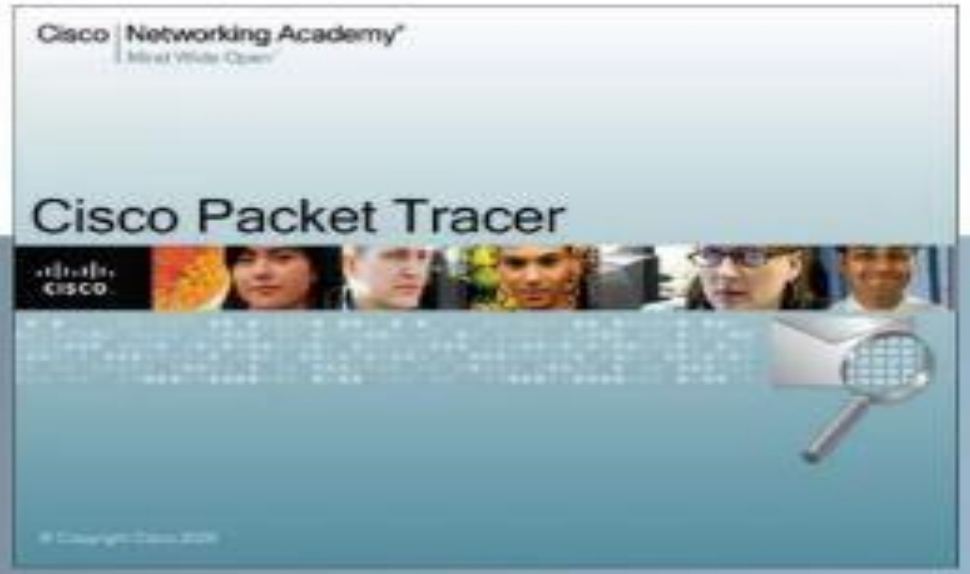
Cisco Packet Tracer Overview

Cisco | Networking Academy®
Mind Wide Open™

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

- The free Cisco Packet Tracer software helps you to practice your network configuration and troubleshooting skills using your desktop or laptop computer.

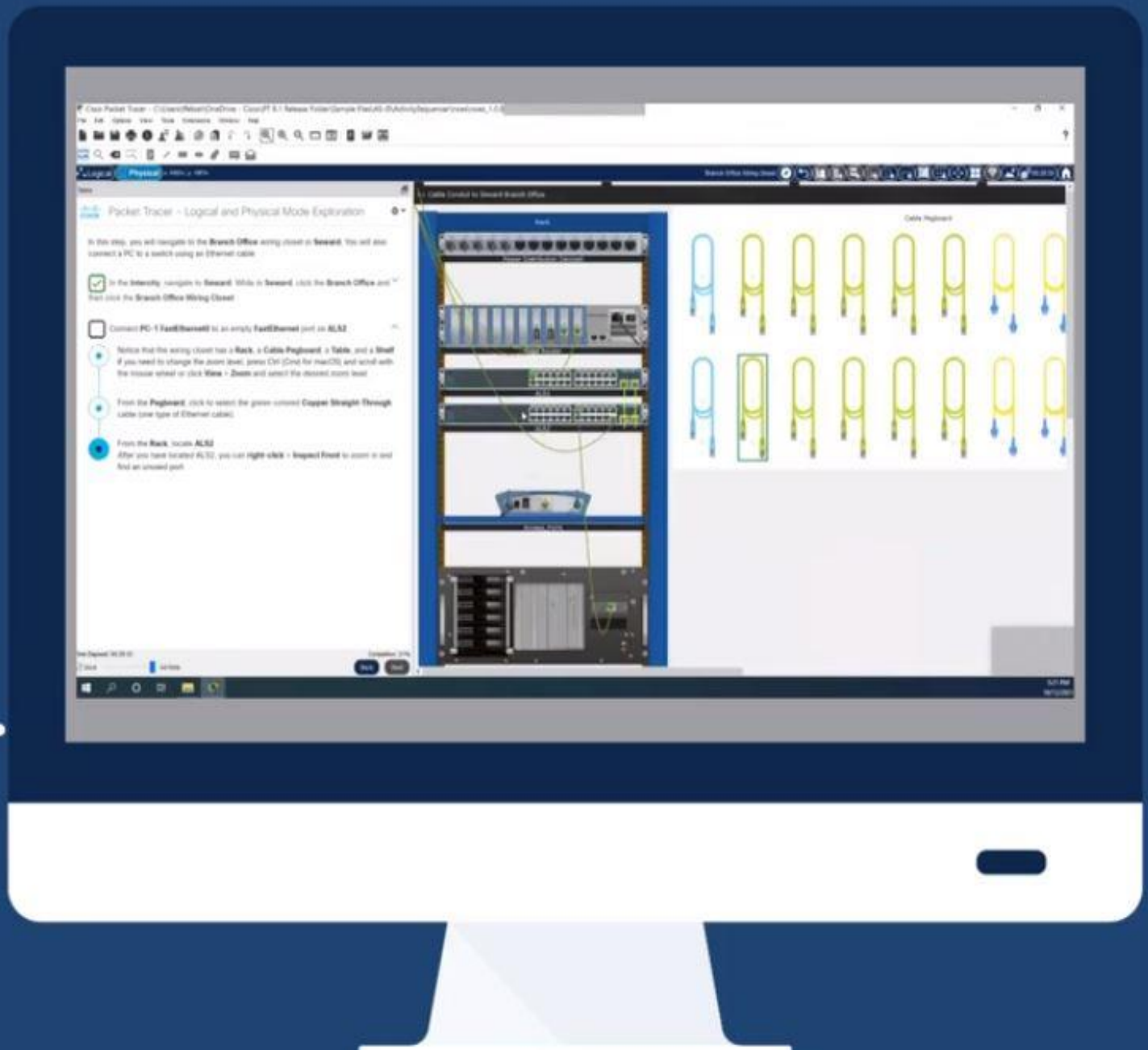
- It allows you to simulate networks without having access to physical equipment.

