

Packet Tracer: Advanced Session





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PT Advanced Session

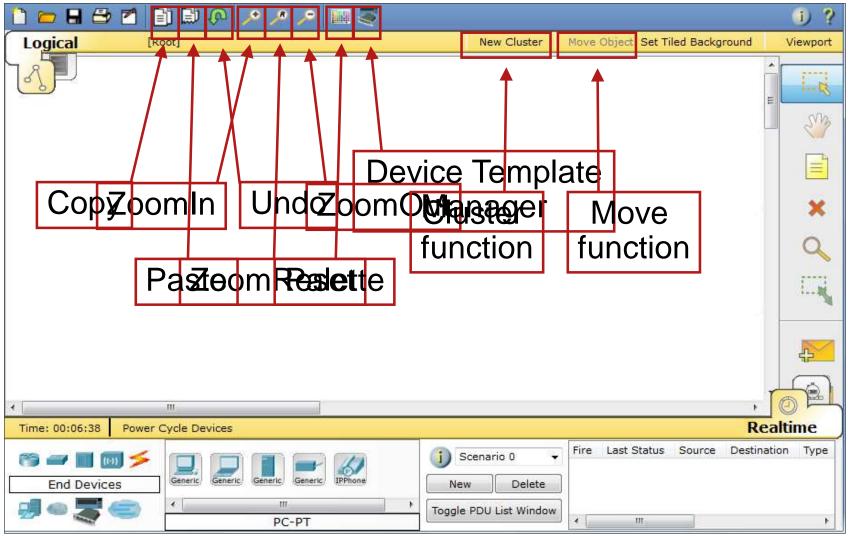
- PT Features.
- The Activity Wizard is an assessment tool that allows you to create highly specific networking scenarios for other users.
- This tool is particularly useful for instructors creating activities for students to complete.
- When students start an activity, they are presented with an initial network and a set of instructions. Students follow the instructions to complete the activity, then they can check their finished network.
- Instructors have control over many aspects of the activity.

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PT Features



Features

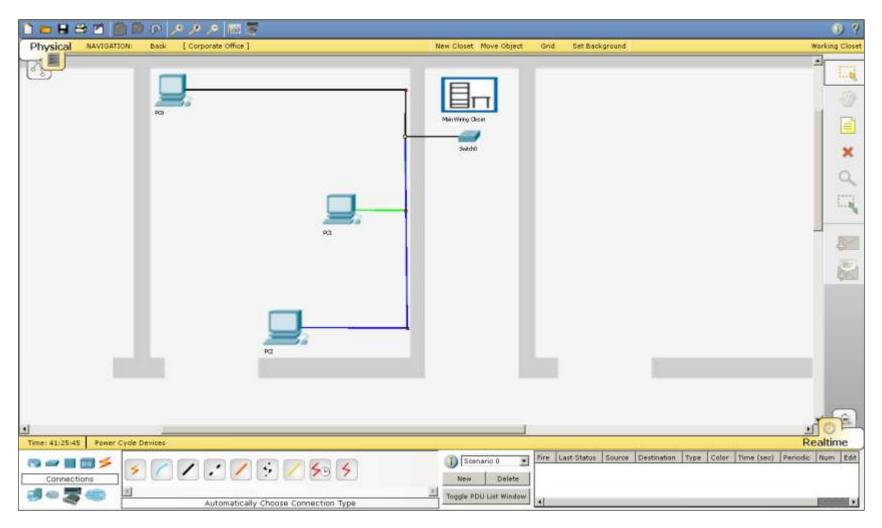


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Create Bend Point



Legacy Devices (PT5.x)

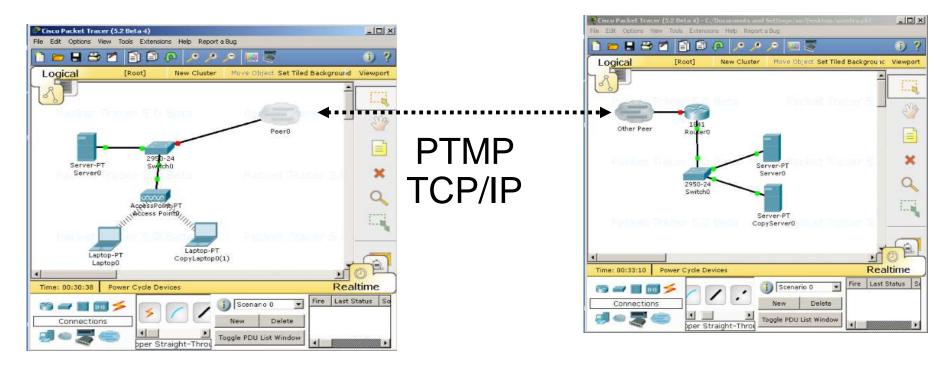
Logical	[Root]			New Clust	er Move Object. Set Tiled Background	Viewport
3						1
	LAHER 3	1841 1800 Family Router	Z620XM 2600 Family Legacy Router	69		
1.00		2811 2800 Family Router	2621XM 2600 Family Legacy Router 2621	Router-PT Generic Router		×
		52				- 0
-	LAVER 2	2560-2005 Multilever Switch	WIRELESS	Linksys-WRT300N Integrated Wireless Route	* 1	
100	2958-24 2950 Family Switch 29507-24 2950 Family Switch with 2 Sigath	2960-5411 Ewitch-PT Endotr 2960 Family Switch Generic Switch Generic B		AccessPoint-PT Generic 802.11 AP Generic 802.11a AP	AccessPoint-PT-N Ieneric 802.11n AP	
-	LAVER 1 Hub-PT Repeater-PT Generic Hub Generic Repeter	WAN CONNECTION Cloud-PT Multi Technology WAN Connection DSL-Modern-PT Generic DSL Modern Generic Cable Modern	PC-PT PC PC PC PC	Protecter PT	SPECIAL MULTIUSER COMPONENT	
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(9 - - 1	s Dovices	E Series	Scenario 0 New Delet	*	tion Type Color Time (sec) Periodic	and the second se
	a a	AccessPoint-PT-A	Toggle PDU List Wind	wob		-

