MCSA / MCSE - Windows 2012 Server Infrastructure

SecureNinja's MCSA / MCSE: Windows 2012 Server Infrastructure (12) twelve-day dual certification boot camp in Washington, DC and San Diego, CA will provide students a full understanding of the Windows Server 2012 environment. During the training course you will take (5) exams enabling you to attain (2) two certifications; the Microsoft Certified Solutions Associate and the Microsoft Certified Solutions Expert.

Certifications and Exams

The Microsoft Certified Solutions Associate (MCSA): Windows Server 2012 certification shows that you have the primary set of Windows Server skills that are relevant across multiple solution areas in a business environment.

- Microsoft Course 20410 (Exam 70-410)
- Microsoft Course 20411 (Exam 70-411)
- Microsoft Course 20412 (Exam 70-412)

The Microsoft Certified Solutions Expert (MCSE): Server Infrastructure certification validates your ability to build comprehensive server infrastructure solutions. Show that you have the skills needed to run a highly efficient and modern data center, with expertise in identity management, systems management, virtualization, storage, and networking.

This course provides you with the skills and knowledge needed to plan, design, and deploy a physical and logical Windows Server 2012 Active Directory Domain Services (AD DS) infrastructure. Students will learn how to plan and implement some of the more advanced features available in Windows Server 2012.

- Microsoft Course 20413 (Exam 70-778)
- Microsoft Course 20414 (Exam 70-779)

What’s Included

- 12 Days of expert MCSA / MCSE: Windows 2012 Server Infrastructure Training
- Hands-on training by a Microsoft certified instructor
- All course materials
- Practice exams
- 5 Microsoft Test Vouchers
- On-site exam testing
- Patented Pre-Present-Post Mentoring
- Daily Breakfast, Lunch, and Snacks
- Courseware
- SecureNinja student kit
- Opportunity to re-sit the class for up to 1 year

Prerequisites

Candidates should have at least 2 years of experience in information systems. The student should have passed A+, Network+ or possess an equivalent in job experience.
Course Length

120 Hours

Detailed Exams and Topics Covered

Microsoft Course 20410

Exam: 70-410 - The course is part one of a series of three courses, which provide the skills and knowledge necessary to implement a core Windows Server 2012 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2012 environment. While there is some cross-over in skillset and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration.

Objectives

At the completion of this course, students will be able to:

- Install and configure Windows Server 2012.
- Describe Active Directory Domain Services and install a domain controller.
- Create and configure user, group, and computer objects.
- Use Windows PowerShell and other command-line tools to create and configure AD DS objects.
- Configure IPv4 for simple scenarios.
- Install and configure a DHCP server.
- Install and configure DNS service.
- Configure IPv6 for simple scenarios.
- Configure local storage on a server.
- Create and secure files shares and shared printers.
- Create and manage Group Policy objects.
- Secure Windows Servers by Using Group Policy Objects.
- Implement Server Virtualization with Hyper-V.

Audience

This course is intended for Information Technology (IT) Professionals who have good Windows operating system knowledge and experience and want to acquire the skills and knowledge necessary to implement the core infrastructure services in an existing Windows Server 2012 environment. Although students would benefit from having some previous Windows Server experience, they must have good hands-on Windows Client experience with Windows Vista, Windows 7, or Windows 8.

Prerequisites

Before attending this course, students must have:

- A good understanding of networking fundamentals.
An understanding and experience configuring security and administration tasks in an enterprise environment.
Experience supporting or configuring Microsoft Windows clients

Course Outline

Deploying and Managing Windows Server 2012

This module introduces the new Windows Server 2012 administrative interface. This module covers the different roles and features that are available with the Windows Server 2012 operating system. It also discusses the various installation and configuration options you can use when deploying and configuring Windows Server 2012.

- Windows Server 2012 Overview
- Overview of Windows Server 2012 Management
- Installing Windows Server 2012
- Post-Installation Configuration of Windows Server 2012
- Introduction to Windows PowerShell

After completing this module, students will be able to:

- Describe Windows Server 2012.
- Describe the management tools available in Windows Server 2012.
- Install Windows Server 2012.
- Perform post-installation configuration of Windows Server 2012.
- Perform basic administrative tasks using Windows PowerShell.

Introduction to Active Directory Domain Services

This module introduces Active Directory Domain Services (AD DS) in Windows Server 2012. It covers general AD DS infrastructure including forests, trees, schema, Global Catalog, Operations Masters. It also covers installing and configuring domain controllers.

- Overview of AD DS
- Overview of Domain Controllers
- Installing a Domain Controller

After completing this module, students will be able to:

- Describe the structure of Active Directory Domain Services (AD DS).
- Describe the purpose of domain controllers.
- Install a domain controller.

Managing Active Directory Domain Services Objects

This module covers configuring Active Directory Objects such as users, groups, and computers. The functionality of AD DS Administrative Tools is addressed, in addition to the configuration of user profiles and the process of delegating permissions to perform AD DS administration.
Managing User Accounts
Managing Group Accounts
Managing Computer Accounts
Delegating Administration

After completing this module, students will be able to:

- Manage user accounts with graphical tools.
- Manage groups with graphical tools.
- Manage computer accounts.
- Delegate permissions to perform AD DS administration.

