



Windows System Administration

Students Will Learn:

- Windows Server Installation
- Powershell Administration
- User and Group Configuration
- Permissions and Security Management

- Active Directory Architecture and Installation
- Clustering and Server Virtualization
- System Backup and Update Management
- IPv4 and IPv6 Network Addressing

Course Description: This course provides hands on experience installing and configuring Windows Server. Students will perform full installations, switch between GUI and Server Core features, configure and tune the server and assign roles and services. Attendees will practice local and remote administration of security, network, data and hardware in hands on labs. After installing an Active Directory domain controller, students will create and assign users, groups, permissions, rights, policies and profiles.

Attendees will configure and troubleshoot the TCP/IP network, utilize Powershell cmdlets, and implement a backup strategy. Also covered are many aspects of local security, such as group policy objects (GPO), Encrypting File System (EFS), rights and permissions. Students will learn to use enterprise tools such as Distributed File System (DFS) and File System Resource Manager (FSRM) to manage file storage and accessibility, as well as facilitate clustering and virtualization. Comprehensive labs and exercises give the students real experience deploying, managing and troubleshooting the Windows 2012 infrastructure.

Course Prerequisites: Understanding of Windows Vista or Windows 7 Aero interface and Control Panel applets.

Follow-up Course: [Designing and Implementing Windows Server Network Infrastructure and Security](#)



Windows 2012 System Administration Course Overview:

Overview of Windows Server 2012

- Windows Architecture
- Windows Server 2012 Editions
- Server Roles
- TCP/IP
- Powershell
- Virtualization (Hyper-V)
- Patch and Update Management
- Tuning System Performance
- Remote Assistance
- Backup and Recovery
- Licensing and Activation
- Active Directory

Installing Windows

- Hardware Requirements
- DVD Installation
- Windows 2012 GUI Features
- Upgrading Existing Operating Systems

Configuring Windows

- Command Line Server Core Configuration
- Configuring the Network
- Selecting and Installing Device Drivers
- Configuring Printers

Windows Management

- Server Manager
- Remote Server Admin Tools (RSAT)
- Event Viewer
- Event Subscriptions
- Performance Monitor
- Reliability Monitor
- Performance Logs and Alerts
- Tuning System Performance
- Windows System Resource Manager (WSRM)
- Windows Remote Management (WinRM)



Administering Users and Groups

- Creating Local Users and Groups
- Creating Domain Users and Groups
- Local and Domain Groups
- Distribution and Security Groups
- Group Nesting
- Setting User Rights
- User Profiles
- Setting the Accounts Policy

Print Servers

- Configuring Print Servers
- Printer Priorities
- Printer Pooling

Active Directory Domain Services

- ADDS Architecture
- Domains, Trees and Forests
- Organizational Units (OUs)
- Global Catalog Servers
- Domain Controller Installation
- DNS Requirements
- Configuring Active Directory
- Delegating Authority
- AD Replication

Powershell

- Cmdlets
- Creating Users, Groups and OUs
- Manipulating Objects

Networking

- TCP/IP version 4 (IPv4)
- IPv4 Addressing
- Understanding Workgroups and Domains
- TCP/IP Diagnostic Tools
- Network Troubleshooting

Security Features

- Encrypting File System
- NTFS Permissions
- User Rights

Group Policy

- Blocking Group Policy
- Enforcing Group Policy
- Domain and Local Policies
- Group Policy Inheritance
- Group Policy Management Console (GPMC)

Virtualization

- Planning and Design
- Hyper-V
- Hardware Requirements
- Consolidating Resources
- Isolating Services
- Licensing Requirements
- Virtual Networks
- Controlling VM Resources
- Isolating VM Traffic



Clustering

- High Availability
- Cluster Models
- Planning
- Failover Clusters
- Network Load Balancing (NLB)
- Storage Area Network (SAN) Technologies

Permissions

- NTFS File and Folder Permissions
- Permission Inheritance
- Effective Permissions
- Shared Folder Permissions
- Administrative Shares

Distributed File System (DFS)

- DFS Replication
- Domain-based DFS
- Namespace Root
- Access-Based Enumeration
- Diagnostic Reports
- Replication Groups

File Server Resource Manger (FSRM)

- Configuring Quotas
- File Screening
- Reporting

System Recovery and Restoration

- Server Backup and Restore
- Volume Shadow Copy Service
- System State Data
- System Image Recovery / Bare Metal Restore
- Recovery Console

AD Sites and Replication

- Creating and Managing AD Sites
- Site Topology
- DFS Replication Overview
- SYSVOL Replication
- Replication Monitoring and Troubleshooting