New Devices (PT5.x)

• The new device: laptop-PT

File Edit Options View	w Tools Extensions Help Report	a Bug	
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Logical	[Root]	New Cluster Move Object Set Tiled Backgrou	nd Viewport
N	cer S.U.Geta	Pactor Traces 5.0 Detai	E C
			×
	Laptop-PT Laptop1	Peer0	
Parket Do	or 50 Prol		
the second s	wer Cycle Devices		Realtime
	Convex Convex Convex	S IPPE New Delete Toggle PDU List Window	Source Destina

Multiuser Cloud and New Laptop



 The Multiuser connection (Peer0 in the picture) can connect by TCP/IP to a Multiuser connection of another PT (Instance on a different computer)

Device Template Manager

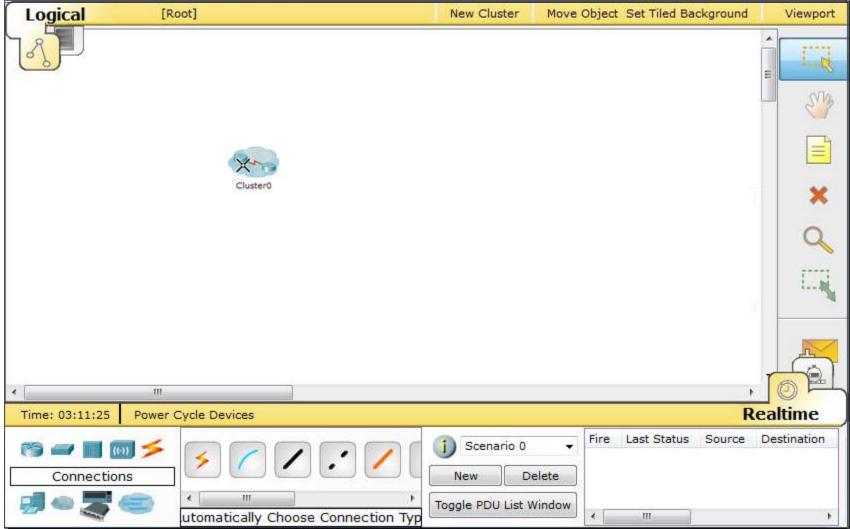
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Logical [R	oot]	New Cluster Move Of	oject Set Tiled Background	Viewport
			Í	
				53
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				P
۰ (III				B
Time: 00:06:28 Power (Cycle Devices	19. 19	Rea	altime
😤 🛹 🔳 뒔 🗲 Routers	1841 2620XM 2621XM 2811 Generic	j Scenario 0 ▼ New Delete	Fire Last Status Source	Destinatior
	۲ الله الله الله الله الله الله الله الل	Toggle PDU List Window	۲ (m)	F.

Port Label Options and Other Options

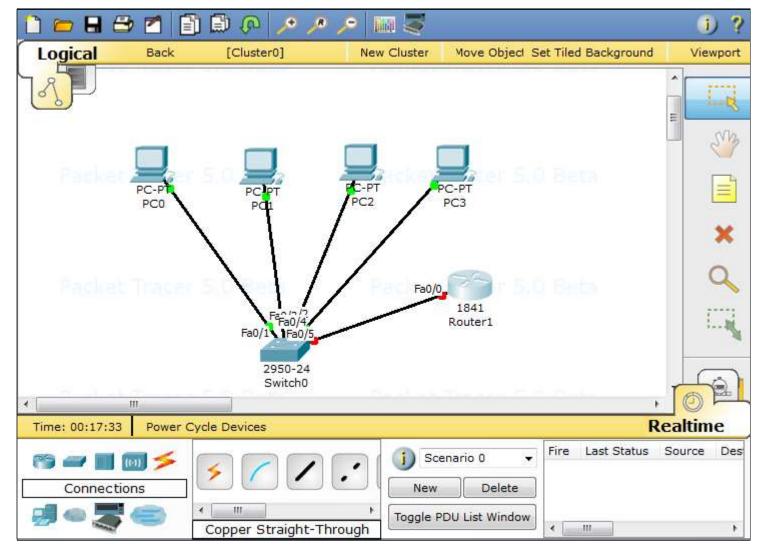
1 👝 🖶 🗁 🗖 📳 🚇	<u>, , , , , </u> , , , , , , , , , , , , , ,	1 - T	j ?
Logical [Root]	Poptions	2 ×	pund Viewport
Zali Rourer0 250-24 Switch0	Interface Administrative Hide Customize User Experience Animation Sound Show Link Lights Hide Device Label Port Labels Always Shown Don't show port labels when mouse over Hide QoS Stamps on Packets	Font Logging ✓ Enable Logging ✓ Enable Logging ✓ View Log Export Log Simulation - Buffer Full Action ● Prompt △ Auto Clear Event List △ Auto View Previous Events Accessibility Enable Screen Reader Support	
PC0	Select Language		
<	Languages default.ptl	^	
Time: 02:49:54 Power Cycle De	english en.ptl	·	Realtime
r		Change Language	Destination Type
Connections			
Autor	atically Choose Connection Type		,