Automating Active Directory Domain Services Administration

This module covers using command-line tools to configure and administer AD DS. It introduces using Windows PowerShell cmdlets for AD DS administration, and using Windows PowerShell to perform bulk AD DS administrative operations.

- Using Command-line Tools for Administration
- Using Windows PowerShell for Administration
- Performing Bulk Operations with Windows PowerShell

After completing this module, students will be able to:

- Use command-line tools for AD DS administration.
- Use Windows PowerShell cmdlets for AD DS administration.
- Perform bulk operations by using Windows PowerShell.

Implementing IPv4

This module covers Internet Protocol Version 4 (IPv4) addressing. It details the various IPv4 components, covers subnetting and supernetting, and discusses configuring and general troubleshooting of IPv4 addresses.

- Overview of TCP/IP
- Understanding IPv4 Addressing
- Subnetting and Supernetting
- Configuring and Troubleshooting IPv4

After completing this module, students will be able to:

- Describe the TCP/IP protocol suite.
- Describe IPv4 addressing.
- Determine a subnet mask necessary for supernetting or subnetting.
- Configure IPv4 and troubleshoot IPv4 communication.

Implementing DHCP

This module covers the installation and configuration of DHCP as well as managing a DHCP database. It also covers security and monitoring of DHCP, including auditing and logging.
• Installing a DHCP Server Role
• Configuring DHCP Scopes
• Managing a DHCP Database
• Securing and Monitoring DHCP

After completing this module, students will be able to:

• Install the DHCP server role.
• Configure DHCP scopes.
• Manage a DHCP database.
• Secure and monitor the DHCP server role.

Implementing DNS

This module covers name resolution for Windows Server and clients. It details the installation of a DNS server and configuring Active Directory Integrated DNS zones.

• Name Resolution for Windows Client and Servers
• Installing and Managing a DNS Server
• Managing DNS Zones

After completing this module, students will be able to:

• Describe name resolution for Windows operating system clients and Windows Server servers.
• Install and manage DNS service.
• Manage DNS zones.

Implementing IPv6

This module covers understanding and implementing IPv6 addressing. It covers configuration and troubleshooting as well as co-existence with IPv4 using transition technologies.

• Overview of IPv6
• IPv6 Addressing
• Coexistence with IPv6
• IPv6 Transition Technologies

After completing this module, students will be able to:

• Describe the features and benefits of IPv6.
• Describe IPv6 addressing.
• Describe IPv6 coexistence with IPv4.
• Describe IPv6 transition technologies.

Implementing Local Storage

This module covers the storage configuration options for Windows Server 2012, including managing disks and volumes and implementing file systems. It also covers creating and
managing storage pools.

- Overview of Storage
- Managing Disks and Volumes
- Implementing Storage Spaces

After completing this module, students will be able to:

- Explain the various storage technologies.
- Manage disks and volumes.
- Implement Storage Spaces.

**Implementing File and Print Services**

This module covers securing files, folders, and network file shares, in addition to using shadow copies to protect network file shares. It also covers configuring network printing and creating a printer pool.

- Securing Files and Folders
- Protecting Shared Files and Folders Using Shadow Copies
- Configuring Network Printing

After completing this module, students will be able to:

- Secure shared files and folders.
- Protect shared files and folders by using shadow copies.
- Configure network printing.

**Implementing Group Policy**

This module covers using Group Policy to centrally manage and apply configuration settings.

- Overview of Group Policy
- Group Policy Processing
- Implementing a Central Store for Administrative Templates

After completing this module, students will be able to:

- Create and manage Group Policy Objects.
- Describe Group Policy processing.
- Implement a central store for administrative templates.

**Securing Windows Servers Using Group Policy Objects**


- Windows Security Overview
- Configuring Security Settings
• Restricting Software
• Configuring Windows Firewall with Advanced Security

After completing this module, students will be able to:

• Describe Windows Security.
• Configure security settings by using Group Policy.
• Restrict unauthorized software from running on servers and clients.
• Configure Windows Firewall with Advanced Security.

Implementing Server Virtualization with Hyper-V

This module describes Microsoft Virtualization technologies. It covers installing and configuring Hyper-V virtual machines, configuring virtual storage, and configuring virtual networks.

• Overview of Virtualization Technologies
• Implementing Hyper-V
• Managing Virtual Machine Storage
• Managing Virtual Networks

After completing this module, students will be able to:

• Understand and describe Microsoft's virtualization technologies.
• Implement Hyper-V.
• Manage virtual machine storage.
• Manage virtual networks

Microsoft Course 20411

Exam: 70-411- This course is part two, of a series of three courses, which provide the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2012 environment. While there is some cross-over in skillset and tasks across the courses this course will primarily cover the administration tasks necessary to maintain a Windows Server 2012 infrastructure, such as user and group management, network access and data security.

