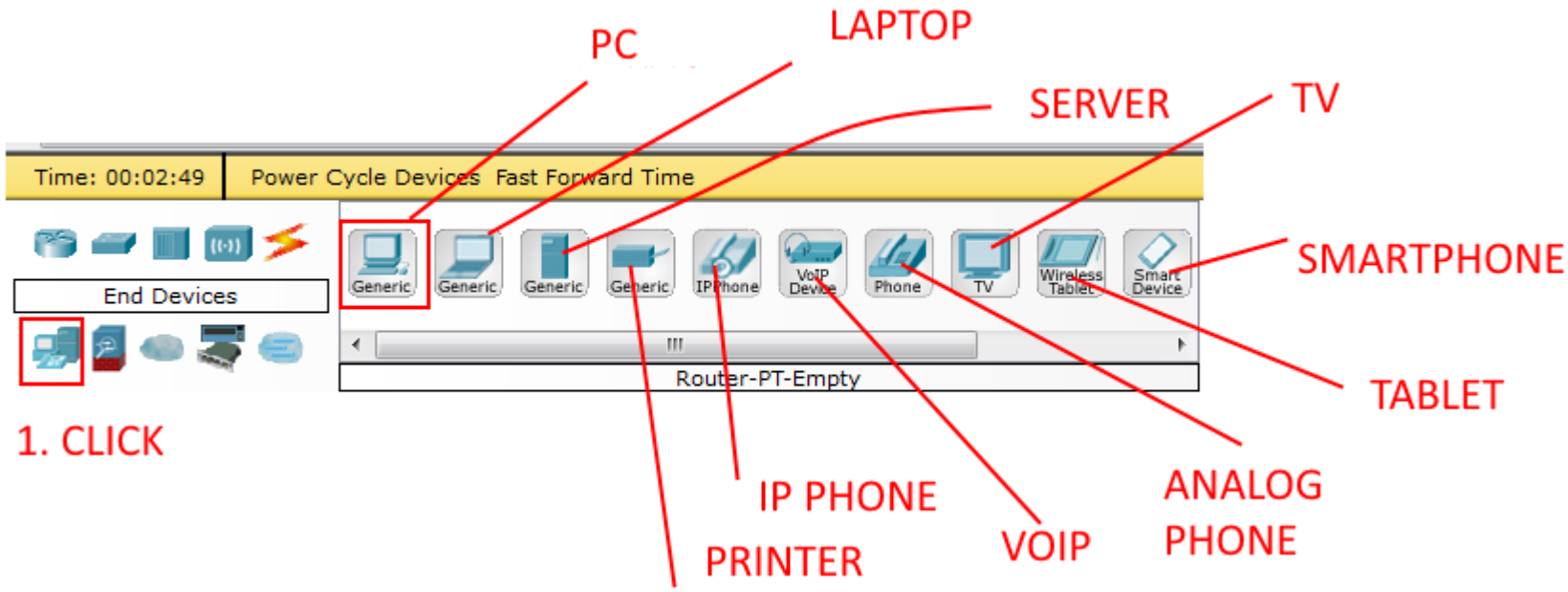


Some Tips

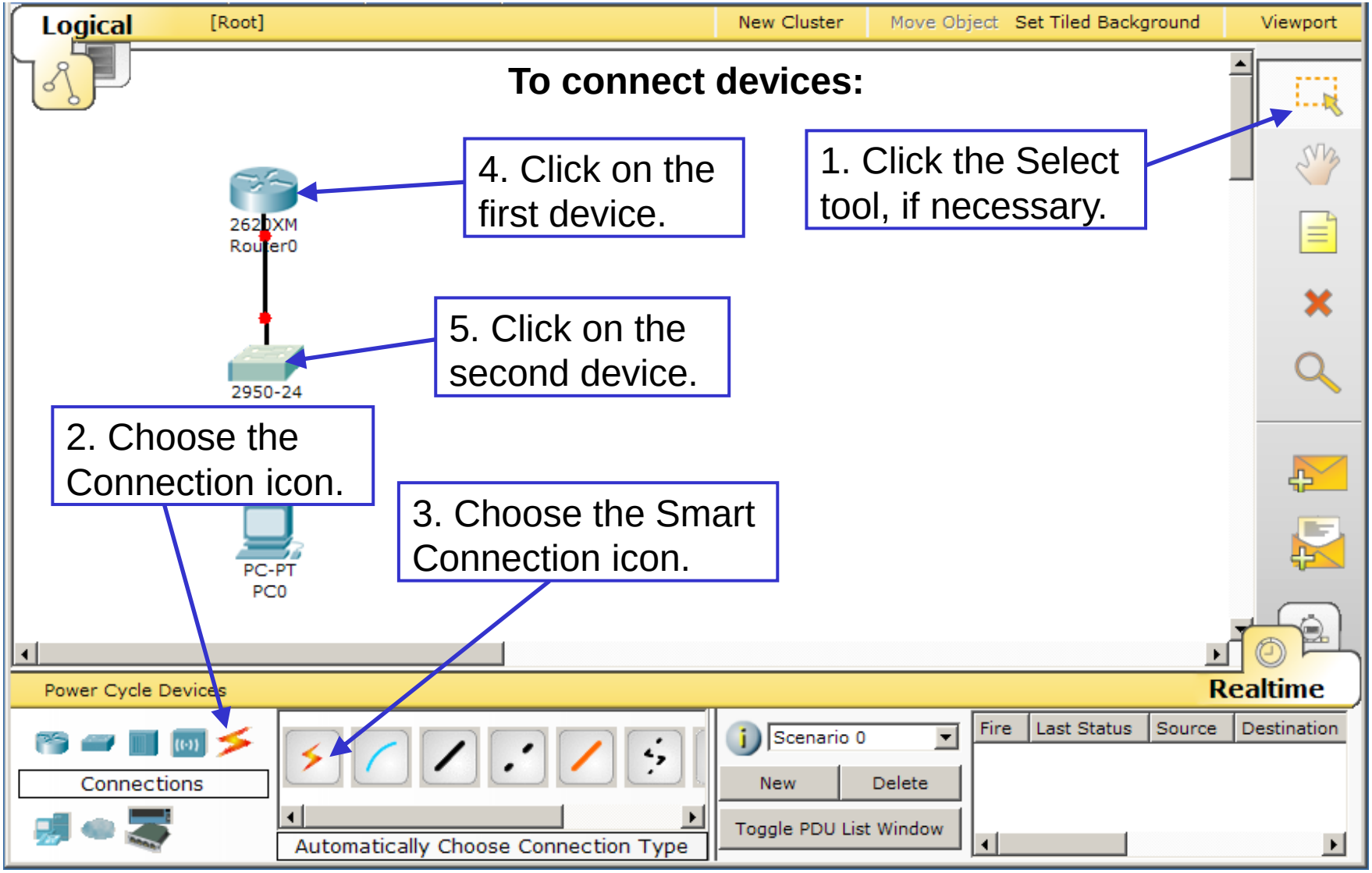

Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
2620XM
Router0
2950-24
Switch0
PC-PT
PC0
A Few Tips:
You can create multiple instances of the same device by holding down the CTRL key.
Cancel creating a device by clicking on it again or another tool. Also, the ESC key will cancel any action.
Multiple devices can be selected at one time using the select tool and dragging a box around the desired devices.
Power Cycle Devices
Realtime
End Devices
Generic
Generic
Generic
IPPhone
PC-PT
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination

