CompTIA A+ Certification Comprehensive: Exams 220-1201 and 220-1202

Days: 5

Prerequisites: This course assumes that you have basic computer knowledge.

Description: This course provides the basic knowledge needed to install, configure, and support computer software and implement networking. This includes:

- Applying basic methodical troubleshooting skills as an IT technician

- Identifying motherboard and CPU components, installing or replacing them, and troubleshooting their functions

- Identifying power supply functions and connectors, installing them into a PC, and troubleshooting power issues

- Configuring BIOS/UEFI firmware, identifying and installing RAM, and troubleshooting memory issues

- Comparing internal and external expansion buses on a computer, installing internal cards, and identifying expansion cables and connectors

- Distinguishing between physical storage technologies, installing drives, and troubleshooting storage problems

- Connecting, configuring, and troubleshooting common input-output devices

- Describing common printing technologies, installing and maintaining printers, and troubleshooting printing issues

- Identifying client operating system features, installing Windows and application software, and working with scripts

- Managing and troubleshooting operating systems using built-in administrative tools, such as the Windows Control Panel, Windows Settings, and command-line utilities

- Describing network principles, network devices, and internet connection technologies

- Identifying and categorizing network cables and connectors

- Configuring and troubleshooting issues related to TCP/IP and other network protocols

- Describing common wireless networking standards and encryption methods

- Configuring and troubleshooting problems with Windows resource sharing and network connections

- Identifying and using virtualization technology and cloud computing services

- Identifying types of mobile devices and operating systems, and configuring and troubleshooting mobile devices

- Recognizing common cybersecurity threats and the security controls which are used to reduce risk

- Identifying and using security features built into operating systems, as well as security hardware and software used on workstations and networks

- Securing workstations and mobile devices against security risks, and troubleshooting common security issues such as malware infection

- Applying best practices in IT operations, including policies, documentation, ticketing systems, incident response, and data backups and recovery

This course maps to the CompTIA A+ Certification 220-1201 and 220-1202 certification exams.

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Exams 220-1201 and 220-1202

OUTLINE:

INTRODUCTION
- Course setup
- A+ Certification skills inventory

LESSON 1: TROUBLESHOOTING AND SAFETY
- Troubleshooting theory
- Safety
- Environmental factors

LESSON 2: MOTHERBOARDS AND CPUS
- Motherboards
- CPUs

LESSON 3: COMPUTER POWER SUPPLIES
- Power supply connectors
- Power supply installation
- Power supply troubleshooting

LESSON 4: MEMORY
- Read-only memory
- Random access memory

LESSON 5: COMPUTER EXPANSION
- Expansion interfaces
- Expansion card installation
- Connectors and cables

LESSON 6: PHYSICAL STORAGE
- Disk drives
- RAID storage
- Optical drives
- Other storage methods

LESSON 7: INPUT-OUTPUT DEVICES
- Input devices
- Display output devices
- Display management
- Other input and output devices

LESSON 8: PRINTERS AND MULTIFUNCTION PRINT DEVICES
- Printer technologies
- Printer installation and maintenance
- Printer troubleshooting

LESSON 9: MOBILE DEVICES
- Mobile device types
- Mobile device configuration
- Mobile device troubleshooting

LESSON 10: OPERATING SYSTEMS
- Windows versions and features
- Non-Windows operating systems
- OS installation and upgrades
- Applications, cloud-based productivity tools, scripting, and artificial intelligence

LESSON 11: OPERATING SYSTEM MANAGEMENT
- Operating system features and tools
- Control Panel and Settings
- Command-line tools
- Operating system troubleshooting

LESSON 12: NETWORK BASICS
- Classifying networks
- Network devices
- Internet connections

LESSON 13: NETWORK CABLES AND CONNECTORS
- Twisted-pair connections
- Coaxial connections
- Optical-media connections

LESSON 14: NETWORK PROTOCOLS
- TCP/IP settings
- Transport protocols
- Application protocols

LESSON 15: WIRELESS NETWORKING
- Wireless technology
- Wi-Fi standards

LESSON 16: WINDOWS NETWORKING
- Network shares
- Network connections
- Connection troubleshooting

LESSON 17: VIRTUALIZATION AND CLOUD COMPUTING
- Virtualization
- Cloud computing

LESSON 18: SECURITY PRINCIPLES
- Threats and vulnerabilities
- Security controls

LESSON 19: SECURITY TECHNOLOGIES
- Operating system security
- Security hardware and software

LESSON 20: SECURING DEVICES AND DATA
- Workstation security
- Mobile device security
- Security troubleshooting

LESSON 21: SECURING NETWORKS
- SOHO router features
- Network security

LESSON 22: OPERATIONAL PROCEDURES
- Professionalism
- IT operations
- Incident response
- Backup and recovery