



MCSE With Private Cloud

Course Content of MCSE 2012 - (Microsoft Certified Solutions Expert with Private Cloud)

Total Duration of MCSE : 75 Days

Earning an MCSE: Private Cloud certification will qualify you for such jobs as server administrator, systems programmer, and network manager. Heard about the coming Windows Server 2012 R2 updates? Read the [FAQs](#) to find out how we are updating our certifications.

Step	Title	Optional training	Required exam	Certification earned
1	Installing and Configuring Windows Server 2012	410		
2	Administering Windows Server 2012	411		
3	Configuring Advanced Windows Server 2012 Services 	412		
After successfully completing steps 1-3, you'll earn a Microsoft Certified Solutions Associate (MCSA): Windows Server 2012 certification.				
4	Monitoring and Operating a Private Cloud with System Center 2012	246		
5	Configuring and Deploying a Private Cloud with System Center 2012	247		

Exam 70-410 - Installing and Configuring Windows Server 2012

(Course 20410A Duration : 40 hrs)

Module 1: Deploying and Managing 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

Lab : Deploying and Managing Windows Server 2012

- Deploying Windows Server 2012
- Configuring Windows Server 2012 Server Core
- Managing Servers
- Using Windows PowerShell to Manage Servers



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	<p>Module 2: Introduction to Active Directory Domain Services</p> <ul style="list-style-type: none"> • Overview of AD DS • Overview of Domain Controllers • Installing a Domain Controller <p>Lab : Installing Domain Controllers</p> <ul style="list-style-type: none"> • Installing a Domain Controller • Installing a Domain Controller by Using IFM 	
	<p>Module 3: Managing Active Directory Domain Services Objects</p> <ul style="list-style-type: none"> • Managing User Accounts • Managing Group Accounts • Managing Computer Accounts • Delegating Administration <p>Lab : Managing Active Directory Domain Services Objects</p> <ul style="list-style-type: none"> • Delegating Administration for a Branch Office • Creating and Configuring User Accounts in AD DS • Managing Computer Objects in AD DS 	
	<p>Module 4: Automating Active Directory Domain Services Administration</p> <ul style="list-style-type: none"> • Using Command-line Tools for Administration • Using Windows PowerShell for Administration • Performing Bulk Operations with Windows PowerShell <p>Lab : Automating AD DS Administration by Using Windows PowerShell</p> <ul style="list-style-type: none"> • Creating User Accounts and Groups by Using Windows PowerShell • Using Windows PowerShell to Create User Accounts in Bulk • Using Windows PowerShell to Modify User Accounts in Bulk 	
	<p>Module 5: Implementing IPv4</p> <ul style="list-style-type: none"> • Overview of TCP/IP • Understanding IPv4 Addressing • Subnetting and Supernetting • Configuring and Troubleshooting IPv4 <p>Lab : Implementing IPv4</p> <ul style="list-style-type: none"> • Identifying Appropriate Subnets • Troubleshooting IPv4 	



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	<p>Module 6: Implementing DHCP</p> <ul style="list-style-type: none"> • Installing a DHCP Server Role • Configuring DHCP Scopes • Managing a DHCP Database • Securing and Monitoring DHCP <p>Lab : Implementing DHCP</p> <ul style="list-style-type: none"> • Implementing DHCP • Implementing a DHCP Relay (Optional Exercise) 	
	<p>Module 7: Implementing DNS</p> <ul style="list-style-type: none"> • Name Resolution for Windows Client and Servers • Installing and Managing a DNS Server • Managing DNS Zones <p>Lab : Implementing DNS</p> <ul style="list-style-type: none"> • Installing and Configuring DNS • Creating Host Records in DNS • Managing the DNS Server Cache 	
	<p>Module 8: Implementing IPv6</p> <ul style="list-style-type: none"> • Overview of IPv6 • IPv6 Addressing • Coexistence with IPv6 • IPv6 Transition Technologies <p>Lab : Implementing IPv6</p> <ul style="list-style-type: none"> • Configuring an IPv6 Network • Configuring an ISAT AP Router 	
	<p>Module 9: Implementing Local Storage</p> <ul style="list-style-type: none"> • Overview of Storage • Managing Disks and Volumes • Implementing Storage Spaces <p>Lab : Implementing Local Storage</p> <ul style="list-style-type: none"> • Installing and Configuring a New Disk • Resizing Volumes • Configuring a Redundant Storage Space 	