- In addition to networking, you can learn, and then practice your Internet of Things (IoT) and Cybersecurity skills.

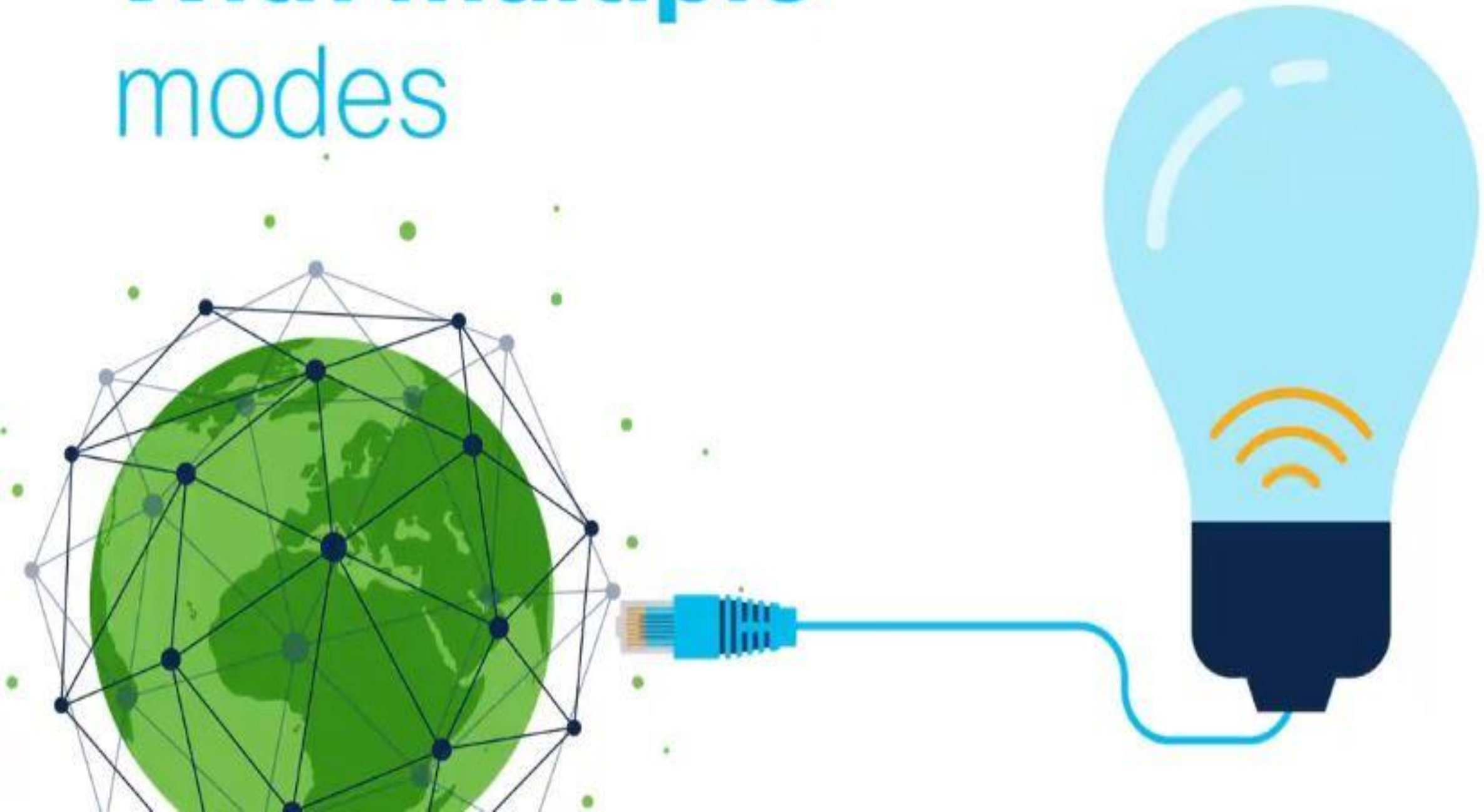
Powerful
learning tool

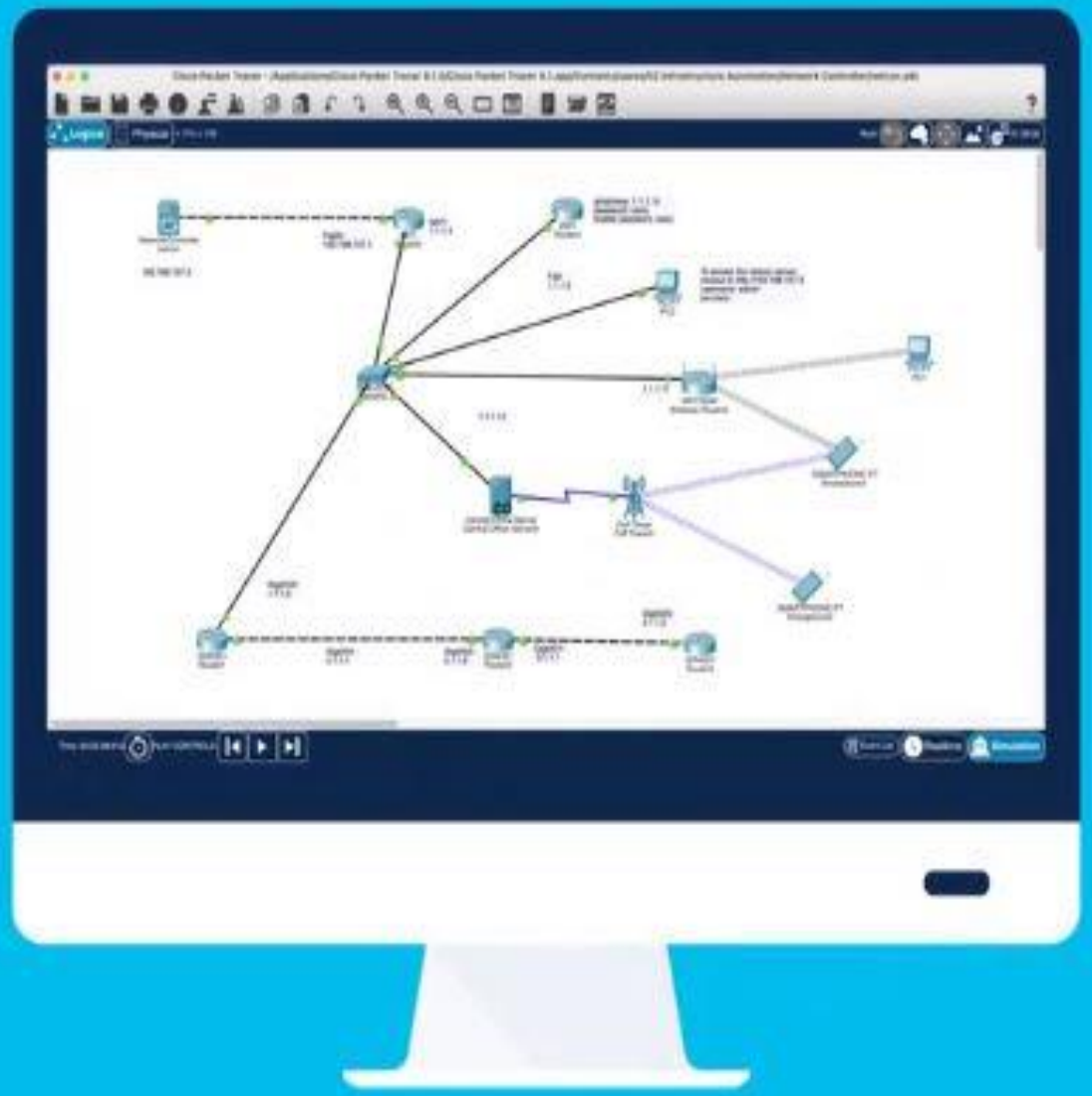
KEY FEATURES

Virtual lab



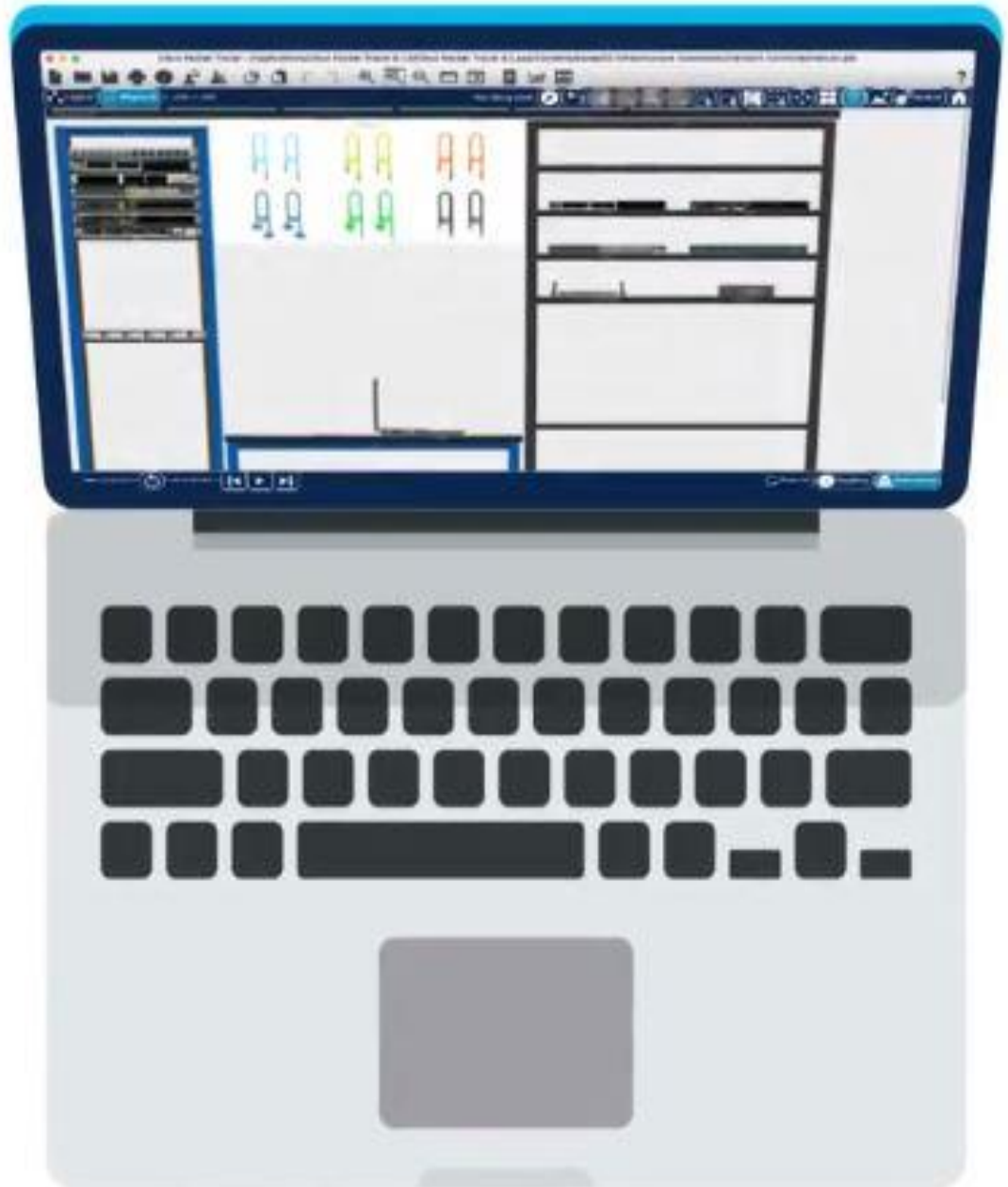
With multiple
modes



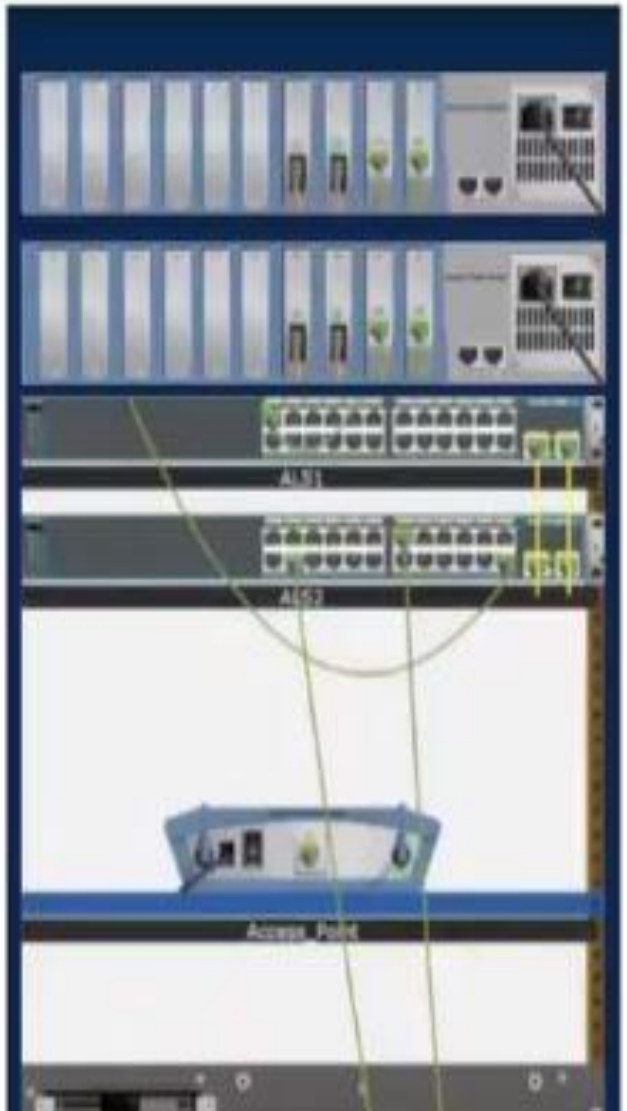


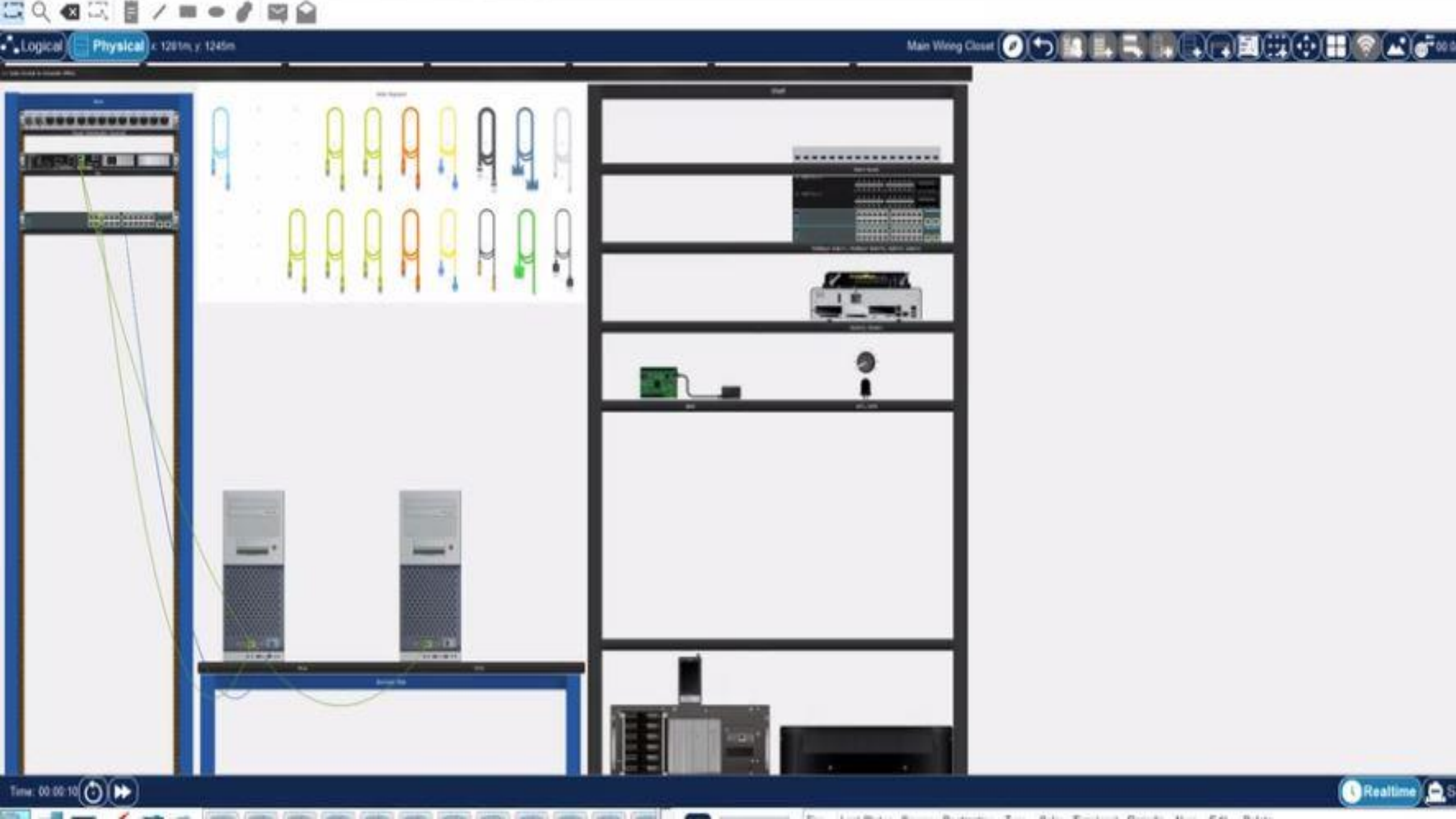
Simulation mode

Physical mode

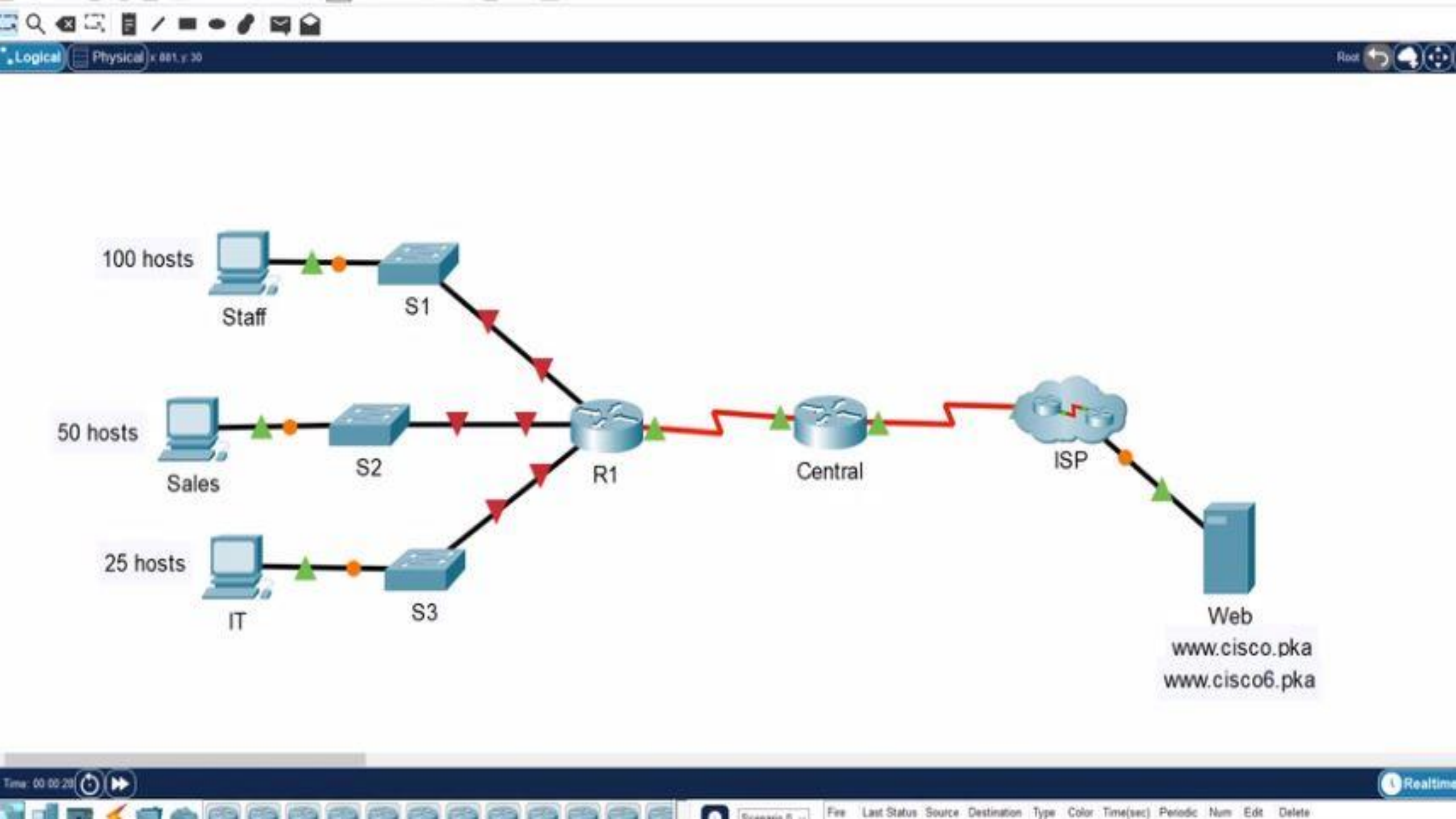


