

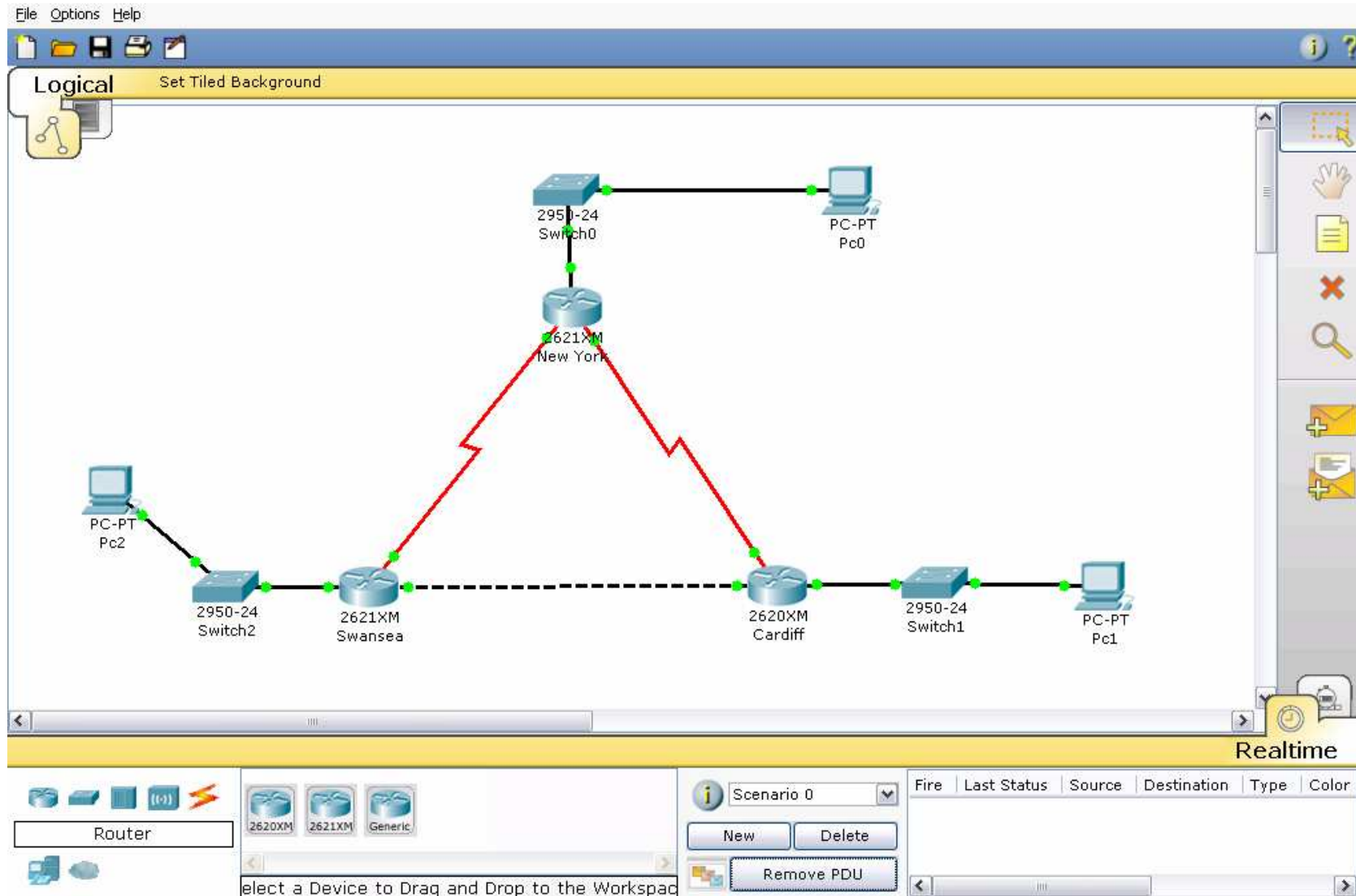


Packet Tracer – version 4.0

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Packet Tracer version 4.0 BETA



Packet Tracer v4.0

- **Currently in Beta testing**
- **Release June 2006**
- **For instructors**
- **For Students**
- **Significant improvements over V3.2**

Packet Tracer v4.0 – coverage - examples

- **RIP V1 and V2 plus EIGRP**
- **VLANS – IEEE 802.1q**
- **PPP – CHAP authentication using router hostname no PAP**
- **Frame Relay**
- **Access lists – basic plus extended**
- **NAT – PAT & DHCP**

