



Advanced Packet Tracer



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Mind Wide Open™

Advanced Packet Tracer

Session Agenda

- Configure a WAN Frame Relay Cloud
- Using Clusters
- Author Activities
- Modify an Activity File
 - Working with Instructions
 - Assessment Timing and Feedback
- Troubleshooting Activities
 - Correcting Assessment Items
 - Changing Answer Network Items

Working with WAN Devices



WAN Device

Configurable 10-Port Chassis

- Multiprotocol support

 - Frame Relay

 - DSL

 - Cable

Four Module Types

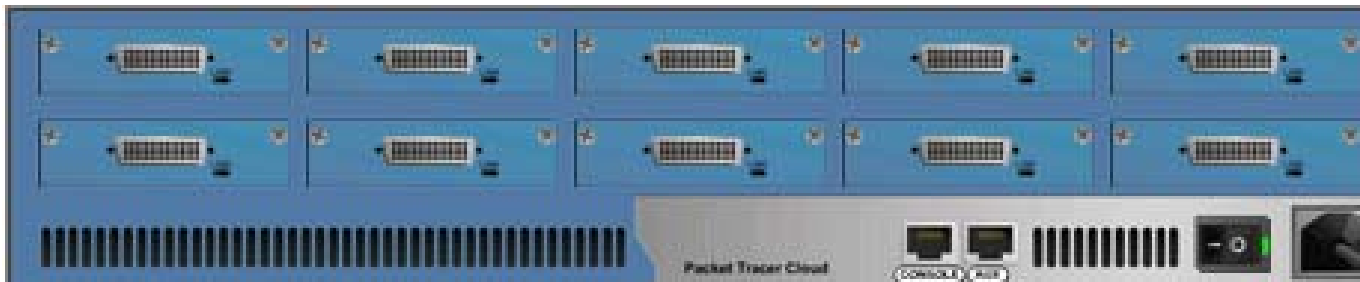
- RJ-11 PT-CLOUD-NM-1AM

- Ethernet PT-CLOUD-NM-1CE

- Coax PT-CLOUD-NM-1CX

- Serial PT-CLOUD-NM-1S

WAN Device



Packet Tracer

Activity



Packet Tracer

Initial.pkt

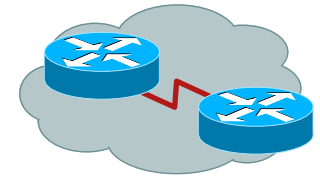
The Art of Clustering



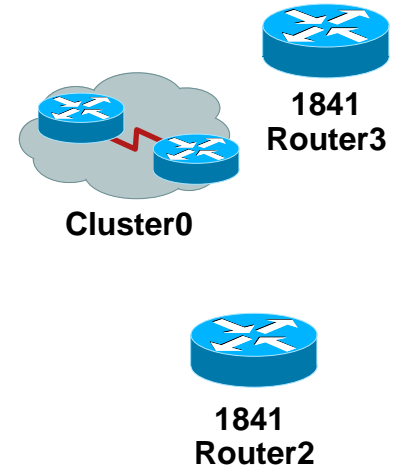
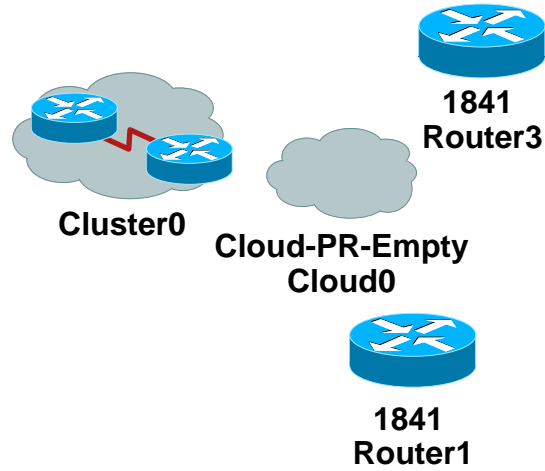
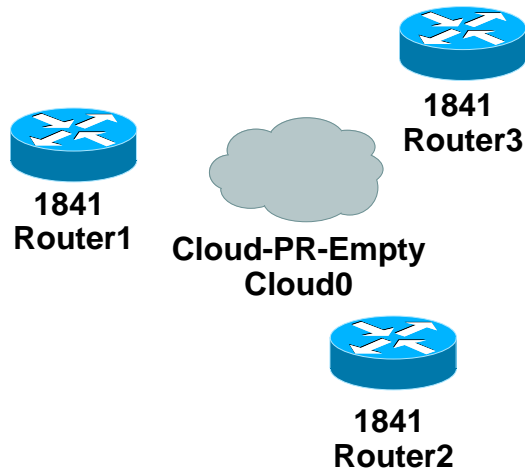
Clusters

Uses for Clusters

- Allows simplification of topology
- Cluster one device or multiple devices
- Hide devices in a topology



Cluster0



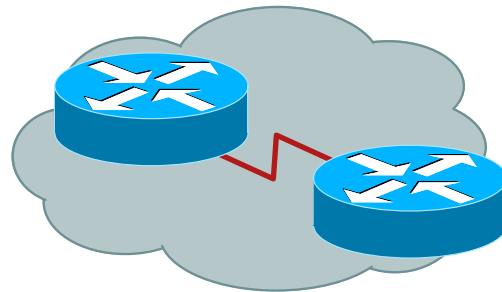
Clusters

Using Clusters in Activity Wizard

- Prevent students from using the **Kobayashi Maru*** solution
- Optional locks
 - Create cluster—locks user from creating clusters
 - Change cluster—locks user from adding or removing devices and deleting a cluster
 - Enter cluster—locks user from opening the cluster

