

# CompTIA A+

**Course duration** : 5 days

**Audience** : For technicians who want to learn the skills to service and troubleshoot PC equipment.

## Operating System Technologies

### Domain 1 : Operating System Fundamentals

- Identify the major desktop components and interfaces, and their functions. Differentiate the characteristics of Windows 9x/Me, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP.
- Identify the names, locations, purpose, and contents of major system files.
- Demonstrate the ability to use command-line functions and utilities to manage the operating system, including the proper syntax and switches.
- Identify basic concepts and procedures for creating, viewing, and managing disks, directories and files. This includes procedures for changing file attributes and the ramifications of those changes (eg, security issues).
- Identify the major operating system utilities, their purpose, location, and available switches.

### Domain 2 : Installation, Configuration & Upgrading

- Identify the procedures for installing Windows 9x/Me, Windows NT 4.0 Workstation, Windows 2000 Professionals, and Windows XP, and bring the operating system to a basic operational level.
- Identify steps to perform an operating system upgrade from Windows 9.x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP. Given an upgrade scenario, choose the appropriate next steps.
- Identify the basic boot sequences and boot methods, including the steps to create an emergency boot disk with utilities installed for Windows 9x/Me, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP.

- Identify procedures for installing/adding a device, including loading, adding, and configuring device drivers, and required software.
- Identify procedures necessary to optimize the operating system and major operating system subsystems.

### Domain 3 : Diagnosing & Troubleshooting

- Recognize and interpret the meaning of common error codes and startup messages from the boot sequence, and identify steps to correct the problems.
- Recognize when to use common diagnostic utilities and tools. Given a diagnostic scenario involving one of these utilities or tools, select the appropriate steps needed to resolve the problem.
- Recognize common operational and usability problems and determine how to resolve them.

### Domain 4 : Networks

- Identifying the networking capabilities of Windows. Given configuration parameters, configure the operating system to connect to a network.
- Identify the basic Internet protocols and terminologies. Identify procedures for establishing Internet connectivity. In a given scenario, configure the operating system to connect to and use Internet resources.

# CompTIA A+ Core Hardware

## Domain 1 : Installation, Configuration & Upgrading

- Identify the names, purpose, and characteristics, of system modules. Recognize these modules by sight or definition.
- Identify basic procedures for adding and removing field-replaceable modules for desktop systems. Given a replacement scenario, choose the appropriate sequences.
- Identify basic procedures for adding and removing field-replaceable modules for portable systems. Given a replacement scenario, choose the appropriate sequences.
- Identify typical IRQs, DMAs, and I/O addresses, and procedures for altering these settings when installing and configuring devices. Choose the appropriate installation or configuration steps in a given scenario.
- Identify the names, purpose, and performance characteristics, of standardized/common peripheral ports, associated cabling, and their connectors. Recognize ports, cabling, and connectors, by sight.
- Identify proper procedures for installing and configuring common IDE devices. Choose the appropriate installation or configuration sequences in given scenarios. Recognize the associated cables.
- Identify proper procedures for installing and configuring common SCSI devices. Choose the appropriate installation or configuration sequences in given scenarios. Recognize the associated cables.
- Identify proper procedures for installing and configuring common peripheral devices. Choose the appropriate installation or configuration sequences in given scenarios.
- Identify procedures to optimize PC operations in specific situations. Predict the efforts of specific procedures under given scenarios.
- Determine the issues that must be considered when upgrading a PC. In a given scenario, determine when and how to upgrade system components,

## Domain 2 : Diagnosing & Troubleshooting

- Recognize common problems associated with each module and their symptoms, and identify steps to isolate and troubleshoot the problems.
- Identify basic troubleshooting procedures and tools, and how to elicit problem symptoms from customers.

## Domain 3 : PC Preventive Maintenance, Safety & Environmental Issues

- Identify the various types of preventive maintenance measures, products and procedures and when and how to use them.
- Identify various safety measures and procedures, and when/how to use them.
- Identify environmental protection measures and procedures, and when/how to use them.

## Domain 4 :

### Motherboard/Processors/Memory

- Distinguish between the popular CPU chips in terms of their basic characteristics.
- Identify the types of RAM (Random Access Memory), form factors, and operational characteristics. Determine banking and speed requirements under given scenarios.
- Identify the most popular types of motherboards, their components, and their architecture (bus structures).
- Identify the purpose of CMOS (Complementary Metal-Oxide Semiconductor) memory, what it contains, and how and when to change its parameters. Given a scenario involving CMOS, choose the appropriate course of action.

## Domain 5 : Printers

- Identify printer technologies, interfaces, and options/upgrades.
- Recognize common printer and techniques used to resolve them.

## Domain 6 : Basic Networking

- Identify the common types of network cables, their characteristics and connectors.
- Identify basic networking concepts including how a network works.
- Identify common technologies available for establishing Internet connectivity and their characteristics.

## Training Methodology

- Classroom based lecture and hands-on Lab sessions
- Provides numerous screenshots and diagrams that illustrate important utilities and concepts.
- Features extensive learning tools, including review questions, hands-on projects.



**Certification :** This course prepares individuals for the CompTIA A+ Certification Exam.

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