

1 Networking Today

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1.0.1 Why should I take this module?

Welcome to Networking Today!

Congratulations! This module starts you on your path to a successful career in Information Technology by giving you a foundational understanding of the creation, operation, and maintenance of networks. As a bonus, you get to dive into networking simulations using Packet Tracer. We promise you will really enjoy it!

1.0.2 What will I learn to do in this module?

Module Title: Networking Today

Module Objective: Explain the advances in modern network technologies.

Topic Title	Topic Objective
Networks Affect our Lives	Explain how networks affect our daily lives.
Network Components	Explain how host and network devices are used.
Network Representations and Topologies	Explain network representations and how they are used in network topologies.
Common Types of Networks	Compare the characteristics of common types of networks.
Internet Connections	Explain how LANs and WANs interconnect to the internet.
Reliable Networks	Describe the four basic requirements of a reliable network.
Network Trends	Explain how trends such as BYOD, online collaboration, video, and cloud computing are changing the way we interact.
Network Security	Identify some basic security threats and solution for all networks.
The IT Professional	Explain employment opportunities in the networking field.

1.0.3 Video - Download and Install Packet Tracer

This video will show you how to download and install Packet Tracer. You will use Packet Tracer to simulate creating and testing networks on your computer. Packet Tracer is a fun, take-home, flexible software program that will give you the opportunity to use the network representations and theories that you have just learned to build network models and explore relatively complex LANs and WANs.

Students commonly use Packet Tracer to:

- Prepare for a certification exam.
- Practice what they learn in networking courses.
- Sharpen their skills for a job interview.
- Examine the impact of adding new technologies into existing network designs.
- Build their skills for jobs in the Internet of Things.
- Compete in Global Design Challenges (take a look at the 2017 PT 7 Design Challenge on Facebook).

Packet Tracer is an essential learning tool used in many Cisco Networking Academy courses.

To obtain and install your copy of Cisco Packet Tracer follow these steps:

- Step 1. Log into your Cisco Networking Academy "I'm Learning" page.
- Step 2. Select Resources.
- Step 3. Select Download Packet Tracer.
- Step 4. Select the version of Packet Tracer you require.
- Step 5. Save the file to your computer.
- Step 6. Launch the Packet Tracer install program.

Click Play in the video for a detailed walk-through of the Packet Tracer download and installation process.

1.0.4 Video - Getting Started in Cisco Packet Tracer

Packet Tracer is a tool that allows you to simulate real networks. It provides three main menus:

- You can add devices and connect them via cables or wireless.
- You can select, delete, inspect, label, and group components within your network.
- You can manage your network by opening an existing/sample network, saving your current network, and modifying your user profile or preferences.

If you have used any program such as a word processor or spreadsheet, you are already familiar with the File menu commands located in the top menu bar. The Open, Save, Save As, and Exit commands work as they would for any program, but there are two commands that are special to Packet Tracer.

The Open Samples command will display a directory of prebuilt examples of features and configurations of various network and Internet of Things devices included within Packet Tracer.

The Exit and Logout command will remove the registration information for this copy of Packet Tracer and require the next user of this copy of Packet Tracer to do the login procedure again.

Click Play in the video to learn how to use the menus and how to create your first Packet Tracer network.

1.0.5 Packet Tracer - Logical and Physical Mode Exploration

The network model in this Packet Tracer Physical Mode (PTPM) activity incorporates many of the technologies that you can master in Cisco Networking Academy courses. It represents a simplified version of how a small to medium-sized business network might look.

Most of the devices in the Seward branch office and Warrenton data center are already deployed and configured. You have just been hired to review the devices and networks deployed. It is not important that you understand everything you see and do in this activity. Feel free to explore the network on your own. If you wish to proceed more systematically, follow the steps below. Answer the questions to the best of your ability.

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