70-412: Configuring Advanced Windows Server 2012 Services

Course Overview

This course provides students with the knowledge and skills to utilize Network Services, High Availability, Hyper-V and High Availability, Active Directory, Active Directory Federation Services, File and Storage Services, Business Continuity and Disaster Recovery, Active Directory Certificate Services, and Active Directory Rights Management Services.

Maintaining DNS Database
Demo - Maintaining DNS Database
Name Resolution Optimization
Creating Stub Zones
Global Names Zone
Demo - Create Global Names Zone
Demo - Add Alias Global Names Zone
IPAM (IP Address Management)
IPAM Monitoring
IPAM Prerequisites
Hardware & Software Requirements Server 2012
Hardware & Software Requirements Server 2008/2008 R2
IPAM Abilities
IPAM Database Support
IPAM Users and Groups
IPAM Modules
IPAM Deployment Methods
IPAM Components
Views of IP Address Space
Demo - Installing IPAM
Demo - Configuring IPAM
Module 01 Review

Module 02 - High Availability   1h 38m
High Availability
NLB – Network Load Balancing
NLB Uses
NLB Prerequisites
How NLB Works
Server Failures & NLB
NLB PowerShell Cmdlets
NLB Port Rules
Configuring NLB Networks
Using NLB with VMs
Upgrading NLB Clusters
Demo - Implementing NLB Clusters
Demo - Configuring NLB Affinity and Port Rules
Securing NLB
Server 2012 Failover Clustering
Clustering and High Availability
Depreciated Cluster Features
Storage Options
CSV – Cluster Shared Volumes
CSV – Clustered Shared Volumes
Network Considerations | CSV
Windows Requirements for Failover Cluster
Infrastructure Requirements
Failover Clustering - Quorum
Failover Clustering: Hardware Requirements
Clustering and Hyper-V Hardware Requirements

Quorum | Definitions
Quorum Witness
Quorum Configuration Options
Quorum Modes
Failover Cluster Networks
Cluster Networking
Demo - Create a Cluster
Multi-Site Failover Cluster
Configuring Multi-Site Failover Clusters
Configuring Applications and Services
Procedure Reference: Installing Clustering Server Roles
Demo - Deploying Highly Available Servers
Cluster Aware Updating
Common Cluster Management Tasks
Management Tools
Backing up Clusters
Restoring a Cluster
DHCP Failover
Configuring DHCP Failover
DHCP Failover Modes
Demo - Configuring DHCP Failover
DHCP MCLT Parameters
Module 02 Review

Module 03 - Hyper-V and High Availability   47m
Hyper-V and High Availability
High Availability | Host Clustering
New Features Server 2012 VM Host Clustering
Prerequisites for Hyper-V Clusters Server Hardware and Software
Prerequisites: Network Infrastructure Requirements
Procedure Reference: Configuring Failover Clustering
Components of Hyper-V Clusters
High Availability | Guest Clustering
High Availability | Network Load Balancing
Cluster Shared Volumes (CSVs)
Failover Process
VM Failover and Preference Settings
Virtual Machine Manager | System Center 2012
VMM Components
VMM 2012 Prerequisites
What is VMM?
How to Deploy Virtual Machines with VMM
P2V Migration
V2V Migration
Migration Methods
Virtual Machine and Storage Migration
Live Migration
Quick Migration
Hyper-V Replica
Demo - Implementing Hyper-V Replica

Hyper-V Replica Components
Hyper-V Replica Prerequisites
Importing & Exporting
Demo - Importing Virtual Machines
Demo - Exporting Virtual Machines
Module 03 Review

Module 04 - Active Directory   2h 41m
Active Directory
AD DS
AD DS Domain Boundaries
AD DS Forest Boundary
Multi-Domain Configuration
Multiple Forest Configuration
DNS Recommendations
Demo - Install AD DS
Demo - Installing a New Domain in a New Forest
Domain Functional Levels
UPNs
Demo - Functional Levels and UPNs
Demo - Configuring Trusts
Upgrading Domain Controllers
Restructure and Migration
Pre-Migration Steps
SID-History Attribute
Restructure & Migration Steps
Trust Relationships
SID Filtering | Selected Authentication
AD DS Partitions
AD DS Replication
AD Sites and Replication
Conflicts | Replication
Replication Topology
RODC Replication
RODC Replication Options
SYSVOL Replication
DFS Replication
AD DS Sites
Demo - Creating Additional Sites
Replication in Same Site
Site Replication in Between Sites
Demo - Moving Servers Between Sites
AD and SYSVOL Replication
ISTG - Intersite Topology Generator
AD DS Site Links
Demo - Site Links
Site Link Bridging
Site Link Costs
Demo - Configuring AD DS Intersite Replication
Universal Group Membership Caching

