City & Guilds
Digital and IT Skills Sector

Packet Tracer Guide
Part of City & Guilds' Virtual Assessment Service

Version 1.0 (December 2020)

About this document

This guide is intended to provide an overview of how to access and use Packet Tracer for training providers and apprentices using the City & Guilds End Point Assessment Service.

Content

1. Introduction

This provides the guidance and requirements for training providers and apprentices that intend to use Virtual Assessment option for undertaking Synoptic Projects for the Digital Skills Apprenticeship Standard End Point Assessment (EPA). This will be especially helpful for those training providers who are not directly part of the Cisco Academy programme and only need access to Cisco Packet Tracer, and how to use it, for the purposes of EPA.

City & Guilds does not offer any of the Cisco training and certification programmes through its NetAcad offer, it is only offered as a means to allow our training providers access to Packet Tracer and some basic training in its use. For those who want to offer Cisco programmes and the Vendor qualifications we can provide the relevant contacts, but City & Guilds will not be adding these to our own portfolio.

Our Virtual Assessment Service has developed 2 Synoptic Projects for Network Engineer and 2 Synoptic Projects for Infrastructure that have been specifically written to work with Packet Tracer, which are based on current Projects that use physical resources. In addition, it may be possible to use some of the current Unified Communications Technician with Packet Tracer – but we would advise that a training provider work through any of those they may consider providing to their Apprentices.

2. Enrolling with City & Guilds NetAcad

To allow you and your apprentices to become familiar with Packet Tracer, if you are not a Cisco Academy, then we have provided access a pre-packaged self-enrol course. This shows how Packet Tracer works and the different elements available, as well as the opportunity to download Packet Tracer for free so that you and the apprentices can work alongside the tutorials.

We would recommend using Google Chrome/Microsoft Edge as the browser when using Cisco NetAcad.

To access the City & Guilds NetAcad click on the link on the Digital and IT sector/Updates and webinars page

Miscellaneous

Digital Skills – City & Guilds NetAcad Access

Digital Skills – Apprenticeship Standard Vendor Guide (PDF)

Digital Skills – Synoptic Project Dispensation Form (DOCX)

Digital Skills – Synoptic Project Dispensation Timing Record (DOCX)

You will be presented with this screen and need to complete the details under **Enrol now.**

Once you or the apprentice has entered their name and email address, click on the submit button.

Submit

PT - 10 - resource for End Point Assessment

City & Guilds

Course Details

End-Point-Assessment-PT-101
Introduction to Packet Tracer (English - 1.11)
19 Oct 2020 - 30 Sep 2021
Ian Butters

Description

Packet Tracer download and preparation resource for Apprenticeship End Point Assessment.

By enrolling in this course, you acknowledge:

1. You are accessing **Packet Tracer** as part of the proscribed end-point-assessment.
2. Participating in this course or downloading content does not represent endorsement from Cisco, the Open University or City and Guilds of any additional Cisco studies you may take.
3. Any time used participating in this course does not contribute to time taken on the end-point-assessment. It must be included as part of the apprentices nominal study time.
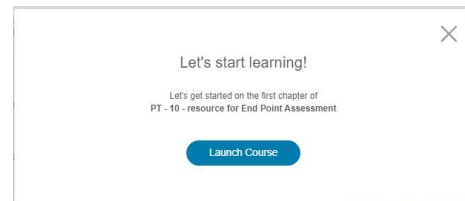
Enroll now

First Name *

Last Name *

Email *

One you have completed the registration; you will be asked to Launch the PT101 course.

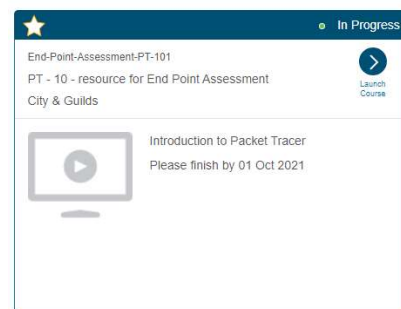You can start later simply by click on the **X** to cancel this and following the instructions that follow

Welcome to the Cisco NetAcad for City & Guilds.
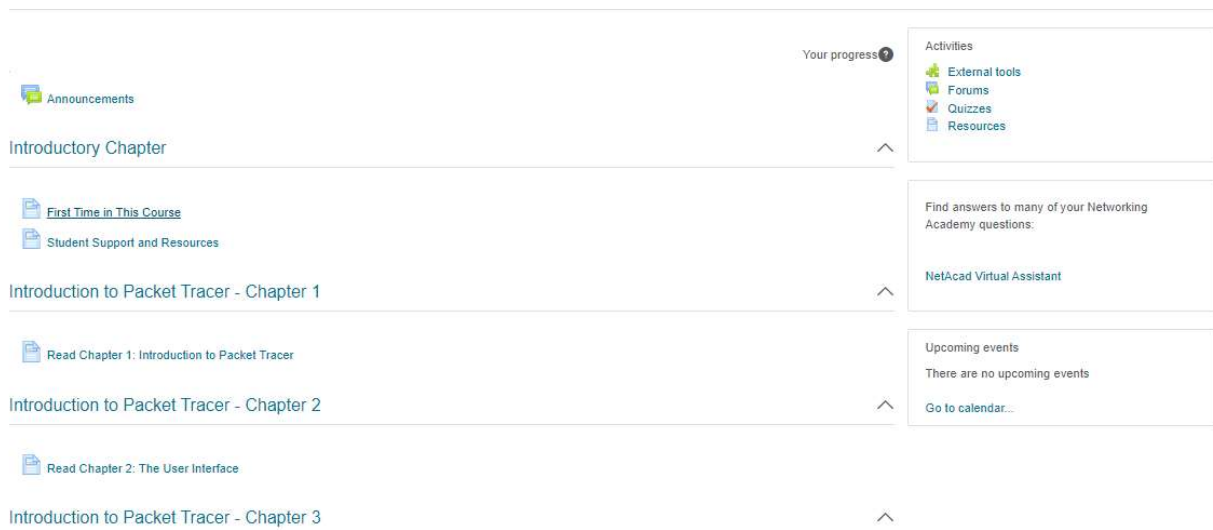
- click on the Launch Course button

This will take you to the web page shown below:

Before you go through the Course, you will need to download a copy of the latest version of Packet Tracer.