Packet Tracer v4.0

- **Protocol Improvements?**
PT v3.2, plus EIGRP, 802.1q, PPP, Frame Relay
- **GUI Improvements?**
Logical & physical topologies, real time & movie modes
Multi-platform, multiple language support
- **Knowledge Representations?**
Event viewer, OSI Layer, flowchart, IOS, rack view
- **Feedback for Students; Authoring Capabilities?**
Wizard; templates for design, implement, & troubleshoot
- **Architecture for PT v4.x?**
Will support OSPF plus other protocols as needed
- **Improved Simulation, Animation, and Visualization by When?**
July '06

Packet Tracer v4.0 – Switch Commands

Exec Commands

Switch#?

Exec commands:

clear	Reset functions
configure	Enter configuration mode
copy	Copy from one file to another
disable	Turn off privileged commands
enable	Turn on privileged commands
erase	Erase a filesystem
exit	Exit from the EXEC
logout	Exit from the EXEC
ping	Send echo messages
reload	Halt and perform a cold restart
show	Show running system information
traceroute	Trace route to destination
write	Write running configuration to memory, network, or terminal



Packet Tracer v4.0 – Switch Commands

Config Commands



Configure commands:

cdp	Global CDP configuration subcommands
enable	Modify enable password parameters
end	Exit from configure mode
exit	Exit from configure mode
hostname	Set system's network name
interface	Select an interface to configure
ip	Global IP configuration subcommands
line	Configure a terminal line
no	Negate a command or set its defaults
vlan	Vlan commands

Packet Tracer v4.0 – Switch Commands

Interface Commands

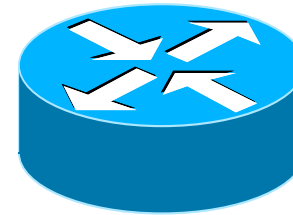


Switch(config-if)#?

cdp	Global CDP configuration subcommands
description	Interface specific description
duplex	Configure duplex operation.
exit	Exit from interface configuration mode
mac-address	Manually set interface MAC address
no	Negate a command or set its defaults
shutdown	Shutdown the selected interface
speed	Configure speed operation.
switchport	Set switching mode characteristics

Packet Tracer v4.0 – Router Commands

Exec Commands

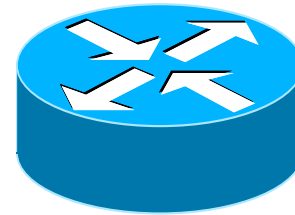


Exec commands:

clear	Reset functions
configure	Enter configuration mode
copy	Copy from one file to another
debug	Debugging functions (see also 'undebug')
disable	Turn off privileged commands
enable	Turn on privileged commands
erase	Erase a filesystem
exit	Exit from the EXEC
logout	Exit from the EXEC
no	Disable debugging informations
ping	Send echo messages
reload	Halt and perform a cold restart
show	Show running system information
traceroute	Trace route to destination
undebug	Disable debugging functions (see also 'debug')
write	Write running configuration to memory, network, or term

Packet Tracer v4.0 – Router Commands

Configure Commands

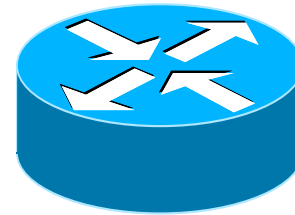


Configure commands:

access-list	Add an access list entry
cdp	Global CDP configuration subcommands
enable	Modify enable password parameters
end	Exit from configure mode
exit	Exit from configure mode
hostname	Set system's network name
interface	Select an interface to configure
ip	Global IP configuration subcommands
line	Configure a terminal line
no	Negate a command or set its defaults
router	Enable a routing process
username	Establish User Name Authentication