Some End devices

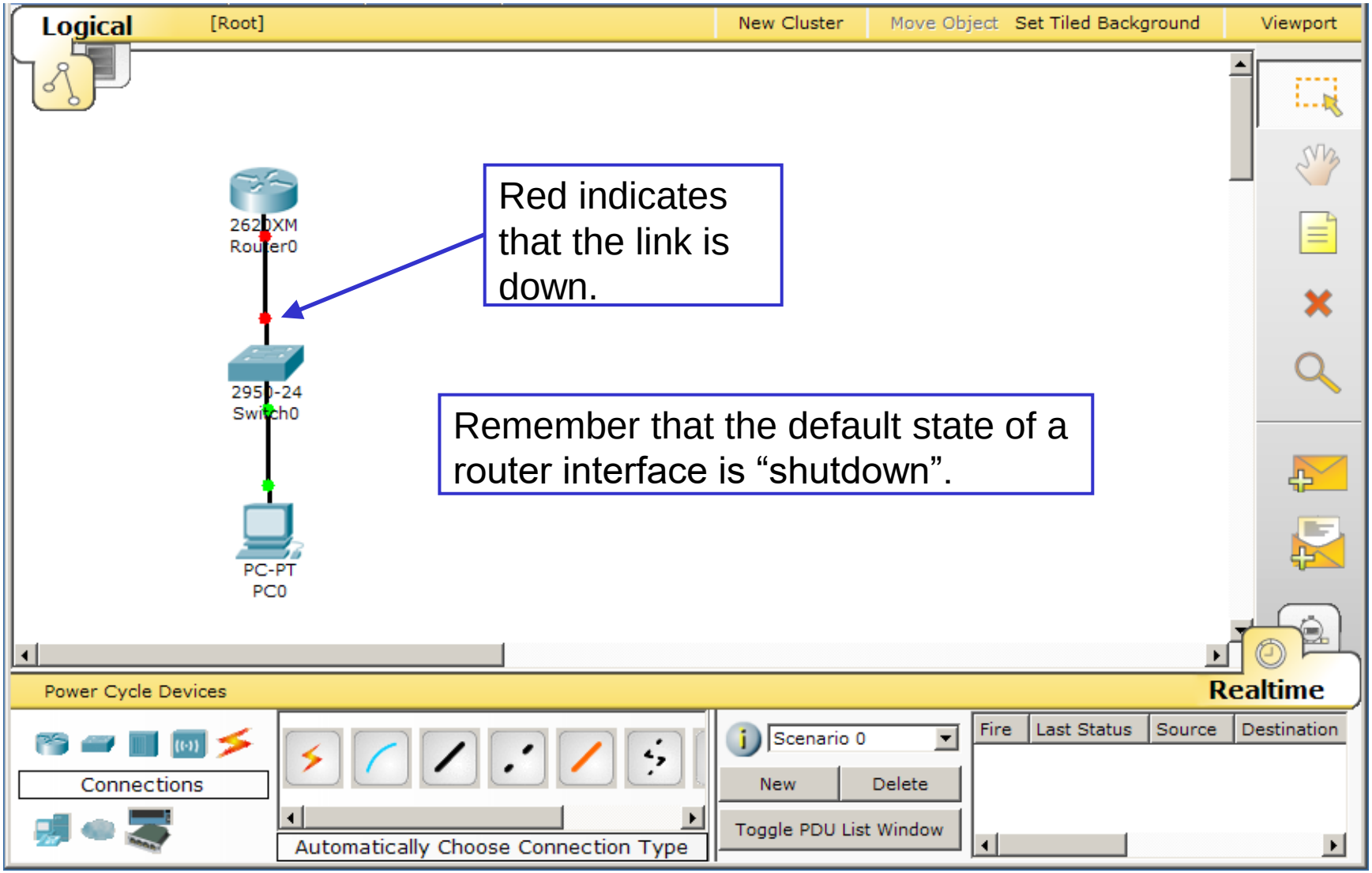
Under End Devices, these are the following devices available:



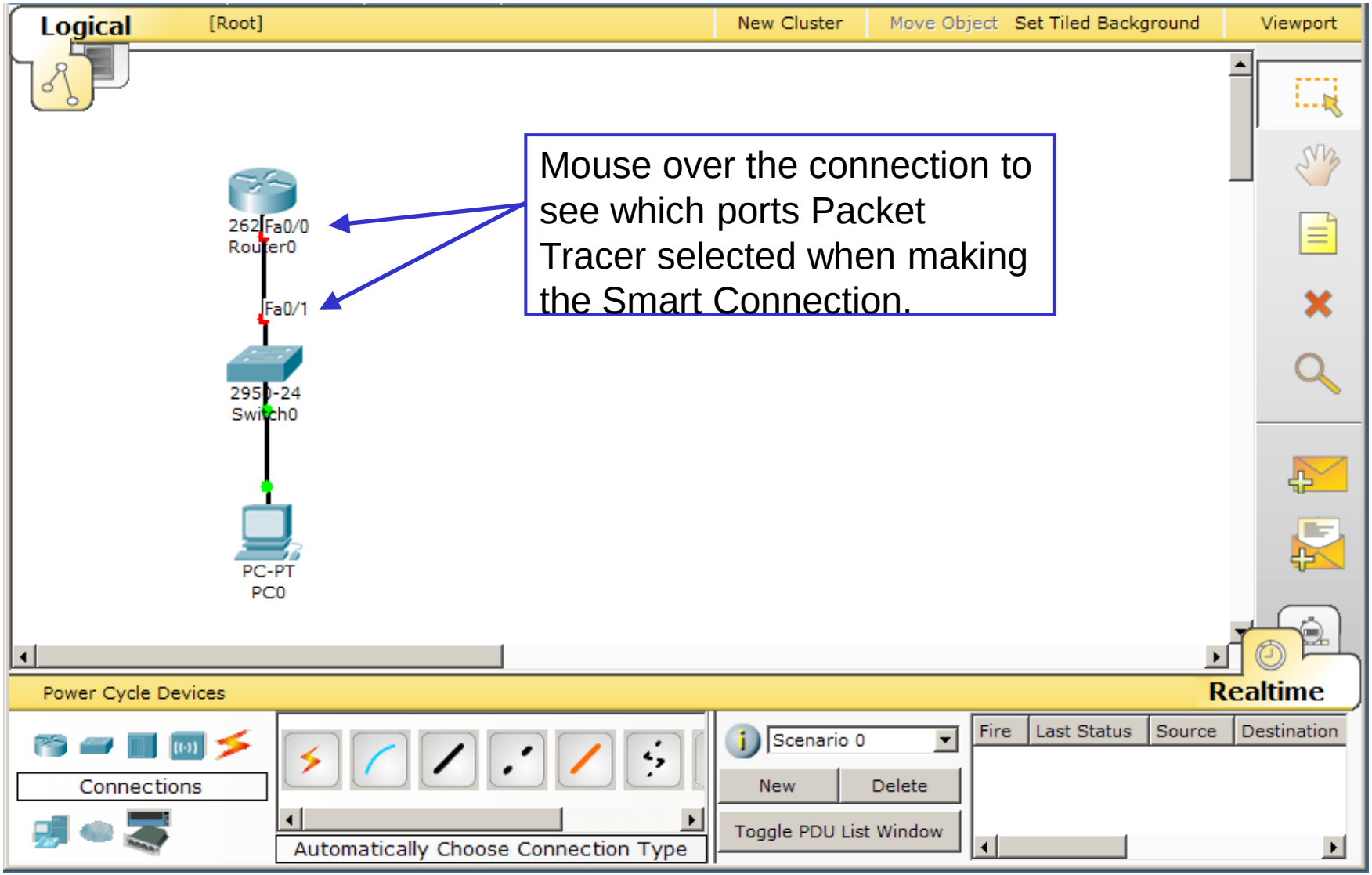
Smart Connection



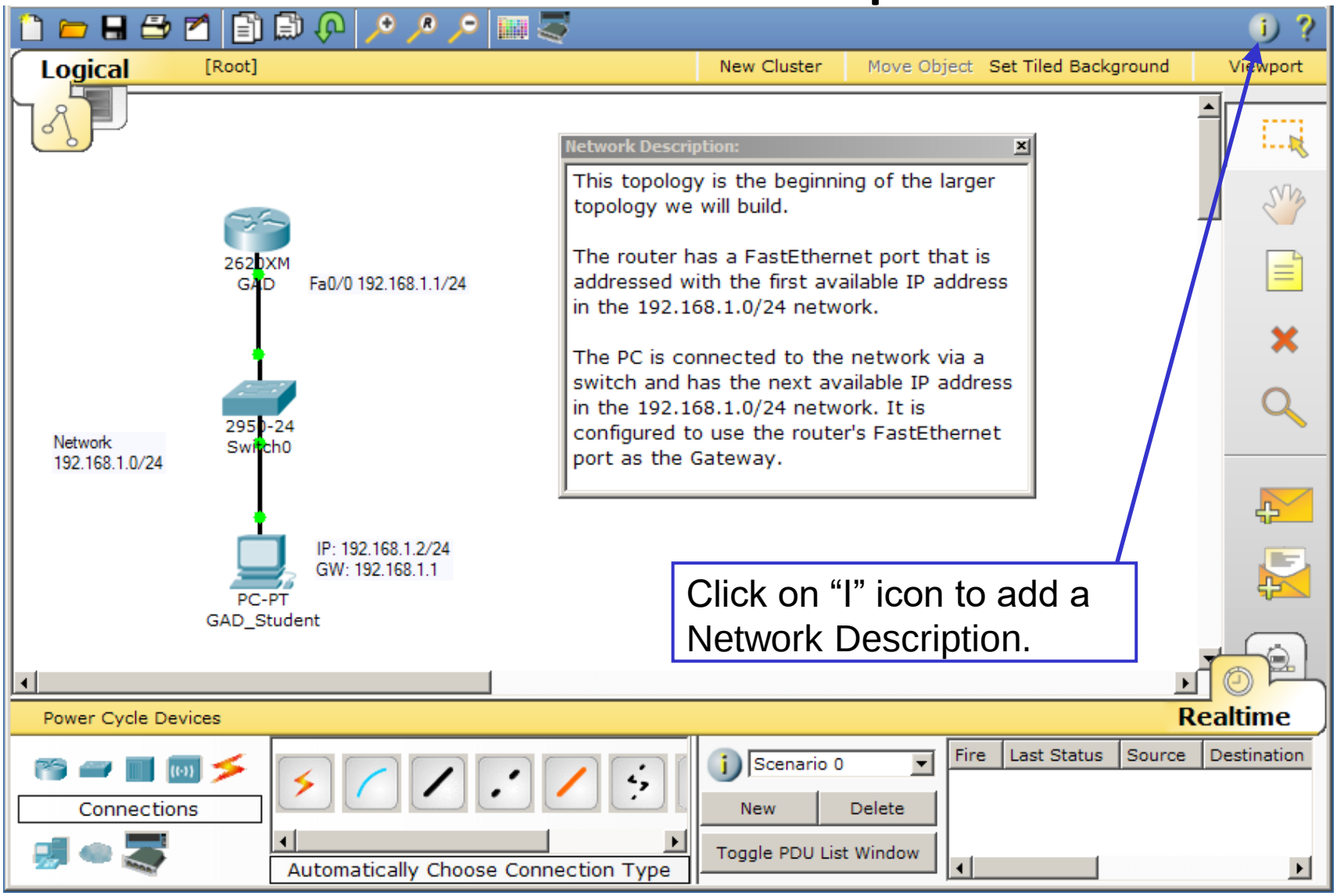
Port Status



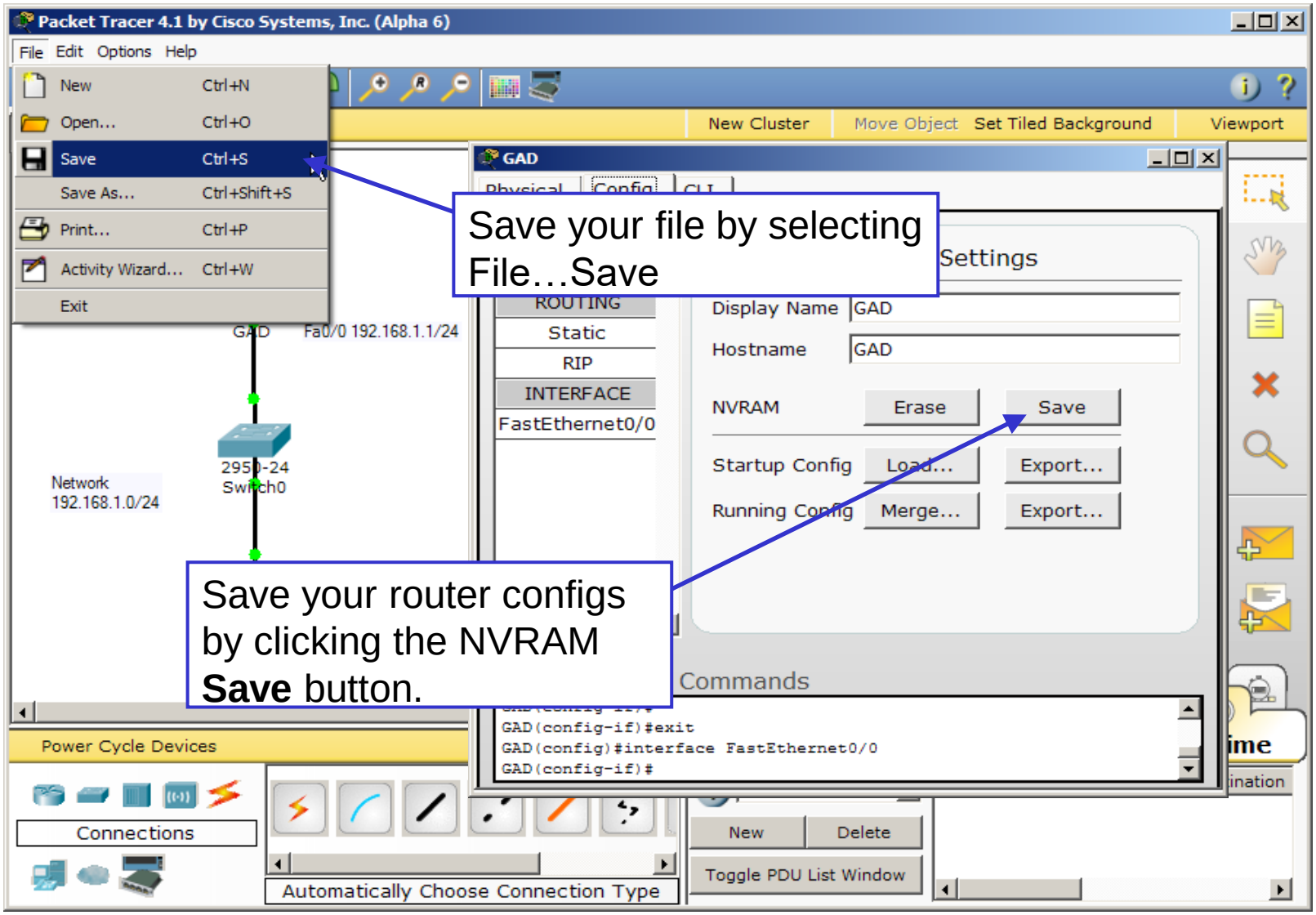
Viewing Port Labels



Network Description



Save Your Configurations and File



POLL 4

Which of the following and end devices

a) PC

b) Laptop

c) Printer

d) All of the above

FUTURE SCOPE

They receive live information from the road authority about the state of the roads including traffic jams, accidents and weather. The car transmits information to the road authority regarding speed, distance travelled, use of windscreen wipers, etc.


Any questions?