



# Intermediate Packet Tracer



**Glenn Wright**

Cisco | Networking Academy®  
Mind Wide Open™



# Intermediate Packet Tracer

## Agenda

- Using the CLI Mode
- Using Packet Tracer Activities
- Viewing PDUs
- Using the Wizard to Build Activities

## Hands-on Activities

- Using Packet Tracer Activities
- Building an activity Using the Wizard

# Intermediate Packet Tracer



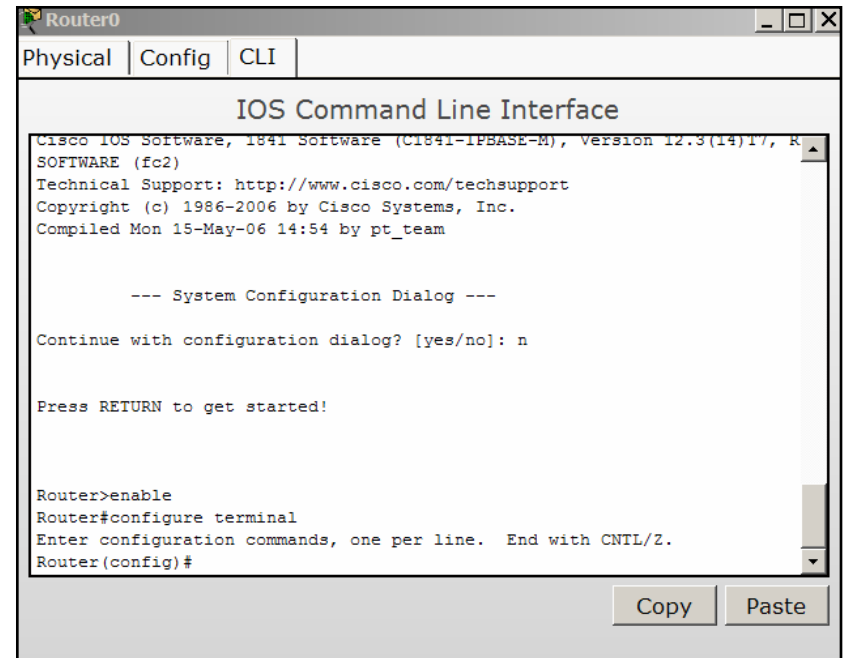
## Using the CLI Mode



# Intermediate Packet Tracer

## Using the CLI Mode

- The CLI mode in Packet Tracer allows a wide variety of commands to be entered
- It provides for advanced configuration of devices
- Any supported Packet Tracer Cisco IOS commands may be entered in the CLI mode



# Intermediate Packet Tracer



## Using Packet Tracer Activities



# Intermediate Packet Tracer

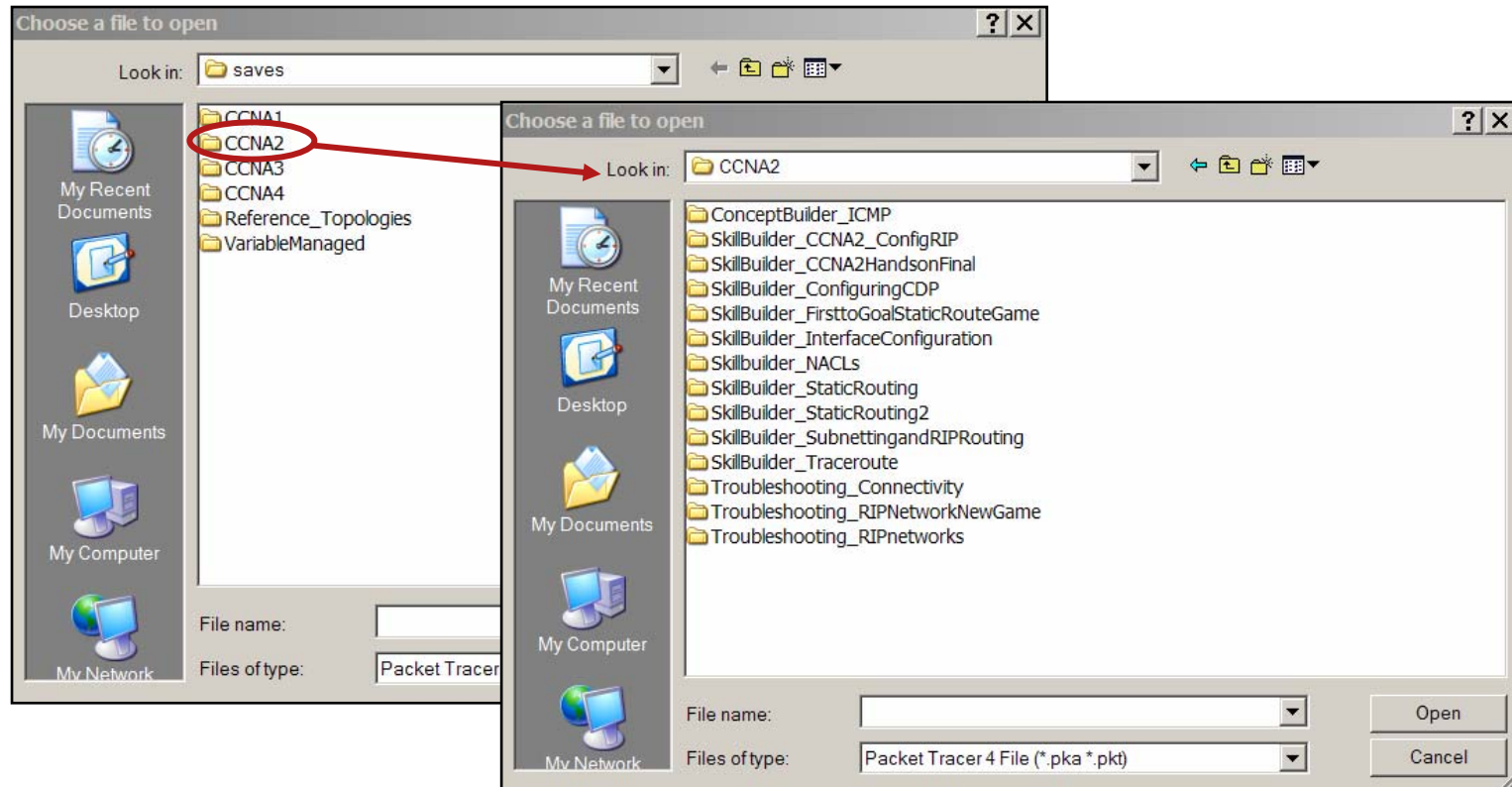
## Using Packet Tracer Activities

- Packet Tracer comes with a number of prebuilt activities
- The activities are divided into groups by course and then by skill
- The activities provide the user with a set of instructions for completing the task
- Upon completion the user is provided feedback