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Clustering Devices

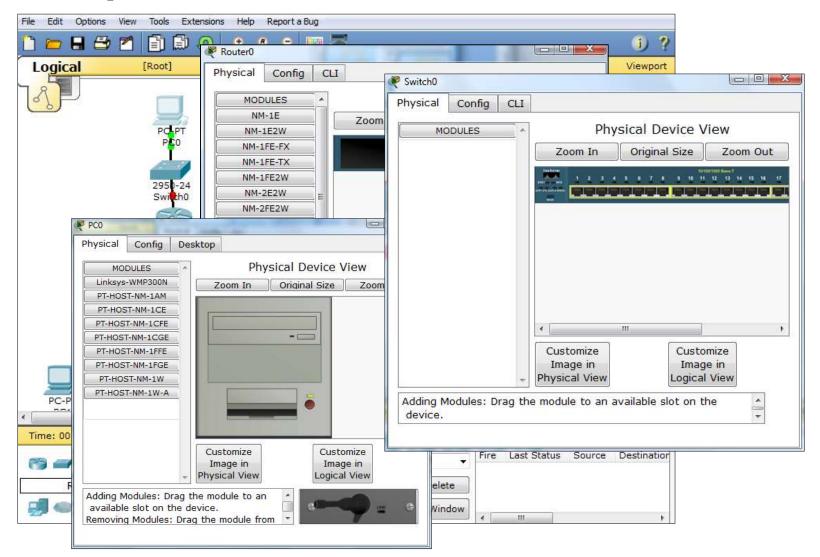


Connect to a Device Within a Cluster



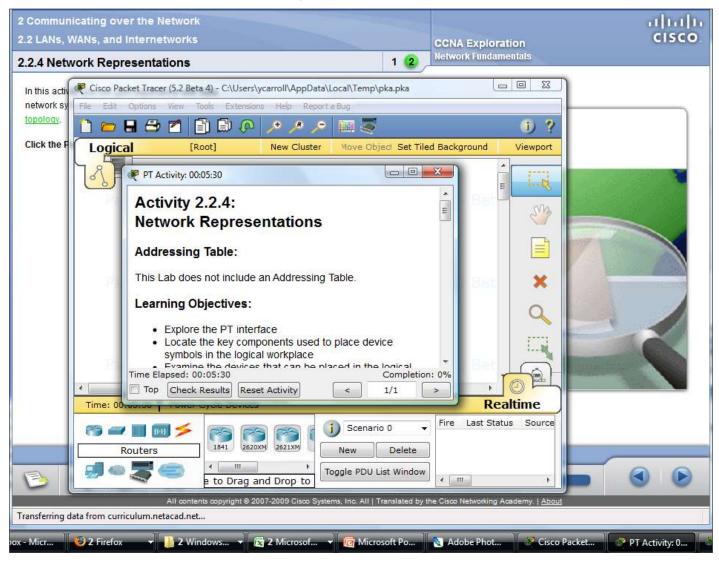
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Multiple Device Windows



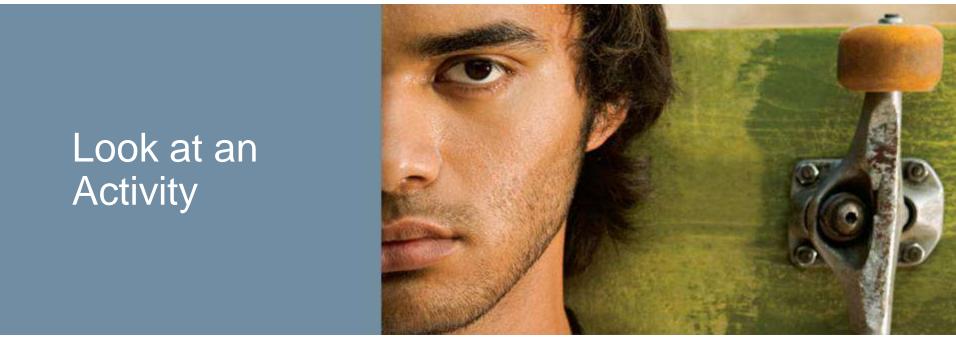
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Where is the Activity Instructions Window?



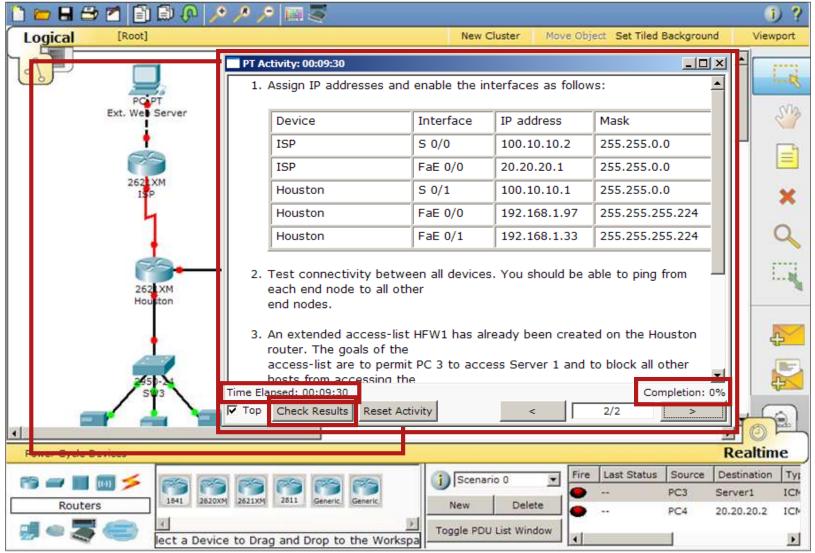
ahaha

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An Activity from a Student's Perspective

A Packet Tracer Activity



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Activity Results

File Edit Options Help

Activity Results

Time Elapsed: 00:09:47

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You did not complete the activity. Please close this window and try again.