Audience Profile

This course is intended for Information Technology (IT) Professionals who are already very experienced system administrators working in a Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012 environment and wish to acquire the skills and knowledge necessary to be able to manage and maintain the core infrastructure required for a Windows Server 2012 environment. The key focus for students in this course is to broaden the initial deployment of Windows Server 2012 services and infrastructure and provide the skills necessary to manage and maintain a domain based Windows Server 2012 environment, such as user and group management, network access and data security.
A secondary audience for this course will be candidates looking to take Exam 70-411: Administering Windows Server 2012, or are aspiring to acquire the Microsoft Certified Solutions Associate (MCSA) credential, either in its own right, or in order to proceed in acquiring the Microsoft Certified Solutions Expert (MCSE) credentials, for which the MCSA credential is a pre-requisite.

At Course Completion

After completing this course, students will be able to:

- Implementing a Group Policy Infrastructure
- Managing User Desktops with Group Policy
- Managing User and Service Accounts
- Maintaining Active Directory Domain Services
- Configuring and Troubleshooting DNS
- Configuring and Troubleshooting Remote Access
- Installing, Configuring, and Troubleshooting the Network Policy Server role
- Implementing Network Access Protection? Optimizing File Services
- Configuring Encryption and Advanced Auditing
- Monitoring Windows Server 2012
- Deploying and Maintaining Server Images
- Implementing Update Management

Prerequisites

Before attending this course, students must have:

- Good knowledge and understanding of Active Directory and Networking Infrastructure
- Knowledge equivalent to the learning's covered in the "20410A: Installing and Configuring Windows Server 2012" course, as this course will build upon that knowledge

Course Outline

Implementing a Group Policy Infrastructure

This module covers how to implement a Group Policy infrastructure and then how to configure and manage that infrastructure. It also covers how to Scope GPOs using links, security groups, WMI filters, loopback processing, and Preference targeting as well as covering troubleshooting Policy Application.

- Understanding Group Policy
- Implement GPOs
- Manage Group Policy Scope
- Group Policy Processing
- Troubleshooting Policy Application
After completing this module, students will be able to:

- Implement a Group Policy Infrastructure
- Implement Group Policy Objects
- Manage Group Policy Scope
- Outline and describe Group Policy Processing
- Troubleshoot Policy Application

**Managing User Desktops with Group Policy**

This module covers Implementing Administrative templates, how to configure GPO preferences and folder redirection as well as managing software with Group Policy.

- Implement Administrative Templates
- Configure Group Policy Preferences
- Manage Software with GPSILab: Managing User Desktops with Group Policy
- Deploying Software Using Group Policy
- Implement Settings Using Group Policy Preferences
- Configuring Folder Redirection

After completing this module, students will be able to:

- Implement Administrative Templates
- Configure Group Policy Preferences
- Manage Software with Group Policy

**Managing User and Service Accounts**

This module covers how to create and administer user accounts as well as configure user object attributes. It also covers automating user account creation and configuring Managed Service

- Create and Administer User Accounts
- Configure User Object Attributes
- Automate User Account Creation
- Configure Managed Service Accounts

After completing this module, students will be able to:

- Create and Administer User Accounts
- Configure User Object Attributes
- Automate User Account Creation
- Configure Managed Service Accounts

**Maintaining Active Directory Domain Services**

This module covers how to implement Virtualized and Read Only Domains Controllers as well as how to perform common ADDS administrative tasks. The module will also cover how to manage the AD DS database.
Implementing Virtualized Domain Controllers
Implementing Read-Only Domain Controllers
Administering AD DS
Managing the AD DS Database

After completing this module, students will be able to:

- Implement Virtualized Domain Controllers
- Implement Read-Only Domain Controllers
- Administer AD DS
- Manage the AD DS database

Configuring and Troubleshooting DNS

This module covers installing and configuring the DNS server role as well as creating and configuring DNS zones and zone transfers. It will also cover managing and troubleshooting DNS.

- Installing the DNS Server Role
- Configuring the DNS Server Role
- Configuring DNS Zones
- Configuring DNS Zone Transfers
- Managing and Troubleshooting DNS

After completing this module, students will be able to:

- Install the DNS Server Role
- Configure the DNS Server Role
- Configure DNS Zones
- Configure DNS Zone Transfers
- Manage and Troubleshooting DNS

Configuring and Troubleshooting Remote Access

This module covers configuring Network Access, creating and configuring VPNs and Network Policies as well as troubleshooting Routing and Remote Access. It will also cover the configuration of DirectAccess.

- Configuring Network Access
- Configuring VPN Access
- Overview of Network Policies
- Troubleshooting Routing and Remote Access
- Configuring DirectAccess

After completing this module, students will be able to:

- Configuring Network Access
- Configuring VPN Access
- Overview of Network Policies
- Troubleshooting Routing and Remote Access? Configuring DirectAccess
Installing, Configuring, and Troubleshooting the Network Policy Server Role

This module covers Installing and configuring Network Policy Server as well as RADIUS clients and servers. It will also deal with Network Policy Server authentication methods and monitoring and troubleshooting a Network Policy Server.

- Installing and Configuring a Network Policy Server
- Configuring RADIUS Clients and Servers
- NPS Authentication Methods
- Monitoring and Troubleshooting a Network Policy Server

After completing this module, students will be able to:

- Installing and Configuring a Network Policy Server
- Configuring RADIUS Clients and Servers
- NPS Authentication Methods
- Monitoring and Troubleshooting a Network Policy Server

Implementing Network Access Protection

This module will provide an overview Network Access Protection, detailing the functionality and infrastructure requirements. It will also cover configuration, monitoring and troubleshooting NAP.