# Intermediate Packet Tracer

## Using Packet Tracer Activities

- Packet Tracer activity files may be accessed by going to the File menu and selecting Open

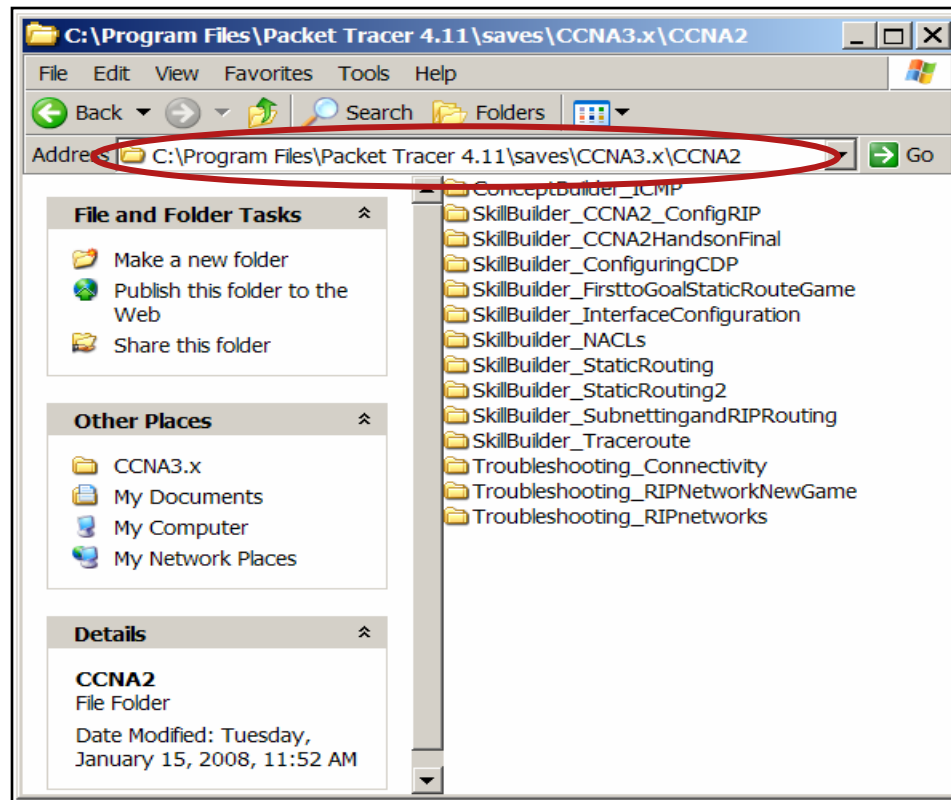




# Intermediate Packet Tracer

## Using Packet Tracer Activities

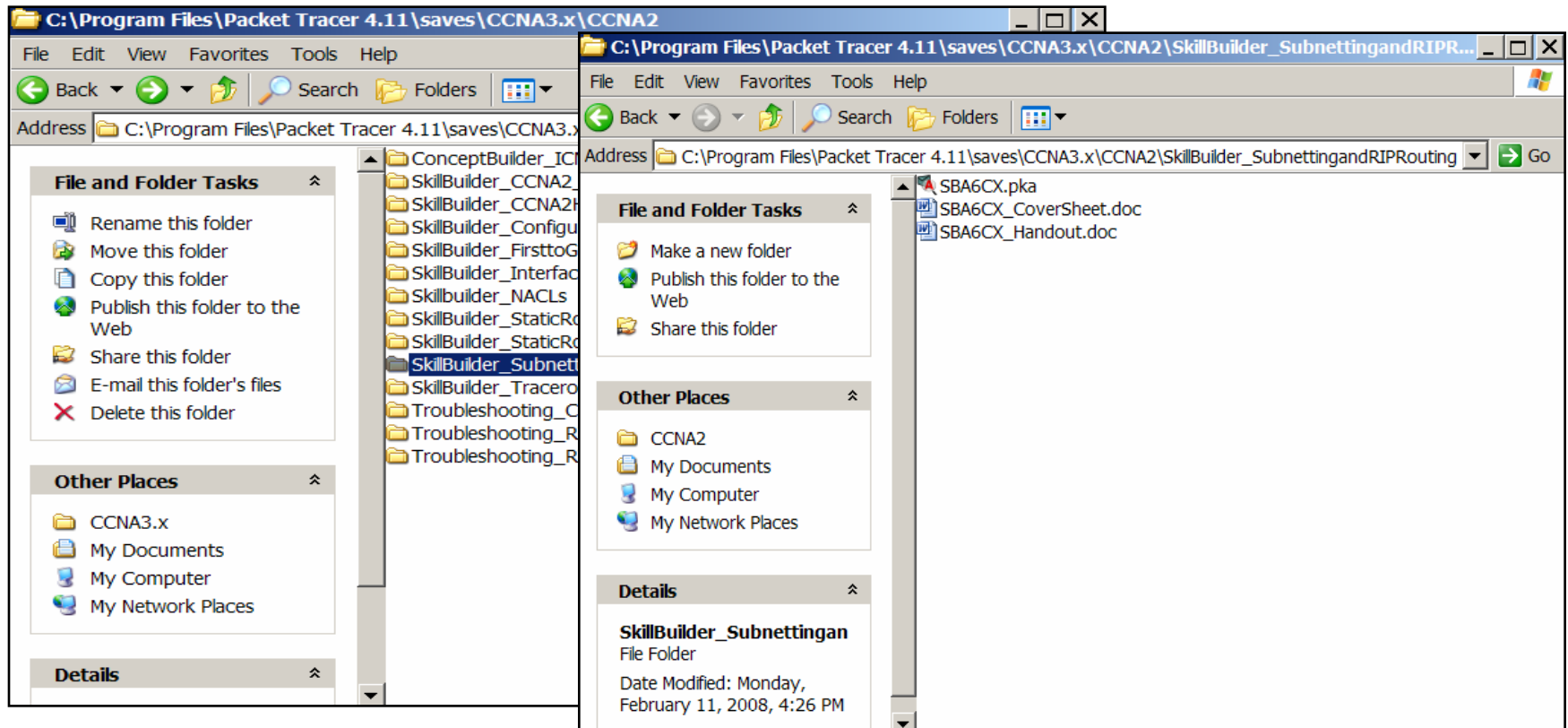
- Packet Tracer activity files may also be accessed through the Program Files folder



# Intermediate Packet Tracer

## Using Packet Tracer Activities

- Packet Tracer also provides Word documents that may be printed out for each activity file



# Intermediate Packet Tracer Using Packet Tracer Activities

- Sample of Word documents from an activity file

**Packet Tracer 4.0 Skill Building Activity: SDA 55X (Subnetting and RIP Routing)**

**Objectives**

Use Packet Tracer to practice and develop the following skills:

- Select a Class C network
- Assign and configure IP addresses on router interfaces
- Assign and configure IP addresses on workstations
- Configure network settings on workstations
- Configure RIP Version 1 routing
- Verify configurations, check end-to-end connectivity, and examine packets traversing a network using dynamic routing

**Scenario**

The network topology allows you to create the simplest possible network that requires subnet addressing and routing for successful end-to-end communication and for examining dynamic routing functionality.