Packet Tracer v4.0 – Router Commands

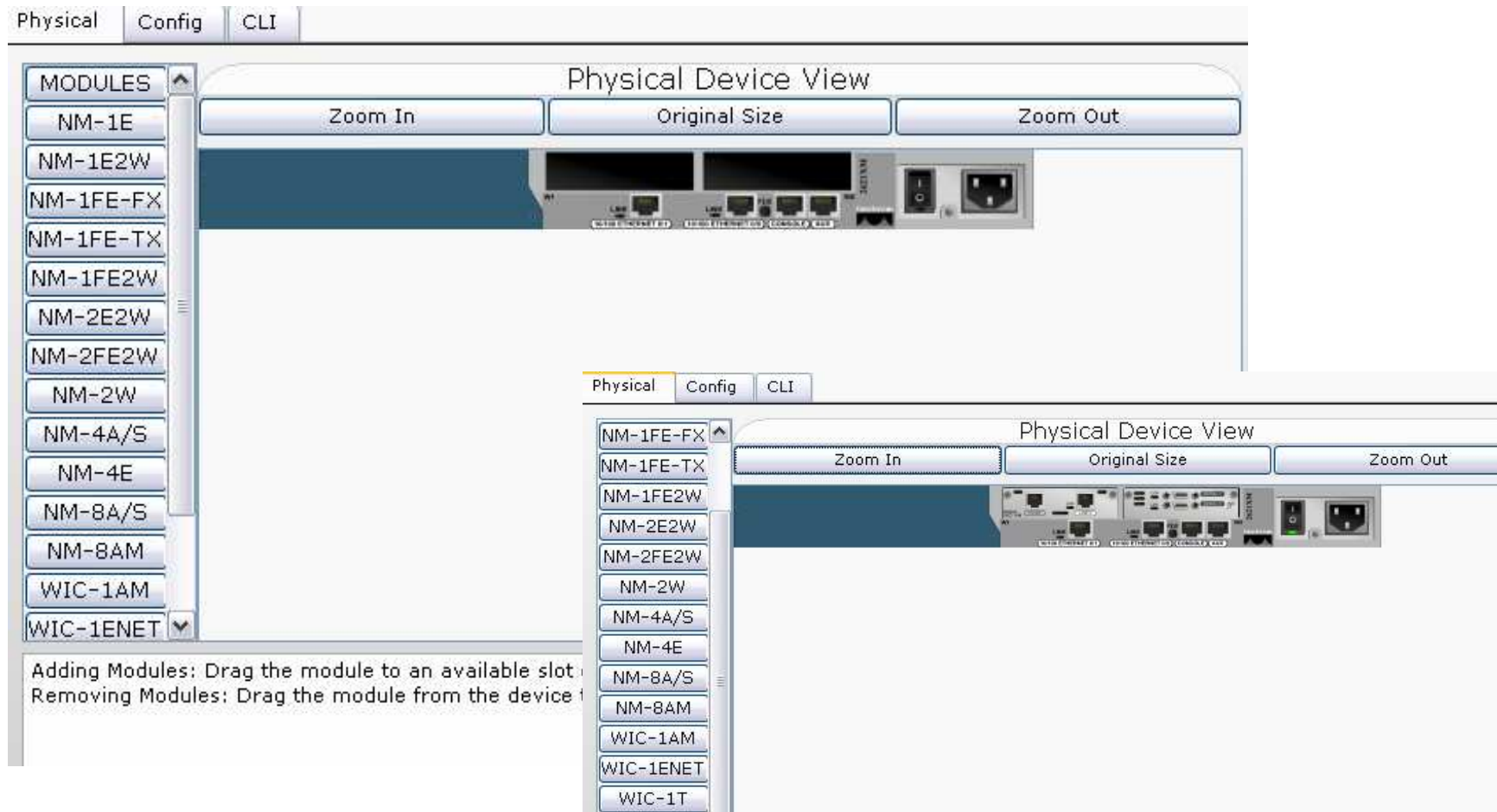
Interface Commands



Router(config-if)#?

bandwidth	Set bandwidth informational parameter
cdp	CDP interface subcommands
clock	Configure serial interface clock
delay	Specify interface throughput delay
description	Interface specific description
encapsulation	Set encapsulation type for an interface
exit	Exit from interface configuration mode
frame-relay	Set frame relay parameters
ip	Interface Internet Protocol config commands
keepalive	Enable keepalive
no	Negate a command or set its defaults
ppp	Point-to-Point Protocol
shutdown	Shutdown the selected interface

Packet Tracer v4.0 – Interface & Features



Build the 'physical' config

Packet Tracer v4.0 – Interface & Features

Physical Config CLI

GLOBAL
Settings
ROUTING
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0
Serial0/1
Modem0/0

FastEthernet0/0

Port Status On

Bandwidth Auto

10 Mbps 100 Mbps

Duplex Auto

Full Duplex Half Duplex

MAC Address 0060.2FAA

IP Address

Subnet Mask 255.255.255.255

Equivalent IOS Commands

```
Enter configuration commands, one per line. End with CNTL/Z.  
Router(config)#interface Serial0/0  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface Serial0/0  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface FastEthernet0/0
```