- Overview of Network Access Protection
- How NAP Works
- Configuring NAP
- Monitoring and Troubleshooting NAP

After completing this module, students will be able to:

- Understand the functionality and requirements of Network Access Protection (NAP)
- Configure and Implement NAP
- Monitor and Troubleshoot NAP

Optimizing File Services

This module covers File Server Resource Manager and how to use it to implement Quotas, file screens, and Storage Reports. It will also outline how to implement Classification Management and File Management Tasks as well as covering how to implement DFS, DFS Namespaces and configuration, and troubleshooting DFS Replication.

- Overview of FSRM
- Using FSRM to Manage Quotas, File Screens, and Storage Reports? Implementing Classification Management and File Management Tasks
- DFS Overview
- Configuring DFS Namespaces
- Configuring and Troubleshooting DFS Replication

After completing this module, students will be able to:
- Implement Manage Quotas, File Screens, and Storage Reports using FSRM
- Implementing Classification Management and File Management Tasks
- Configuring DFS Namespaces
- Configuring and Troubleshooting DFS Replication

**Configuring Encryption and Advanced Auditing**

This module covers how to increase file system security by configuring file encryption with EFS as well as how to enable and implement advanced auditing features.

- Encrypting Network Files with EFS
- Configuring Advanced Auditing

After completing this module, students will be able to:

- Encrypt network files with EFS
- Enable and implement advanced audit policies

**Deploying and Maintaining Server Images**

This module covers the features and functionality of Windows Deployment Services (WDS) as well as providing considerations for its use. It will also cover how to Perform deployments with WDS.

- Overview of WDS
- Implementing Deployment with WDS
- Administering WDS

After completing this module, students will be able to:

- Understand the features and functionality of Windows Deployment Services (WDS)
- Determine the appropriateness of its use in particular situations
- Perform deployments with WDS

**Implementing Update Management**

This module covers the features and functionality of Windows Server Update Services (WSUS) as well as detailing how to provision updates with WSUS.

- Overview of WSUS
- Deploying Updates with WSUS

After completing this module, students will be able to:

- Understand the features and functionality of Windows Server Update Services (WSUS)
- Deploy Updates with WSUS

**Monitoring Windows Server 2012**
This module covers the various monitoring tools available in Windows Server 2012. It will cover the use of Performance Monitor as well as how to monitor and successfully utilize Event logs.

- Monitoring Tools
- Using Performance Monitor
- Monitoring Event Logs

After completing this module, students will be able to:

- Describe and understand the various monitoring tools available in Windows Server 2012
- Use Performance Monitor
- Monitor and successfully utilize Event logs.

**Microsoft Course 20412**

**Exam: 70-412** - This course is part three, of a series of three courses, which provides the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2012 environment. While there is some cross-over in skillset and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2012 infrastructure, such as identity management and identity federation, network load balancing, business continuity, and disaster recovery, fault tolerance and rights management.

**Audience Profile**

This course is intended for IT Professionals who are experienced implementing, managing and maintaining a Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012 infrastructure in an existing Enterprise environment, and wish to acquire the skills and knowledge necessary to carry out advanced management and provisioning of services within that Windows Server 2012 environment. Students would typically be very experienced System Administrators and should have hands-on experience working in a Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012 environment.

A secondary audience for this course will be candidates looking to take Exam 70-41 Configuring Advanced Windows Server 2012 Services, or are aspiring to acquire the Microsoft Certified Solutions Associate (MCSA) credential, either in its own right, or in order to proceed in acquiring the Microsoft Certified Solutions Expert (MCSE) credentials, for which the MCSA credential is a pre-requisite.

**At Course Completion**

After completing this course, students will be able to:

- Implementing Advanced Network Services
- Implementing Advanced File Services
Implementing Dynamic Access Control
Implementing Network Load Balancing
Implementing Failover Clustering
Implementing Failover Clustering with Hyper-V
Implementing Disaster Recovery
Implementing Distributed AD DS Deployments
Implementing AD DS Sites and Replication? Implementing AD CS
Implementing AD RMS
Implementing AD FS

Prerequisites

Before attending this course, students must have:

- Real world experience Implementing, Managing and Configuring Active Directory and Networking infrastructure
- Knowledge equivalent to the learning's covered in "20410A: Installing and Configuring Windows Server 2012" and "20411A: Administering Windows Server 2012" courses, as this course will build upon that knowledge

Course Outline

Implementing Advanced Network Services

This module covers configuring advanced features in DNS and DHCP with Windows Server 2012 as well as covering IP Address management (IPAM).

- Configuring Advanced DHCP Features
- Configuring Advanced DNS Settings
- Implementing IP Address Management

After completing this module, students will be able to:

- Configure advanced DNS services
- Configure advanced DHCP services
- Implement IP Address Management(IPAM)

Implementing Advanced File Services

This module will cover learning how to configure and manage iSCSI and BranchCache as well as Implementing Windows 2012 features that optimize storage utilization such as File Server Resource Manager, File classification and Data Deduplication.

