CompTIA A+ Certification: A Comprehensive Approach (Exams 220-801 and 220-802)

Course Summary

Description

If you are getting ready for a career as an entry-level information technology (IT) professional or personal computer (PC) service technician, the CompTIA A+ Certification course is the first step in your preparation. The course will build on your existing user-level knowledge and experience with personal computer software and hardware to present fundamental skills and concepts that you will use on the job. In this course, you will acquire the essential skills and information you will need to install, upgrade, repair, configure, troubleshoot, optimize, and perform preventative maintenance of basic personal computer hardware and operating systems.

The CompTIA A+ Certification course can benefit you in two ways. Whether you work or plan to work in a mobile or corporate environment where you have a high level of face-to-face customer interaction, where client communication and client training are important, or in an environment with limited customer interaction and an emphasis on hardware activities, this course provides the background knowledge and skills you will require to be a successful A+ technician. It can also assist you if you are preparing to take the CompTIA A+ certification examinations, 2012 objectives (exam numbers 220-801, 220-802), in order to become a CompTIA A+ Certified Professional.

Objectives
At the end of this course, students will be able to:

- Identify the components of standard desktop personal computers.
- Identify fundamental components and functions of personal computer operating systems.
- Identify best practices followed by professional personal computer technicians.
- Install and configure computer components.
- Install and configure system components.
- Maintain and troubleshoot peripheral components.
- Troubleshoot system components.
- Install and configure operating systems.
- Maintain and troubleshoot installations of Microsoft Windows.
- Identify network technologies.
- Install and manage network connections.
- Support laptops and portable computing devices.
- Support printers.
- Identify personal computer security concepts.
- Support personal computer security.

Topics

- Hardware Fundamentals
- Operating System Fundamentals
- Operational Procedures
- Peripheral Components
- Managing System Components
- Installing and Configuring Operating Systems
- Customized Client Environments
- Networking Technologies
- Installing, Configuring, and Maintaining SOHO Networks
- Supporting Laptops
- Mobile Computing
- Supporting Printers
- Security
- Troubleshooting Hardware Components
- Troubleshooting System-Wide Issues

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CompTIA A+ Certification: A Comprehensive Approach (Exams 220-801 and 220-802)

Course Summary (cont'd)

Audience

The target student is anyone with basic computer user skills who is interested in obtaining a job as an IT professional or PC technician. In addition, this course will help prepare students to achieve a CompTIA A+ Certification.

Prerequisites

Students taking this course should have the following skills: end-user skills with Windows-based personal computers, including the ability to: browse and search for information on the Internet; start up, shut down, and log on to a computer and network; run programs; and move, copy, delete, and rename files in Windows Explorer. Students should also have basic knowledge of computing concepts, including the difference between hardware and software; the functions of software components, such as the operating system, applications, and file systems; and the function of a computer network.

An introductory course in a Windows operating system, or equivalent skills and knowledge, is required. Students can take any one of the following Logical Operations courses: Introduction to Personal Computers: Using Windows XP or Introduction to Personal Computers: Using Windows 7.
The following Logical Operations courses are also recommended: Windows XP: Introduction or Microsoft Windows 7: Level 1.

Duration

Five days

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CompTIA A+ Certification: A Comprehensive Approach for All 2009 Exam Objectives (Windows 7)

Course Outline

I. Hardware Fundamentals
- A. Computer System Components
- B. Storage Devices
- C. Device Connections and Interfaces

II. Operating System Fundamentals
- A. Personal Computer Operating Systems
- B. Windows Control Panel Utilities
- C. Command Line Tools
- D. Windows Security Settings
- E. Windows Operating System Tools

III. Operational Procedures
- A. Basic Maintenance Tools and Techniques
- B. Electrical Safety
- C. Environmental Safety and Materials Handling
- D. Professionalism and Communication

IV. Peripheral Components
- A. Install and Configure Display Devices
- B. Install and Configure Input Devices
- C. Install and Configure Expansion Cards
- D. Install and Configure Multimedia Devices

V. Managing System Components
- A. Motherboards
- B. CPUs and Cooling Systems
- C. Select and Install Power Supplies
- D. RAM Types and Features
- E. Install and Configure Storage Devices
- F. Configure the System BIOS

VI. Installing and Configuring Operating Systems
- A. Implement Virtualization
- B. Install Microsoft Windows
- C. Windows Upgrades
- D. Windows Preventive Maintenance

VII. Customized Client Environments
- A. Standard Clients
- B. Custom Client Environments

VIII. Networking Technologies
- A. Physical Network Connections
- B. TCP/IP
- C. Network Connectivity
- D. Ports and Protocols
- E. Set Up and Configure Windows Networking
- F. Networking Tools

IX. Installing, Configuring, and Maintaining SOHO Networks
- A. Install and Configure SOHO Networks
- B. SOHO Network Security

X. Supporting Laptops
- A. Laptop Hardware and Components
- B. Install and Configure Laptop Hardware Components

XI. Mobile Computing
- A. Mobile Device Technologies
- B. Configure Mobile Devices

XII. Supporting Printers
- A. Printer Technologies
- B. Install, Configure, and Maintain Printers

XIII. Security
- A. Security Fundamentals
- B. Security Threats and Vulnerabilities
- C. Security Protection Measures
- D. Workstation Security

XIV. Troubleshooting Hardware Components
- A. Troubleshooting Theory
- B. Troubleshoot Video and Display Devices
- C. Troubleshoot Hard Drives and RAID Arrays
- D. Troubleshoot System Components
- E. Troubleshoot Laptops
- F. Troubleshoot Printers

XV. Troubleshooting System-Wide Issues
- A. Troubleshoot Operating Systems
- B. Troubleshoot Wired and Wireless Networks
- C. Troubleshoot Common Security Issues

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