The download facility can be found under the **Student Support and Resources**.

Click on the *Student Support and Resources* line

Downloading Packet Tracer

You should now see this page and

Student Support and Resources

You can use your smartphone, tablet, laptop, or desktop to access your course and participate in discussions. However, Packet Tracer activities, as well as some other activities, quizzes, and exams are best experienced on a PC.

Learn to Navigate this Course	
Course Navigation Overview	Other short tutorials are located in the online course Help menu.
Join Our Communities	
Facebook LinkedIn	The Facebook site is where you can meet and engage with other Networking Academy students from around the world. The Cisco Networking Academy LinkedIn site connects you with job postings.
Packet Tracer You can follow this link to obtain your copy of Packet Tracer. Download and install the latest version of Packet Tracer (Student Version).	This course will teach you about Packet Tracer and how to obtain it.

In the **Packet Tracer** box you we will see there is the link to *Download and install the latest version of Packet Tracer*.

Click on the link to go to the **Download Cisco Packet Tracer** page.

On the page you will find a section labelled **Download**.

Windows Desktop Version 7.3.1 English
64 Bit Download   32 Bit Download

Linux Desktop Version 7.3.1 English
64 Bit Download

macOS Version 7.3.1 English
Download

Click on the link for your operating system

- Windows Desktop – 64 Bit or 32 Bit version
- Linux Desktop – 64 Bit
- macOS

Then follow the instructions to complete the instalation.

Once the download is complete you should have the icon for Packet Tracer and clicking on this will open the product for use.

You can also have a copy of Packet Tracer on your mobile phone, though to learn the product and use during the End point Assessment requirements it is best to use the Desktop version.

To download on to a mobile, simply use the QR code for your phones operating system.

Mobile

iOS Version 3.0 English

Android Version 3.0 English

The purpose of early use of Packet Tracer

City & Guilds have worked with Cisco to provide a specific version of NetAcad and it has been made available to allow you (tutor and apprentice) time to become familiar with Packet Tracer. Time spent on this is not prior to End Point Assessment is not taken as part of the synoptic project time.

ADVICE: While you can login to Packet Tracer as a **Guest** and use the product for practice, but we recommend that you use a verified login for the synoptic project as the **Guest** login limits the number of saves and may limit their working.

The apprentice's login can be created by accessing the above course.

3. Packet Tracer basics

Open *Packet Tracer* by clicking on the Packet Tracer Icon.
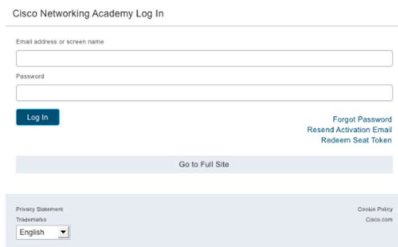
You will be required to login to make use of Packet Tracer,

- enter your **Email address**
- enter your **Password**

Click on the **Log In** button to start.

Creating a simple link

To give you a quick idea of the things that can be done in Packet Tracer, the following instructions will guide you through placing two items on the desktop **Work Area** and then connecting them.

Once Packet Tracer is open you will have a menu across the top with familiar icons for *Open* and *Save* amongst others

Below the Work Area at the bottom are the icons for devices and connections.
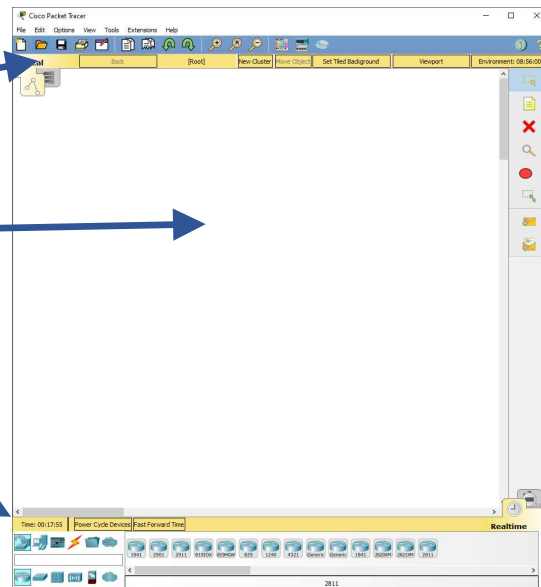
To select an end point device
- click on the **End Devices** icon.