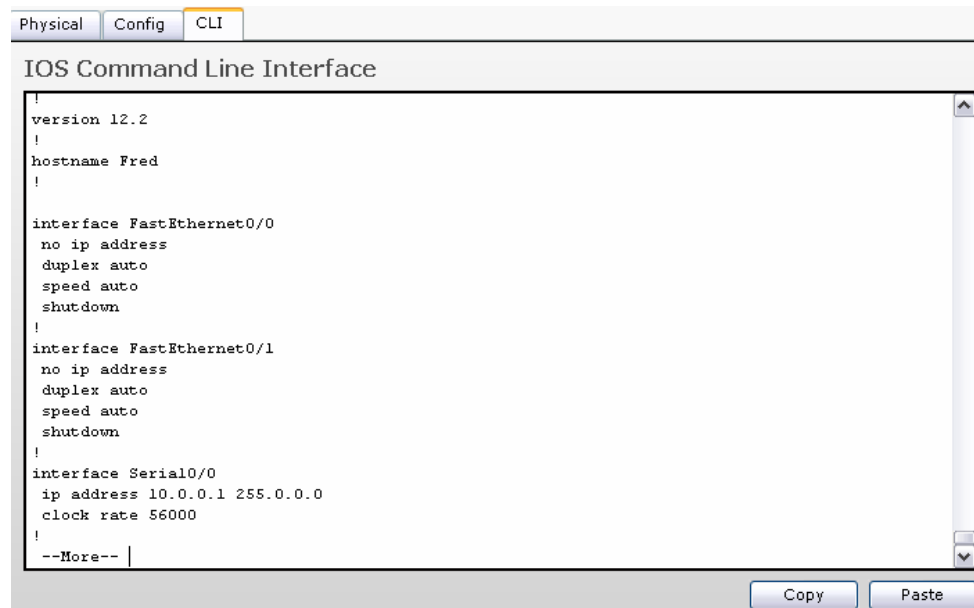


Config Wizard

Equivalent IOS commands

Packet Tracer v4.0 – Interface & Features

- Full command line emulation
- Understands short commands
e.g sh ru, conf t
- Can copy and paste configs
- Look and feel of 'real' equipment



The screenshot shows the Packet Tracer v4.0 interface with the CLI tab selected. The window title is "IOS Command Line Interface". The configuration text displayed is as follows:

```
!
version 12.2
!
hostname Fred
!

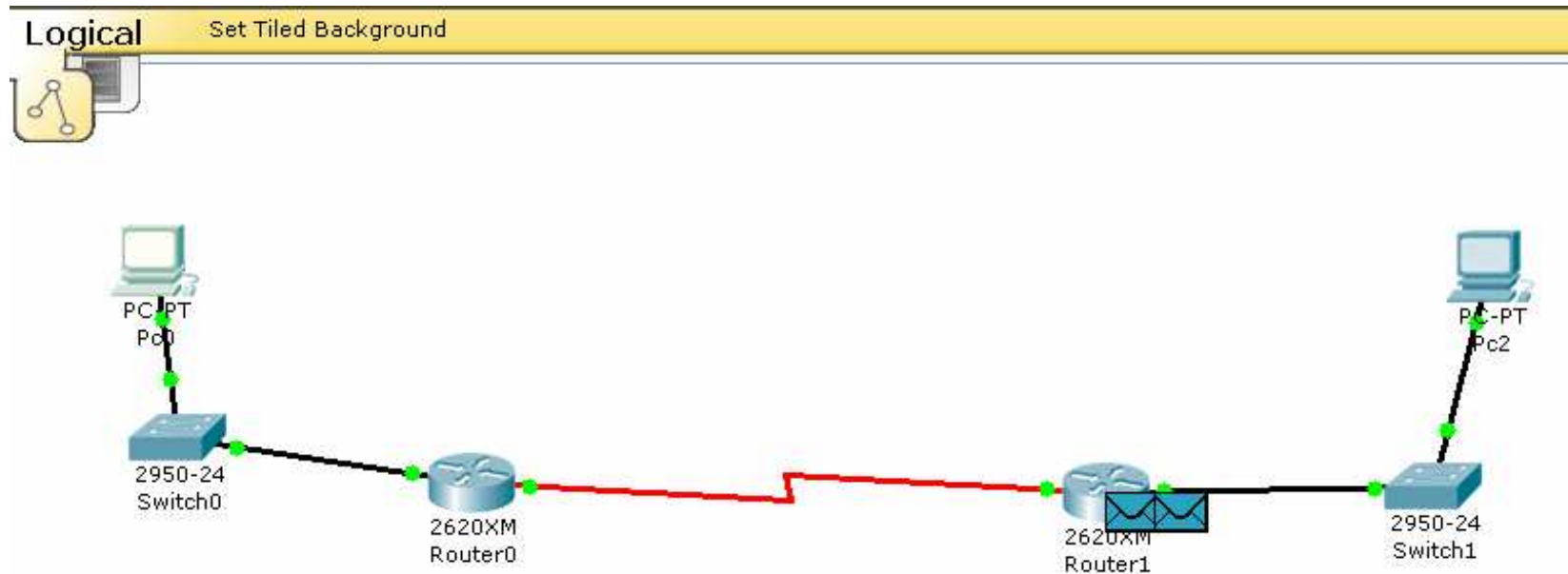
interface FastEthernet0/0
no ip address
duplex auto
speed auto
shutdown
!

interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!

interface Serial0/0
ip address 10.0.0.1 255.0.0.0
clock rate 56000
!
--More--
```