**Required Files**

To complete this lab you will need the following file:

- SRM55X.pkt

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**Step 1: Open the Required File**

- Start Packet Tracer 4.0
- Click on File > Open
- Navigate to the correct directory/folder on your PC: SRM55X.pkt

The following network topology and activity instructions should be developed:

**Step 2: Calculate Subnets**

You are given a Class C network address of 192.168.1.0. Notice in the given network topology that addressing will be required to properly address the routers and workstations so the workstations on the R1 and R2 can communicate with each other.

Using the network address of 192.168.1.0, subdivide the network and assign addresses to the routers and workstations to enable end-to-end communication between all devices on each LAN.

Based upon the network topology, how many subnets will be required? How many hosts will be used? (Note: Subnet 0 is not a usable subnet; Subnet 255 is not used.)

- Subnet the network address, note the main subnet mask, and record the following information for each subnet:

Subnet Number - Subnet Address - Usable Host Address Range - Reserved Address

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**Step 3: Configure the Network**

- Based upon your subnet calculations, configure the network according to the following information:
  - Router0
    - Serial 0/0: Use the FIRST available HOST address from SUBNET 1. **Note: SUBNET 1 is the first usable subnet.**
    - Serial 0/0 is the DCE connection so a clock rate must also be configured.
    - FastEthernet 0/0: Use the FIRST available HOST address from SUBNET 2
    - Enable RIP routing.
  - Router1
    - Serial 0/0: Use the LAST available HOST address from SUBNET 1.
    - FastEthernet 0/0: Use the FIRST available HOST address from SUBNET 4
    - Enable RIP routing.
  - PC-PT PC0
    - Give this PC the SECOND available HOST address from SUBNET 2
    - Enter the appropriate subnet mask and gateway IP address.
  - PC-PT PC1
    - Give this PC the SECOND available HOST address from SUBNET 4
    - Enter the appropriate subnet mask and gateway IP address.

**Step 4: Checking for Connectivity**

- Using the Packet Tracer Inspection Tool then CU, examine the routing table on both routers to see if RIP routes have been installed.
- Verify end-to-end connectivity between the PCs with a simple PDU and a CU ping.
- In the Real Time mode from the CU, use the `debug ip rip` command to view the routing updates.
- In the Simulation Mode, use the event filter to examine only RIP packets and use the capture/forward button to animate the RIP updates.
- When satisfied with your configuration, click on "Check Results".

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# Intermediate Packet Tracer

## Using Packet Tracer Activities

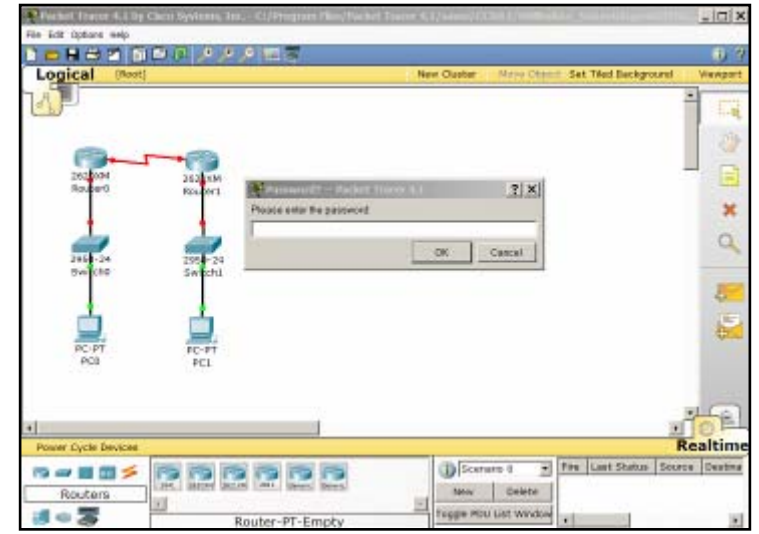
- Activities are password protected to keep users from modifying them
- However, instructors may wish to edit an activity to make a correction or create a new activity
- To access an activity file for editing, open the desired file and then go to the File menu and select Activity Wizard



# Intermediate Packet Tracer

## Using Packet Tracer Activities

- When prompted for a password, enter one of the following:
  - discovery1
  - discovery2
  - discovery3
  - discovery4
  - PT\_user! (used for Exploration)



# Intermediate Packet Tracer



## Viewing PDUs

# Intermediate Packet Tracer

## Viewing PDUs

- The Simulation mode provides the user with an Event List of each PDU that was sent
- The list shows each device the PDU interacted with in route to the destination

The screenshot displays the Cisco Packet Tracer interface. On the left, a network diagram shows two routers (Router0 and Router1) connected to two switches (Switch0 and Switch1), which are in turn connected to two PCs (PC0 and PC1). On the right, the 'Event List' window is open, showing a table of network events. The table is circled in red and contains the following data:

Time	Source (s)	Last Device	At Device	Type	Dir
0.000	--	PC0	ICMP		
0.001	PC0	Switch0	ICMP		
0.002	Switch0	Router0	ICMP		
0.003	Router0	Router1	ICMP		
0.003	--	Router1	APP		
0.004	Router1	Switch1	APP		
0.005	Switch1	PC1	APP		
0.006	PC1	Switch1	APP		
0.007	Switch1	Router1	APP		

Below the table, the 'Event List Filters' section shows 'Visible Events: APP, ICMP' and a 'Show All' button. The bottom status bar indicates the simulation is running in 'Simulation' mode.

# Intermediate Packet Tracer

## Viewing PDUs

- A wealth of information may be obtained from viewing the individual PDUs

The screenshot displays the Cisco Packet Tracer 4.1 interface. The main window shows a logical topology with a 2951-24 Switch connected to a PC-PT PC0. A 'PDU Information at Device: PC0' window is open, showing the following details:

**OSI Model: Outbound PDU Details**

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer 7	Layer 7
Layer 6	Layer 6
Layer 5	Layer 5
Layer 4	Layer 4
Layer 3	Layer 3
Layer 2	Layer 2: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8
Layer 1	Layer 2: Ethernet II Header 0005.5066.003C >> 0000.2184.D155
	Layer 1: Port(s): FastEthernet

Below the layers, a list of steps describes the ping process:

1. The Ping process starts next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The device sets TTL in the packet header.
5. The destination IP address is not in the same subnet and is not the broadcast address.
6. The default gateway is set. The device sets the next-hop to default gateway.