*Star Trek—To Change the Test Parameters in Order to Succeed

Clusters



Cluster0



Authoring PT Activities



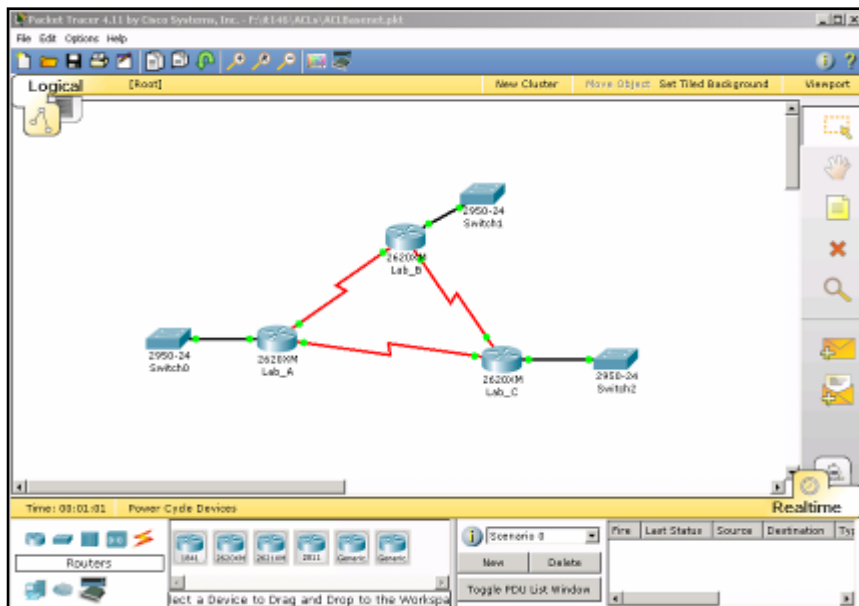
Authoring PT

- This is as simple as taking an old lab and adapting it for PT
- Three options
 - PT exercise - use the old lab as the instructions, create a template for the students to start from and save the completed lab as a pkt file
 - PT challenge - use the old lab as the instructions and have the student create the lab from scratch and save as a pkt file
 - PT activity - convert the lab into a full activity
- Although the last option requires the most prep, it is the easiest to grade

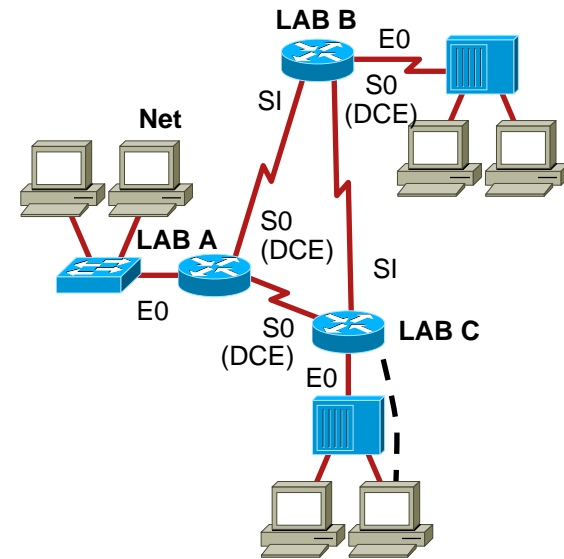
Authoring PT

Option 1 Using a Starting Packet File

- Allows students to concentrate on task at hand



Standard ACL Quiss #0



Router Name—LAB A
Router Type—2514

E0 = 205.7.5.1
S0 = 201.100.11.1
SI = 204.204.7.2
SM = 255.255.255.0

Router Name—LAB B
Router Type—2503

E0 = 219.17.100.1
S0 = 199.6.13.1
SI = 201.100.11.2
SM = 255.255.255.0

Router Name—LAB C
Router Type—2503

E0 = 223.8.151.1
S0 = 204.204.7.1
SI = 199.6.13.2
SM = 255.255.255.0

In the Above Network Configure a Standard Access Control List that:

- Allows All of Network 219.17.100.0 Access to 205.7.5.0
- Deny All Hosts in the Internet Access to 205.7.5.0

Remember:

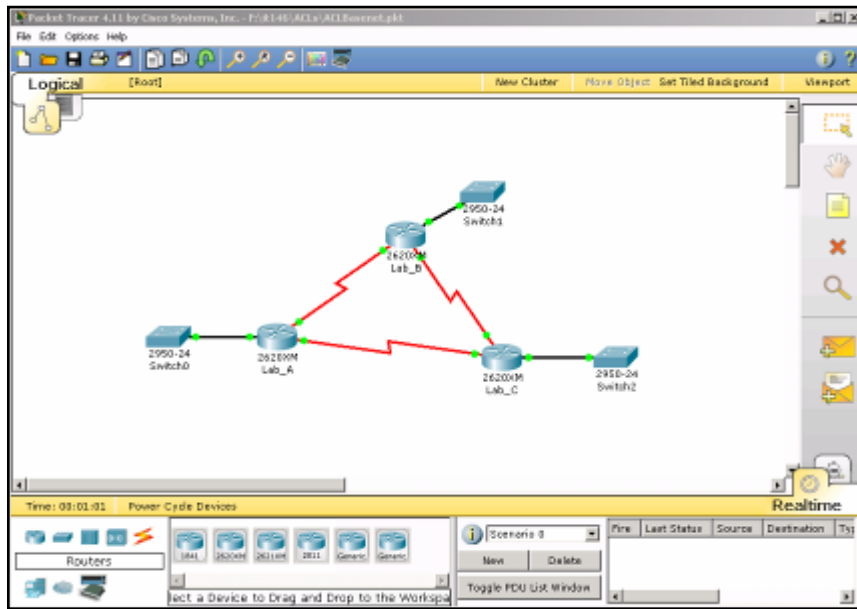
By Default the Statement “Deny 0.0.0.0.255.255.255.255” Is Added to the End of an ACL.

