Training: CompTIA
CompTIA Server+ Prep Course

TRAINING GOALS:

CompTIA Server+ is a global certification that validates the skills necessary to be a server administrator. It is the only industry certification that covers the latest server technologies including virtualization, security and network-attached storage.

This course can benefit you in two ways. If you intend to pass the CompTIA Server+ (Exam SK0-005)certification examination, this course can be a significant part of your preparation. But certification is not the only key to professional success in the field of server management. Today's job market demands individuals with demonstrable skills, and the information and activities in this course can help you build your sysadmin skill set so that you can confidently perform your duties in any entry-level server administration role.

On course completion, you will be able to achieve the following:

- Understand server administration concepts.
- Understand virtualization and cloud computing.
- Understand physical and network security concepts.
- Manage physical inventory and assets.
- Manage server hardware.
- Configure storage management.
- Install and configure an OS.
- Troubleshoot OS, application, and network configurations.
- Maintain and manage servers post-installation.
- Manage data security.
- Manage service and data availability.
- Decommission servers.

Skills you'll learn

- Install physical hardware, configure storage solutions, and perform hardware maintenance for

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ul. Tatarska 5, 30-103 Kraków, tel.: (12) 298 47 77
ul. Postępu 18B, 02-676 Warszawa, tel.: (22) 417 41 70

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server hardware installation and management.

- Manage server operating systems, configure network services, implement high availability, and utilize virtualization technologies for effective server administration.
- Apply server hardening techniques, implement data security measures, and develop disaster recovery and backup strategies to enhance security and disaster recovery.
- Diagnose and resolve issues related to hardware, software, connectivity, storage, and security through effective troubleshooting.

Job roles that benefit from Server+ skills

- Server Administrator
- Data Center Technician
- Systems Engineer
- IT Operations Specialist
- Hardware Support Technician
- Network Administrator
- Cloud Engineer (Hybrid Infrastructure)
- Storage Administrator (SAN/NAS)

This course is ideal for those who physically or remotely manage hardware in server rooms and data centers. The training places significant emphasis on system resiliency (RAID), virtualization, and the physical and logical security of server resources.

Each participant in an authorized training CompTIA Server+ Prep Course held in Compendium CE will receive a free SK0-005 CompTIA Server+ Certification Exam vouchers.

CONSPECT:

- Understanding Server Administration Concepts
  - Understand Server Administration Concepts
    - Systems Administrator Job Roles and Responsibilities
    - Servers Versus Workstations
    - Server Lifecycle
    - The Four Major Subsystems
    - Server OSs-Linux and Windows
    - Assisted Live Lab: Exploring The Lab Environment

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- Assisted Live Lab: Reporting Windows Server Specifications
- Assisted Live Lab: Reporting Linux Server Specifications

- Understand Troubleshooting Methods
  - Troubleshooting Methodology
  - Identify the Problem and Determine the Scope
  - Establish and Test a Theory of Probable Cause
  - Establish and Implement a Plan of Action
  - Verify, Prevent, Analyze, and Document
  - Guidelines for Troubleshooting Methods
- Manage Licenses
  - Licenses Versus Maintenance and Support
  - Licensing Models
  - Guidelines for Managing Licenses

- Understanding Virtualization and Cloud Computing
  - Understand Virtualization Concepts
    - Virtualization Concepts
    - Manage Virtualization Resources
    - Virtual Networking
    - PBQ: Understand Virutalization Concepts
    - Assisted Live Lab: Deploying A Hyperv Vm
    - Assisted Live Lab: Deploying A Docker Container
  - Understanding Cloud Concepts
    - Cloud Characteristics
    - Cloud Deployment Models
    - Cloud Service Models
    - Cloud Service Providers
    - Guidelines for Understanding Cloud Concepts
  - Understand On-Premises Versus Cloud Deployments
    - On-Premises, Physical Server
    - On-Premises, Virtual Server
    - Cloud, Virtual Server
    - On-Premises versus Cloud Deployments
- Understanding Physical and Network Security Concepts
  - Understand Physical Security Concepts
    - Physical Security-An Outside in Approach
    - Building and Property Security