- click on the device to select it
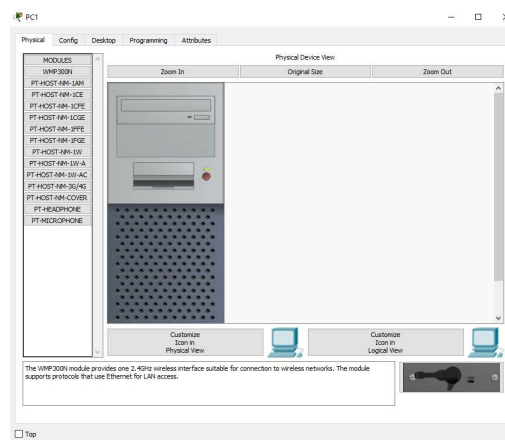- drag it into the Work Area – select the **Generic (PC-PT)**

This device now needs to be configured.

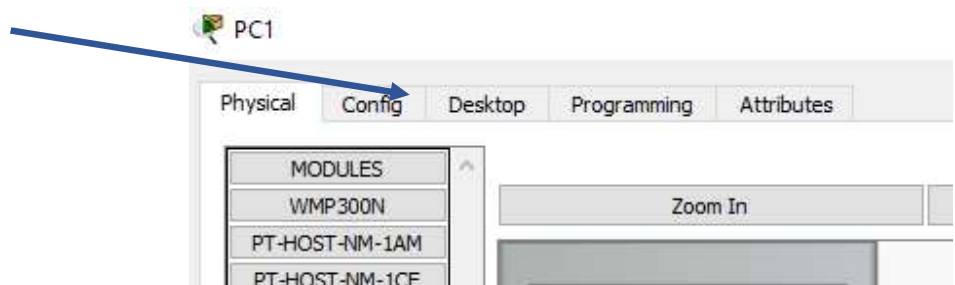- click on the device to open the configuration applet
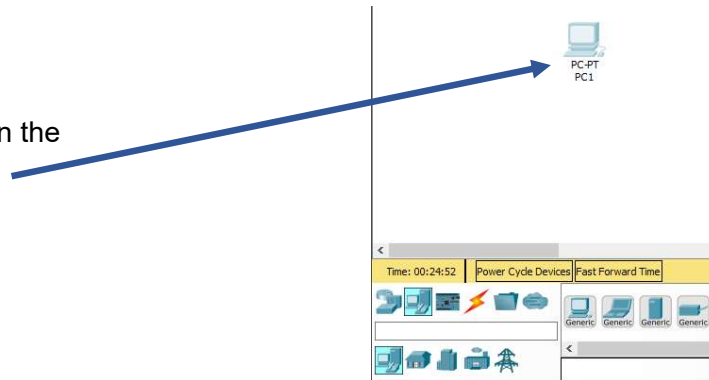
You will now be presented with this screen and can perform various set up operations.

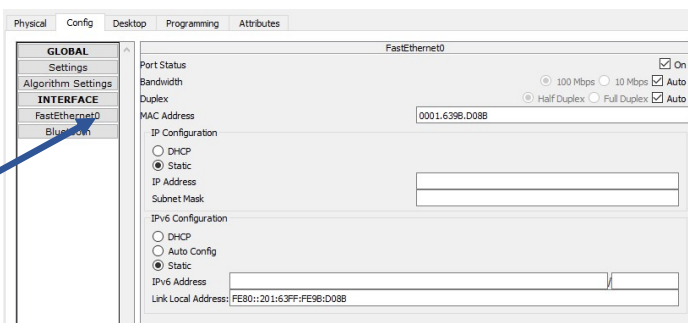For now you are just going to configure the device itself.
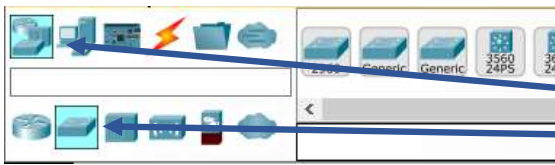
- click on the **Config t**ab

You can now configure the IP address for the Network Interface Card and view the MAC address assigned to this device.

To check these:
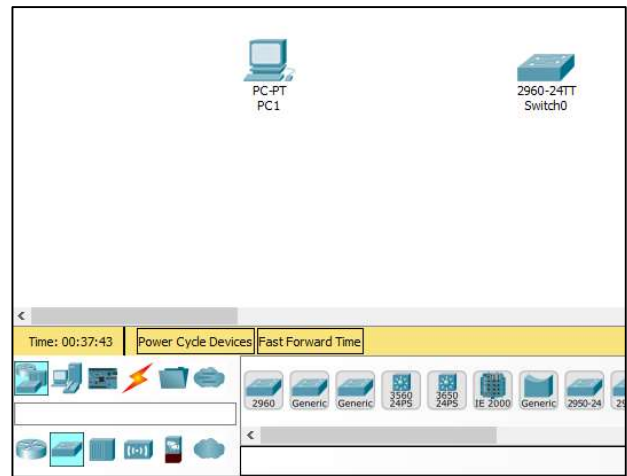
- click on **FastEthernet0**

The next step is to connect this PC to a Switch or router.

- select the **Network Devices** icon
- select the **Switches** icon

- click on the **2960** icon to select it
- drag it into the Work Area

You now have a device (PC) and a switch in the Work Area.

Now they need to be connected

- select the **Connections** icon

You can just click on the **Automatic connection type** icon   , but choose to choose a specific cable:

- select the appropriate cable type

Move the cable mouse image to the PC to begin the connection.

- click on the PC
- select **FastEthernet0**

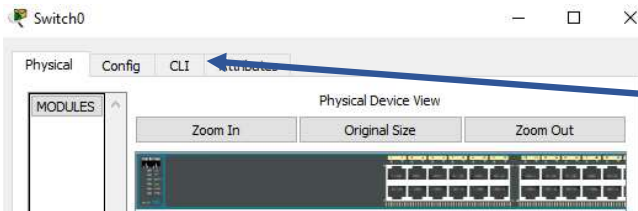Now drag the 'cable' and click on the switch to end with a line between the two devices.