If In/Out Is not Applied to the Access-Group Statement the Default Is Out.

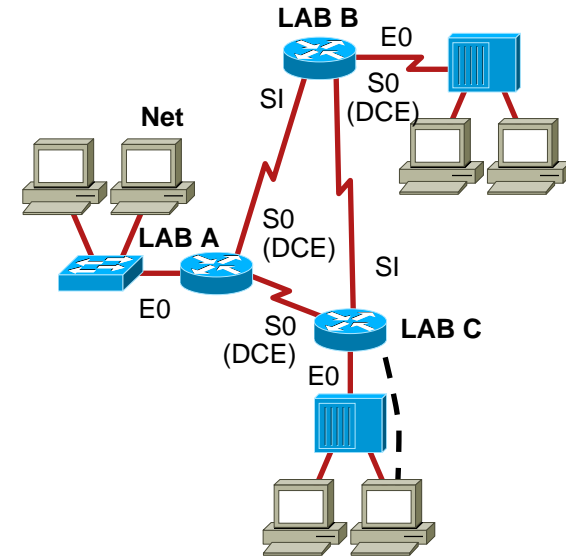
Authoring PT

Option 2 PT challenge

- Use the old lab as the instructions and have the student create the lab from scratch and save as a pkt file



Standard ACL Quiss #0



Router Name—LAB A
Router Type—2514

E0 = 205.7.5.1
S0 = 201.100.11.1
SI = 204.204.7.2
SM = 255.255.255.0

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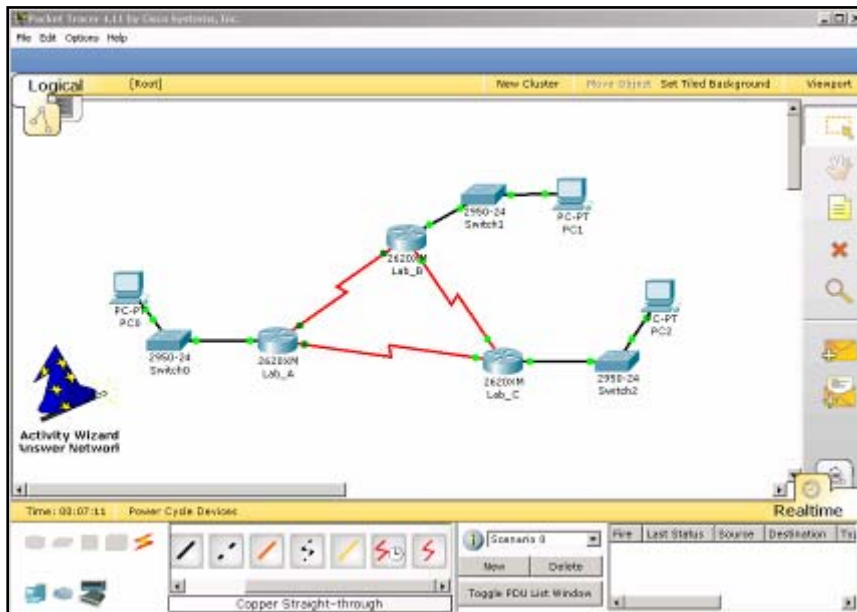
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If In/Out Is not Applied to the Access-Group Statement the Default Is Out.

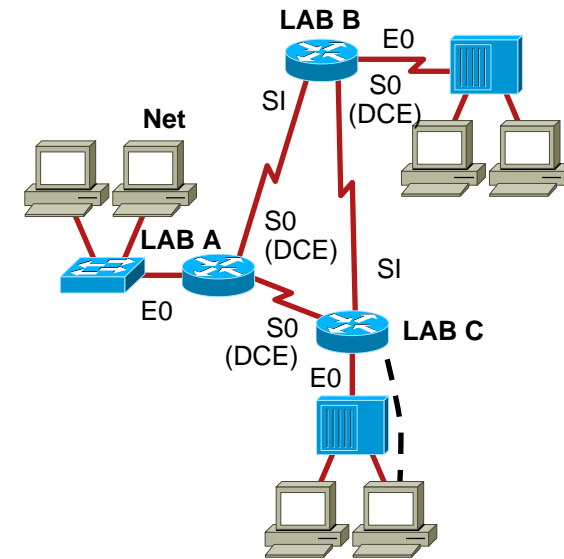
Authoring PT

Option 3 Create an Activity

- Finish the lab in Packet Tracer to create the answer network



Standard ACL Quiss #0



Router Name—LAB A
Router Type—2514

E0 = 205.7.5.1
S0 = 201.100.11.1
SI = 204.204.7.2
SM = 255.255.255.0

Router Name—LAB B
Router Type—2503

E0 = 219.17.100.1
S0 = 199.6.13.1
SI = 201.100.11.2
SM = 255.255.255.0

Router Name—LAB C
Router Type—2503

E0 = 223.8.151.1
S0 = 204.204.7.1
SI = 199.6.13.2
SM = 255.255.255.0

In the Above Network Configure a Standard Access Control List that:

- Allows All of Network 219.17.100.0 Access to 205.7.5.0
- Deny All Hosts in the Internet Access to 205.7.5.0

Remember:

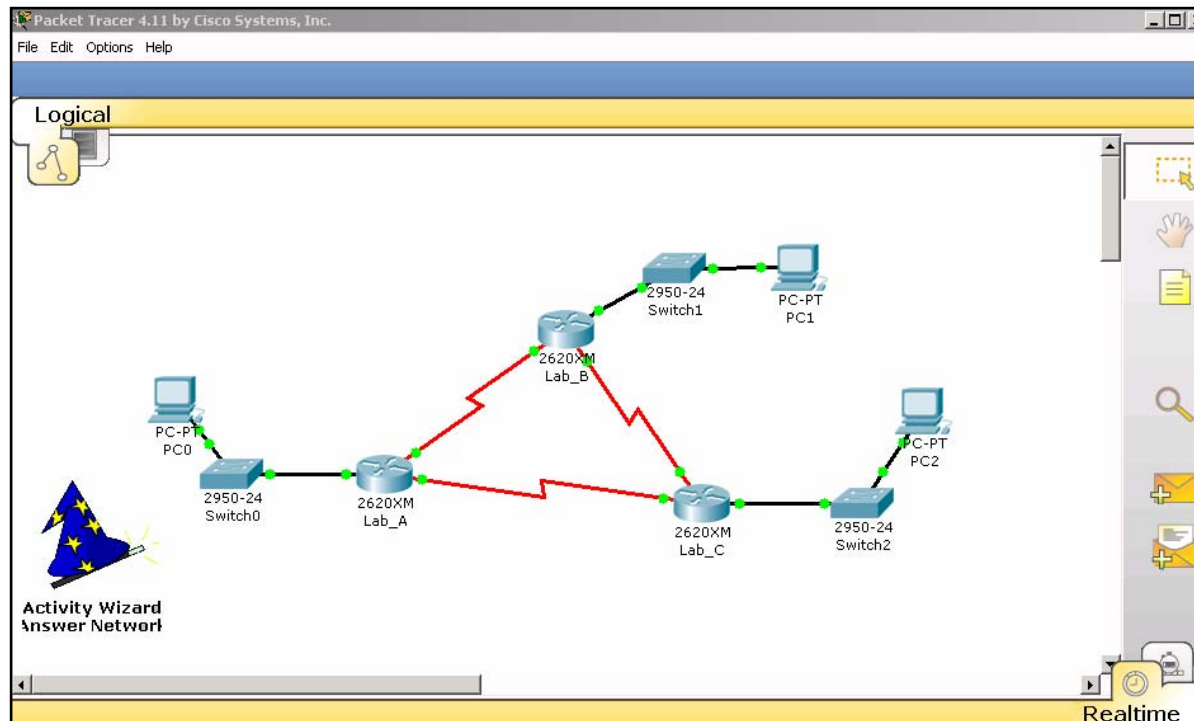
By Default the Statement “Deny 0.0.0.0.255.255.255.255” Is Added to the End of an ACL.

If In/Out Is not Applied to the Access-Group Statement the Default Is Out.

Authoring PT

Option 3 Create an Activity

- Start with the completed lab, select File/Activity Wizard
- PT will prompt you to use this network as the answer network





Authoring PT

Option 3 Create an Activity

- Open Activity Wizard





Authoring PT

Option 3 Create an Activity

- Select Instructions


The screenshot shows the 'Activity Wizard' interface. On the left is a yellow sidebar with navigation options: Welcome, Variable Manager, Instructions (highlighted), Answer Network, Initial Network, Password (with a lock icon), Test Activity, Save, and Exit. The main area is titled 'Activity Wizard' and contains an 'Instructions:' section. Below the title is a text field with a placeholder: '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.' There are two tabs: 'Edit' (selected) and 'Preview as HTML'. Below the text field is a large empty rectangular area for entering instructions. At the bottom of the main area are navigation buttons: a left arrow, a page indicator '1/1', a right arrow, a plus sign, and an 'X' button.

Authoring PT

Option 3 Create an Activity

Instructions

- Paste HTML into the Edit field



The screenshot shows the 'Activity Wizard' window. On the left is a yellow sidebar with navigation buttons: Welcome, Variable Manager, Instructions (highlighted), Answer Network, Initial Network, Password, Test Activity, Save, and Exit. The main area is titled 'Activity Wizard' and contains 'Instructions' and a text editor. The text editor has 'Edit' and 'Preview as HTML' tabs. The text in the editor is as follows:

```
<HTML>
<BODY>
<CENTER><FONT SIZE=6>Standard ACL Quiss #0</FONT><BR></CENTER>
<IMG SRC="Stacl0final.jpg" ALIGN=middle BORDER=0 WIDTH=400 HEIGHT=150><BR>
In the above network configure a standard Access Control List that;<P>

1. Allow all of network 219.17.100.0 access to 205.7.5.0<BR>
2. Deny all hosts on the internet access to 205.7.5.0<BR>
<P>

REMEMBER:
By default the statement "Deny 0.0.0.0 255.255.255.255" is added to the end of an ACL.<BR>
Because the default deny any does not log matches, write it as a statement.

</BODY>
</HTML>
```

At the bottom of the window are navigation buttons: a left arrow, a text box containing '1/1', a right arrow, a plus sign, and an 'X' button.