The 'Event List' window on the right shows a table of events:

Vis.	Time (s)	Last Device	At Device	Type	Info
0.000	---	PC0	PC0	ICMP	
0.001		PC0	Switch0	ICMP	
0.002		Switch0	Router0	ICMP	
0.003		Router0	Router1	ICMP	
0.004		Router1	Switch1	ICMP	
0.005		Switch1	PC1	ICMP	
0.006		PC1	Switch1	ICMP	
0.007		Switch1	Router1	ICMP	
0.008		Router1	Router0	ICMP	
0.009		Router0	Switch0	ICMP	
0.010		Switch0	PC0	ICMP	

The bottom of the interface shows a 'Power Cycle Devices' section with 'Routers' and 'Router-PT-Empty' buttons, and a 'Scenario 0' table with columns for File, Last Status, Source, Destination, Type, and Color.

# Intermediate Packet Tracer

## Viewing PDUs

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer 3: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8
Layer2	Layer 2: Ethernet II Header 0005.5E66.883C >> 0090.2164.D155
Layer1	Layer 1: Port(s): FastEthernet

1. The Ping process starts next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The device sets TTL in the packet header.
5. The destination IP address is not in the same subnet and is not the broadcast address.
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Challenge Me << Previous Layer Next Layer >>

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer 3: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8
Layer2	Layer 2: Ethernet II Header 0005.5E66.883C >> 0090.2164.D155
Layer1	Layer 1: Port(s): FastEthernet

1. The next-hop IP address is unicast. The ARP process looks it up in the ARP table.
2. The next-hop IP address is in the ARP table. The ARP process sets the frame's destination MAC address to the one found in the table.
3. The device encapsulates the PDU into an Ethernet frame.

Challenge Me << Previous Layer Next Layer >>

# Intermediate Packet Tracer

## Viewing PDUs

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer7	Layer7
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Layer3	Layer 3: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8
Layer2	Layer 2: Ethernet II Header 0005.5E66.883C >> 0090.2164.D155
Layer1	Layer 1: Port(s): FastEthernet

1. FastEthernet sends out the frame.

Challenge Me << Previous Layer Next Layer >>

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
Layer 5:	Layer 5:
Layer 4:	Layer 4:
Layer 3:	Layer 3:
Layer 2:	Layer 2:
Layer 1:	Layer 1:

Challenge Question:  
What is the device decision in this layer?

Encapsulate  
 Queue  
 Drop

Challenge Me Hint << Previous Layer Next Layer >>

# Intermediate Packet Tracer

## Viewing PDUs

- This information was obtained from viewing just one PDU as it interacted with one device

The screenshot shows the Packet Tracer 4.1 interface. The network diagram on the left shows two routers (2621XM Router0 and Router1) connected to two switches (2951-24 Switch0 and Switch1), which are connected to two PCs (PC-PT PC0 and PC1). The PDU Information window is open, showing details for an ICMP Echo Request message at PC0. The event list on the right shows a sequence of events from 0.000 to 0.010, including the creation of the ICMP Echo Request message and its transmission through the network.

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

**In Layers**

Layer 7:  
Layer 6:  
Layer 5:  
Layer 4:  
Layer 3:  
Layer 2:  
Layer 1:

**Out Layers**

Layer 7:  
Layer 6:  
Layer 5:  
Layer 4:  
Layer 3: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8  
Layer 2: Ethernet II Header 0005.5E66.883C >> 0090.2164.0155  
Layer 1: Port(s): FastEthernet

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Challenge Me << Previous Layer Next Layer >>

**Event List**

Vis.	Time (s)	Last Device	At Device	Type	Info
	0.000	--	PC0	ICMP	
	0.001	PC0	Switch0	ICMP	
	0.002	Switch0	Router0	ICMP	
	0.003	Router0	Router1	ICMP	
	0.004	Router1	Switch1	ICMP	
	0.005	Switch1	PC1	ICMP	
	0.006	PC1	Switch1	ICMP	
	0.007	Switch1	Router1	ICMP	
	0.008	Router1	Router0	ICMP	
	0.009	Router0	Switch0	ICMP	
	0.010	Switch0	PC0	ICMP	

Reset Simulation  Constant Delay Captured to: 105.215 s

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters: Visible Events: ARP, ICMP Edit Filters Show All

Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward Event List **Simulation**

Scenario 0 Fire Last Status Source Destination Type Color  
Successful PC0 PC1 ICMP

Toggle PDU List Window

# Intermediate Packet Tracer

## Viewing PDUs

- Besides providing a wealth of information, viewing the PDUs is also helpful in troubleshooting

**PDU Information at Device: PC0**

OSI Model | Outbound PDU Details

At Device: PC0  
Source: PC0  
Destination: PC1

In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
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Layer 4:	Layer 4:
Layer 3:	Layer 3: IP Header Src. IP: 192.168.1.2, Dest. IP: 192.168.3.2 ICMP Message Type: 8
Layer 2:	Layer 2: Ethernet II Header 0005.5E66.883C >> 0090.2164.0155
Layer 1:	Layer 1: Port(s): FastEthernet

- The ping process starts next ping request.
- The Ping process creates an ICMP Echo Request message and sends it to the lower process.
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Event List

Vis.	Time (s)	Last Device	At Device	Type	Info
	0.000	--	PC0	ICMP	
	0.001	PC0	Switch0	ICMP	
	0.002	Switch0	Router0	ICMP	
	0.003	Router0	Router1	ICMP	
	0.004	Router1	Switch1	ICMP	
	0.005	Switch1	PC1	ICMP	
	0.006	PC1	Switch1	ICMP	
	0.007	Switch1	Router1	ICMP	
	0.008	Router1	Router0	ICMP	
	0.009	Router0	Switch0	ICMP	
	0.010	Switch0	PC0	ICMP	

Reset Simulation  Constant Delay Captured to: 105.215 s

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters: Visible Events: ARP, ICMP Edit Filters Show All

Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Scenario 0 Fire Last Status Source Destination Type Color  
Successful PC0 PC1 ICMP

Toggle PDU List Window

# Intermediate Packet Tracer



## Using Wireless Devices



# Intermediate Packet Tracer

## Using Wireless Devices

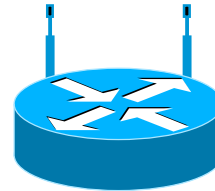
- Packet Tracer has two wireless devices that may be added to networking scenarios