At the bottom right of the window, there are "Copy" and "Paste" buttons.

Packet Tracer v4.0 – Interface & Features



Full simulation of networks

Packet Tracer v4.0 – Interface & Features

PDU Info at Device: Router0

OSI Model Outbound PDU Details

At Device: Router0
Source: Router0
Destination: 255.255.255.255

In Layer	Out Layer
Layer7	Layer 7: RIP Version: 1, Command: 2
Layer6	Layer6
Layer5	Layer5
Layer4	Layer 4: UDP Src Port: 520, Dst Port: 520
Layer3	Layer 3: IP Header Src. IP: 30.0.0.2, Dest. IP: 255.255.255.255
Layer2	Layer 2: HDLC Frame HDLC
Layer1	Layer 1: Port(s): Serial0/0

- The router builds a periodic RIP update packet to send out to Serial0/0.
- The router adds an update route 10.0.0.0 to the rip packet.

Drill down in to PDU's

PDU Info at Device: Switch1

OSI Model Outbound PDU Details

PDU Formats

Ethernet 802.3

0	4	7	8	14	19	Bytes
PREAMBLE: 1010 1010		S F D	DEST ADDR: 0100.0CCC.CCCC	SRC ADDR: 0090.0C13.6D24		
LENGTH / TYPE: 0x8		DATA (VARIABLE LENGTH)			FCS: 0x0	

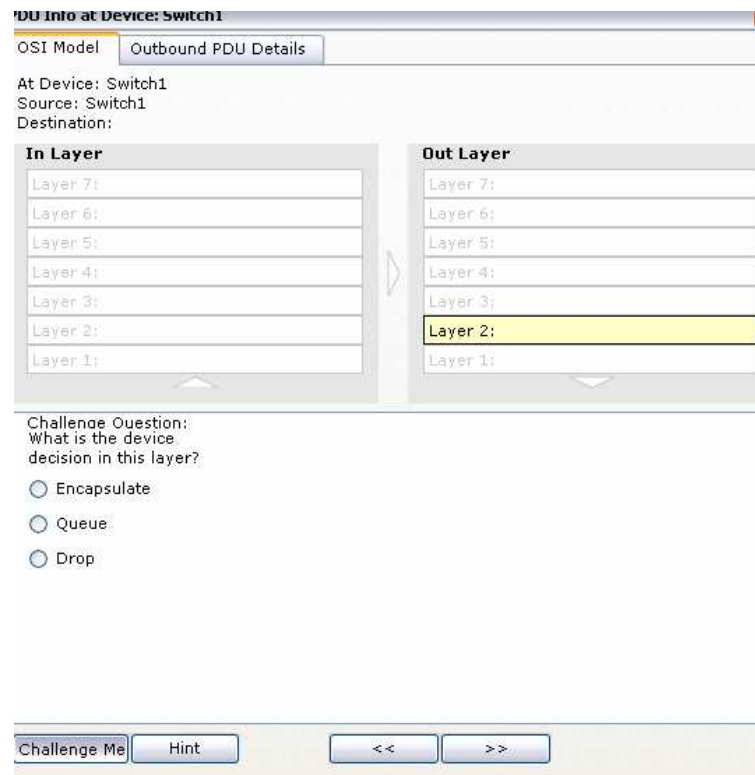
CDP

0	1	2	4	6	8	Bytes
V E R L	T S U M	CHK SUM	TYPE	LEN	VALUE (VARIABLE LENGTH)	