Demo - Configuring RODC Replication Policies
Managing Replication
Demo - Using Replication Tools: DC Diag
Demo - Using Replication Tools: Rep Admin
SRV Resource Records for Domain Controllers
SRV Record Contents
Service Record Example
Locating a Login Server
Module 04 Review

Module 05 - Active Directory Federation Services   28m
Active Directory Federation Services
AD FS
AD FS Claim Rules
Claims Provider Trusts
Claims Based Identity
Web Services
New Features to Server 2012
SSO within Organization
SSO Business to Business
Prerequisites for AD FS
Certificate Requirements
AD FS Components
Demo - Install AD Federation Services Role
Module 05 Review

Module 06 - File and Storage Services   1h 38m
File and Storage Services
BranchCache
BranchCache Requirements
BranchCache Server Settings
BranchCache Client Settings
Demo - Configure Client Firewall Rules
Demo - Implementing BranchCache
Demo - Simulate Slow Link to Branch Office
Enabling Distributed Cache Mode or Hosted Cache Mode
Demo - Enable File Share for BranchCache
Demo - Configure BranchCache for Branch Office
File Server Resource Manager
Demo - Installing FSRM
File Classification
Demo - Implementing DAC
Demo - Resource Property Definitions
Demo - Configure Central Access Rules and Policies
Demo - Configure Central Access Denied
Demo - Manual Classification
Demo - Publish Central Group Policy
Storage Optimization Features
iSCSI
iSCSI Components

iSCSI Security Components
Demo - Configure iSCSI
Demo - iSCSI Powershell
Demo - Bring a New Volume Online
Module 06 Review

Module 07 - Business Continuity and Disaster Recovery   1h 15m
Business Continuity and Disaster Recovery
Disaster Recovery Requirements
Service Level Agreements
Recovery Plans
Data Recovery
Service Recovery
Full Server Recovery
Site Recovery
Backup Types
Backup Technologies
VSS Admin
Backup Planning
Backup Security
Windows Server Backup
Demo - Installing and Using Windows Server Backup
Demo - Create a Scheduled Backup
Options | Windows Backup
Options | Recovery Wizard
System Restore
Demo - Restoring Files Using Windows Server Backup
Windows Azure Online Backup
Demo - Windows Azure Backup
Data Protection Manager (DPM)
Installing DPM
Demo - Installing DPM
Single Instance Storage
Windows RE
Windows RE Entry Points
Windows Setup and Windows RE
Demo - Windows RE Entry Points
Safe Boot
Demo - Safe Boot
Boot Configuration Data Store
Module 07 Review

Module 08 - Active Directory Certificate Services   2h 9m
Active Directory Certificate Services
AD CS
PKI Definitions
Certificate Services Infrastructure
AD CS Server Role
New Features AD CS Server 2012
Private CA

Public CA
CA Hierarchies
Standalone CA
Demo - Deploying Standalone Root CA
Enterprise CA
Demo - Deploying an Enterprise Root CA
Root CA Considerations
Offline Root CA Considerations
Demo - Deploying Root CA Servers
Subordinate CA Deployment
Demo - Subordinate CA Deployment
CAPolicy.inf
AIA | CDP
Certificate Templates
Template Settings | Users
Template Settings | Computers
Template Permissions
Certificate Template Versions Available in Server 2012
Demo - Modify and Enable Certificate Templates
Demo - Configure Certificate Templates
Certificate AutoEnrollment
Demo - Configure AutoEnrollment
Demo - Verify AutoEnrollment
Manual Enrollment
CA Web Enrollment
Enrollment on Behalf
Demo - Restricted Enrollment Agent
Credential Roaming
Network Device Enrollment Service
Certificate Revocation
Demo - Certificate Revocation Location
Online Responders
Demo - Configuring Online Responder
Demo - Updating Web Server Certificates
Losing Recovery Keys
Key Recovery Agents (KRA)
Demo - Key Recovery
Module 08 Review

Module 09 - Active Directory Rights Management Services   56m
Active Directory Rights Management Services
AD RMS
RMS Examples
AD RMS Client Requirements
AD RMS Licensing Requirements
Demo - Installing AD RMS
Components
Temporary RAC's
RMS Process
Creating AD RMS Cluster

Policy Rights Templates
Demo - AD RMS Templates
Template Offline Use
Super Users Group
Enabling External Users and AD RMS Access
Back up AD RMS
Decommission AD RMS
Module 09 Review
Course Closure

Total Duration: 13hr 38m