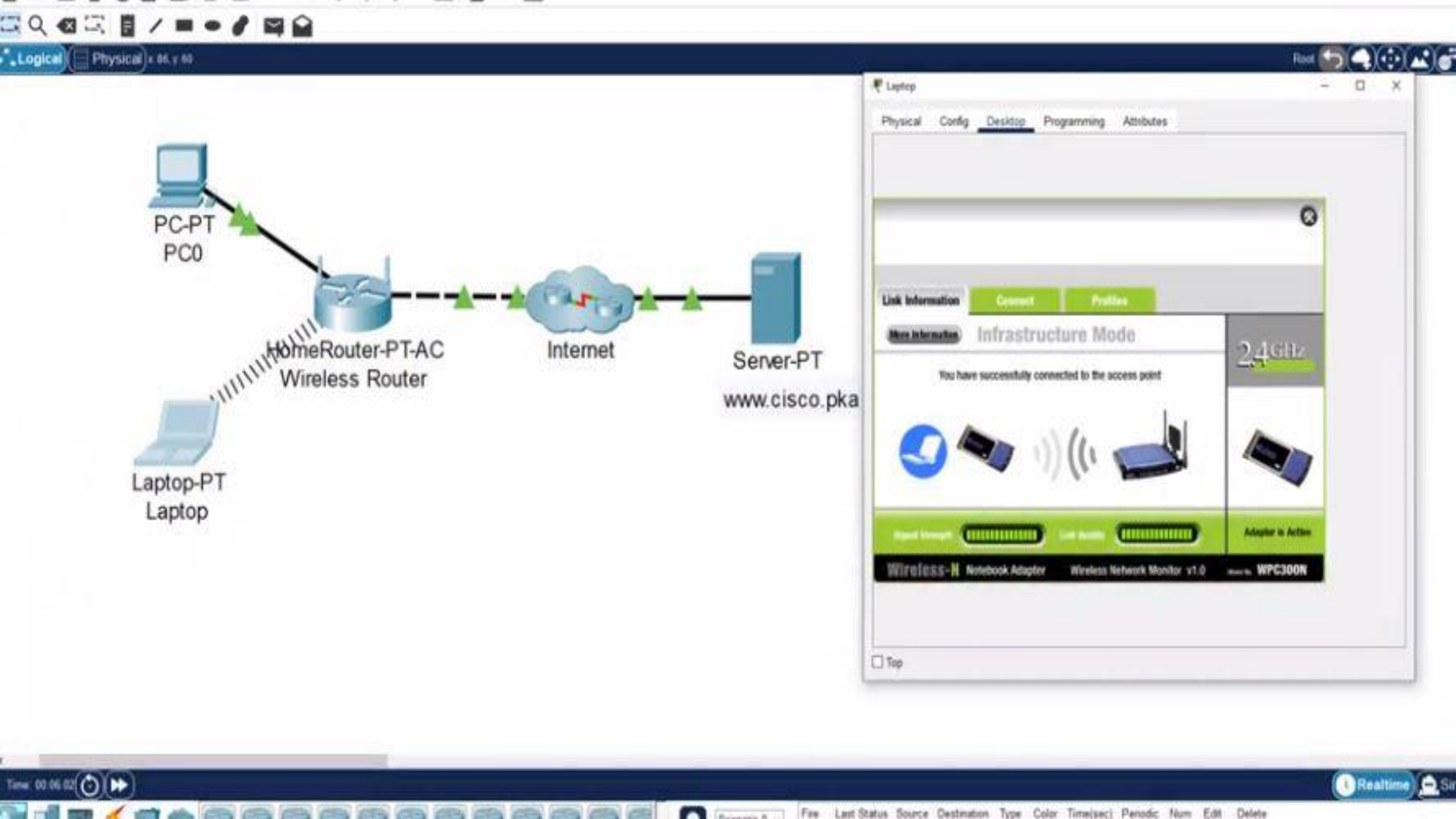
Practice setting up device racks



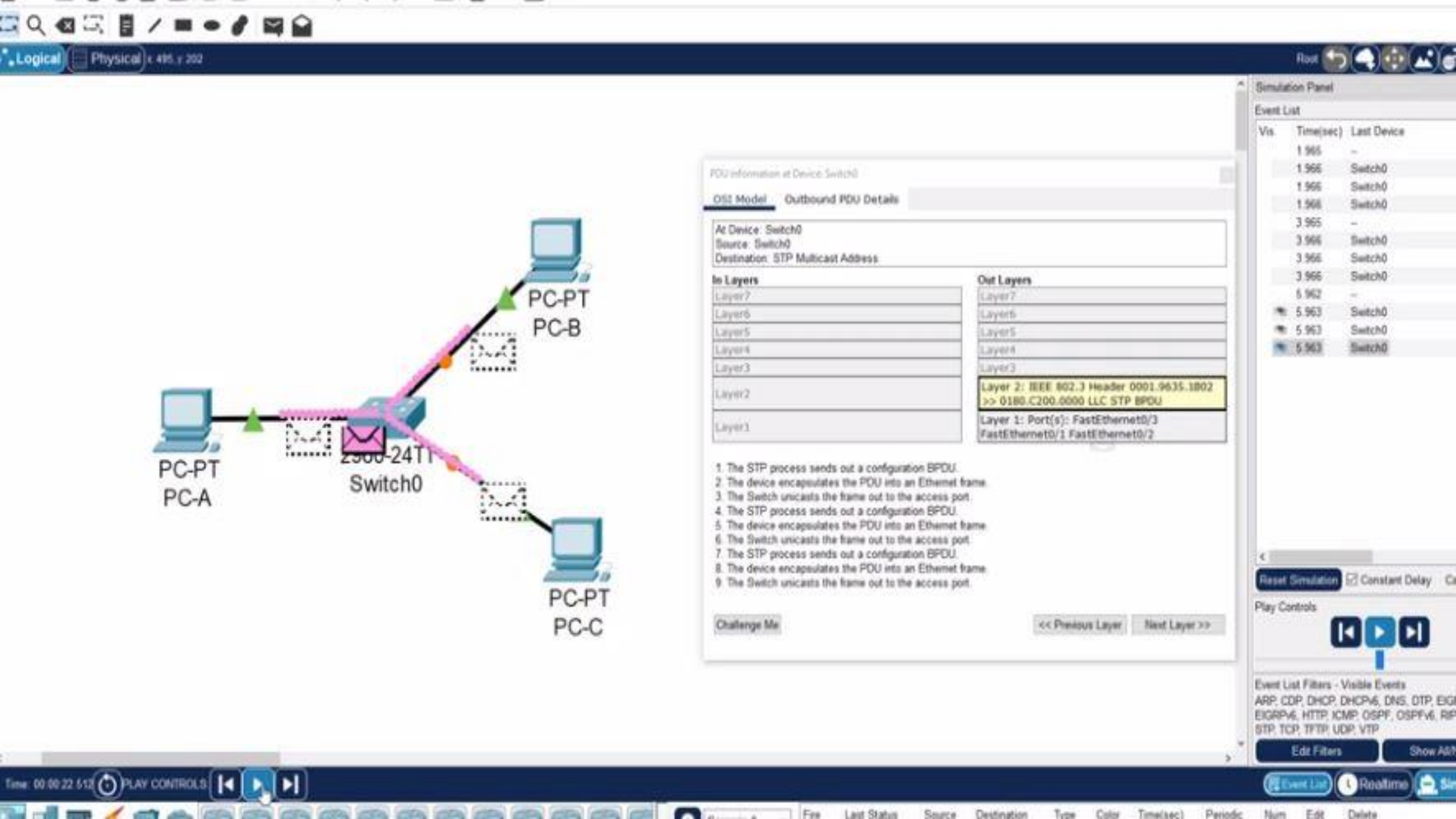

Logical
Physical
Main Wiring Closet
Time: 00:00:10
Realtime

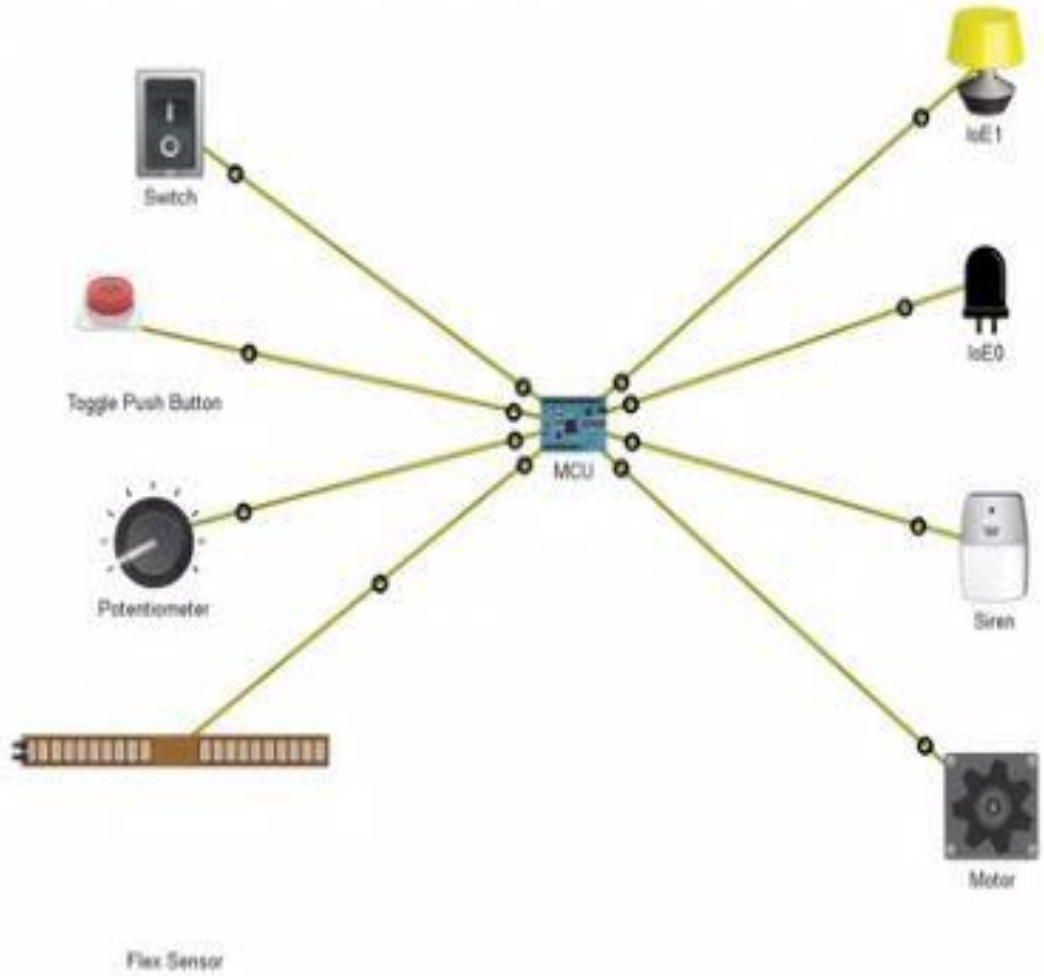
What you can do in Packet Tracer


Logical
Physical
Root
100 hosts
Staff
S1
50 hosts
Sales
S2
25 hosts
IT
S3
R1
Central
ISP
Web
www.cisco.pka
www.cisco6.pka
Realtime
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete


Logical