On the list that appears when you click on the Switch, click on **FastEthernet0/1** at the top of the list.

There is a little bit more that needs to be done to complete the set up of the connection you have made. You now have to configure the Switch end of the connection.
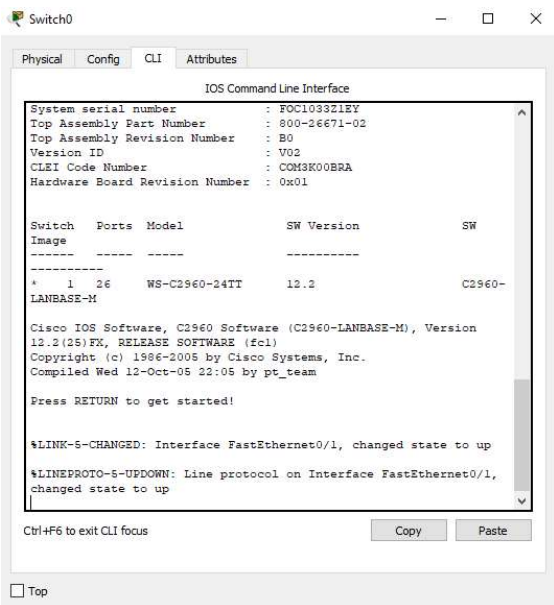
- click on the Switch

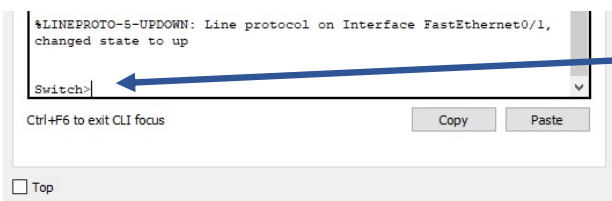When the configuration applet opens, so you can configure the network interface on the switch:

- click on the **CLI** tab

You will now be in the **IOS Command Line Interface** and you need to add some code here to make the connection work.

- Press the return key

You will now be able to edit the script.

At the **Switch** prompt:

- type *Enable* then press the return key to enter **Exec** mode.

hostname

```
Switch>Enable
Switch#Configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#
```

- type *Configure terminal* and press the enter key

You will then be asked to enter configuration commands after **Switch(config)#** prompt.

To change the name of the Switch;

- type *hostname CG1* and press the enter key

```
Switch>Enable
Switch#Configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname CG1
CG1(config)#
```

Having named the Switch you could do further configuration – the prompt now changed to **CG1(config)#**. Let's leave it for now.

To complete the configuration for now and leave the process:

- type *exit* and press the enter key

```
Switch>Enable
Switch#Configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname CG1
CG1(config)#
CG1(config)#exit
CG1#
%SYS-5-CONFIG_I: Configured from console by console
```

Now that is left to do is save you first network connection set up in Packet Tracer.
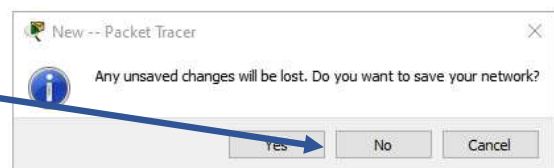
To save your work
- select the **Save** icon

You need to give the file a name:

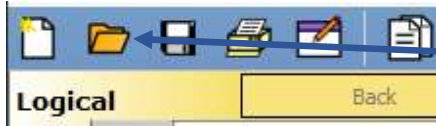- type in *CG1* for the **File name**
- click **Save** and you are done
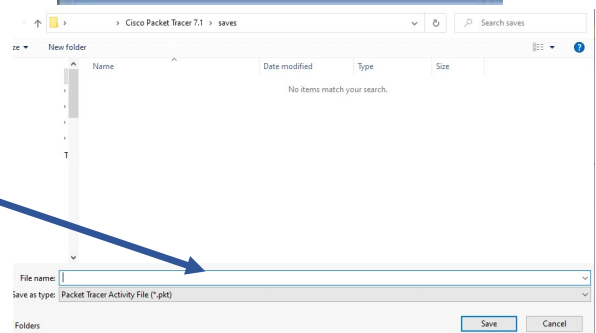
Now let's see if it saved.

- click on the **New** icon to get a blank Work Area

- click **No** to clear start

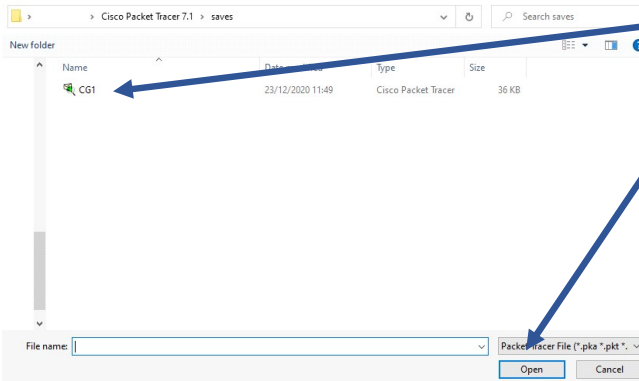![City & Guilds logo - A City & Guilds Group Business]