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	<p>Module 10: Implementing File and Print Services</p> <ul style="list-style-type: none"> • Securing Files and Folders • Protecting Shared Files and Folders Using Shadow Copies • Configuring Network Printing <p>Lab : Implementing File and Print Services</p> <ul style="list-style-type: none"> • Creating and Configuring a File Share • Configuring Shadow Copies • Creating and Configure a Printer Pool 	
	<p>Module 11: Implementing Group Policy</p> <ul style="list-style-type: none"> • Overview of Group Policy • Group Policy Processing • Implementing a Central Store for Administrative Templates <p>Lab : Implementing Group Policy</p> <ul style="list-style-type: none"> • Configuring a Central Store • Creating GPOs 	
	<p>Module 12: Securing Windows Servers Using Group Policy Objects</p> <ul style="list-style-type: none"> • Windows Security Overview • Configuring Security Settings • Restricting Software • Configuring Windows Firewall with Advanced Security <p>Lab : Lab A: Increasing Security for Server Resources</p> <ul style="list-style-type: none"> • Using Group Policy to Secure Member Servers • Auditing File System Access • Auditing Domain Logons <p>Lab : Lab B: Configuring AppLocker and Windows Firewall</p> <ul style="list-style-type: none"> • Configuring AppLocker Policies • Configuring Windows Firewall 	
	<p>Module 13: Implementing Server Virtualization with Hyper-V</p> <ul style="list-style-type: none"> • Overview of Virtualization Technologies • Implementing Hyper-V • Managing Virtual Machine Storage • Managing Virtual Networks 	



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	<p>Lab : Implementing Server Virtualization with Hyper-V</p> <ul style="list-style-type: none"> • Installing the Hyper-V Server Role • Configuring Virtual Networking • Creating and Configuring a Virtual Machine • Using Virtual Machine Snapshots 	
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<p>Exam 70-411: Administering Windows Server 2012</p> <p>Duration: 24 hrs</p>		
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	<p>Module 1: Implementing a Group Policy Infrastructure</p> <ul style="list-style-type: none"> • Introducing Group Policy • Implementing and Administering GPOs • Managing Group Policy Scope • Group Policy Processing • Troubleshooting the Application of GPOs <p>Lab: Implementing a Group Policy Infrastructure</p> <ul style="list-style-type: none"> • Creating and Configuring Group Policy Objects • Managing Group Policy Scope • Verifying Group Policy Application • Managing Group Policy Objects 	
	<p>Module 2: Managing User Desktops with Group Policy</p> <ul style="list-style-type: none"> • Implementing Administrative Templates • Configuring Folder Redirection and Scripts • Configuring Group Policy Preferences • Managing Software with Group Policy <p>Lab: Managing User Desktops with Group Policy</p> <ul style="list-style-type: none"> • Implementing Settings by Using Group Policy Preferences • Configuring Folder Redirection 	
	<p>Module 3: Managing User and Service Accounts</p> <ul style="list-style-type: none"> • Automating User Account Creation • Configuring Password Policy and Account Lockout Settings • Creating and Administering User Accounts • Configuring User Object Attributes • Configuring Managed Service Accounts 	



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	<p>Lab: Managing User and Service Accounts</p> <ul style="list-style-type: none"> • Configuring Password Policy and Account Lockout Settings • Creating and Associating a Managed Service Account 	
	<p>Module 4: Maintaining Active Directory Domain Services</p> <ul style="list-style-type: none"> • Implementing Virtualized Domain Controllers • Implementing Read Only Domain Controllers • Administering AD DS • Managing the AD DS Database <p>Lab: Maintaining Active Directory Domain Services</p> <ul style="list-style-type: none"> • Installing and Configuring a Read Only Domain Controller • Configuring AD DS Snapshots • Configuring the Active Directory Recycle Bin 	
	<p>Module 5: Configuring and Troubleshooting DNS</p> <ul style="list-style-type: none"> • Installing the DNS Server Role • Configuring the DNS Server Role • Configuring DNS Zones • Configuring DNS Zone Transfers • Managing and Troubleshooting DNS <p>Lab: Configuring and Troubleshooting DNS</p> <ul style="list-style-type: none"> • Configuring DNS Resource Records • Configuring DNS Conditional Forwarding • Installing and Configuring DNS Zones • Managing and Troubleshooting DNS 	
	<p>Module 6: Configuring and Troubleshooting Remote Access</p> <ul style="list-style-type: none"> • Configuring Network Access • Configuring VPN Access • Overview of Network Policies • Troubleshooting Routing and Remote Access • Configuring Direct Access <p>Lab: Configuring and Troubleshooting Remote Access</p> <ul style="list-style-type: none"> • Configuring Remote Access • Configuring the Direct Access Infrastructure • Configuring Direct Access Clients • Verifying the Direct Access Configuration 	
	<p>Module 7: Installing, Configuring, and Troubleshooting the Network Policy Server Role</p>	