Overall Feedback Assessment Items Connectivity Tests

Below are the results of your connectivity tests:

Status	Test Condition	Source	Destination	Туре	
Incorrect	Successful	PC3	Server1 : 192.168.1.98	ICMP	
Correct	Fail	PC4	Server1 : 192.168.1.98	ICMP	
0					
L					
2					
3					
1					
5					
5					
					Clos

Activity Wizard



PT Activity Wizard Vocabulary

- Answer network: The network that you want students to end up with after they perform whatever configuration tasks they are instructed to complete. The "correct" answer.
- Initial network: The network that you give students to begin with in completing the activity. This can be as "complete" or incomplete as you like. Just remember that you need to give clear instructions so that students know what Answer network you are expecting.

What can I assess?

- Assessment categories are:
- IP
- Physical
- Routing
- Switching
- ACLs
- NAT

Assessment Tree	Connectivity Test	Overall Feedba	ack Settin	ngs	
Use the tree below to sel categories.	ect the components you	want to assess. You m	ay also use the	View Filter t	to show only certain
-View Filter					
✓ IP		Routing	v	ACL	
Physical		Switching	v	NAT	
🔽 🔵 Variables			v	View/Hide A	All
Assessment Items			Feedback Wher	n Incorrect	
Network					
Ext. Web Serv	/er				
🖻 🗹 Houston					
⊡ ACL Banner MC					
Boot Syste					
	an ries				
	e700e				
Config-R					
⊕ Console					
	ne				
	ver				
Enable Pas	ssword				
- D Enable Sec	cret				
🕀 🗆 🗄 Flash Files					
	me: Router				
📄 🗹 Ports					•

 The Answer network used in creating the activity will dictate which items may be assessed.

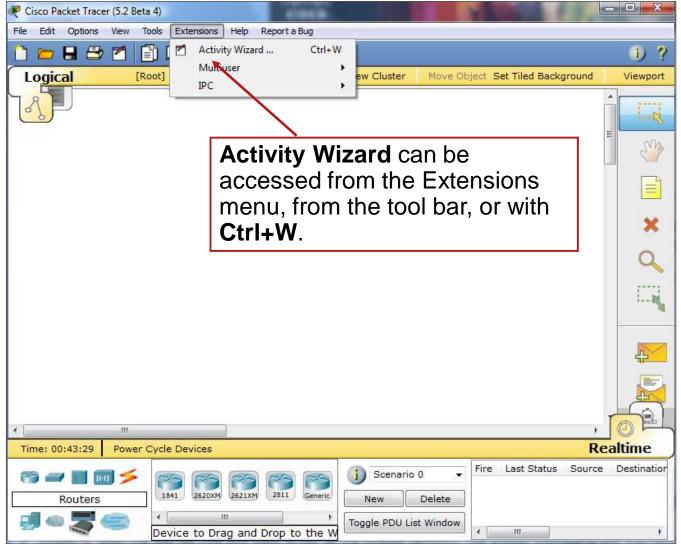
Planning: Create the Answer first...

- Using the Activity Wizard is easier with a little up front planning.
- The easiest way to create activities using the wizard is to create the Answer network first.
- By removing or editing elements of the answer network, the Initial network is created.

Or....

 Import a .pkt file that already contains all or most of the elements you might want to assess. This imported file becomes the Answer network.

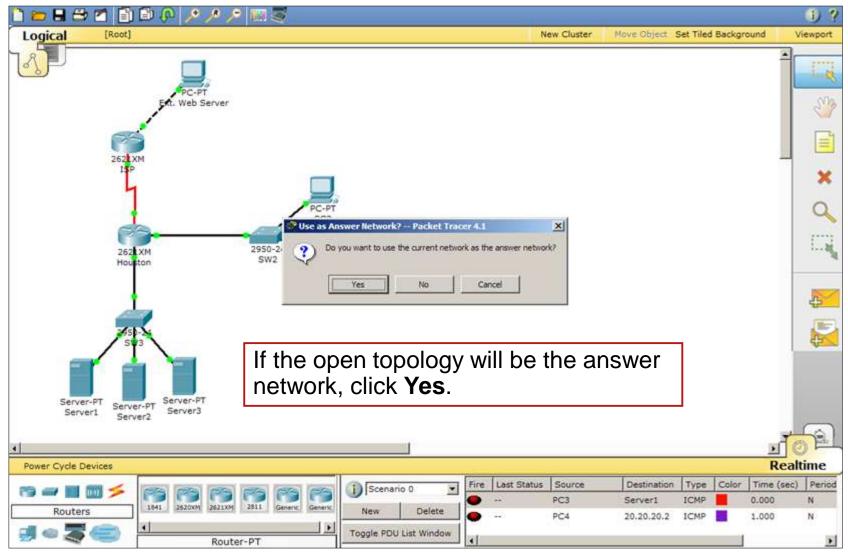
Activity Wizard



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Answer Network



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Welcome Screen

	Activity Wizard	
Welcome	Welcome to the Activity Wizard!	
Instructions	The Activity Wizard is an assessment tool that allows you to create detailed networking scenarios for other users. The typical sequence in making an activity is as follows:	Intermediate adds the
Answer Network	 Create the answer network and set the assessment items. Create the initial network, which will be the user's starting point. A blank 	Variable Manager
Initial Network	initial network may also be used. For accurate scoring, device display name in the initial network must match the ones in the answer network. 3) Put constraints on the user's ability to use certain features during the activity.	
Password 📷	 Write a clear set of instructions for the activity. Password-protect the activity to prevent unauthorized change to activity parameters. 	Advanced adds the
Test Activity	parameters. 6) Save the activity.	
	Please refer to the Activity Wizard help files for more detailed information.	
Check Activity	Activity Creation Experience	
Faula	Select a profile:	
Save	Novice	
	Create a simple, yet powerful, activity with instructions, initial and answer networks.	
	Author Information	
	Original Author:	
	Comments:	
Exit		

Instructions

	Activity Wizard
Welcome	Instructions:
Instructions	Use the text field below to enter the instructions for this activity. The text field supports a limited number of HTML tags. For a complete list of the tags, please refer to the help files.
Answer Network	Edit Preview as HTML
Initial Network	The Instructions screen provides a place where you can list the steps needed to complete this activity.
Password 📷	can list the steps needed to complete this activity.
Test Activity Check Activity	HTML tags such as for bold, <i> for italics, or <u> for underline may also be</u></i>
	used when typing in the instructions field.
Save	Page: 1/1 < > + X
Exit	Use the + button to add more pages to the instructions. Use the x button to delete a page of instructions. Use the < and > to move through the pages.