Access Points



**Access Point-PT**  
**Access Point0**

Linksys-WRT300N



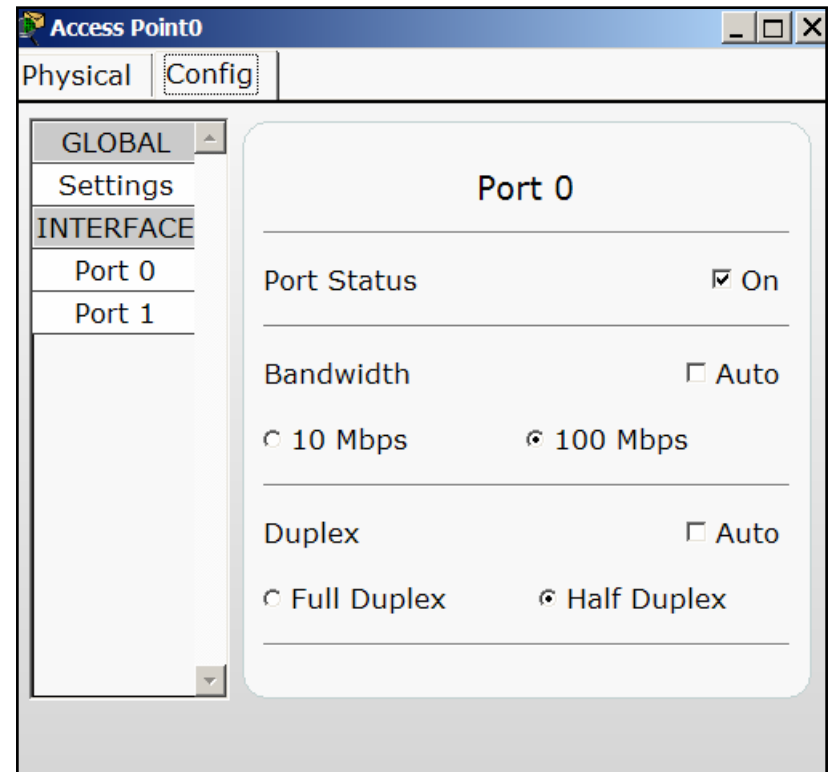
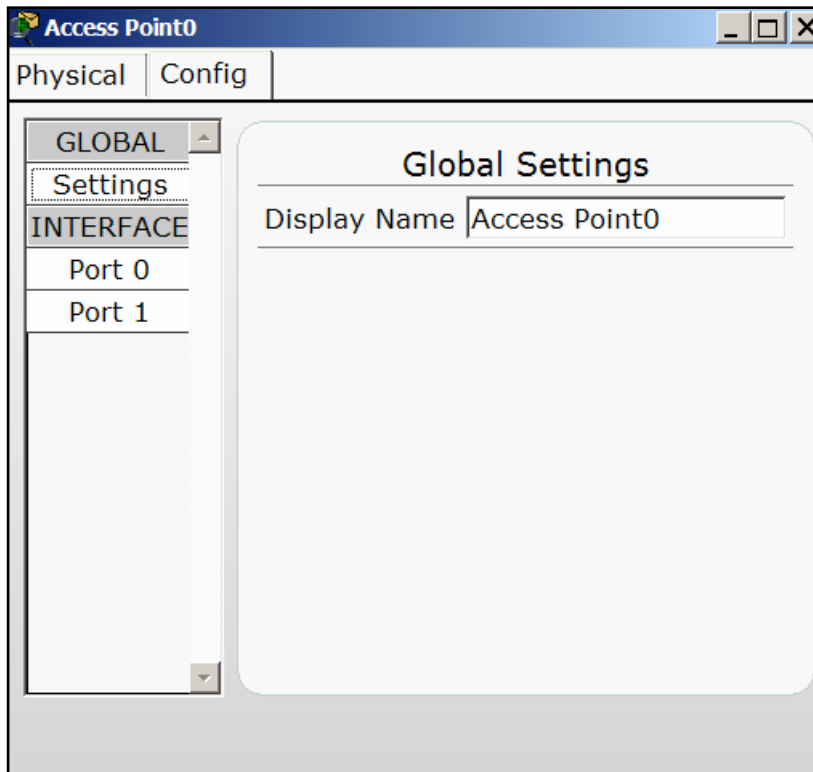
**Linksys-WRT300N**  
**Wireless Router0**



# Intermediate Packet Tracer

## Using Wireless Devices

- The access points have configuration settings





# Intermediate Packet Tracer

## Using Wireless Devices

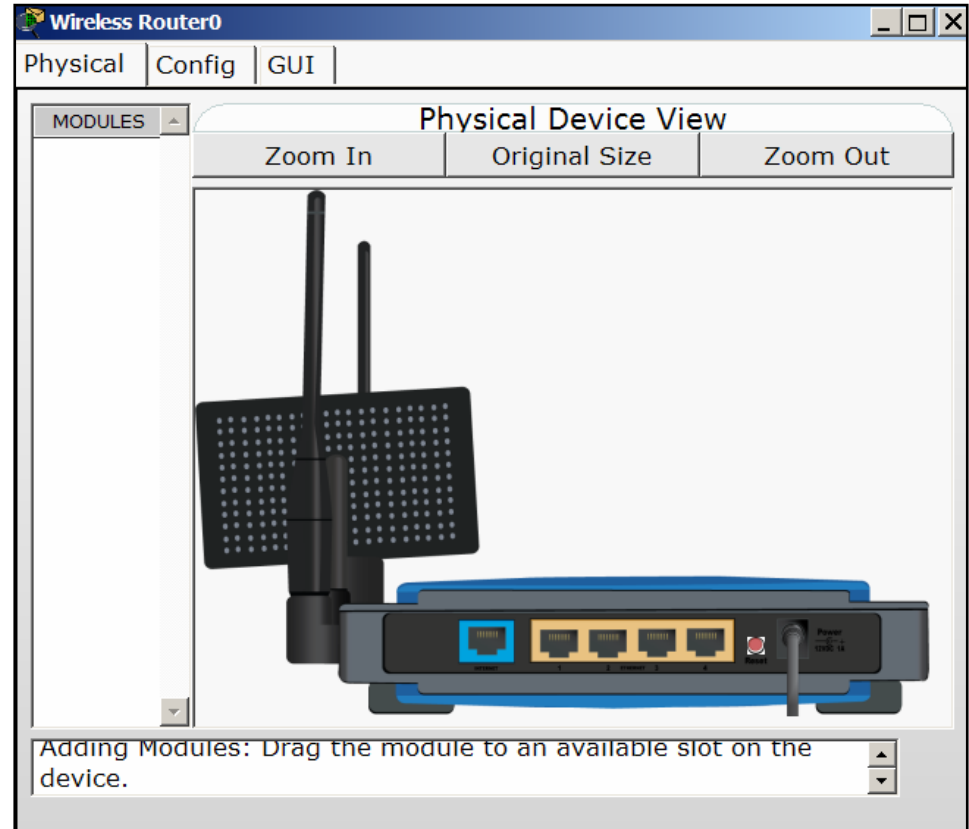
- The Linksys WRT300N has three view modes:

Physical

Config

GUI

- Note the physical mode (shown in this graphic) does not have any items that can be changed





# Intermediate Packet Tracer

## Using Wireless Devices

- The Config tab offers two general levels of configuration: Global and Interface



- The Global Settings only allow the user to change the display name of the device



# Intermediate Packet Tracer

## Using Wireless Devices

- The Interface level allows the user to configure the available interfaces

The image displays three overlapping screenshots of the Packet Tracer configuration interface, illustrating the configuration options available at the Interface level for different connection types.