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	<ul style="list-style-type: none"> • Installing and Configuring a Network Policy Server • Configuring RADIUS Clients and Servers • NPS Authentication Methods • Monitoring and Troubleshooting a Network Policy Server <p>Lab: Installing and Configuring a Network Policy Server</p> <ul style="list-style-type: none"> • Installing and Configuring NPS to Support RADIUS • Configuring a RADIUS Client 	
	<p>Module 8: Implementing Network Access Protection</p> <ul style="list-style-type: none"> • Overview of Network Access Protection • Overview of NAP Enforcement Processes • Configuring NAP • Monitoring and Troubleshooting NAP <p>Lab: Implementing Network Access Protection</p> <ul style="list-style-type: none"> • Configuring NAP Components • Configuring the Client Settings to Support NAP 	
	<p>Module 9: Optimizing File Services</p> <ul style="list-style-type: none"> • 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 <p>Lab: Lab A: Configuring Quotas and File Screening by Using FSRM</p> <ul style="list-style-type: none"> • Configuring FSRM Quotas • Configuring File Screening <p>Lab: Lab B: Configuring DFS Namespaces and Replication</p> <ul style="list-style-type: none"> • Installing the DFS Namespaces Server Role • Configuring the DFS Role Service • Configuring DFS Namespace • Configuring DFS-R 	
	<p>Module 10: Configuring Encryption and Advanced Auditing</p> <ul style="list-style-type: none"> • Encrypting Network Files with EFS • Configuring Advanced Auditing <p>Lab: Lab A: Configuring Encryption and Advanced Auditing</p>	



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	<ul style="list-style-type: none"> • Encrypting and Recovering Files <p>Configuring Advanced Auditing</p>	
	<p>Module 11: Deploying and Maintaining Server Images</p> <ul style="list-style-type: none"> • Overview of Windows Deployment Services • Implementing Deployment with WDS • Administering WDS <p>Lab: Deploying and Maintaining Server Images Using Windows Deployment Services</p> <ul style="list-style-type: none"> • Installing and Configuring Windows Deployment Services • Creating Operating System Images with WDS • Configuring Custom Computer Naming • Deploying Images with WDS 	
	<p>Module 12: Deploying and Maintaining Server Images</p> <ul style="list-style-type: none"> • Overview of WSUS • Deploying Updates with WSUS <p>Lab: Implementing Update Management</p> <ul style="list-style-type: none"> • Implementing the WSUS Server Role • Configuring Update Settings • Approving and Deploying an Update by Using WSUS 	
	<p>Module 13: Monitoring Windows Server 2012</p> <ul style="list-style-type: none"> • Monitoring Tools • Using Performance Monitor • Monitoring Event Logs <p>Lab: Monitoring Windows Server 2012</p> <ul style="list-style-type: none"> • Establishing a Performance Baseline • Identifying the Source of a Performance Problem • Viewing and Configuring Centralized Event Logs 	

Exam 70-412: Configuring Advanced Windows Server 2012 Services		
Duration: 40 hrs		
	<p>Module 1: Implementing Advanced Network</p> <ul style="list-style-type: none"> • Configuring Advanced DHCP Features • Configuring Advanced DNS Settings 	



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	<ul style="list-style-type: none"> • Implementing IP Address Management <p>Lab : Implementing Advanced Network Services</p> <ul style="list-style-type: none"> • Configuring Advanced DHCP Settings • Configuring Advanced DNS Settings • Configuring IP Address Management 	
	<p>Module 2: Implementing Advanced File Services</p> <ul style="list-style-type: none"> • Configuring iSCSI Storage • Configuring BranchCache • Optimizing Storage Usage <p>Lab : Implementing Advanced File Services</p> <ul style="list-style-type: none"> • Configuring iSCSI Storage • Configuring the File Classification Infrastructure <p>Lab : Implementing BranchCache</p> <ul style="list-style-type: none"> • Configuring the Main Office Servers for BranchCache • Configuring the Branch Office Servers for BranchCache • Configuring Client Computers for BranchCache • Monitoring BranchCache 	
	<p>Module 3: Implementing Dynamic Access Control</p> <ul style="list-style-type: none"> • Overview of Dynamic Access Control • Planning for Dynamic Access Control • Deploying Dynamic Access Control <p>Lab : Implementing Dynamic Access Control</p> <ul style="list-style-type: none"> • Planning the Dynamic Access Control Implementation • Configuring User and Device Claims • Configuring Resource Property Definitions • Configuring Central Access Rules and Central Access Policies • Validating and Remediating Dynamic Access Control • Implementing New Resource Policies 	
	<p>Module 4: Implementing Network Load Balancing</p> <ul style="list-style-type: none"> • Overview of NLB • Configuring an NLB Cluster • Planning an NLB Implementation <p>Lab : Implementing Network Load Balancing</p> <ul style="list-style-type: none"> • Implementing an NLB Cluster • Configuring and Managing an NLB Cluster 	