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Instructions in HTML

	Activity Wizard	
Welcome	Instructions: Use the text field below to enter the instructions for this activity. The text	
Instructions	field supports a limited number of HTML tags. For a complete list of the tags, please refer to the help files.	
Answer Network	Edit Preview as HTML	
Initial Network	<html> <html> <html> <mta content="en-us" http-equiv="Content-Language"> <mta content="en-us" http-equiv="Content-Language"> Sente a http-equiv="Content-Type" content="en-us"> Sente a http://sente a ht</mta></mta></html></html></html>	
Password 💣	<pre></pre>	
Test Activity	<pre>i>In this activity, you will assign IP addresses ba scheme. You will then apply and test an ACL to con network. </pre>	
Check Activity	Subsp; Subsp; Subsp;	
Save	<pre>Devic Interf <td height="34" th="" wi<="" width="34"></td></pre>	
	<	
	Page: 1/1 < > + X	
	Import Page Export Page Import All Export All Auto-load Exte	
Exit		

Previewing the HTML

weicome	Instructions:			
Instructions	Use the text field below field supports a limited please refer to the hel	number of HTML tags	For	view as HT our coding.
nswer Network	Edit Preview as H	ITML		
Password 💣	2. Assign IP address	ses and enable the interfac	es as follows:	
	ISP	S 0/0	100.10.10.2	
est Activity	ISP	FaE 0/0	20.20.20.1	
	Houston	S 0/1	100.10.10.1	
heck Activity	Houston	FaE 0/0	192.168.1.97	
Check Activity	Houston Houston	FaE 0/0	192.168.1.33	

Answer Network

		Activity Wizard
	Welcome Instructions Answer Network	Building Answer Network Import/Export Show Answer Network Import File to Answer Network Export Answer Network to File Assessment Tree Connectivity Test Overall Feedback
the answ		Use the tree below to select the component of the variable of
	Save	The Answer Network screen allows you to customize the activity's answer network, assessment options, timer settings, connectivity testing, and feedback options.

Assessment Options and Items

Activity Wizard

Welcome	Building Answer Network Import/Export
Instructions	Show Answer Network Import File to Answer Network
	Export Answer Network to File
Answer Network	Assessment Tree Connectivity Test Overall Feedback Settings
Initial Network	Assessment Tree Connectivity Test Overall Feedback Settings Use the tree below to select the components you want to assess. You may also use
	the View Filter to show only certain categories.
Password 🔐	View Filter
Test Activity	Keyword: Filter Show Checked Only
Check Activity	Assessment Iten Points Component(s Feedback When Incorre
Save	FastEthernet0/0 Access-group Out: HFW1
	Bandwidth Info: 100000 COP Enabled: 1 Oescription: connection to SW3 Duplex EIGRP Hello Interval EIGRP Summary Addresses Ø eIP Address: 192.168.1.97 Double-check the IP address assignments in the ii EKcepalive: 1 Unik to SW3
Exit	
LAIL	

Assessment Options Tips

Activity Wizard

	Show Answer Net	twork	Import File to Answer Network	
Instructions			Export Answer Network to File	
iswer Network	Assessment Tree Connectiv	ity Test Overall Feedback	Settings	
nitial Network	Use the tree below to select the cor categories.	mponents you want to assess. You	may also use the View Filter to show only	certain
Password an	🔽 IP	🔽 Routing	V ACL	
	Physical	Switching	V NAT	
Test Activity	🔽 🖕 Variables		View/Hide All	
heck Activity	Assessment Items		Feedback When Incorrect	
Save	Ports Ports FastEthernet0/0 FastEthernet0/1 Serial0/0 Access-group Access-group Access-group Occop Enable Clock Rate: Occop Enable Occop Enable	Out Info: 1544 d: 1 0		

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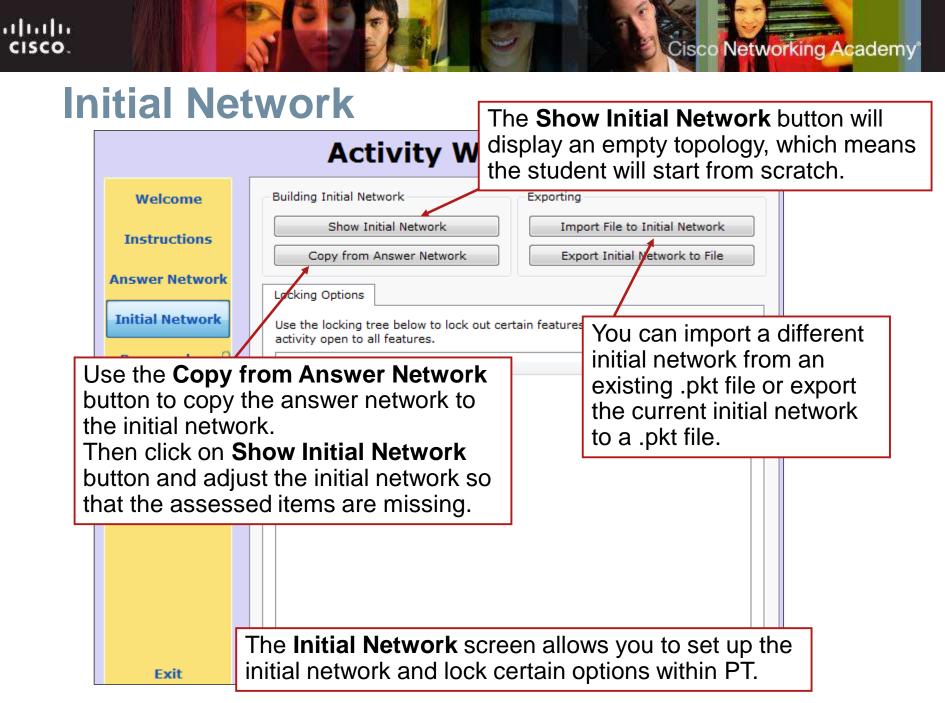
Activity Timer