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        - Perimeter Security
        - Interior Data Center
        - Network Operations Center/Server Room
        - Physical Server Security
    - Understand Network Security Concepts
        - Intercept Network Traffic
        - Segment Networks for Security
        - Network Maps
        - IP Address Review
        - Network Hardware, Protocols, and Tools
        - Network Devices
        - Network Firewalls
        - Network Protocols
        - Network Access Control (NAC)
        - Assisted Live Lab: Auditing Network Services
        - Assisted Live Lab: Securing Network Traffic With Ipsec
- Managing Physical Assets
    - Understand Asset Management Concepts
        - Server Lifecycle
        - Leasing Versus Owning and Service Plans
        - Inventory Management
        - PBQ: Understand Asset Management Concepts
        - Assisted Live Lab: Managing System Inventories
    - Manage Documentation
        - Configurations and Baselines
        - Design Documents
        - Standard Operating Procedure (SOP)
        - Business Continuity Plan (BCP)
        - Disaster Recovery Plan (DRP)
        - Uptime Requirements
        - Troubleshooting Documents
        - Guidelines for Managing Documentation
        - Assisted Live Lab: Monitoring Performance In Windows
        - Assisted Live Lab: Monitoring Performance In Linux
    - Applied Live Lab: Deploying And Monitoring Servers
- Managing Server Hardware

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- Manage the Physical Server
  - Server Chassis Types
  - Mounting Server and Network Devices in Racks
  - Power Cabling
  - Network Cabling
  - Transmission Media Types
  - Twisted Pair Cable
  - Fiber Optic Cable
- Administer the Server and Storage
  - Local Hardware Administration and Out-of-Band Management
  - Manage Server Components
  - Storage Drives
  - Hot-swappable Hardware
- Troubleshoot Server Hardware
  - Indicators of Common Hardware Problems
  - Causes of Common Hardware Problems
  - Tools and Techniques for Troubleshooting Hardware
  - Assisted Live Lab: Managing Event Logs In Windows
  - Assisted Live Lab: Managing Event Logs In Linux

- Configuring Storage Management
  - Manage Storage
    - Capacity Planning
    - Hard Drive Media Types
    - Hard Disk Interface Types
    - DAS Controllers and Drives
    - DAS Drive Connectors
    - RAID Levels and Types
    - Shared Storage
    - Network File Sharing Protocols
    - Network Attached Storage (NAS)
    - Storage Area Networks
    - Guidelines for Managing Storage
  - Troubleshoot Storage
    - Common Storage Problems
    - Tools and Techniques for Troubleshooting Storage
    - Assisted Live Lab: Configuring Raid Storage In Windows

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- Assisted Live Lab: Provisioning Iscsi Storage

- Installing and Configuring an Operating System
  - Install an Operating System
    - Installation Process
    - Managing the Server with A GUI or CLI
    - Guidelines for Installing an Operating System
    - Assisted Live Lab: Deploying A Linux Application Server
  - Configure Storage
    - Volumes and Partitions
    - Partition Tables
    - Partition and Volume Management
    - Partition Strategies
    - File Systems
    - Guidelines for Configuring Storage
    - PBQ: Configure Storage
    - Assisted Live Lab: Configuring Volumes In Linux
  - Configure Network Settings
    - Review Network Fundamentals
    - Review the OSI Model
    - Review the TCP/IP Suite
    - Addressing
    - Network Identities
    - IP Address Configuration
    - Network Segmentation
    - Name Resolution
    - Network Devices
    - Guidelines for Configuring Network Settings
    - Assisted Live Lab: Managing Network Configurations
    - Assisted Live Lab: Developing Network Documentation
  - Use Scripts to Configure Servers
    - What are scripts?
    - Shell Languages
    - Comment Syntax
    - Environment Variables
    - Basic Script Constructs
    - Functions