Physical
Root
PC-PT
PC0
HomeRouter-PT-AC
Wireless Router
Internet
Server-PT
www.cisco.pka
Laptop-PT
Laptop
Laptop
Physical
Config
Desktop
Programming
Attributes
Link Information
Connect
Profiles
More Information
Infrastructure Mode
2.4GHz
You have successfully connected to the access point
Adapter is Active
Wireless-N Notebook Adapter
Wireless Network Monitor v1.0
WPC300N
Top
Realtime

Follow
data packets


Logical
Physical
PC-PT
PC-B
PC-PT
PC-A
2960-24TT
Switch0
PC-PT
PC-C
PDU information at Device: Switch0
OSI Model
Outbound PDU Details
At Device: Switch0
Source: Switch0
Destination: STP Multicast Address
In Layers
Out Layers
Layer7
Layer6
Layer5
Layer4
Layer3
Layer2
Layer1
Layer 2: IEEE 802.3 Header 0001.9635.1802
>> 0180.C200.0000 LLC STP BPDU
Layer 1: Port(s): FastEthernet0/3
FastEthernet0/1 FastEthernet0/2
1. The STP process sends out a configuration BPDU.
2. The device encapsulates the PDU into an Ethernet frame.
3. The Switch unicasts the frame out to the access port.
4. The STP process sends out a configuration BPDU.
5. The device encapsulates the PDU into an Ethernet frame.
6. The Switch unicasts the frame out to the access port.
7. The STP process sends out a configuration BPDU.
8. The device encapsulates the PDU into an Ethernet frame.
9. The Switch unicasts the frame out to the access port.
Challenge Me
<< Previous Layer
Next Layer >>
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
Reset Simulation
Constant Delay
Play Controls
Event List Filters - Visible Events
Edit Filters
Show All
PLAY CONTROLS
Event List
Realtime



Network Description

An MCU (microcontroller unit) is a board that has a USB port, six digital I/O ports, and four analog I/O ports. The digital I/O ports on the MCU allows a user to connect digital sensors and actuators. Meanwhile, the analog I/O ports allows a user to connect analog sensors and actuators.