- Configuring iSCSI Storage
- Configuring Branch Cache
- Optimizing Storage Usage

After completing this module, students will be able to:
Implementing Dynamic Access Control

This module covers planning and implementing Dynamic Access Control (DAC).

- Overview of Dynamic Access Control
- Planning for a Dynamic Access Control Implementation
- Configuring Dynamic Access Control

After completing this module, students will be able to:

- Planning for a Dynamic Access Control Implementation
- Configuring Dynamic Access Control

Implementing Network Load Balancing

This module covers how to plan and implement Network Load Balancing (NLB). It will cover managing and configuring an NLB cluster and validating High Availability for an NLB cluster.

- Network Load Balancing Overview
- Configuring a Network Load Balancing Cluster
- Planning a Network Load Balancing Implementation

After completing this module, students will be able to:

- Configuring a Network Load Balancing Cluster
- Planning a Network Load Balancing Implementation

Implementing Failover Clustering

This module covers the Failover Clustering features in Windows Server 2012. It will cover how to implementing Failover Cluster, Configuring highly available applications and services on a failover cluster and how to how to maintain Failover Cluster and how to use new maintenance features such as Cluster Aware Updating (CAU). It will also cover how to implement multi-site failover cluster.

- Overview of Failover Clustering
- Implementing a Failover Cluster
- Configuring Highly-Available Applications and Services on a Failover Cluster?
  Maintaining a Failover Cluster
- Implementing a Multi-Site Failover Cluster

After completing this module, students will be able to:

- Implementing a Failover Cluster
- Configuring Highly-Available Applications and Services on a Failover Cluster
Implementing Failover Clustering with Hyper-V

This module will cover the options for making virtual machines highly available. It will cover how to implement virtual machines in failover cluster deployed on a host, options for moving virtual machine or its storage and provide high-level overview about System Center Virtual Machine Manager (SCVMM) 2012.

- Overview of the Integration of Hyper-V with Failover Clustering
- Implementing Hyper-V Virtual Machines on Failover Clusters
- Implementing Hyper-V Virtual Machine Movement
- Managing Hyper-V Virtual Environments by Using System Center Virtual Machine Manager

After completing this module, students will be able to:

- Overview of the Integration of Hyper-V with Failover Clustering
- Implementing Hyper-V Virtual Machines on Failover Clusters
- Implementing Hyper-V Virtual Machine Movement
- Managing Hyper-V Virtual Environments by Using System Center Virtual Machine Manager

Implementing Disaster Recovery

This module covers considerations that must be included when you are implementing a disaster recovery solution, how to plan and implement a backup solution for Windows Server 2012, plan and implement server and data recovery using Windows Server Backup and Microsoft Online Backup.

- Disaster Recovery Overview
- Implementing Windows Server Backup
- Implementing Server and Data Recovery

After completing this module, students will be able to:

- Disaster Recovery Overview
- Implementing Windows Server Backup using Windows Server Backup and Microsoft Online Backup
- Implementing Server and Data Recovery

Implementing Distributed AD DS Deployments

This module will cover the components of a highly complex AD DS deployment such as implementing a distributed AD DS deployment and configuring AD DS Forest trusts.

- Overview of Distributed AD DS Deployments
- Implementing a Distributed AD DS Deployment
- Configuring AD DS Trusts
After completing this module, students will be able to:

- Describe and understand Distributed AD DS Deployments
- Implement a Distributed AD DS Deployment
- Configure AD DS Trusts

**Implementing AD DS Sites and Replication**

This module covers how replication works in a Windows Server 2012 AD DS environment. It will include configuring AD DS sites in order to optimize AD DS network traffic and configuring and monitor AD DS replication.

- Overview of AD DS Replication
- Configuring AD DS Sites
- Configuring and Monitoring AD DS Replication

After completing this module, students will be able to:

- Understand and describe AD DS Replication
- Configure AD DS Sites
- Configure and Monitoring AD DS Replication

**Implementing AD CS**

This module covers Describe the Public Key Infrastructure (PKI) components and concepts. It covers implementing a certification authority infrastructure, Planning and implementing a certificate template deployment using an AD CS certification authority and Planning and implementing certificate distribution and revocation.

- Public Key Infrastructure Overview
- Deploying Certification Authorities
- Deploying and Managing Certificate Templates
- Implementing Certificate Distribution and Revocation
- Managing Certificate Recovery

After completing this module, students will be able to:

- Understand and describe Public Key Infrastructure
- Deploy Certification Authorities
- Deploy and Manage Certificate Templates
- Implement Certificate Distribution and Revocation
- Manage Certificate Recovery

**Implementing AD RMS**

This module covers features and functionality of Active Directory Rights Management Service (AD RMS). It will outline how it can be used to achieve content protection, Deploying and managing an AD RMS infrastructure and Configuring content protection using AD RMS.
• Active Directory Rights Management Overview
• Deploying and Managing an AD RMS Infrastructure
• Configuring AD RMS Content Protection
• Configuring External Access to AD RMS

After completing this module, students will be able to:

• Understand and Describe the Active Directory Rights Management Service (AD RMS)
• Deploy and Manage an AD RMS Infrastructure
• Configure AD RMS Content Protection
• Configure External Access to AD RMS

Implementing AD FS

This module covers detailing identity federation business scenarios and how AD FS can be used to address such scenarios. It will cover Configuring the AD FS prerequisites and deploying the AD FS services, Implementing AD FS to enable SSO in a single organization, and Implementing AD FS to enable SSO between federated partners.