Authoring PT

Option 3 Create an Activity

Answer Network

- Check assessment items for ACL and interface access-group commands

Activity Wizard

Building Answer Network

Show Answer Network

Import/Export

Import File to Answer Network

Export Answer Network to File

Assessment Options | Timing | Connectivity Test | Overall Feedback

Use the tree below to select the components you want to assess. You may also use the View Filter to show only certain categories.

View Filter

IP Routing ACL

Physical Switching NAT

Variables View/Hide All

Assessment Items | Feedback When Incorrect

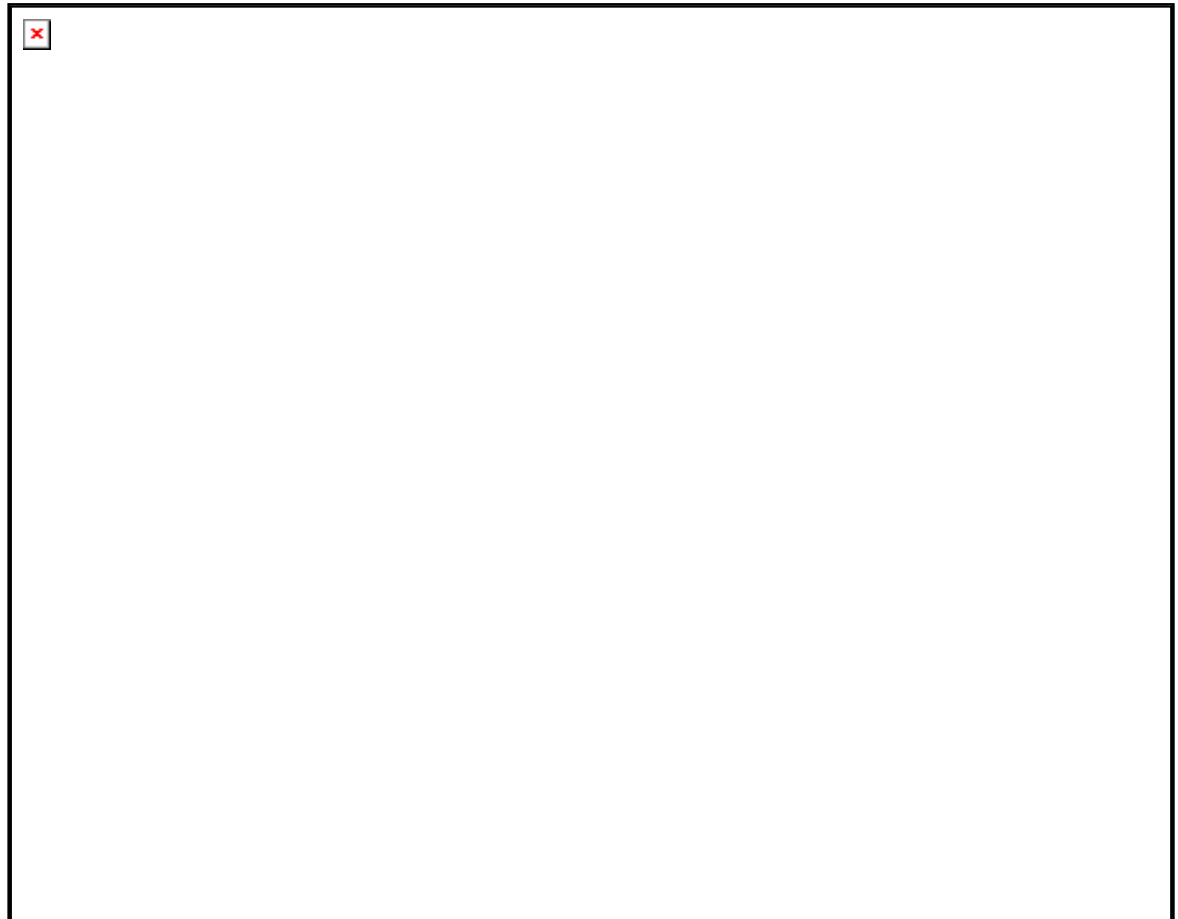
- Network
 - Lab_A
 - ACL
 - 1: 1
 - Banner MOTD
 - Boot System Files
 - CDP
 - Clock Timezone
 - Config-Register: 8450
 - Console
 - Console Line
 - DHCP Server
 - DNS
 - EIGRP
 - Enable Password: class

Authoring PT

Option 3 Create an Activity

Initial Network

- Copy from the Answer Network
- Remove the ACL
- Remove the access-group command from the interface
- At this point, you can lock down the Items