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	<ul style="list-style-type: none"> Validating High Availability for the NLB Cluster 	
	<p>Module 5: Implementing Failover Clustering</p> <ul style="list-style-type: none"> 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 <p>Lab : Implementing Failover Clustering</p> <ul style="list-style-type: none"> Configuring a Failover Cluster Deploying and Configuring a Highly Available File Server Validating the Deployment of a Highly Available File Server Configuring Cluster-Aware Updating on the Failover Cluster 	
	<p>Module 6: Implementing Failover Clustering with Hyper-V</p> <ul style="list-style-type: none"> Overview of Integrating 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 VMM <p>Lab : Implementing Failover Clustering with Hyper-V</p> <ul style="list-style-type: none"> Configuring Hyper-V Replicas Configuring a Failover Cluster for Hyper-V Configuring a Highly Available Virtual Machine 	
	<p>Module 7: Implementing Disaster Recovery</p> <ul style="list-style-type: none"> Overview of Disaster Recovery Implementing Windows Server Backup Implementing Server and Data Recovery <p>Lab : Implementing Windows Server Backup and Restore</p> <ul style="list-style-type: none"> Backing Up Data on a Windows Server 2012 Server Restoring Files Using Windows Server Backup Implementing Microsoft Online Backup and Restore 	
	<p>Module 8: Implementing Distributed Active Directory Domain Services Deployments</p> <ul style="list-style-type: none"> Overview of Distributed AD DS Deployments Implementing a Distributed AD DS Environment Configuring AD DS Trusts <p>Lab : Implementing Complex AD DS Deployments</p>	



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	<ul style="list-style-type: none"> • Implementing Child Domains in AD DS • Implementing Forest Trusts 	
	<p>Module 9: Implementing Active Directory Domain Services Sites and Replication</p> <ul style="list-style-type: none"> • Overview of AD DS Replication • Configuring AD DS Sites • Configuring and Monitoring AD DS Replication <p>Lab : Implementing AD DS Sites and Replication</p> <ul style="list-style-type: none"> • Modifying the Default Site • Creating Additional Sites and Subnets • Configuring AD DS Replication 	
	<p>Module 10: Implementing Active Directory Certificate Services</p> <ul style="list-style-type: none"> • PKI Overview • Deploying CAs • Deploying and Managing Certificate Templates • Implementing Certificate Distribution and Revocation • Managing Certificate Recovery <p>Lab : Implementing Active Directory Certificate Services</p> <ul style="list-style-type: none"> • Deploying a Standalone Root CA • Deploying an Enterprise Subordinate CA • Configuring Certificate Templates • Configuring Certificate Enrollment • Configuring Certificate Revocation • Configuring Key Recovery 	
	<p>Module 11: Implementing Active Directory Rights Management Services</p> <ul style="list-style-type: none"> • AD RMS Overview • Deploying and Managing an AD RMS Infrastructure • Configuring AD RMS Content Protection • Configuring External Access to AD RMS <p>Lab : Configuring AD RMS</p> <ul style="list-style-type: none"> • Installing and Configuring AD RMS • Configuring AD RMS Templates • Implementing the AD RMS Trust Policies • Verifying the AD RMS Deployment 	
	<p>Module 12: Implementing Active Directory Federation Services</p> <ul style="list-style-type: none"> • Overview of AD FS 	