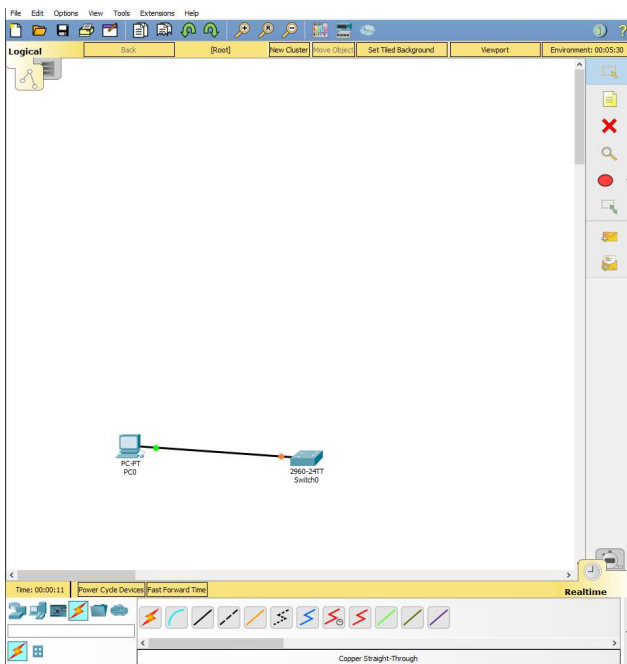# Opening and existing Packet Tracer file (.pkt)

To open a saved network;

- click the **Open file** icon

- select **CG1.pkt**
- click on the **Open** button

There is the work you did and saved, ready to add more devices, switches, etc.

Now you can go onto discovering more about setting up networks in Packet Tracer and other functions through the PT 101 Course and the tutorials provided.

4. Access and using PT 101 - Packet Tracer tutorials

PT 101 provides 8 tutorials, the first 4 of which cover all the basics that you will need to do to undertake the Synoptic Projects for End Point Assessment and covers;

1. *Introduction to Packet Tracer*
2. *The User Interface*
3. *Simulation View*
4. *Packet Tracer Usage*

Plus *Introduction to Packet Tracer - PT Basics Quiz* to test how you got on with the learning
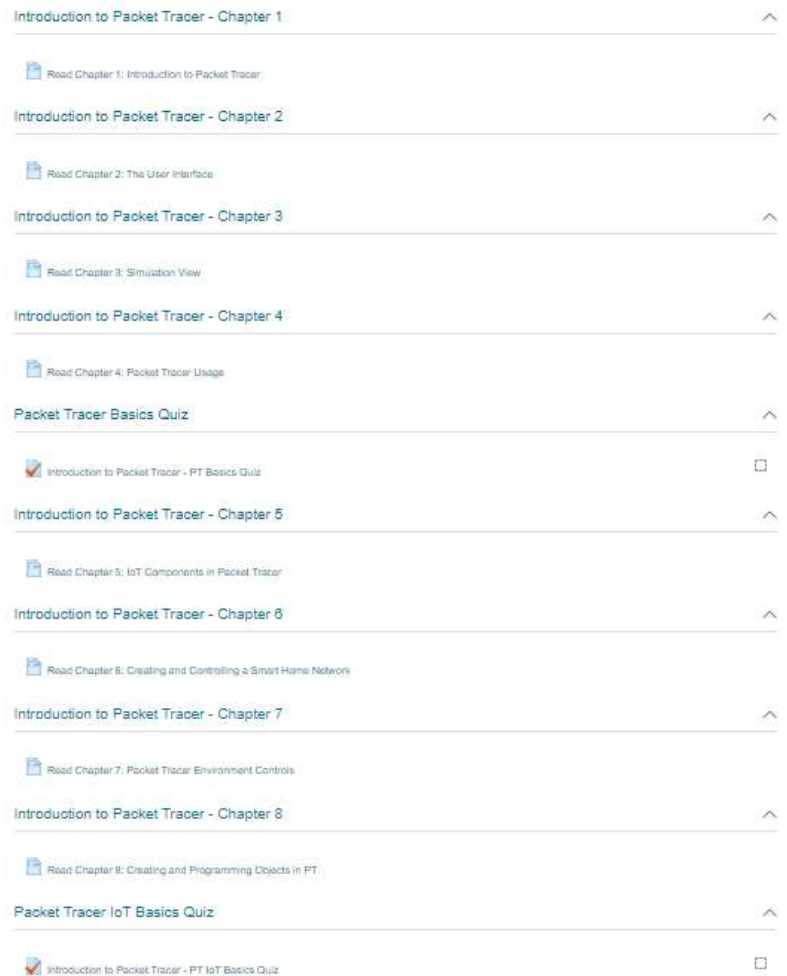
Chapters 6 to 10 cover more in depth activities that include;

5. *IoT Components in Packet Tracer*
6. *Creating and Controlling a Smart Home Network*
7. *Packet Tracer Environment controls*
8. *Creating and Programming Objects in PT*

Plus *Introduction to Packet Tracer - PT IoT Basics Quiz* to test how you got on with the learning.

Those on the Infrastructure Technician, Network Engineer and Unified Communications Technician Standards should go through the first 4 chapters. Those doing the Network Engineer programme, may find the content of the last 4 chapters useful both toward their learning and their job role.

To begin the tutorials simply click on the link under the chapter you are about to start or are have already begun. Let's have a quick look.

