

Course outlines : CompTIA Server + (Exam SK0-004)

Module 1 : Server Setup

- Servers and Racks
- Server Hardware and Software
- Server Form Factors, Rack Systems
- Rack Installation and Safety
- Storage Devices, Mass Storage Drives
- The SCSI Interface
- Serial Attached SCSI (SAS)
- The Serial ATA Interface
- Solid State Drives (SSD)
- RAID, Drive Arrays (RAID)
- RAID Mirroring and Parity
- Nested RAID
- Hardware and Software RAID
- Enterprise RAID Configurations
- System Setup, BIOS and UEFI Configuration
- Upgrading Firmware
- MBR and GPT Partitions
- File System Choices
- Server Operating Systems
- Server Pre-installation Planning
- Network Operating Systems
- Hardware Compatibility List (HCL)
- Installation and Deployment Methods
- Driver Installation
- Virtual Memory
- Troubleshooting Procedures
- Identifying the Problem
- Establishing a Probable Cause
- Establishing a Plan of Action
- Server Setup

Module 2 : Server Networking

- Ethernet
- Twisted Pair Cabling and Connectors
- Installing Network Cables, Patch Cable Types
- Fiber Optic Cabling and Connectors
- Ethernet Standards
- Network Adapter Cards

- Troubleshooting Cabling
- Internet Protocol
- The TCP/IP Suite
- Internet Protocol and IP Addressing
- Subnet Masks
- Configuring IP
- Classless Addressing
- Planning an IPv Addressing Scheme
- Troubleshooting IP
- IP Version
- Routers and Firewalls
- IP Routing Basics
- Troubleshooting Routing Issues
- TCP and UDP Ports
- Netstat, Zones and Access Control Lists (ACL)
- Basic Firewalls
- Host-based Firewalls
- VLAN Configuration
- Network Services
- Network Services Servers
- Host Names and FQDNs
- Domain Name System (DNS)
- Configuring DNS Servers
- nslookup and nbtstat
- Configuring DHCP
- NTP Server
- Copyrighted Material
- Virtualization Services
- Virtualization Basics
- Hypervisors
- Resource Requirements
- Virtual Networks
- Purposes of Virtual Machines
- Virtualization Best Practices and Risks
- Server Networking

Module 3 : Server Applications

- Configuring Server Roles
- Installing Roles and Applications
- Database and Application Servers
- Web Servers
- File Transfer Services (FTP)

- Email (SMTP / POP / IMAP)
- Messaging Servers
- Troubleshooting Services
- Storage Services
- DAS, NAS, and SAN
- Fibre Channel
- Tape Drives
- Other Storage Media
- Storage Capacity Planning
- Volume Management
- Disk Management Tool
- Adding Arrays (Dynamic Storage)
- Drive Status and Disk Tools
- Managing Disks in Linux
- Troubleshooting Storage
- Troubleshooting RAID
- Troubleshooting Disk Performance
- Directory Services
- Configuring Directory Services
- Active Directory
- Managing Users
- Managing Group Accounts
- Account Policy Enforcement
- File and Print Services
- Copyrighted Material
- Configuring File Shares
- NTFS File and Folder Permissions
- Securing a Linux File System
- Print Servers
- Troubleshooting Software
- Server Monitoring
- Measuring Performance in Windows
- Measuring Performance in Linux
- System Logs
- Troubleshooting Software Problems
- Server Applications

Module 4 : Server Maintenance

- Server Hardware
- Motherboard Components
- CPU Features
- CPU Packaging and Sockets

- CPU Upgrades
- System Memory
- Dual-channel Motherboards
- Other Memory Features
- Expansion Cards
- Environment and Maintenance
- Developing a Server Management Plan
- Server Chassis Features
- Performing Shut Down
- Server Cooling
- Heating, Ventilation, Air Conditioning (HVAC)
- Power Distribution
- Power
- Power Supply Unit
- Connector Types and Voltages
- Power Problems and UPS
- UPS Sizing
- UPS in the Data Center
- PDUs and Power Circuits
- Server Hardware Troubleshooting
- Adding and Removing Components
- Troubleshooting Power and POST Problems
- Troubleshooting Processor, Memory, and I/O Failure
- Performing a Memory Upgrade
- Copyrighted Material
- Server Management
- Server Management Methods
- Local Hardware Administration
- OS Administration Tools
- Network Hardware Administration Tools
- Configuration Management
- Change and Configuration Management
- Documentation
- Procedures and Standards
- Server Maintenance

Module 5 : Server Security

- Site Security
- Authentication
- Designing a Secure Site
- Site Security Controls
- Hardware Security

- Data Encryption
- Data Wiping and Disposal
- Fire Prevention and Suppression
- Remote Access Services
- Digital Security
- Remote Access Server
- Server Hardening
- Hardening Techniques
- Firmware Security
- Patch Management
- Windows Update
- Linux Patch Management
- Application Patch Management
- Security Software
- Anti-malware Software
- Preventive Measures
- Intrusion Detection Systems (IDS)
- IDS Analysis Engine
- Endpoint Security
- Vulnerability Assessments
- Copyrighted Material
- Disaster Recovery
- Business Continuity Concepts
- Disaster Recovery Planning
- IT Contingency Planning
- Clusters and Sites
- Backup
- Backup Plans and Policies
- Database and System Backups
- Backup Execution and Frequency
- Restoring Data and Verifying Backups
- Server Security