**Internet Settings:** This window shows the configuration for an Internet connection. The left sidebar has 'INTERFACE' selected, with 'Internet' highlighted. The main area is titled 'Internet Settings' and includes a 'Connection Type' section with radio buttons for 'DHCP' (selected) and 'Static'. Below this are input fields for 'Default Gateway', 'IP Address', 'Subnet Mask', and 'DNS Server'.

**LAN Settings:** This window shows the configuration for a LAN connection. The left sidebar has 'INTERFACE' selected, with 'LAN' highlighted. The main area is titled 'LAN Settings' and includes input fields for 'IP Address' (set to 192.168.1.1) and 'Subnet Mask' (set to 255.255.255.0).

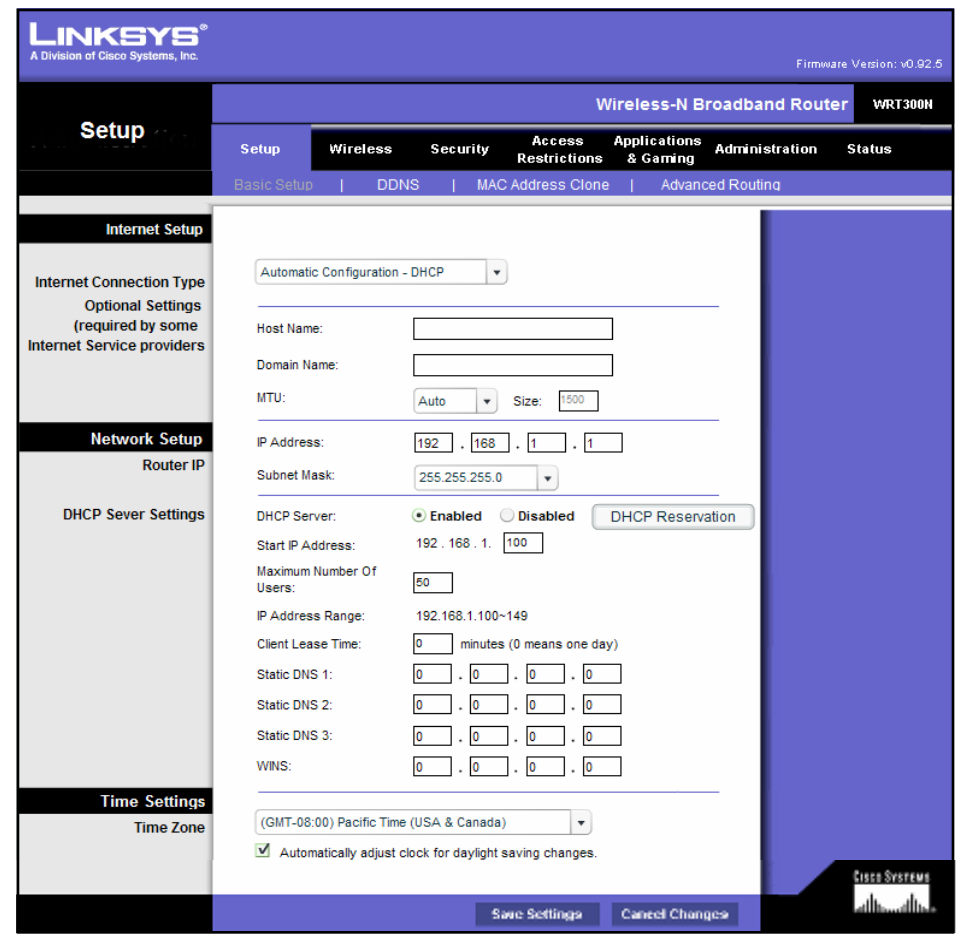
**Wireless Settings:** This window shows the configuration for a wireless connection. The left sidebar has 'INTERFACE' selected, with 'Wireless' highlighted. The main area is titled 'Wireless Settings' and includes an 'SSID' field (set to Default), a 'Security Mode' section with radio buttons for 'Disabled' (selected), 'WEP', and 'WPA', and a 'Key' input field.



# Intermediate Packet Tracer

## Using Wireless Devices

- The **GUI** tab offers the same configurations and settings as the **Config** tab with some additional features for port forwarding, management, and router and network status
- Make sure you click on the **Save Settings** button at the bottom to apply the new settings to the Linksys WRT300N

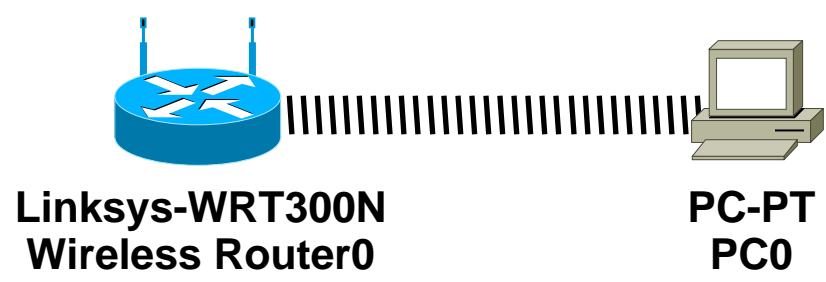




# Intermediate Packet Tracer

## Using Wireless Devices

- When using a wireless device, the client PC must have a wireless module installed in order to connect
- If security is set on either device, the settings must match



MODULES
Linksys-WMP300N
PT-HOST-NM-1AM
PT-HOST-NM-1CE
PT-HOST-NM-1CFE
PT-HOST-NM-1CGE
PT-HOST-NM-1FFE
PT-HOST-NM-1FGE
PT-HOST-NM-1W



