Windows Server 2008: Server Administrator

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Prerequisites: The users must have an understanding of computers and computer networks. Previous experience with Microsoft Server is helpful.

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Course description: Microsoft Windows Server 2008 has many features that need to be considered before administering a network. This course will cover many aspect of administration of Windows Server 2008, starting with preparing for deployment, network infrastructure and Active Directory. Once the server is in place Group Policies will need to be created and the course will show you how to do that. After that comes application servers, file and print services. The most important part of any network is security and we will cover that. From there the courses moves to server administration, monitoring and maintenance and then cover disaster recovery. At the end the newest of technologies virtualization is covered with the Microsoft Hyper V technology.

Course outline:

Planning Server Deployment
- Introduction
- Deploying Windows Server 2008
- Document Everything
- Help for the Planning Process
- Industry Standards
- Microsoft Operations Framework
- Planning and Managing
- Service Level Agreement
- Solution Accelerators
- Single Server Versions
- Licenses
- What to Consider
- Planning for Upgrading Server
- Clean Install is the Best
- Bitlocker
- Device Driver Issues
- Planning the Installation
- Hands On VS. Automated
- Activating the OS
- Upgrade or Migrate
- Which Edition of Server 2008
- 32 Bit vs. 64 Bit
- Summary

TCP_IP Addressing
- Introduction
- TCP/IP Overview
- Address Ranges
- Classless Inter Domain Routing
- Private Addresses
- TCP/IP Address Planning
- Address Planning Scenario 1
- Address Planning Scenario 2
- Manual or Dynamic Addressing
- Variable Length Subnet Mask
- Internal Subnets
- Client Configuration
- DHCP Considerations
- Packet Routing
- Summary

DHCP and IPV6 Overview
- Introduction
- DHCP and IPV6: Demo
- TCP/IP v6 Overview
- IPv6 Address
- Routers
- Global Addresses
- Link Local Address
- Unique Local Address
- Address States
- Next Generation TCP/IP
- ISATAP
- 6 to 4
- Teredo
- Summary

Namespace Planning
- Introduction
- OSI Stack Overview
- TCP/IP Stack
- Choosing Domain Name
- DNS Servers
- Single Name Resolution
- WINS Servers
- Access From the Internet
- Practice Planning
- Summary

Active Directory Prep Overview
- Introduction
- AD DS Overview
- AD DS Terms
- Domain Functional Level
- Forest Functional Level
- Domain Controller
- Organizational Unit
- Read Only Domain Controller
- Master of Operations
- Relative ID Master
- Global Catalog
- Active Directory: Demo
- Summary

Active Directory Trust
- Introduction
- Trust Relationships
- AD DS Preparations
- Deployment Considerations
- Infrastructure Design
- One Name Domains
- Multiple Name Domains
- Domain Funtional Levels
- Forest Functional Level
- Physical Network Preparations
- Site Planning
- Certificate Services
- Lightweight Directory Services
- Federation Services
- Rights Management Services
- Considerations
- Summary

Group Policy Overview
- Introduction
- Group Policy Overview
- New Features
- Policies vs. Preferences
- Preference Settings Categories
- Group Policy Application
- What"s New
- Application of Policies
- Organizational Units
- Group Policy Application
- How Settings Apply
- WMI Filtering
- Considerations
- Group Policy: Demo
- Summary

Group Policy Planning
- Introduction

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- Group Policy Tools
- GPO Replication
- ADMX and ADML
- Central Store
- Starter GPOs
- Number of GPOs Needed
- Maintaining GPOs
- Delegating Control of GPOs
- Folder Redirection
- GP Software Installation
- Which Method to use
- Deploying Scripts with GP
- Group Policy Planning: Demo
- Summary

Application Servers Overview
- Introduction
- Application Servers Overview
- Traditional Application Concerns
- Web Application Concerns
- Updating Application Servers
- Authentication
- Windows Server 2008 Features
- Application Servers: Demo
- Summary

Application Servers
- Introduction
- Web Server Authentication
- SSL
- Web Application Concerns
- What does SQL do
- SQL Server Editions
- SQL Databases
- SQL Data Access
- Transaction Commitment Process
- Transaction Logs and Backup
- Restoring from a Backup
- SQL Performance Considerations
- Testing Compatability
- Deploying Applications
- Windows Terminal Server
- Terminal Server Changes
- Terminal Server Concerns
- Application Server: Demo
- Summary