Welcome Instructions Answer Network Show Answer Network Initial Network Show Answer Network Initial Network Import File to Answer Network to File Assessment Tree Connectivity Test Overall Feedback Settings Time Settings Different timing settings can be applied to this activity. The "Time Elapsed" setting will keep a running time of the activity duration. The "Countdown" setting will pop-up the Check Answers Page once the timer expires. Test Activity Save Time Elapsed Countdown Import he to import to setting will pop-up the Check Answers Page once the timer expires. Image: None Time Elapsed Countdown he he to set import for complete an activity. None The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. User Profile Locking		Activity Wizard				
Instructions Answer Network Initial Network Password Test Activity Save Time Elapsed Countdown D	Welcome	Building Answer Network Import/Export				
Answer Network Initial Network Password Test Activity Save Time Elapsed tracks the time taken to complete an activity. None Time Elapsed tracks the time taken to complete an activity. None turns the timer off. The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. User Profile Locking	Instructions					
Initial Network Password Password Image: Test Activity Test Activity Check Activity Save Time Elapsed Countdown Image:	Answer Network					
Password Image: Keep a running time of the activity duration. The "Countdown" setting will pop-up the Check Answers Page once the timer expires. Test Activity Image: Time Elapsed Check Activity Countdown Save Countdown Time Elapsed tracks the time taken to complete an activity. Countdown sets a time limit for completing the activity. None The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. Image: User Profile Locking	Initial Network					
Check Activity Save • Countdown • None Time Elapsed tracks the time taken to complete an activity. Countdown sets a time limit for completing the activity. None turns the timer off. The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. User profile locking prevents the user from changing their user profile during an activity.	Password 📷	keep a running time of the activity duration. The "Countdown" setting will pop-up the				
Check Activity Save None Time Elapsed tracks the time taken to complete an activity. Countdown sets a time limit for completing the activity. None turns the timer off. The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. User Profile Locking	Test Activity	Time Elapsed				
Time Elapsed tracks the time taken to complete an activity. Countdown sets a time limit for completing the activity. None turns the timer off. The default is Time Elapsed. User profile locking prevents the user from changing their user profile during an activity. Image: Display the locking	Check Activity					
activity.	Time Elapsed tracks the time taken to complete an activity Countdown sets a time limit for completing the activity. None turns the timer off.					
Evit	Exit	activity.				

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Connectivity Test

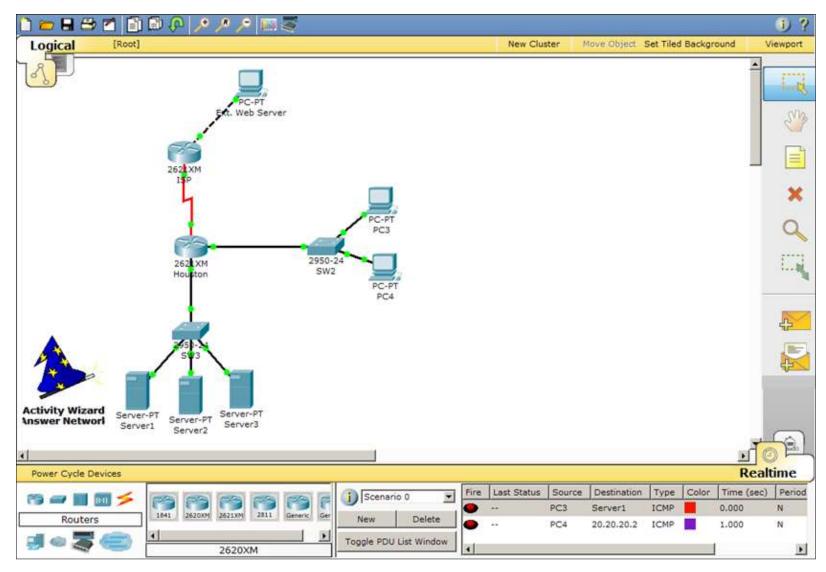
đ	Activity Wizard							
	Welcome		Activ	ity Wiz	ard			
	Instructions	-Building Answer Netwo			Import/E			
	Instructions	Sho	ow Answer Network		J	Import Fi	le to Answer Netw	vork
	Answer Network					Export A	nswer Network to	File
		Assessment Tree	Connectivity	Test Overall	Feedback	Settings		
	Initial Network	The connectivity tests select the test conditi		irst scenario of th	e answer netwo	ork's User Crea	ated PDUs list. On	the first column,
	Password 🚮	Test Condition	Last Status	Source	Destination	Туре	Color	Time (se
		1 Successful		PC3	Server1	ICMP		
	Test Activity			PC4	20.20.20.2	ICMP		
		-		PC4	Server1	ICMP		
	Check Activity	4 5						
	Check Activity	6						
	C	7						
	Save	8						
		9						
		10						
		11						
		12						
		14						
		15						
		16						-
		•						▼ ▶
	Exit							