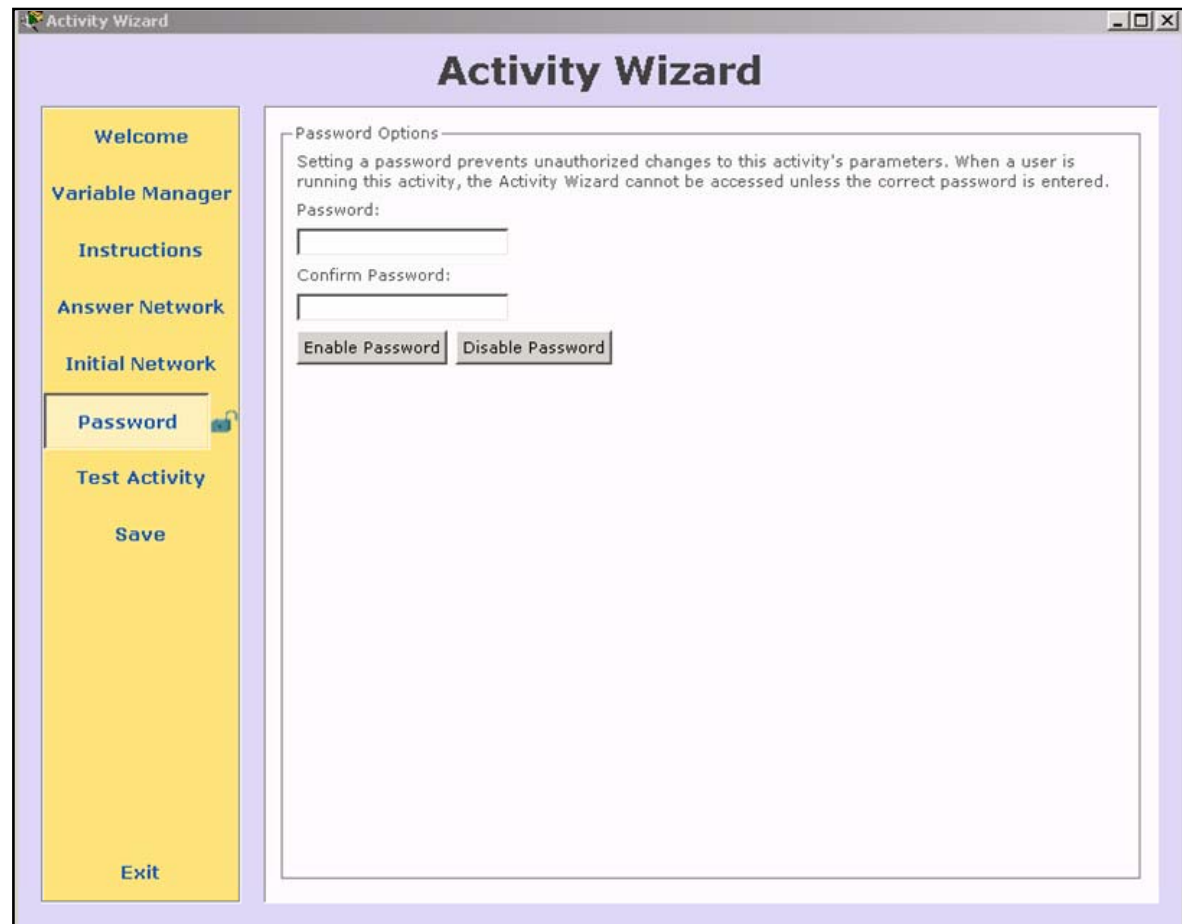


Authoring PT

Option 3 Create an Activity

Password

- This screen allows you to create a password needed to enter the Activity Wizard



The screenshot shows the 'Activity Wizard' window with a sidebar on the left and a main content area on the right. The sidebar contains the following options: Welcome, Variable Manager, Instructions, Answer Network, Initial Network, Password (highlighted with a lock icon), Test Activity, Save, and Exit. The main content area is titled 'Activity Wizard' and contains a section for 'Password Options'. This section includes a text box for 'Password', a text box for 'Confirm Password', and two buttons: 'Enable Password' and 'Disable Password'. A paragraph of text explains that setting a password prevents unauthorized changes to the activity's parameters.

Activity Wizard

Password Options

Setting a password prevents unauthorized changes to this activity's parameters. When a user is running this activity, the Activity Wizard cannot be accessed unless the correct password is entered.

Password:

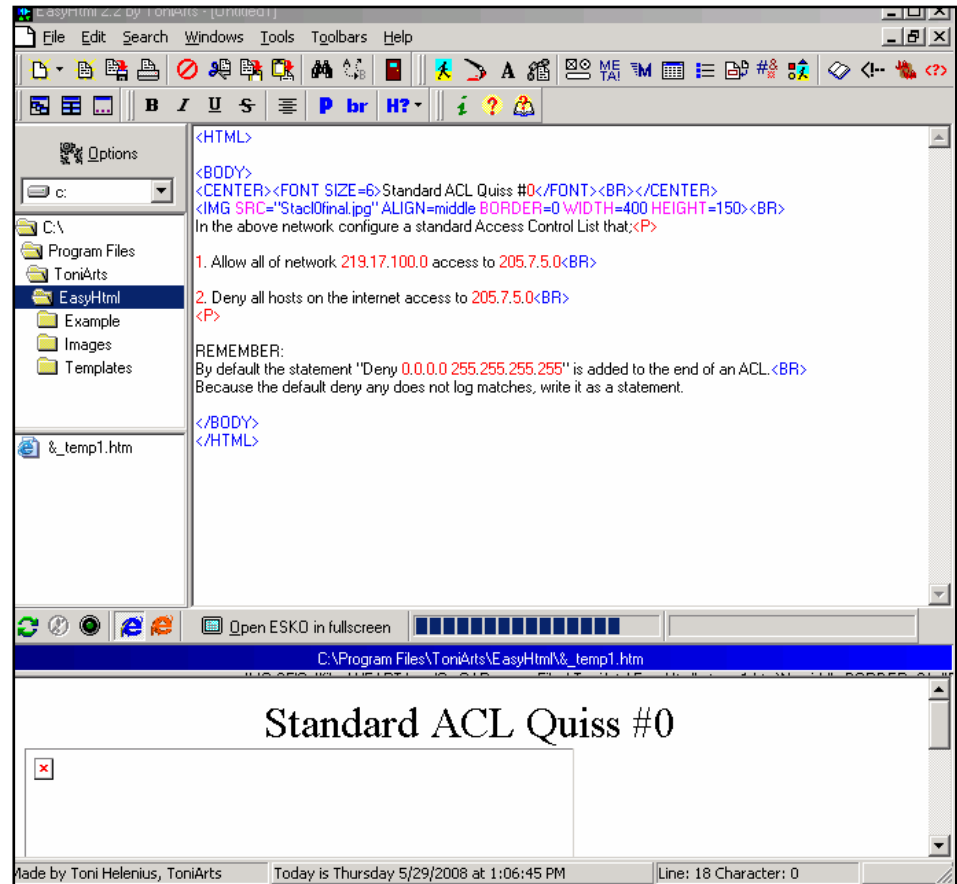
Confirm Password:

Working with Activity Instructions



Activity Instructions

- Instructions in Packet Tracer Activity Wizard are built in simple HTML format
- Most HTML editors write in HTML 4 or XML
- Find a simple HTML editor like Easy HTML
- You will still have to remove code not recognized by PT



Activity Instructions

Partial List of Accepted HTML Commands

<code><h1>...</h1></code>	<code><h5>...</h5></code>	Heading levels	
<code><p>...</p></code>		Paragraph	
<code><center>...</center></code>		Center	
<code>...</code>		Unordered List	
<code>...</code>		Ordered List	
<code>...</code>	<code><dl>...</dl></code>	<code><dt>...</dt></code>	<code><dd>...</dd></code>
<code><pre>...</pre></code>	<code><table>...</table></code>		

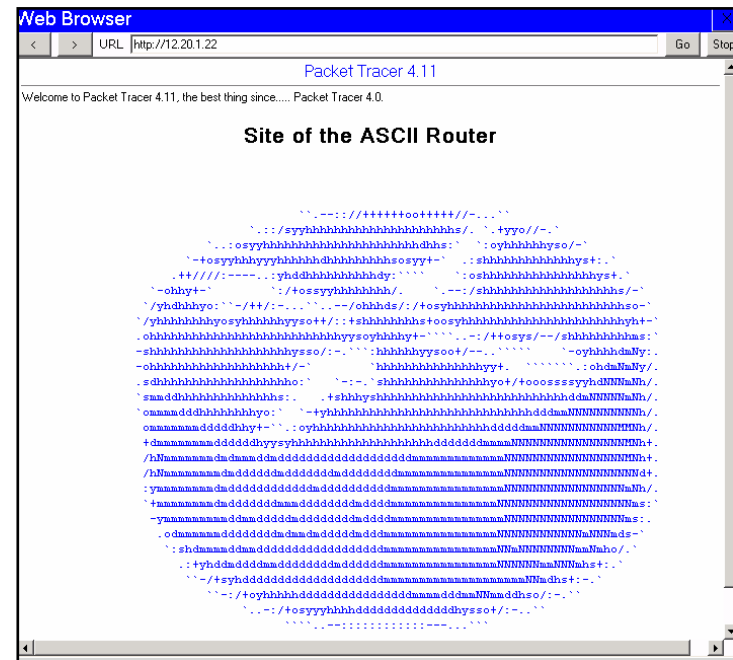
A full list of usable commands is included in the BRK-137T_Advanced_Use_of_PT Folder

Activity Instructions

- Commands that are questionable
 - anchor tags can be used but the referenced file needs to be in the Packet Tracer folder
- Commands that don't work
 - Image tags don't work
 - <meta> metatags don't work

Need an Image?

Try <http://www.text-image.com/convert/>



Assessment Timing and Feedback



Timing

Answer Network Tab

Activity Wizard

Welcome

Variable Manager

Instructions

Answer Network

Initial Network

Password 

Test Activity

Save

Building Answer Network

Show Answer Network

Import/Export

Import File to Answer Network

Export Answer Network to File

Assessment Options

Timing

Connectivity Test

Overall Feedback

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.

Time Settings

Time Elapsed

Countdown

None

0 h : 10 m : 0 s

Elapsed, Countdown Maximum 23:59:59

Feedback

Answer Network Tab

The screenshot displays the 'Activity Wizard' interface. On the left is a yellow sidebar with navigation links: Welcome, Variable Manager, Instructions, Answer Network (highlighted), Initial Network, Password (with a lock icon), Test Activity, and Save. The main content area has a purple header 'Activity Wizard'. Below the header, there are two sections: 'Building Answer Network' with a 'Show Answer Network' button, and 'Import/Export' with 'Import File to Answer Network' and 'Export Answer Network to File' buttons. A tabbed interface below these sections includes 'Assessment Options', 'Timing', 'Connectivity Test', and 'Overall Feedback'. The 'Overall Feedback' tab is active, showing a text area with the message: 'There are two feedback pages. The "Completed Feedback" message is shown when the activity is 100% complete. Otherwise, the "Incomplete Feedback" message is shown.' Below this are two preview boxes: 'Completed Feedback' showing 'Congratulations on completing this activity!' and 'Incomplete Feedback' showing 'This activity is incomplete, please try again.'