File and Print
- Introduction
- Windows Server Resource Access
- Public Folders
- Sharing Resources
- Protecting File Resources
- Sharing Considerations
- NTFS Permissions
- NTFS Permission Planning
- Share vs. NTFS Permissions
- File and Print: Demo
- Summary

Resource Management
- Introduction
- Encrypted File System
- Preparing for EFS
- Performance - File Servers
- Availability - File Servers
- Data Storage
- Managing Storage Requirements
- Quotas
- Quota Types
- Quotas Set Limits
- File Screen Templates
- Resource Management - Reports
- Demo: Resource Manager
- Demo: Reports
- Summary

DFS and Printing
- Introduction
- Distributed File System
- DFS Namespace
- DFS Namespace - Two Types
- DFS Data Availability
- DFS Replication
- DFS Deployment Considerations
- Sharing Printers
- Print Server Review
- Printer Options
- Print Management Console
- Print Drivers
- Group Policy for Printers
- Demo: Print Services
- Demo: Print Management
- Demo: Deploy Printer
- Summary

Network Security Overview
- Introduction
- Network Security
- Mitigation Steps
- Network Profiles
- Firewall Advanced Security
- Firewall Rule Considerations
- Connection Security Rules
- Creating Isolation
- Viruses and Malware
- Protecting Against
- Considerations
- User Account Control
- Security Configuration Wizard
- Demo: Configure Firewall
- Demo: Creating Firewall Rule
- Summary

Remote Access
- Introduction
- Remote Access - Protocol
- RADIUS
- Network Policy Server
- NPS Server Configuration
- NPS as RADIUS Server
- NPS as RADIUS Proxy
- Demo: Role for NPS
- Demo: Policy for VPN
- Demo: Create VPN
- Summary

Network Access Protection
- Introduction
- Overview
- Scenarios for Guest Network
- System Health Validation
- Health Policy
- Remediation Server Group
- DHCP Enforcement
- VPN Enforcement
- 802.1x Access Points
- IPsec
- Demo: Client Services
- Summary

Server 2008 Admin Overview
- Introduction
- Administration of Server 2008
- Common Day to Day Tasks
- Server Manager
- Command Line Tools
- Remote Administration
- Demo: Server Manager
- Demo: Active Directory
- Demo: Command Line
- Summary

Server Core Administration
- Introduction
- Server Core
- Server Core Roles
- Server Core Features
- Server Core Administration
- Logged onto Server Core
- Promoting Server Core to DC
- Who is the Server Admin
- Demo: Delegate Roles
- Demo: Delegate Computers
- Demo: Add User with Powershell
- Summary

Monitoring and Maintenance
- Introduction
- Proactively Monitoring
- Tools used for Monitoring
- Monitoring Factors
- Monitoring Performance
- Baseline
- Monitoring Tools in Detail
- Applications and Services Logs
- Configuring Forwarded Events
- Collecting Computer Config
- Custom Configuration
- Planning Event Forwarding
- Keeping Systems Up to Date
- WSUS
- WSUS installs as a Role
- WSUS Process
- Test Updates
- Demo: Performance Monitor
- Demo: Reports
- Summary

High Availability
- Introduction
- Overview
- High Availability Options
- Network Load Balancing
- NLB Options
- Disk Drives
- RAID 0
- RAID 1
- RAID 0 + 1
- RAID 1 + 0
- RAID 5
- RAID 6
- Which RAID to use
- Demo: Set Up RAID
- Summary

Client and Shadow Copies
- Introduction
- Clustering Servers
- Features
- Cluster Server Components
- Cluster Server Hardware
- iSCSI
- Network Infrastructure
- Cluster Server Uses
- Cluster Server Failover
- Quorum Types
- Quorum Processes
- NLB or Failover Cluster
- Backups
- Who Should Backup
- Shadow Copies

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• Demo: Shadow Copies
• Summary

Virtualization Planning
• Introduction
• Overview
• Different Virtualization Tech
• Hyper-V
• Features of Hyper-V
• Hyper-V Architecture
• Installation Requirements
• Installation Considerations
• Demo: Hyper-V Role
• Summary

Configuring And Virtualization
• Introduction
• Hyper-V Configuration
• Drive Considerations
• When to use Hyper-V
• Snapshots
• Managing Hyper-V Hosts
• Using VMM
• Hyper-V Failover Cluster
• Managing Virtual Machines
• Backing up a Virtual Machine
• Demo: Create a VOS
• Summary