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	<ul style="list-style-type: none"> • Deploying AD FS • Implementing AD FS for a Single Organization • Deploying AD FS in a B2B Federation Scenario <p>Lab : Implementing AD FS</p> <ul style="list-style-type: none"> • Configuring AD FS Prerequisites • Installing and Configuring AD FS • Configuring AD FS for a Single Organization • Configuring AD FS for Federated Business Partners 	
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Exam: 70-247 Configuring and Deploying a Private Cloud with System Center 2012		
	<p>Module 1: Planning for the Private Cloud</p> <ul style="list-style-type: none"> • Understanding the Private Cloud • Requirements for Deploying a Private Cloud • Designing the Private Cloud Infrastructure • Overview of System Center 2012 Components • Deploying HyperV Clustering with VMM 	
	<p>Module 2: Configuring and Deploying the Private Cloud with SC VMM 2012</p> <ul style="list-style-type: none"> • Overview of VMM Architecture and Components • Installing and Upgrading VMM • Configuring VMM Security and Roles • Understanding Host Groups 	
	<p>Module 3: Extending and Maintaining the Private Cloud Infrastructure</p> <ul style="list-style-type: none"> • Overview of the PXE and Update Server Roles • Deploying BareMetal HyperV Host Servers • Configuring the Update Server Role • Creating and Using an Update Baseline 	
	<p>Module 4: Configuring Application Delivery</p> <ul style="list-style-type: none"> • Dynamic Application Deployment Overview • Web Deployment Packages • Server Application Virtualization Overview • Configuring Server AppV Components • Sequencing and Deploying Virtual Applications 	
	<p>Module 5: Creating the Private Cloud Building Blocks</p> <ul style="list-style-type: none"> • Configuring Guest Operating System Profiles • Configuring Hardware Profiles • Configuring SQL Server Using SQL Server Profiles • Configuring Application Profiles • Configuring Virtual Machine Templates • Configuring the SelfService User Role 	
	<p>Module 6: Deploying and Accessing a Private Cloud</p> <ul style="list-style-type: none"> • Understanding Private Cloud Computing • Installing and Configuring App Controller • Creating and Managing Services and Service Templates 	
	<p>Module 7: Monitoring the Private Cloud Infrastructure</p> <ul style="list-style-type: none"> • Operations Manager Architecture and Security • Upgrading Operations Manager 2007 R2 • Configuring Notifications • Configuring Management Packs • Configuring Integration with System Center 2012 	



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	<p>Module 8: Extending and Customizing Monitoring of the Private Cloud Infrastructure</p> <ul style="list-style-type: none"> • Configuring the SharePoint Server Portal • Monitoring Templates Distributed Application Monitoring 	
	<p>Module 9: Implementing Service Management for the Private Cloud</p> <ul style="list-style-type: none"> • Service Manager Architecture Overview • Upgrading to System Center 2012 Service Manager • Understanding Service Manager Work Items • Configuring Service Manager Connectors • Configuring Service Manager Notifications 	
	<p>Module 10: Protecting the Private Cloud Infrastructure</p> <ul style="list-style-type: none"> • Planning DPM Deployment • DPM Architecture and Components • Upgrading DPM • Configuring DPM for the Private Cloud • Configuring Application Protection for the Private Cloud • Restoring Applications to the Private Cloud 	
	<p>Module 11: Automating and Standardizing the Private Cloud</p> <ul style="list-style-type: none"> • Orchestrator Architecture and Components Overview • Deploying and Configuring Core Components • Managing Runbooks • Configuring Integration Packs 	
	<p>Module 12: Configuring the Cloud Services Process Pack</p> <ul style="list-style-type: none"> • Implementing the Cloud Services Process Pack • Service Level Management 	

Exam : 70-246 : Monitoring and Operating a Private Cloud with System Center 2012		
	<p>Module 1: Introduction to the Private Cloud</p> <ul style="list-style-type: none"> • Overview of the Cloud Computing Model • Requirements for the Private Cloud • Operating a Private Cloud Infrastructure with System Center • Maintaining the Health of the Private Cloud • Integrating System Center Components • Verifying the Compliance of the Private Cloud Infrastructure 	
	<p>Module 2: Automatic Incident Creation, Remediation, and Change Requests</p> <ul style="list-style-type: none"> • Installing and Configuring the System Center Cloud Services Process Pack • Cloud Services Configuration Items • Cloud Services Request Items 	
	<p>Module 3: Problem Management in the Private Cloud</p> <ul style="list-style-type: none"> • Overview of Problem Management • Creating Custom Rules 	
	<p>Module 4: Automating SelfService Provisioning</p> <ul style="list-style-type: none"> • Installing and Configuring the System Center Cloud Services Process Pack • Cloud Services Configuration Items • Cloud Services Request Items 	
	<p>Module 5: Configuring Compliance in the Private Cloud</p> <ul style="list-style-type: none"> • Overview of the Process Pack for IT GRC • Installing and Configuring the Process Pack for IT GRC • Implementing an IT GRC Control Management Program • Maintaining Compliance through VMM Security Baselines and System Center Advisor 	



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	<p>Module 6: Configuring SLAs, Dashboards, and Widgets</p> <ul style="list-style-type: none">• Service Level Tracking• Configuring and Deploying Widgets and Dashboards• Publishing RealTime State with Microsoft Visio Snapin• System Center Analytics• Using Excel and SSRS to View Data• Overview of PerformancePoint	
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