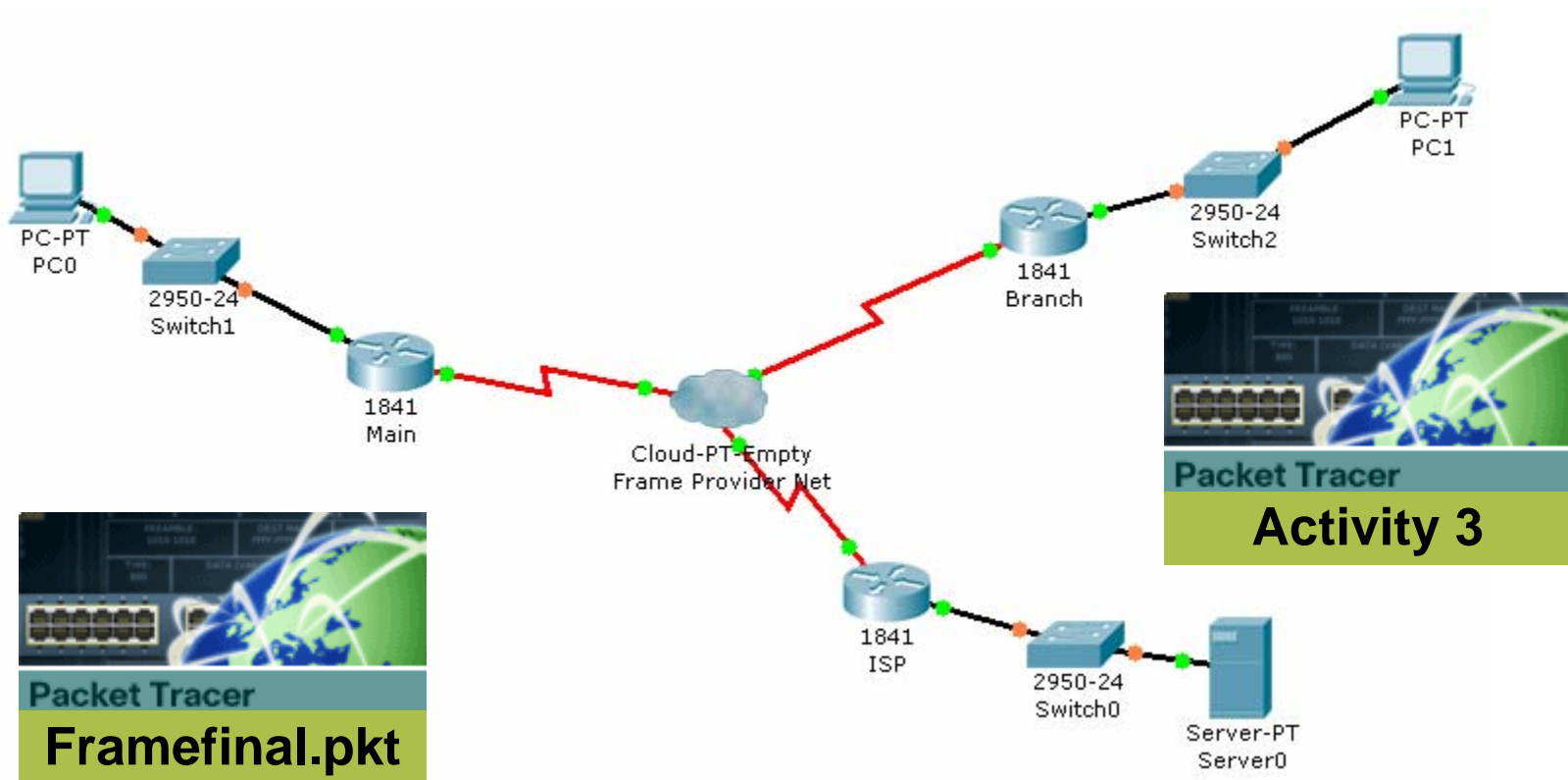
Configurable Text

Activity 3



Activity 3

Creating and Modifying an Activity



Troubleshooting Activities

Changing Answer Networks

Correcting Assessments



Activity 4

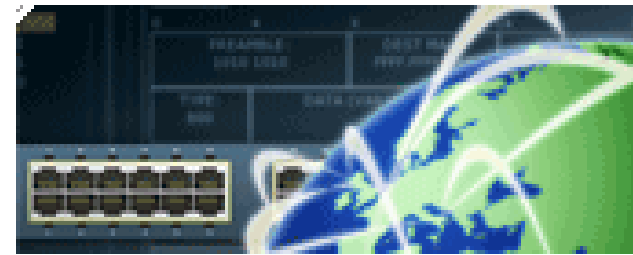
Troubleshooting Assessment Items

Common Errors

- Answer network is incorrect
- Assessment items are not in lab directions
- Directions are wrong



Packet Tracer
Activity



Packet Tracer
FigaWAN_AENeuman.pka

**The Best Practice is to Test
Each Activity Before You Save**

Q and A



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