• Overview of Active Directory Federation Services
• Deploying Active Directory Federation Services
• Implementing AD FS for a Single Organization
• Deploying AD FS in a Business to Business Federation Scenario

After completing this module, students will be able to:

• Understand and Describe Active Directory Federation Services
• Deploy Active Directory Federation Services
• Implement AD FS for a Single Organization
• Deploy AD FS in a Business to Business Federation Scenario

Microsoft Course 20413

Exam 70-416- This course provides students with the skills and knowledge to be able to design, deploy and manage a physical as well as a virtual Windows Server 2012 application management infrastructure. Students will also learn to design, deploy and manage Windows 8 Enterprise applications in a physical and virtual environment as well as in the cloud.

Audience Profile

This course is intended for IT Professionals who are interested in specializing in Windows 8 application deployments and managing the application environments for large organizations. People attending this training could support technicians or currently in deployment roles and are considering taking the next step in their career or enhancing their skills in the areas of planning and deploying Windows 8 desktops.

At Course Completion
After completing this course, students will be able to:

- Design an application distribution strategy that is appropriate for an organizational environment.
- Diagnose and remediate application compatibility problems for desktop and presentation virtualization-based deployments.
- Use Group Policy and Windows Intune to deploy applications to client devices.
- Deploy applications centrally using Configuration Manager.
- Configure self-service application deployment using Configuration Manager, Service Manager, and Windows 8 Application Store.
- Design and deploy Windows Server 2012 roles and features to support presentation virtualization.
- Design and deploy Windows Server 2012 roles and features to support application virtualization.
- Virtualize and deploy applications by using App-V and System Center 2012 Configuration Manager.
- Plan and configure the appropriate infrastructure to streamline the deployment of software updates to applications, and plan and configure application security.
- Plan and implement application upgrades, supersedence, and application coexistence.
- Monitor the deployment, performance, and utilization of applications and determine whether current application hosting platforms are meeting business needs.

**Course Outline**

**Module 1: Designing an Application Distribution Strategy**

This module explains how to design an application distribution strategy that is appropriate for an organizational environment.

- Determining Business Requirements for Application Distribution
- Overview of Application Distribution Strategies

After completing this module, students will be able to:

- Determine business requirements for application distribution.
- Design an application distribution strategy appropriate for an organizational environment.

**Module 2: Diagnosing and Remediating Application Compatibility**

This module explains how to diagnose and remediate application compatibility problems for desktop and presentation virtualization-based deployments.

- Diagnosing Application Compatibility Issues
- Evaluating and Implementing Remediation Solutions
- Resolving Compatibility Issues with the Application Compatibility Toolkit
After completing this module, students will be able to:

- Describe common compatibility issues, and determine whether an application is compatible with the Windows 8 operating system prior to deploying the application.
- Determine an appropriate solution to remediate application compatibility issues.
- Resolve application compatibility issues by using the Application Compatibility Toolkit.

**Module 3: Deploying Applications by Using Group Policy and Windows Intune**

This module explains how to use Group Policy and Windows Intune to deploy applications to client devices.

- Deploying Applications by Using Group Policy
- Deploying Applications by Using Windows Intune

After completing this module, students will be able to:

- Deploy applications centrally by using Group Policy.
- Deploy applications to clients using Windows Intune.

**Module 4: Deploying Applications by Using System Center Configuration Manager**

This module covers how to deploy applications centrally using Configuration Manager.

- Understanding Application Deployment by Using Configuration Manager 2012
- Deploying Applications by Using Configuration Manager 2012

After completing this module, students will be able to:

- Configure Configuration Manager 2012 to support application deployment.
- Deploy applications by using Configuration Manager 2012.

**Module 5: Configuring Self-Service Application Deployment**

This module explains how to configure self-service application deployment using Configuration Manager, Service Manager, and Windows 8 Application Store.

- Understanding Self-Service Application Deployment
- Configuring Self-Service with Windows Intune
- Self-Service Deployment with Configuration Manager 2012
- Self-Service Deployment with Service Manager 2012

After completing this module, students will be able to:

- Plan and configure self-service application deployment.
- Configure self-service application deployment by using Windows Intune.
- Plan self-service application deployment and configure self-service application
Module 6: Designing and Implementing Presentation Virtualization Infrastructure

This module describes how to design and deploy Windows Server 2012 roles and features to support presentation virtualization.

- Assessing Presentation Virtualization Requirements
- Planning Presentation Virtualization Infrastructure
- Deploying Presentation Virtualization Infrastructure

After completing this module, students will be able to:

- Assess presentation virtualization infrastructure requirements.
- Design a presentation virtualization infrastructure that meets business requirements.
- Deploy a presentation virtualization infrastructure.

Module 7: Preparing, Configuring and Deploying Presentation Virtualization Applications

This module explains how to prepare, deploy and manage applications for Remote Desktop, RemoteApp, and Remote Desktop Web Access.