- Click on *Read Chapter 1: Introduction to Packet Tracer*

Introduction to Packet Tracer - Chapter 1

    Read Chapter 1: Introduction to Packet Tracer

Introduction to Packet Tracer - Chapter 2

    Read Chapter 2: The User Interface

Introduction to Packet Tracer - Chapter 3

    Read Chapter 3: Simulation View

Introduction to Packet Tracer - Chapter 4

    Read Chapter 4: Packet Tracer Usage

Packet Tracer Basics Quiz

    Introduction to Packet Tracer - PT Basics Quiz

Introduction to Packet Tracer - Chapter 5

    Read Chapter 5: IoT Components in Packet Tracer

Introduction to Packet Tracer - Chapter 6

    Read Chapter 6: Creating and Controlling a Smart Home Network

Introduction to Packet Tracer - Chapter 7

    Read Chapter 7: Packet Tracer Environment Controls

Introduction to Packet Tracer - Chapter 8

    Read Chapter 8: Creating and Programming Objects in PT

Packet Tracer IoT Basics Quiz

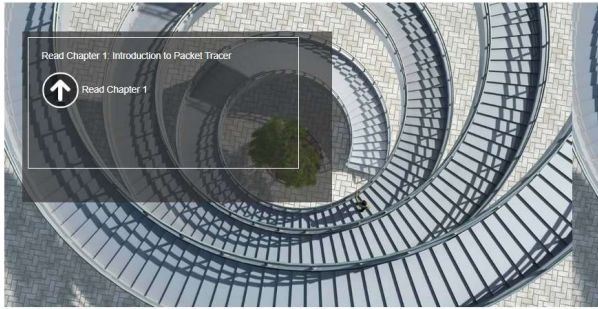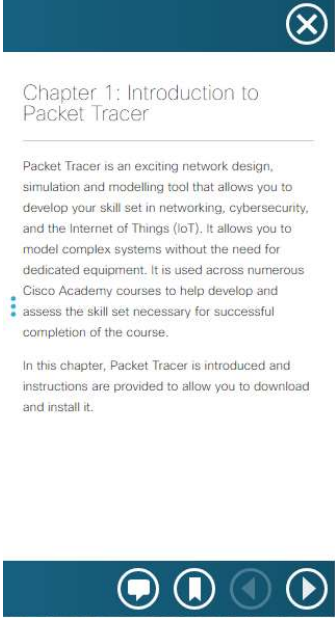   Introduction to Packet Tracer - PT IoT Basics Quiz

Introduction to Packet Tracer - Chapter 1

    Read Chapter 1: Introduction to Packet Tracer

Introduction to Packet Tracer – quick view

PT - 10 - resource for End Point Assessment

Read Chapter 1: Introduction to Packet Tracer

Last modified: Friday, 31 January 2020, 4:03 PM

To begin the tutorials simply click on the link under the chapter you are about to start or are have already begun. Let's have a quick look.

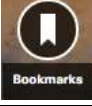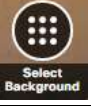- Click on *Read Chapter 1: Introduction to Packet Tracer*
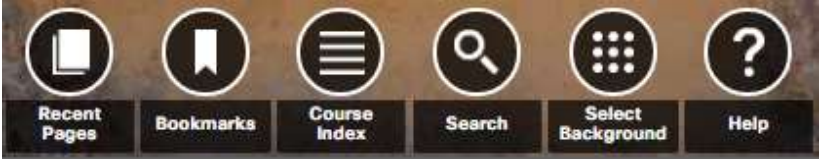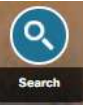
- Click any image to begin the programme

This will be the background image for this Chapter.

-
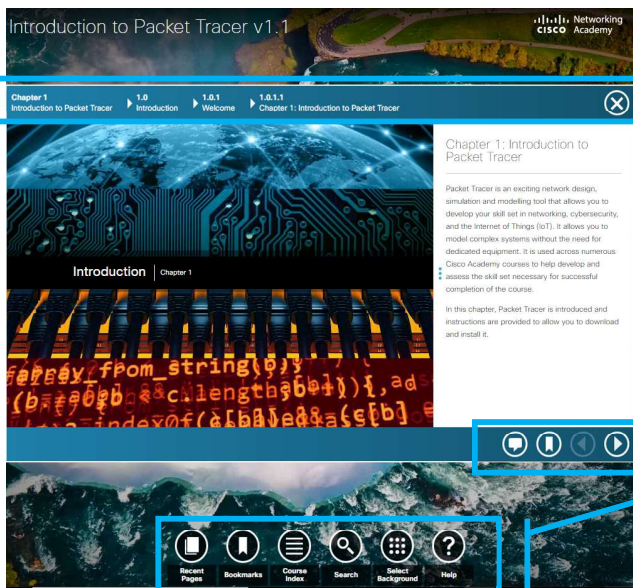
You will be presented with the Introduction to the chapter as shown and can use the various icons on the screen to navigate through the learning material.

Tutorial screen explained

The information at the top of the screen tells you where you are in the programme: • Chapter 1, Introduction, Welcome, Introduction to Packet Tracer	

	"Lesson" content explanation – in this case just an explanation of what Packet Tracer is and what you can do with it. Should the content be longer than the white space, this area can be expanded by clicking on the ⋮ To move to the next section of the tutorial: • Click on ▶ To move back a section of the tutorial: • Click on ◀ You can book mark a "page": • Click on 🔖

The icons at the bottom of the page allows you to see:

|			
	show the recent pages visted in this learning session		search for "term(s)" in across Chapters
	shows a list of the Bookmarks that you have set up		allows you to select a different image for the background
	show the list of Chapters that are available in this programme		provides help in using the learning materials