CDP VALUE FIELD:

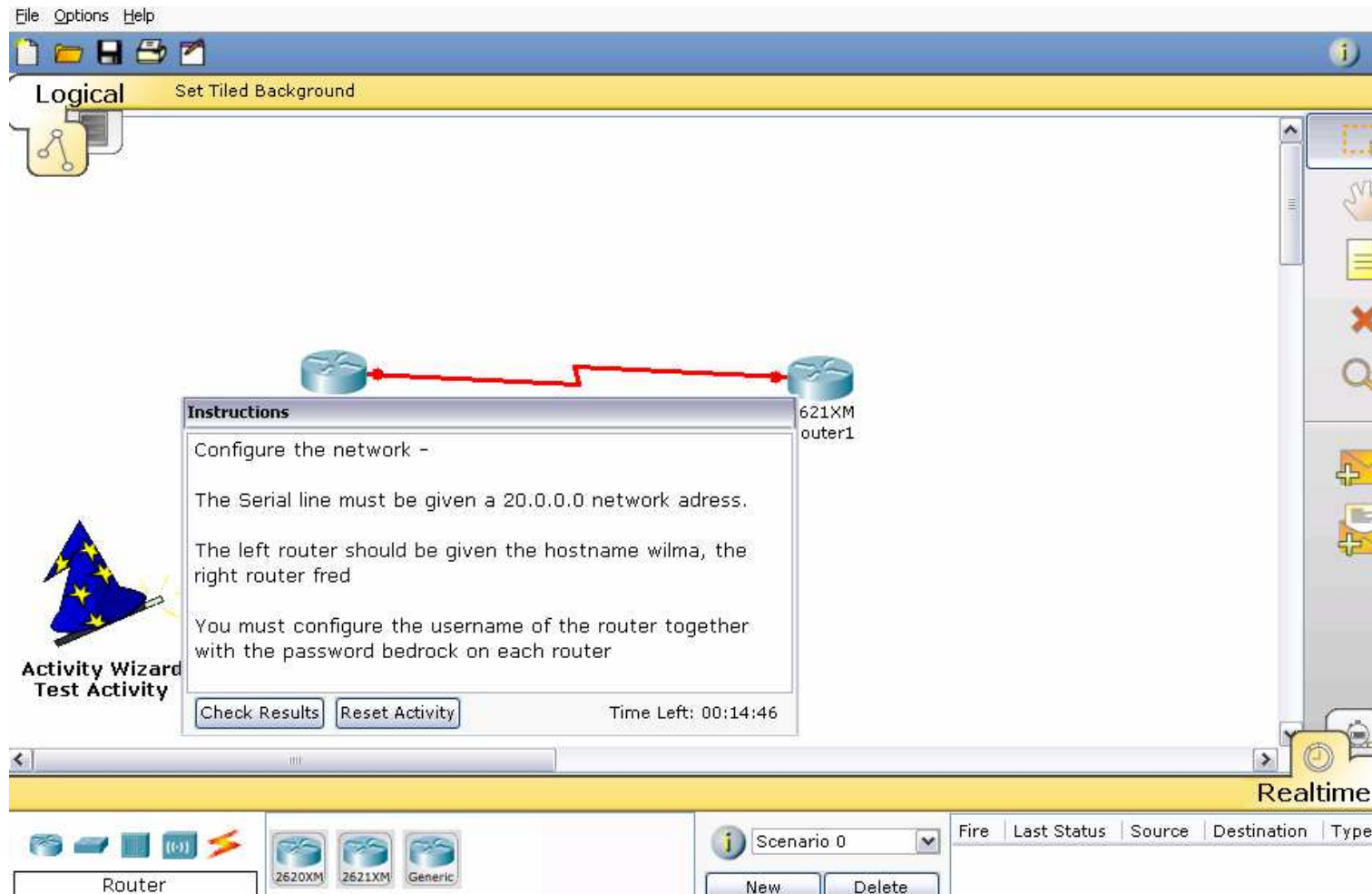
0	1	2	Bytes
P R O T O C O L	L E N	PROTOCOL (VARIABLE) ADR LEN	ADDRESS (VARIABLE)

Packet Tracer v4.0 – Interface & Features



With challenge questions

Packet Tracer v4.0 – Interface & Features



Activity wizard

Packet Tracer v4.0 – Examples

Demo

CISCO SYSTEMS