- Determining Presentation Virtualization Application Strategies
- Deploying Remote Desktop, RemoteApp, and RD Web Access

After completing this module students will be able to:

- Determine the best presentation virtualization strategies.
- Plan and deploy Remote Desktop Session Host servers as traditional, RemoteApp, and Remote Desktop Web Access.

Module 8: Designing and Deploying an Application Virtualization Environment

This module covers how to design and deploy Windows Server 2012 roles and features to support application virtualization.

- Overview of Application Virtualization Models
- Deploying Application Virtualization Infrastructure Components
- Configuring Application Virtualization Client Support

After completing this module, students will be able to:

- Deploy the components needed to support various App-V models.
- Deploy the App-V full infrastructure model.
- Deploy and configure the App-V client.
Module 9: Preparing, Sequencing, and Deploying Virtual Applications

This module describes how to virtualize and deploy applications by using App-V and System Center 2012 Configuration Manager.

- Sequencing Applications with App-V
- Deploying App-V Applications

After completing this module, students will be able to:

- Sequence applications.
- Use different methods to deploy an App-V application.

Module 10: Planning and Implementing Application Updates and Security

This module covers how to plan and configure the appropriate infrastructure to streamline the deployment of software updates to applications. It also describes how to plan and configure application security.

- Planning Application Updates
- Deploying Updates With WSUS
- Deploying Application Updates by Using Configuration Manager 2012
- Implementing Application Security

After completing this module, students will be able to:

- Plan for application updates.
- Use WSUS to manage application updates.
- Deploy application updates by using Configuration Manager 2012.
- Implement application security using Group Policy and System Center 2012 Endpoint Protection.

Module 11: Planning and Implementing Application Upgrade and Supersedence

This module explains how to plan and implement application upgrades and supersedence. It also covers how to plan and implement application coexistence.

- Planning and Implementing Application Upgrades and Supersedence
- Planning and Implementing Application Coexistence

After completing this module, students will be able to:

- Plan and implement application upgrades and supersedence.
- Plan and implement application coexistence.

Module 12: Monitoring Application Deployment, Utilization, and Performance

This module describes how to monitor the deployment, performance, and utilization of applications and determine whether current application hosting platforms are meeting business needs.
• Planning and Implementing Application Monitoring Infrastructure
• Application Metering, Inventory and Asset Intelligence
• Monitoring Application Resource Utilization

After completing this module, students will be able to:

• Plan and perform application monitoring.
• Create an application inventory and perform metering.
• Monitor application resource utilization.

Microsoft Course 20414

Exam 70-414- In this course, students will learn how to plan and implement some of the more advanced features available in Windows Server 2012.

Audience Profile

This course is intended for Information Technology (IT) professionals who are responsible for planning, designing and deploying a physical and logical Windows Server 2012 enterprise and Active Directory Domain Services (AD DS) infrastructures including the network services. Candidates would typically have experience of previous Windows Server operating systems and have Windows Server 2012 certification (MCSA) or equivalent skills.

At Course Completion

After completing this course, students will be able to:

• Plan and implement server virtualization strategy.
• Plan and implement networks and storage for virtualization.
• Plan and deploy virtual machines.
• Manage a virtual machine deployment.
• Plan and implement a server monitoring strategy.
• Plan and implement high availability for file services and applications.
• Plan and implement a highly available infrastructure using failover clustering.
• Plan and implement an server updates infrastructure.
• Plan and implement a business continuity strategy.
• Plan and implement a public key infrastructure (PKI).
• Plan and implement an identity federation infrastructure.
• Plan and implement an information rights management infrastructure.

Course Outline

Module 1: Planning and Implementing a Server Virtualization Strategy

This module explains how to plan and implement a server virtualization strategy using Microsoft System Center 2012.

• Overview of System Center 2012 Components
• Integrating System Center 2012 and Server Virtualization
• Planning and Implementing a Server Virtualization Host Environment
After completing this module, students will be able to:

- Describe the System Center 2012 components.
- Describe how System Center 2012 is used to manage a server virtualization deployment.
- Plan and implement a server virtualization environment based on Windows Server 2012 Hyper-V and Microsoft System Center 2012 - Virtual Machine Manager (VMM).

Module 2: Planning and Implementing Networks and Storage for Virtualization

This module explains how to plan a storage infrastructure for a Hyper-V server virtualization deployment.

- Planning a Storage Infrastructure for Virtualization
- Implementing a Storage Infrastructure for Virtualization
- Planning and Implementing a Network Infrastructure for Virtualization

After completing this module, students will be able to:

- Plan a storage infrastructure for a Hyper-V server virtualization deployment.
- Implement a storage infrastructure for server virtualization.
- Plan and implement a network infrastructure for server virtualization.

Module 3: Planning and Deploying Virtual Machines

This module explains how to plan and deploy virtual machines on Windows Hyper-V.

- Planning Virtual Machine Configuration
- Preparing for Virtual Machine Deployments with VMM
- Deploying Virtual Machines

After completing this module, students will be able to:

- Plan a virtual machine configuration.
- Plan and configure the VMM profiles and templates that can be used to implement a VMM deployment.
- Plan and implement a virtual machine deployment in VMM.

Module 4: Planning and Implementing a Virtualization Administration Solution

This module explains how to plan and implement a virtualization administration solution by using System Center 2012.