You can also access the Chpaters sedctions by clicking on one of the links at the top of the page and it will show the page below.
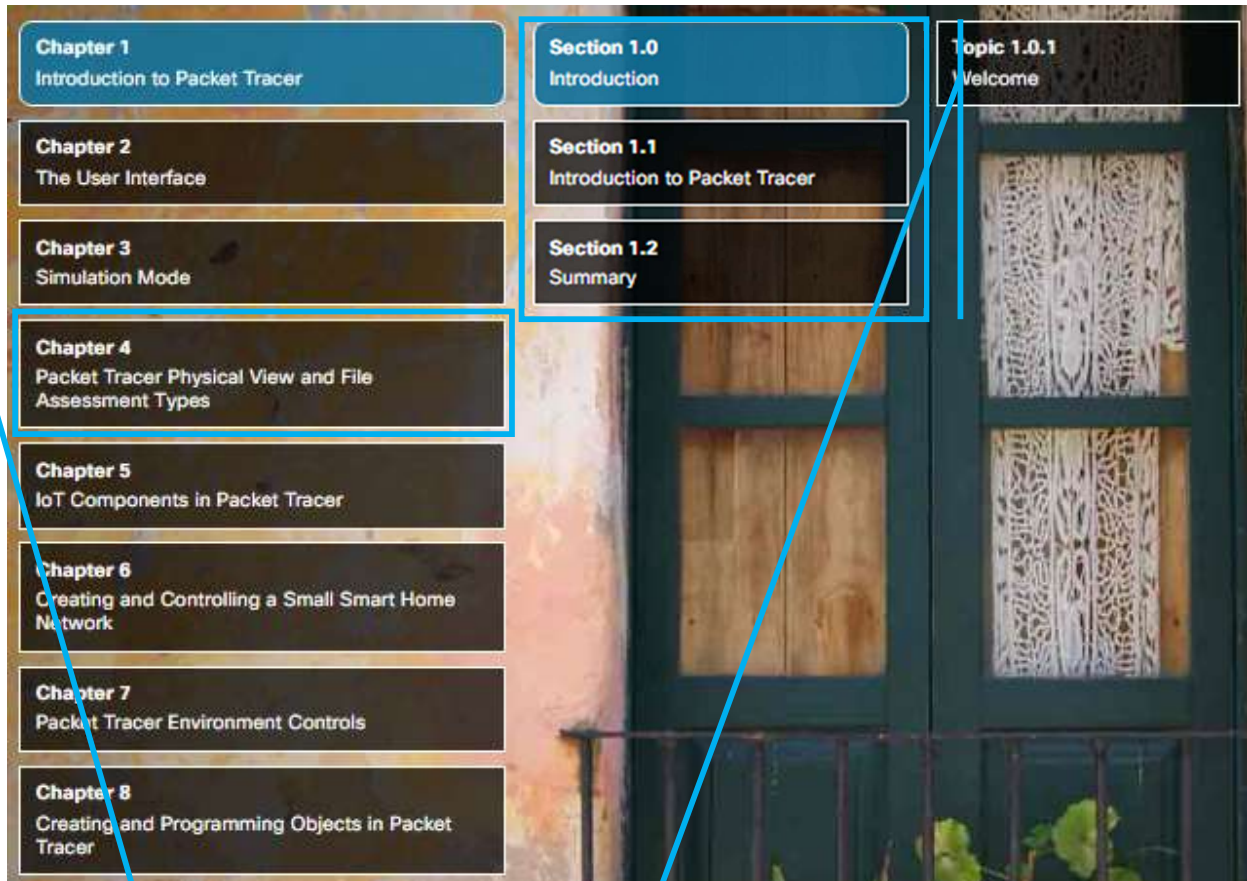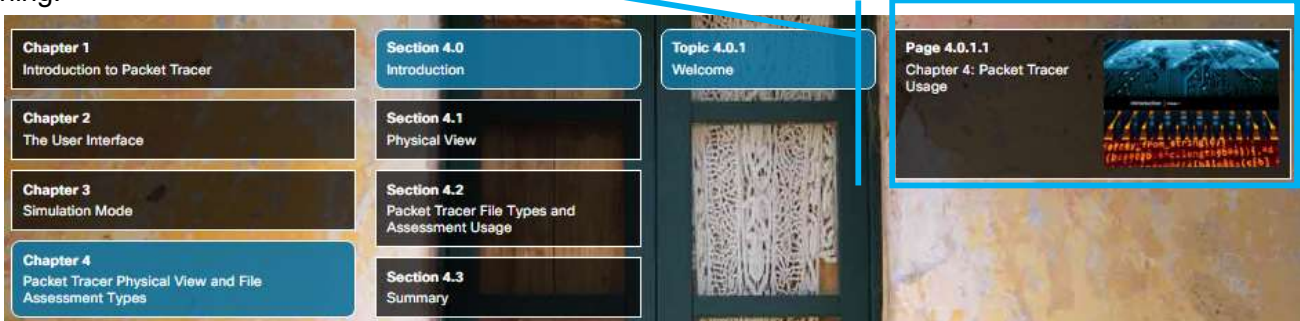