Copy from Answer Network

Welcome	Building Initial Network	Exporting		
Instructions	Show Initial Network	Import File to Initial Network		
	Copy from Answer Network	Export Initial Network to File		
swer Network	Locking Options			
tial Network	Use the locking tree below to lock out ce	rtain features for this activity or leave		
ssword Repl	ace Initial Network? Packet Tracer			
	Replacing the initial network with the answer	network cannot be undone.		
est Activi	Replace the Initial Network?			
eck Activ	Yes No			
	177			
Save				

Show Initial Network

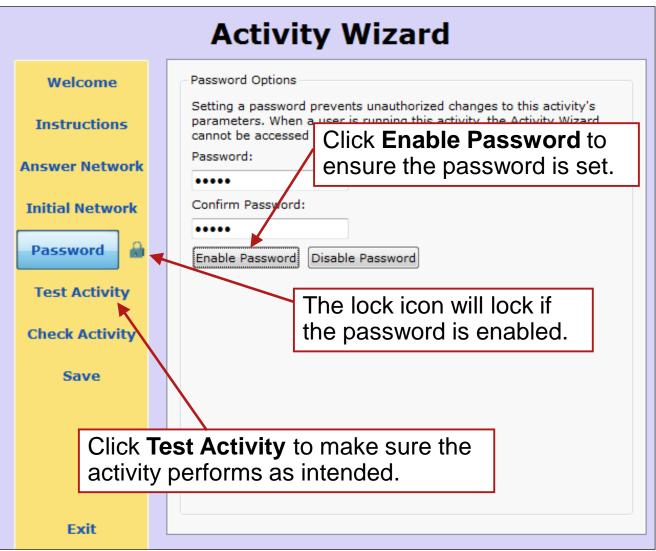


Set Locking Options

	Activity Wizard			
Welcome	Building Initial Network Exporting			
Instructions	Show Initial Network Import File to Initial Network Copy from Answer Network Export Initial Network to File			
Answer Network	Locking Options			
Initial Network	Use the locking tree below to lock out certain features for this activity or leave this activity open to all features.			
Password 💣	Locking Items			
Test Activity	ian Interface			
Check Activity	E Create Devices			
Save	Create Devices Remove Device Toggle Power Configure Devices Move Devices Under Locking Options, you can specify which features are not accessible within the activity. Check items you want locked.			
	Use Config Tab			
Exit				

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Password Options



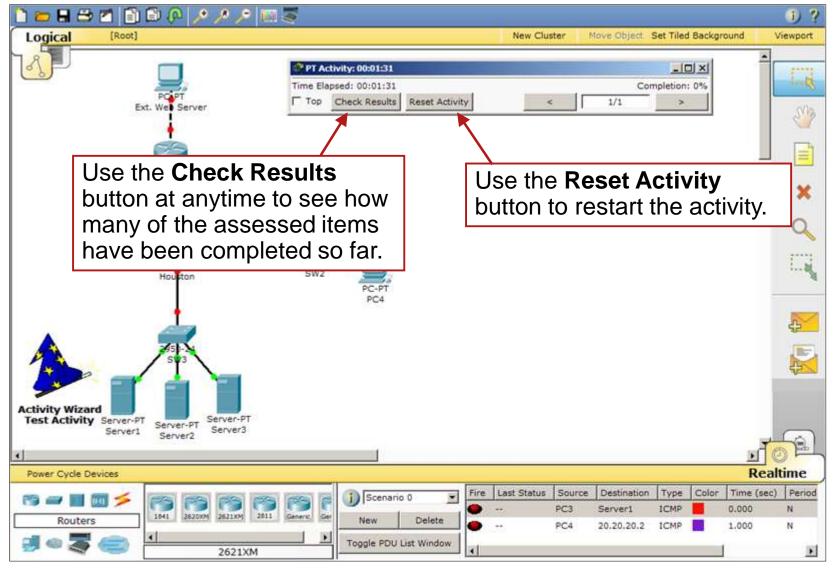
Testing the Activity

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Logical [Root]		Ne	w Cluster Move Object	t Set Tiled Background	Viewpo
The Test Activity	PT Activity: 00:01:30				
wizard cap reminds	1. In this activity, you apply and test and 2. Assign IP addresse	ACL to control traffic	in your network.	ted scheme. You will the	
testing the activity.	Device	Interface	IP address	Mask	
Click on it to exit	ISP	S 0/0	100.10.10.2	255.255.0.0	
	ISP	FaE 0/0	20.20.20.1	255.255.0.0	
testing.	Houston	S 0/1	100.10.10.1	255.255.0.0	0
	Houston	FaE 0/0	192.168.1.97	255.255.255.224	
250-X 5123	ping from each end 4. An extended acces	i node to all other end s-list HFW1 has alrea			
Activity Wizard Answer Networl Server-PT Server-PT Server2 Server3	Top Check Results Ret	set Activity		1/1 <u>></u>	
Power Cycle Devices	The Instru	ictions w	vindow can	not he	
		ICLIUIIS W	induw car		
Routers	closed. Yo resize it.	u can mir	nimize the	window or	

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Check Results



File Options Help

Activity Results

Time Left: 00:13:23

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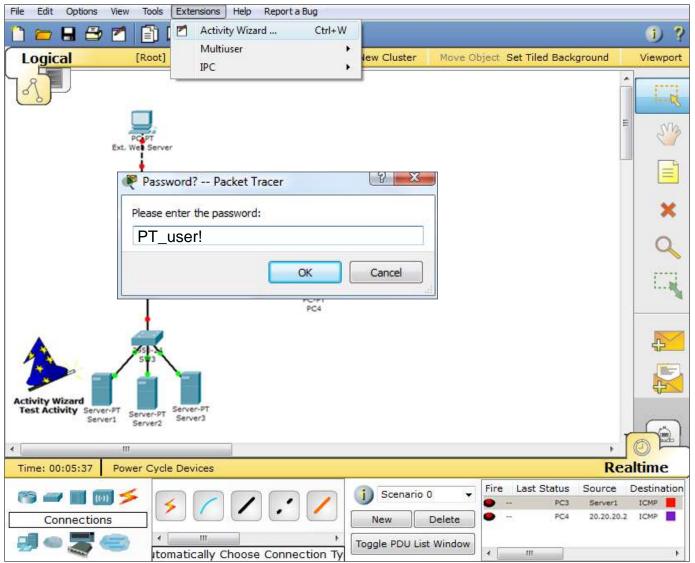
You did not complete the activity. Please close this window and try again.