- Planning and Implementing Microsoft System Center Administration
- Planning and Implementing Self-Service with System Center
- Planning and Implementing Automation with System Center

After completing this module, students will be able to:

- Plan a delegated administration model in System Center 2012.
• Plan self-service and automation of a virtual machine environment by using the System Center 2012.
• Plan automation of a virtual machine environment by using System Center 2012.

**Module 5: Planning and Implementing a Server Monitoring Strategy**

This module explains how to plan and implement a server monitoring strategy using the Windows Server 2012 tools and using Microsoft System Center 2012 - Operations Manager (Operations Manager).

• Planning Monitoring in Windows Server 2012
• Overview of System Center Operations Manager
• Planning and Configuring Monitoring Components
• Configuring Integration with VMM

After completing this module, students will be able to:

• Plan a monitoring strategy using the Windows Server 2012 tools.
• Describe the Operations Manager components and describe how Operations Manager can be used to monitor physical and virtual servers.
• Plan and configure management packs, notifications and reporting.
• Configure the integration of Operations Manager and VMM.

**Module 6: Planning and Implementing High Availability for File Services and Applications**

This module explains how to plan and implement an application and file services infrastructure that is highly available.

• Planning and Implementing Storage Spaces
• Planning and Implementing DFS
• Planning and Implementing Network Load Balancing

After completing this module, students will be able to:

• Plan and implement a highly available storage infrastructure by using storage spaces.
• Plan and implement a highly available file services deployment by using distributed file system (DFS).
• Plan and implement high availability for applications by using network load balancing (NLB).

**Module 7: Planning and Implementing a Highly Available Infrastructure Using Failover Clustering**

This module explains how to plan and implement a highly available server infrastructure by using the failover clustering features in Windows Server 2012.

• Planning a Failover Clustering Infrastructure
• Implementing Failover Clustering
Integrating Failover Clustering with Server Virtualization
Planning a Multi-Site Failover Cluster

After completing this module, students will be able to:

- Plan and implement a highly available storage infrastructure by using storage spaces
- Plan and implement a highly available file services deployment by using DFS.
- Plan and implement high availability for applications by using NLB.

Module 8: Planning and Implementing a Server Updates Infrastructure

This module explains how to plan and implement an infrastructure for updating Windows Servers and virtual machines.

- Planning and Implementing a Windows Server Update Services (WSUS) Deployment
- Planning Software Updates with System Center 2012 Configuration Manager
- Planning and Implementing Updates in a Server Virtualization Infrastructure

After completing this module, students will be able to:

- Plan and implement a WSUS deployment to distribute updates to Windows Servers.
- Plan a software update deployment infrastructure by using Configuration Manager.
- Plan and implement updates for Hyper-V hosts by using Cluster-Aware Updating and VMM.

Module 9: Planning and Implementing a Business Continuity Strategy

This module explains how to plan and implement a business continuity strategy in a Windows Server 2012 environment.

- Overview of Business Continuity Planning
- Planning and Implementing Backup Strategies
- Planning and Implementing Recovery
- Planning and Implementing Virtual Machine Backup and Recovery

After completing this module, students will be able to:

- Describe the high-level requirements and strategies for implementing a business continuity strategy.
- Plan backup strategies for a variety of Windows roles.
- Plan and implement recovery of servers and data.

Module 10: Planning and Implementing a Public Key Infrastructure

This module explains how to plan and implement a PKI deployment, and plan and implement a certificate management solution.

- Planning and Implementing a Certification Authority Deployment
• Planning and Implementing Certificate Templates
• Planning and Implementing Certificate Distribution and Revocation
• Planning and Implementing Key Archival and Recovery

After completing this module, students will be able to:

• Plan and implement a CA deployment hierarchy in AD CS.
• Design and implement a strategy for configuring and maintaining certificate templates.
• Design and implement a strategy for distributing and revoking certificates.
• Plan and implement private key and certificate recovery.

Module 11: Planning and Implementing an Identity Federation Infrastructure

This module explains how to plan and implement an AD FS server deployment and claims-aware application access.

• Planning and Implementing an AD FS Server Infrastructure
• Planning and Implementing AD FS Claim Providers and Relying Parties
• Planning and Implementing AD FS Claims and Claim Rules

After completing this module, students will be able to:

• Plan and implement an AD FS server infrastructure.
• Plan and implement AD FS claim providers and relying on parties.
• Plan and implement AD FS claims and claim rules.

Module 12: Planning and Implementing an Information Rights Management Infrastructure

This module describes how to plan and implement an Active Directory Rights Management Services (AD RMS) deployment, plan and manage AD RMS templates and access, and plan and implement external access to AD RMS services.

• Planning and Implementing an AD RMS Cluster
• Planning and Implementing AD RMS Templates and Policies
• Planning and Implementing External Access to AD RMS Services
• Planning and Implementing AD RMS Integration with Dynamic Access Control (DAC)

After completing this module, students will be able to:

• Plan, implement and manage an AD RMS cluster.
• Plan and implement AD RMS templates and policies.
• Plan and implement external access to AD RMS services.
• Plan the integration of AD RMS and DAC.

About SecureNinja

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