

Official CompTIA Server + (Exam SK0-005)

Course Summary

Description

The Official CompTIA Server+ Instructor and Student Guides (SK0-005) have been developed by CompTIA for the CompTIA certification candidate. Rigorously evaluated to validate coverage of the CompTIA Server+ (SK0-005) exam objectives, The Official CompTIA Server+ Instructor and Student Guides teach the knowledge and skills required to install, configure, and manage server hardware and server operating systems; implement proper server hardening and security controls; successfully troubleshoot common server problems; demonstrate an understanding of key disaster recovery, high-availability, and backup concepts; and prepare candidates to take the CompTIA Server+ certification exam.

Topics

- Understanding Server Administration Concepts
- Understanding Virtualization and Cloud Computing
- Understanding Physical and Network Security Concepts
- Managing Physical Assets
- Managing Server Hardware
- Configuring Storage Management
- Installing and Configuring an Operating System
- Troubleshooting OS, Application, and Network Configurations
- Managing Post-Installation Administrative Tasks
- Managing Data Security
- Managing Service and Data Availability
- Decommissioning Servers

Audience

This course is designed for IT professionals such as PC, desktop, and help desk technicians who have experience supporting PC hardware who wish to make the transition to become server hardware and support specialists.

Prerequisites

To ensure success, attendees should have 18-24 months of hands-on experience with installation, configuration, diagnosis, and troubleshooting of PC hardware and network operating system issues. It is also recommended that you have a CompTIA A+ certification of the equivalent training and experience.

Duration

Five days

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Course Outline

I. *Understanding Server Administration Concepts*

- A. In order to effectively manage servers in an enterprise environment, you must understand the role of the systems administrator (sysadmin). You must also understand the differences between servers and workstations and how to manage the server lifecycle. Troubleshooting is a key skill for sysadmins. A troubleshooting methodology will make it more efficient to address server and network issues. Finally, in this lesson, you will learn about licensing models and compare open source and proprietary software licenses.

II. *Understanding Virtualization and Cloud Computing*

- A. Modern server management is heavily integrated with virtualization and cloud-based deployments. In this section, you will understand virtualization concepts for on-premises deployments. You will then examine cloud computing concepts and how they relate to virtualization. Finally, you will look at the considerations for choosing between on-premises and cloud virtualized deployments.

III. *Understanding Physical and Network Security Concepts*

- A. Systems administrators are responsible for basic security configurations to protect the confidentiality, integrity, and availability of services and data. Physical security is of paramount importance, and it is the foundation for all other security measures. Network security must also be guaranteed by using secure protocols, network segmentation strategies, and policies to manage data in transit across your network.

IV. *Managing Physical Assets*

- A. Servers are critical physical assets for the organization. They have a specific lifecycle and must be properly inventoried. In addition, supporting documentation must be created, updated, and made accessible to those that need it. In this Lesson, you will learn the server lifecycle and the associated documentation.

V. *Managing Server Hardware*

- A. Server hardware is managed differently than workstation hardware. The server chassis is usually designed to fit in a server rack, which helps to manage server power, networking, cable management, and security. Servers often contain redundant components. In this Lesson, you will also learn common troubleshooting problems and their related causes.

VI. *Configuring Storage Management*

- A. Administering server storage can be one of the most challenging tasks for sysadmins. There are choices between traditional HDDs and solid-state drives (SSDs), as well as choices for connectivity. These choices impact speed and resiliency for data reads and writes.
- B. This Lesson also covers common troubleshooting areas for storage and the tools that may help you discover and resolve storage problems.

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VII. Installing and Configuring an Operating System

- A. There are many deployment options available to you as a systems administrator when standing up a new server. You will view both manual and automated installation methods for both Windows Server and Linux. You will also view installation differences for virtualized versus bare-metal installations. Server storage is much more complex than standalone workstation storage, and you will gain knowledge of storage options, including partition and filesystem settings. Servers must be properly configured to participate on the network. You will briefly review basic network concepts before examining network settings and the TCP/IP protocol suite. Finally, scripted server configuration help to make server deployments quicker and more consistent. You will see both Bourne Again Shell (bash) and PowerShell scripting concepts.

VIII. Troubleshooting OS, Application, and Network Configurations

- A. One of the most important steps in troubleshooting is determining whether a problem exists at the OS, application, or network layer. Troubleshooting methodology, and even responsibility, varies depending on which layer the problem resides in. In this section, you will examine OS and applications issues in the first section. Network issues are covered in the second section.

IX. Managing Post-Installation Administrative Tasks

- A. Post-installation administrative tasks are essential to the performance, utility, and security of servers. These tasks are governed by good administrative practices, proper service configuration, and server hardening.

X. Managing Data Security

- A. Data security is one of the most important jobs of the sysadmin. In the first portion of the lesson, you will view data security concepts. Next, you'll manage data security configurations. Finally, security troubleshooting will be covered.

XI. Managing Service and Data Availability

- A. Frequently, service and data availability are functions of redundancy. That redundancy may entail duplication of data, such as with backups, or duplication of servers, such as with clustering, or even duplication of locations, such as with disaster recovery sites. Each of these strategies also has a corresponding recovery method that must be properly planned and tested.

XII. Decommissioning Servers

- A. Removing servers from the network must be accomplished in a deliberate way. Sysadmins must ensure the server is no longer supporting services in use, whether those services have been migrated to another physical server, a virtual server, the cloud, or retirement. This lesson covers the decommissioning process.