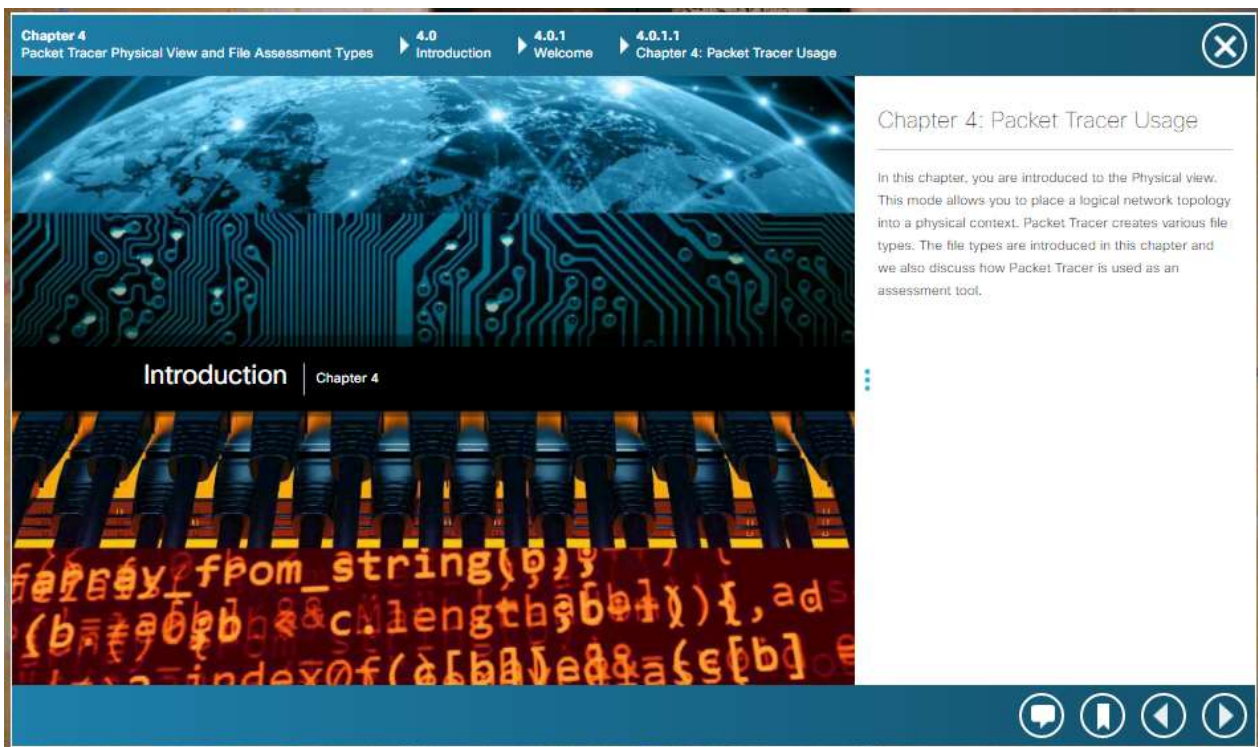Clicking on a Chapter heading will open up the Section content that it covers.

- Click on Chapter 4 to see this change as below
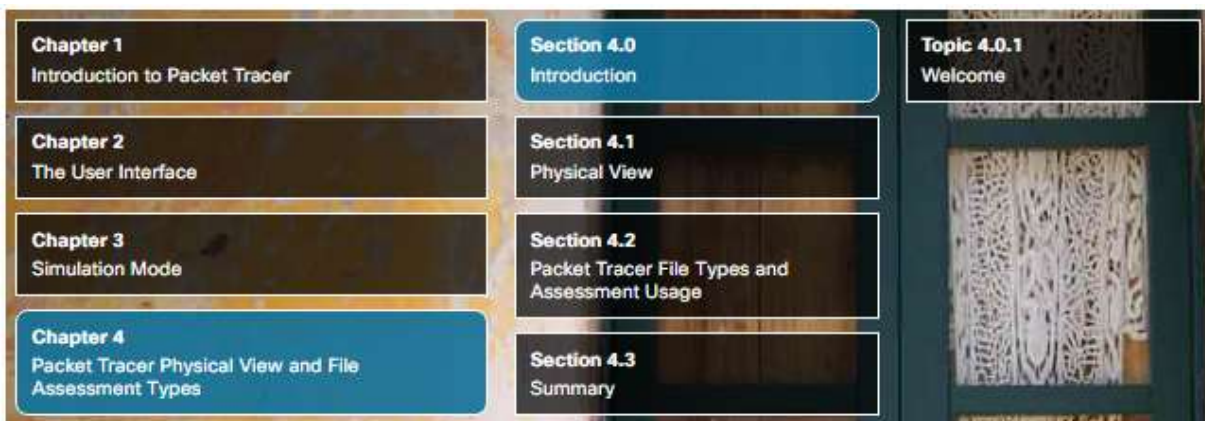
BY clicking on the Topic, you will get a large image that once clicked on will take you in to that session of learning.

Like this.

You should now be in a position to use your copy of Packet Tracer and work through the learning materials here to get experience in how it works to enable you to complete formative assessment activities to prepare you for the End Point Assessment Synoptic Project as part of our Virtual Assessment Service.

Enjoy.

5. Summary

City & Guilds has worked with our Cisco support partner to provide free access to Packet Tracer and learning materials for tutor/assessors and apprentices. This will allow you to become familiar with the product should they wish to use our Virtual Assessment Service for Network Engineer and Infrastructure Technician Synoptic Projects that have been written specifically for Packet Tracer.

This is not a City & Guilds product and is offer as and not supported directly. Any issues can be sent to City & Guilds, but these will need to be escalated to our Cisco Support Partner. Uses of this service do so at their own risk and accept that the information on system requirements and this document are provided to help support centres and their apprentices, it does not form part of any contractual arrangement.

Giltspur House 5-6 Giltspur Street London EC1A 9DE
T +44 (0)20 7294 2468
F +44 (0)20 7294 2400

cityandguilds.com