

# Start Your Network+ Certification Today!

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CompTIA Network+ certification establishes knowledge of networking features and functions and is the leading certification for networking professionals. The actual exam covers network technologies, devices, management, tools, and security.

+ [Managing and Monitoring the Network](#) (2 hours)

Proper management and monitoring of a network can prevent many problems that commonly occur in a network environment as well as make troubleshooting problems that do arise that much easier. This course describes how to document and diagram the network environment and the procedures that should be in place to ensure that all documentation is up to date.

+ [Network Addressing](#) (1.5 hours)

All network devices have a hardware address but communication is enabled through the use of logical addresses, most commonly IP addresses. This course describes the two most common types of network addresses – MAC addresses and IP addresses.

+ [Network Components](#) (1.5 hours)

In order for devices on a network to communicate, some type of medium has to be in place. Types of communication media include physical cable, copper or fiber optic, and can also refer to radio waves, such as in the case of wireless networks. This course covers the different standards that apply to network media and the types of media that can be used on a network.

+ [Network Devices](#) (1.5 hours)

There are a variety of devices that are used on a network. Depending on the design and requirements of the network, the choice of devices put in place will vary. This course describes network devices from the user level, which includes network interface cards, firewalls, and modems, to network level devices, such as routers, switches, and bridges.

+ [Network Fundamentals](#) (2 hours)

The physical and logical 'shape' of a network is called the topology. Topologies have a great deal to do with how a network communicates and even what devices and media can be used on the network. This course covers the basic devices used in a network and focuses on the different logical and physical topologies that networks can be based on.

+ [Network Protocols](#) (3 hours)

The Open Systems Interconnection (OSI) model is a set of communication standards, or protocols, that enable devices and applications to communicate with each other, regardless of their origin. In this course, the OSI model is explained as is a wide range of protocols, including those that are part of the TCP/IP suite of protocols.

+ [Network Security](#) (2.5 hours)

Security technologies can take the form of protocols, applications, and hardware devices, and many of these things can be found in today's enterprise networks as well as most home networks. This course focuses on the threats facing today's networks and information, and the steps administrators can take to mitigate these issues. It also explores the processes and procedures that should be in place to prevent security breaches and to recover from threats that get past network defenses.

+ [Routing](#) (1 hour)

Routing paths are selected by a number of criteria, including cost, administrative distance, and available bandwidth. Evaluation of the criteria is generally performed by routers, which is known as dynamic routing, although paths can also be selected manually, which is known as static routing. This course covers many of the routing concepts, including dynamic and static routing.

+ [Troubleshooting the Network](#) (2 hours)

Knowing the proper troubleshooting methodology and being familiar with the many tools available to troubleshoot network issues will make the task of finding and solving problems that much easier. This course describes basic troubleshooting practices, including the steps for information gathering and documentation, to use to solve all sorts of issues.

+ [Wide Area Networks](#) (1.5 hours)

Wide Area Networks, or WANs, are defined as computer networks that cover a broad geographical area and use routers and public links to connect unrelated networks with each other. This course describes how WANs function and the components that make them work.

+ [Wireless Networks](#) (1.5 hours)

Wireless networks are one of the fastest growing sectors in networking today. The convenience and simplicity of wireless technology contributed to its explosive growth over the last few years. This course introduces the 802.11x wireless standards and describes the components of basic wireless networks.

+ [TestPrep N10-004 Network+](#) (1.5 hours)

TestPrep can be taken in either Study or Certification mode. Study mode is designed to maximize learning by not only testing your knowledge of the material, but also by providing additional information on the topics presented. Certification mode is designed to test your knowledge of the material within a structured testing environment, providing valuable feedback at the end of the test.

As with all AgLearn resources, these are available to all USDA employees at no cost to you!