In this demo, there is a single MCU connected to four sensors and four actuators. The four sensors include a digital switch, a digital toggle push button, an analog potentiometer, and an analog flex sensor. The four actuators include a digital light, a digital LED, a digital siren, and an analog motor.

The MCU is programmed in Python to continuously read the sensor values and then write to the actuators, governed by conditional logic. The relationship between the sensors and actuators can be summed up by:

Switch -> Light
Toggle Push Button -> LED
Potentiometer -> Siren
Flex Sensor -> Motor

Logical
Physical
Root
0 W
Solar Panel
Smart Solar Panel
Battery
Cable Modem-PT
Cable Modem
Temperature Monitor
Smoke Detector
Light
Smart Lamp
Appliance
Smart Coffee Maker
Tablet
Door
Smart Door
Garage Door
Garage Door
MCU-PT
MCU
Cluster0
Old Car
Classic Car
Time: 00:02:34
Scenario 0
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete

Cisco Packet Tracer

costs nothing

1.0.3 Download Cisco Packet Tracer

To obtain and install your copy of Cisco Packet Tracer, please follow the instructions from the link below:

https://skillsforall.com/resources/lab-downloads

To obtain and install your copy of Cisco Packet Tracer, please follow these simple steps:

Step 1. Download the version of Packet Tracer you require.

Packet Tracer 8.2.1 MacOS 64bit

Packet Tracer 8.2.1 Ubuntu 64bit

Packet Tracer 8.2.1 Windows 64bit

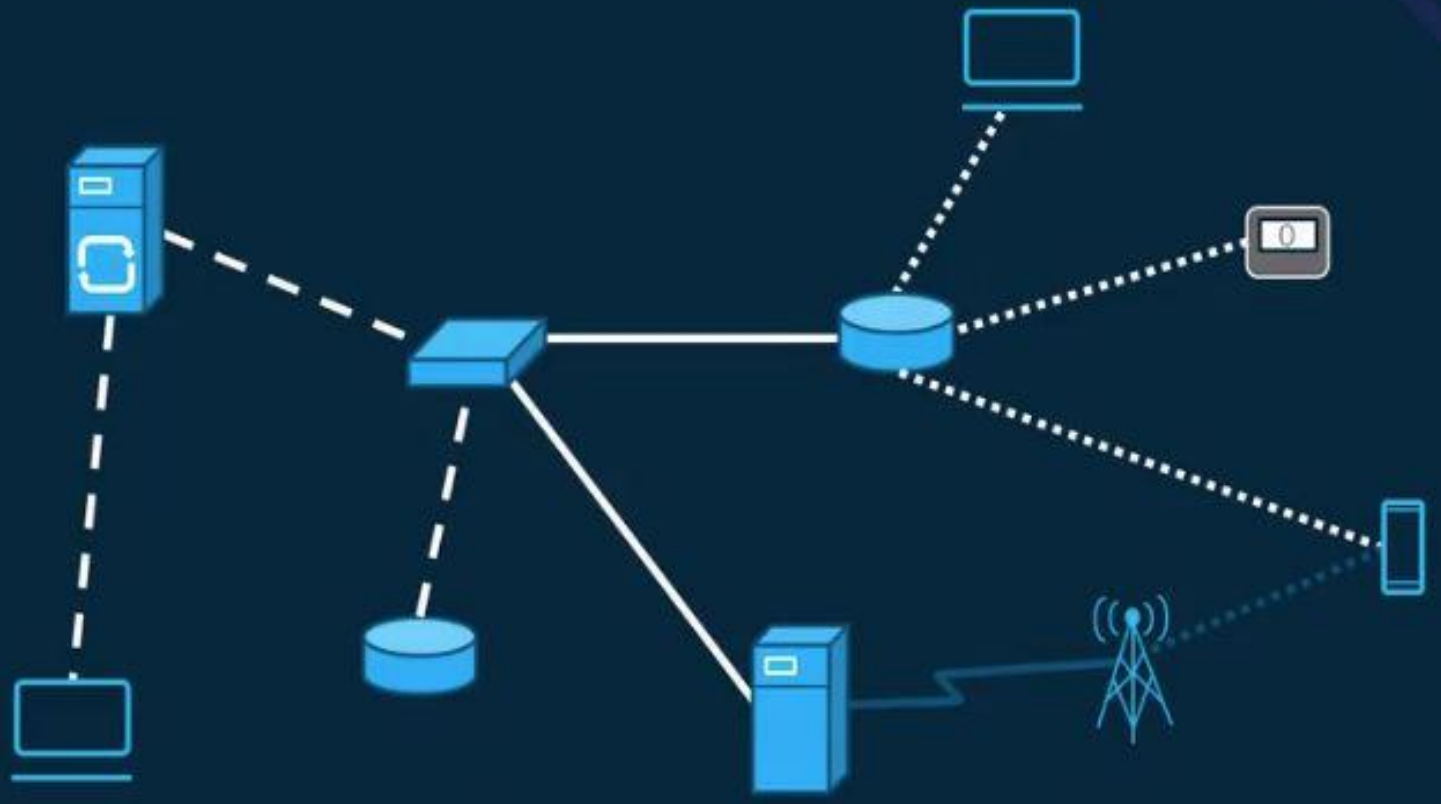
Step 2. Launch the Packet Tracer install program.

Step 3. Launch Cisco Packet Tracer by selecting the appropriate icon.

Step 4. When prompted, click on Skills For All green button to authenticate.

Step 5. Cisco Packet Tracer will launch and you are ready to explore its features.

Cisco Packet Tracer



Getting Started with Cisco Packet Tracer: The User Interface