# Intermediate Packet Tracer



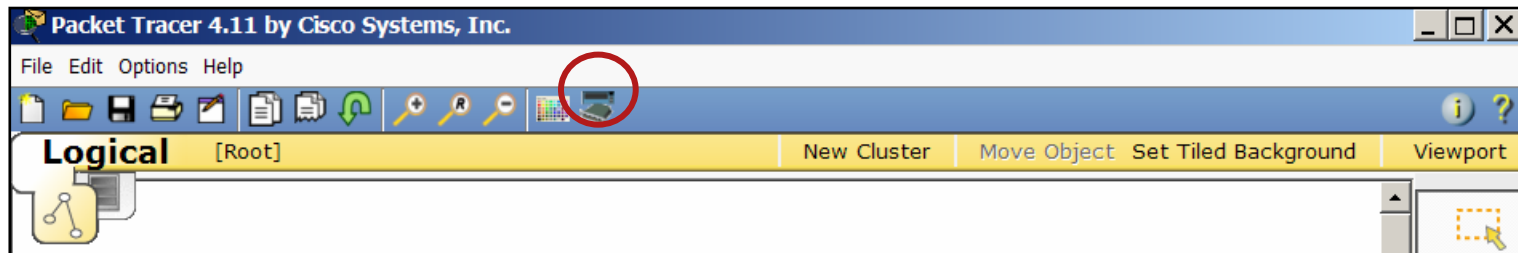
## Creating Custom Devices



# Intermediate Packet Tracer

## Creating Custom Devices

- Users can create custom devices with different module configurations pre-installed
- Steps to build a custom device:
  - Build the device with all the modules you need installed
  - Click Custom Device Dialog in the tool bar
  - Click Select
  - Click on the device you built and wish to use as a template
  - Enter the device name and description in the Device Template manager window
  - Click add when finished

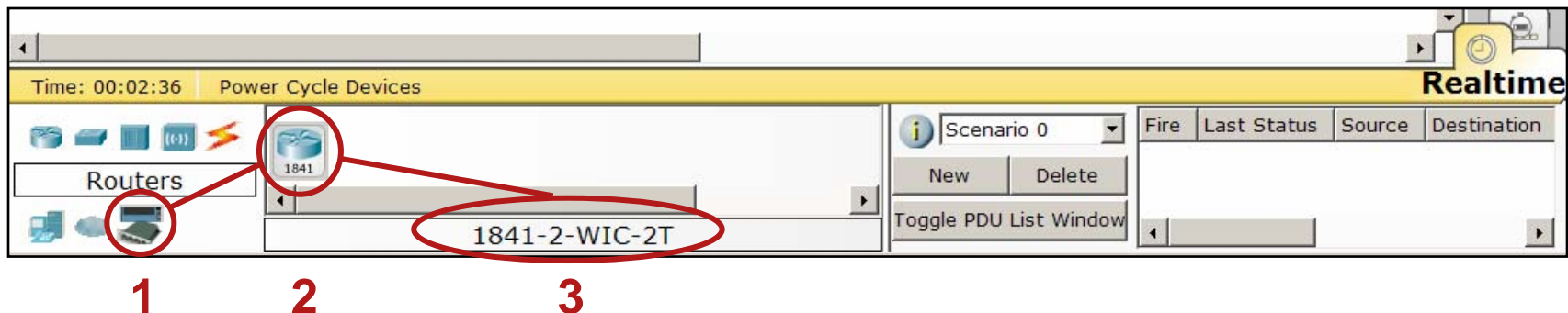




# Intermediate Packet Tracer

## Creating Custom Devices

- Once a custom device has been created, it will be available for future use
- To access the new device, click on the Custom Device icon in the **Device-Type Selection Box (1)**
- Then click on the desired device (2)
- The custom device name will appear in the **Device-Specific Selection (3)**





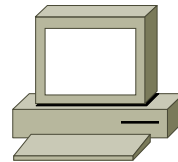
# Intermediate Packet Tracer

## Creating Custom Devices

- You can create a custom device out of any of the available devices
- Using custom devices can save time in building activities
- You might think about creating a custom device for the type of router you use the most, wireless PCs, or WAN emulation clouds



**1841  
Router0**



**PC-PT  
PC0**



**Cloud-PT  
Cloud0**

# Intermediate Packet Tracer



## Using the Wizard to Build Activities



# Intermediate Packet Tracer

## Using the Wizard to Build Activities

- The Activity Wizard in Packet Tracer allows the user to create activities that are complete with instructions, a criteria for determining completeness of the activity, and provide feedback to the activity user
- This is a great tool for giving users additional practice on configuring devices and troubleshooting the network design
- It is also an excellent tool for assessing the user's skills



# Intermediate Packet Tracer

## Using the Wizard to Build Activities

- The Activity Wizard may be accessed by clicking on the file menu and then selecting Activity Wizard





# Intermediate Packet Tracer

## Using the Wizard to Build Activities

- Information about using the Activity Wizard and other Packet Tracer features may be obtained by clicking on the Help menu and selecting contents

**Packet Tracer 4.11**

- Search**
- Introduction**
  - What's New
  - Program Usage
- Getting Started**
  - Interface Overview
  - My First PT Lab
- Tutorials**
- Workspace Basics**
  - Logical Workspace
  - Physical Workspace
  - Moving Devices
  - Wireless Devices
  - Special Notes
- Operating Modes**
  - Realtime Mode
  - Simulation Mode
    - PDU Information
    - Scenarios
    - Complex PDUs
    - Special Notes
- Connections / Links**
- Devices & Modules**
  - Routers
  - Switches

**Packet Tracer 4.11** Provided by Cisco Systems, Inc. for use in the Cisco Networking Academy.

**Using the Help Files**

The help files are designed to familiarize users with the Packet Tracer 4.11 interface, functions, and features. Although the help files may be used as a reference guide, the pages are meant to be read in order (especially the sections presented at the beginning). Annotated screenshots are used to aid your understanding. Important notes or tips are presented in tip boxes like the following:

# Intermediate Packet Tracer



## Packet Tracer 5.0 Overview

# Ten PT 5.0 Talking Points

- PT 5.0 is **FREE** for all Academy students and instructors
- PT 5.0 is a powerful tool for network **MODEL** building
- PT 5.0 is not a replacement for **REAL** equipment and Wireshark
- PT 5.0 **SIMULATION** mode offers powerful visualizations
- PT 5.0 **PHYSICAL** mode offers context
- PT 5.0 has most of the important CCNA-level **PROTOCOLS**
- PT 5.0 runs on more **PLATFORMS** like Vista and Linux
- PT 5.0 has a **MULTI-USER** feature; it is a network application
- PT 5.0 has an improved **ACTIVITY WIZARD** – please try it!
- Please **SHARE** your insights, activities, tutorials, and feedback
- **BONUS:** API, External Applications, Portal in near future

# The Evolution of PT5.0 – What's New

- Expanded platform support

Now runs on Windows (WinXP, Win2k), Vista (Vista Basic, Vista Premium), and

Linux (Ubuntu, Fedora)

- Enhanced protocol support

Expanded list of protocols to reflect current networking trends and practices in industry and government