ssessment Items	Status	<u>▲</u>	Completed Components	: 1
⊡-RIP ⊡-Networks	Iress Correct t Mask Correct 58.2.0 Correct		Required Components	: 1
	58.3.0 Correct	When the student clicks		
i⊐-Ports			omponent Types:	
IP Add	iress Correct	Check Results, she can see	IP	: 8/1
⊡-Serial0/0		exactly which assessment	Routina	: 4/4
		items have not yet been completed or were completed	ACL	: 0/0
⊡-RIP ⊡-Networks		incorrectly.	NAT	: 0/0
	58.1.0 Correct		Physical	: 0/0
⊢HostA ⊡-HostA	vay Incorrect		Switching	: 0/0
⊡ Ports				. 0,0
⊡-FastEthernet			Others	: 0/0
	lress Incorrect t Mask Incorrect			
- HostB	C Mask Incomete			
🗝 🗶 Default Gatev	vay Incorrect			
⊡-Ports				
⊡-FastEthernet 	ress Incorrect			
	t Mask Incorrect	-		Close

Saving the Activity

Ĵ,	Activity Wizard		×
		Activity Wizard	
		Choose a filename to save under	
	Welcome	Save in: Saves	
	Instructions	Reference_Topologies Discovery	
	Answer Network	My Recent Documents	
	Initial Network	Desktop	
	Password 💕	My Documents	
	Test Activity		
	Check Activity	My Computer	
	Save	My Network File name: Activity_Wizard_Jesson.pka	
		Places Save as type: Packet Tracer 5 Activity File (*.pka) Cancel	
		When satisfied with the activity, click the Save button.	
		Save the file with an appropriate name in the directory of	
	Exit	your choice. Note that the file extension for activities is \Box	
		.pka.	

Editing a .pka



Variable Manager (Intermediate)

Activity Wizard					
Welcome	Introduction Pools Variables				
Variable Manager	What is Variable Manager?				
Instructions	The variable manager will add dynamism to the activities. Numbers, strings, and IP addresses may be assigned to a variable that is generated one time or randomly each time the user runs an activity.				
Answer Network	Quick Reference (for a full guide, see the help files):				
Initial Network	To add number pools. Provide the range in min and max To add string pools				
Password 🗃	Text separated by semicolons ";", must end in ; To add IP pools: Put in the network and the mask				
Test Activity	Settings:				
Check Activity	To start using the variable manager throughout the rest of the activity wizard, select "Show Variable Manager Interface"				
Save					
	Settings				
	Show Variable Manager Interface				
Exit					

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Variable Manager (Intermediate)

		Activ	vity Wiz	zard		
Welcome	Introde	uction Poo	ls Variables			
Variable Manager	To Rer	nove an Item	in all the fields : Highlight the item	, press the "Dele	ete" Key	
Instructions	Num	ber				
Instructions		Name	Min	Max		•
Answer Network	1					
Initial Network	3					-
Password 🔐	Strin	gs				
		Name	Text			•
Test Activity	1					
	4					•
Check Activity						
	-IP A	ddress				
Save		Name	Network	Mask	1st IP Addr	L A
	1					
	2					-
	•		III			4
Exit						

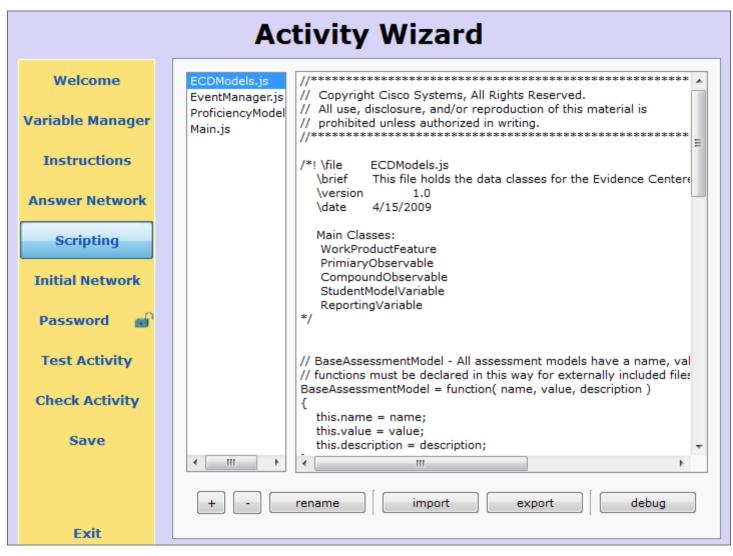
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Variable Manager (Intermediate)

		Activ	ity Wi	zard		
Welcome	Intro	duction Pools	Variables			
Variable Manager		dd an Item: Fill in emove an Item: H		m, press the "D	elete" Key	
Instructions		Variable Name	Pool Name	Value	PoolType	*
Instructions	1					=
Answer Network	2					-
Answei network	3					_
Initial Network	4					
	5					_
Password	6					
	7					
Test Activity	8					
	9					
Check Activity	10					
	11					-
Save	12					
	13					
	14					-
	15					-
	10					
Exit						

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Scripting (Advanced)



Q and A



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