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        - Basic Data Types
        - Server Administration Scripting Tasks
        - Guidelines for using Scripts to Configure Servers
        - Assisted Live Lab: Developing Administrative Bash Scripts
        - Assisted Live Lab: Developing Administrative Powershell Scripts
    - Applied Live Lab: Managing Storage And Networks
- Troubleshooting OS, Application, and Network Configurations
    - Troubleshoot an OS and Applications
        - General Categories
        - Common Problems
        - Privilege Escalation
        - Services
        - Common Categories
        - Configure the Firewall
        - Manage Patches
        - Manage Software Packages
        - Manage Time Services
        - Configure Recovery
        - PBQ: Troubleshoot an OS and Application
    - Troubleshoot Network Configurations
        - External Issues
        - Internal Issues
        - Network Troubleshooting Tools
        - Assisted Live Lab: Troubleshooting A Network Issue
- Managing Post-Installation Administrative Tasks
    - Understand Secure Administration Practices
        - Managing Users and Groups
        - Password Policies
        - Enforcing Password Policies
        - Multifactor Authentication
        - Single Sign-On
        - Access Controls
        - Account Auditing
        - Guidelines for Secure Administration Practices
        - PBQ: Understand Secure Asministration Practices
        - Assisted Live Lab: Auditing Accounts And Permissions In Windows

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- Manage Server Functions
  - Server Roles Requirements
  - Storage Management
  - Virtual Memory
  - Data Transfers
  - Administrative Interfaces
  - Monitoring
  - PBQ: Manage Server Functions
  - Assisted Live Lab: Configuring Server Roles
  - Assisted Live Lab: Configuring Administrative Interfaces
  - Assisted Live Lab: Managing Virtual Memory
- Configure Server Hardening
  - Hardware Hardening
  - Operating System Hardening
  - Application Hardening
  - Host Security
  - Patching
  - Guidelines for Server Hardening
  - PBQ: Configure Server Hardening
  - Assisted Live Lab: Configuring Group Policy Objects
  - Assisted Live Lab: Analyzing Configuration Baselines
- Applied Live Lab: Troubleshooting Servers Scenario 1
- Applied Live Lab: Troubleshooting Servers Scenario 2
- Applied Live Lab: Troubleshooting Servers Scenario 3

- Managing Data Security
  - Understand Data Security Concepts
    - The Business Impact of Data Security
    - Data Encryption
    - Retention Policies
    - Additional Data Security Measures
    - Guidelines for Understanding Data Security
    - Assisted Live Lab: Configuring Efs And Bitlocker
  - Manage Data Security
    - Risks and Mitigation
    - Guidelines for Managing Data Security
    - Assisted Live Lab: Troubleshooting A Security Issue

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- Troubleshoot Data Security
- General Troubleshooting
- Troubleshooting Tools and their Uses

- Managing Service and Data Availability
  - Manage Data Backup and Restore
    - Managing Backups and Restores
    - Backup Frequency
    - Backup Media Types
    - Media Rotation
    - Backup Validation
    - Restoring Data
    - Restore Methods
    - PBQ: Manage Data Backup and Restore
    - Assisted Live Lab: Configuring Backup Solutions On Windows Server
    - Assisted Live Lab: Configuring Backup Solutions On Linux
  - Manage High Availability
    - High Availability
    - Server Clusters
    - Types of Server Clusters
    - Patching Failover Clusters
    - Fault Tolerance
    - Load Balancing
    - NIC Teaming
    - Assisted Live Lab: Configuring A File Server Cluster
  - Manage Disaster Recovery
    - Sites
    - Data Replication
    - Data Recovery
    - Guidelines for Managing Disaster Recovery

- Decommissioning Servers
  - Decommission Servers
    - Decommissioning Policies
    - Media Destruction
    - Cable Remediation
    - Electronics Recycling and Repurposing
    - Guidelines for Decommissioning Servers

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- Assisted Live Lab: Decommissioning A Domain Controller
- Applied Live Lab: Troubleshooting Server Security Scenario 1
- Applied Live Lab: Troubleshooting Server Security Scenario 2

REQUIREMENTS:

Recommended experience: CompTIA A+ certified or equivalent knowledge, with two years of hands-on experience in a server environment.

Difficulty level

CERTIFICATE:

The participants will obtain certificates signed by CompTIA (course completion). This course will help prepare you for the CompTIA Server+ certification exam, which is available through the Pearson VUE test centers.

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TRAINER:

Authorized CompTIA Trainer

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