More support for teaching CCNA-level commands

Deeper modeling for existing protocols

- Multiuser functionality

From individual to social learning

PT 5.0 is now a network-capable (peer to peer) application

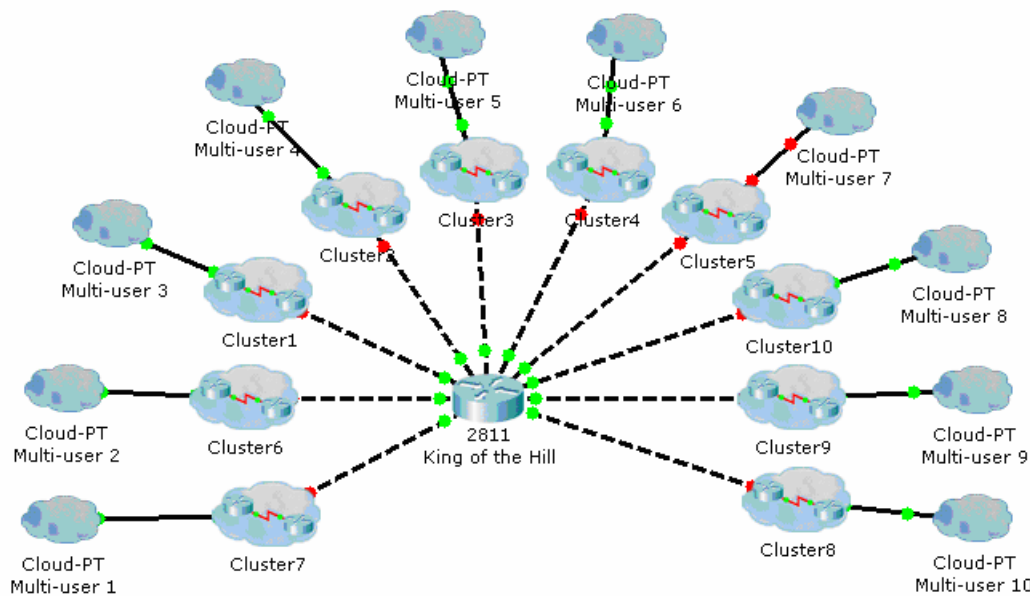
Instead of students working alone, PT 5.0 supports collaboration, competition, remote instructor-student interaction, social networking, gaming

# Protocols Modeled:

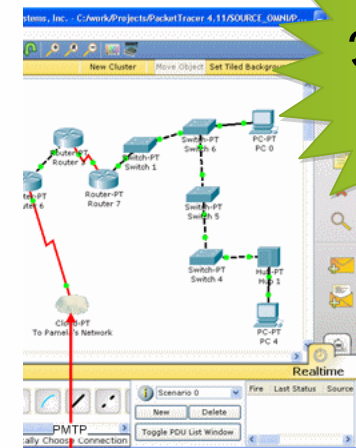
Protocols are a good way to describe a simulator's power

- ✓ HTTP, TFTP, Telnet, SSH, DNS, DHCP
- ✓ TCP and UDP
- ✓ IPv4, ICMP, ARP, IPv6, ICMPv6
- ✓ RIPv1/v2/ng, Multi-Area OSPF, EIGRP, Static Routing, Route Redistribution, Multilayer switching
- ✓ Ethernet (802.3), HDLC, Frame Relay, PPP
- ✓ STP, RSTP, VTP, DTP, CDP, 802.1q, PAgP
- ✓ 802.11

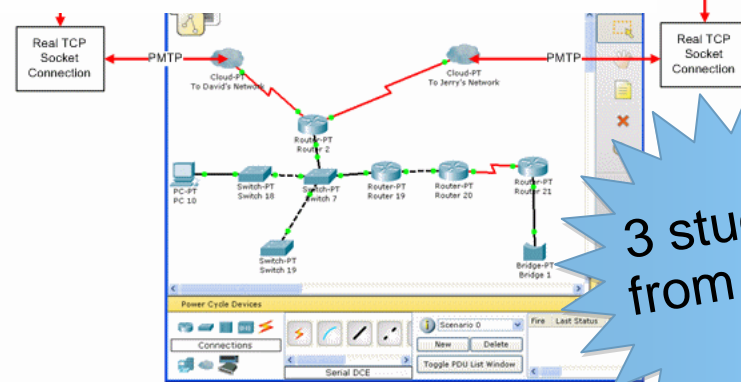
# Multi-user Collaboration and Competition



3 different classes



PC 2



3 students from home

PC 3

# Activity Results

Time Elapsed: 00:00:29

Congratulations Guest! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Assessment Items	Status	Points	Component(s)	Feedback
<ul style="list-style-type: none"> <li>[-] Network                             <ul style="list-style-type: none"> <li>[-] PC0                                     <ul style="list-style-type: none"> <li>✓ Default Gateway</li> <li>[-] Ports   <ul style="list-style-type: none"> <li>[-] FastEthernet   <ul style="list-style-type: none"> <li>✓ IP Address</li> <li>[-] Link to Switch0   <ul style="list-style-type: none"> <li>✓ Connects to FastEthernet0/1</li> <li>✓ Type</li> <li>✓ Subnet Mask</li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> <li>[-] Router0                                     <ul style="list-style-type: none"> <li>[-] Ports   <ul style="list-style-type: none"> <li>[-] FastEthernet0/0   <ul style="list-style-type: none"> <li>[-] Link to Switch0   <ul style="list-style-type: none"> <li>✓ Connects to FastEthernet0/2</li> <li>✓ Type</li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> </ul>	Correct	10, 1	Gateway Config, Network Con...	
	Correct	1	Network Config	
	Correct	1	Topology Creation	
	Correct	2	Topology Creation	
	Correct	1	Network Config	
	Correct	1	Topology Creation	
	Correct	2	Topology Creation	

Total Points : 19  
 Completed Items : 7  
 Required Items : 7

Topology Creation	Completed: 4/4 Points: 6
Network Config	Completed: 3/3 Points: 3
Gateway Config	Completed: 1/1 Points: 10

Observable  
Meta-Data  
(ontology)

Binary  
Weights

Evidence  
Weights

Paths

Observable level  
Diagnostic Feedback  
Possible

# Impact Summary of New PT 5.0 Features

	On Students	On Instructors	On Authors
<b>Additional Platforms</b>	Ability to run PT on more operating systems, supports more out of classroom environments	Ability to run PT on more operating systems both in and out of classroom	Improved support for authoring on more operating systems
<b>More Protocols</b>	Free practice and visualization environment for crucial networking technologies	Ability to use PT to teach more topics (like IPv6)	Improved support for creating CCNA-level curriculum and assessments
<b>New Multiuser Feature</b>	More collaboration, competition, and fun	More support for social learning processes	More instructional design possibilities

# Q and A



Glenn Wright ~ [glwright@esc11.net](mailto:glwright@esc11.net)

# Intermediate Packet Tracer



## Hands-on Activities

# Cisco | Networking Academy<sup>®</sup>

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