

NETLOGIC TRAINING CENTER

Course Training

Designing and Implementing a Server Infrastructure (70-413)

Course Content

This five-day course to get hands-on instruction and practice planning, designing and deploying a physical and logical Windows Server® 2012 R2 enterprise infrastructure in this 5-day Microsoft Official course. This course is part one in a series of two courses that provides the skills and knowledge necessary to design and implement a Windows Server 2012 R2 infrastructure in an enterprise environment. The two courses collectively cover designing, planning, deploying, securing, monitoring, automating, and virtualizing an enterprise server infrastructure. This course covers the knowledge and skills needed to provide an enterprise solution that supports manual and automated server installations in a physical and virtual environment including the supporting file and storage services. You will also learn the skills necessary to provide enterprise networking solutions such as DHCP, IPAM, VPN, and DirectAccess. You will also learn the skills necessary to design and implement a forest and domain infrastructure including multi domains/forest and branch office scenarios. This course maps directly to and is the preferred choice for hands-on preparation for Microsoft Certified Solutions Expert (MCSE): Exam 413: Designing and Implementing and Server Infrastructure, which is the fourth of five exams required for MCSE: Server Infrastructure certification.

NOTE: Labs in this course are based on Windows Server 2012 R2 and System Center 2012 R2. This course is designed for experienced IT professionals who support medium to large enterprises and have experience administering Windows Server 2012 R2 and have an MCSA: Windows Server 2012 certification or equivalent skills.

Course Objective

By the end of the course, you should be able to meet the following objectives:

- Plan server upgrade and migration.
- Plan and implement a server deployment strategy.
- Plan and deploy servers by using System Center 2012 R2 Virtual Machine Manager (VMM).
- Design and maintain an IP configuration and address management solution.
- Design and implement name resolution.
- Design and implement an AD DS forest and domain infrastructure.
- Design and implement an AD DS organizational unit (OU) infrastructure.
- Design and implement a Group Policy Object (GPO) strategy.
- Design and implement an AD DS physical topology.
- Plan and implement storage and file services.
- Design and implement network protection.
- Design and implement remote access services.

Course Prerequisite

Candidates for this course have good Windows client and server operating system knowledge and basic AD DS and networking experience in an enterprise/small business (SMB) environment together with application configuration experience.

- In addition to their professional experience, students who attend this training should already have the following technical knowledge:
- A good understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) fundamentals and networking concepts.
- A good working knowledge of both Windows Server 2012 R2 and Active Directory® Domain Services (AD DS). For example, domain user accounts, domain vs. local user accounts, user profiles, and group membership.
- A good understanding of both scripts and batch files.
- A solid understanding of security concepts, such as authentication and authorization.
- Familiarity with deployment, packaging, and imaging tools.
- Ability to work in a team/virtual team.
- Ability to produce good documentation and have the appropriate communication skills to create proposals and make budget recommendations.
- Knowledge equivalent to Windows 2012 R2 MCSA.

Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills:

- 20410D: Installing and Configuring Windows Server 2012
- 20411D: Administering Windows Server 2012
- 20412D: Configuring Advanced Windows Server 2012 Services
- OR
- 20417D: Upgrading Your Skills to MCSA Windows Server 2012

Course Pre-Test

Not Required

Course Details

Day 1

| Item | Subject | Details | Personal Lab and devices | Workgroup Lab and devices |
|--------------|--|--|--|---------------------------|
| 1 | Planning Server Upgrade and Migration | <ul style="list-style-type: none">• Considerations for Upgrades and Migrations• Creating a Server Upgrade and Migration Plan• Planning for Virtualization | Theory and Lecture | |
| Break | | | | |
| 2 | Planning and Implementing a Server Deployment Strategy | <ul style="list-style-type: none">• Selecting an Appropriate Server Deployment Strategy• Implementing an Automated Deployment Strategy | Theory and Lecture | |
| 3 | Planning and Deploying Servers Using Virtual Machine Manager | <ul style="list-style-type: none">• System Center 2012 R2 Virtual Machine Manager Overview• Implementing a Virtual Machine Manager Library and Profiles• Planning and Deploying Virtual Machine Manager Services | Theory and Lecture | |
| | Summary challenge advance lab for Planning a Server Upgrade , Deployment and implement virtual machine | Lab 1 - Planning for Upgrade server - Planning for Deployment server - Planning for Deployment virtual machine | (Lab 1) Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version | |

Day 2

| Item | Subject | Details | Trainee Lab and devices | Workgroup Lab and devices |
|--------------|--|---|---|---------------------------|
| 4 | Designing and Maintaining an IP Configuration and Address Management Solution | <ul style="list-style-type: none"> • Designing DHCP Servers • Planning DHCP Scopes • Designing an IPAM Provisioning Strategy • Managing Servers and Address Spaces by Using IPAM | Theory and Lecture | |
| Break | | | | |
| 5 | Designing and Implementing Name Resolution | <ul style="list-style-type: none"> • Designing a DNS Server Implementation Strategy • Designing the DNS Namespace • Designing DNS Zones • Designing DNS Zone Replication and Delegation • Optimizing DNS Servers • Designing DNS for High Availability and Security • | Theory and Lecture | |
| | Summary challenge advance lap for Designing and Maintaining IP configuration and DNS | <p>Lab 1 - Design IP configuration and DHCP Planning Scope</p> <p>Lab 2 - Design a Domain Name System (DNS) server-implementation strategy. - Design a DNS namespace. - Design and implement a DNS zone strategy. - Design and configure DNS zone replication and delegation. - Optimize the DNS server configuration. - Design DNS for high availability and security.</p> | <p>(Lab 1 to 2)</p> <p>Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version</p> | |

Day 3

| Item | Subject | Details | Trainee Lab and devices | Workgroup Lab and devices |
|--------------|--|---|--|---------------------------|
| 6 | Designing and Implementing an Active Directory Domain Services Forest and Domain Infrastructure | <ul style="list-style-type: none"> • Designing an Active Directory Forest • Designing and Implementing Active Directory Forest Trusts • Designing Active Directory Integration with Windows Azure Active Directory • Designing and Implementing Active Directory Domains • Designing DNS Namespaces in Active Directory Environments • Designing Active Directory Domain Trusts | Theory and Lecture | |
| Break | | | | |
| 7 | Designing and Implementing an AD DS Organizational Unit Infrastructure | <ul style="list-style-type: none"> • Planning the Active Directory Administrative Tasks Delegation Model • Designing an OU Structure • Designing and Implementing an AD DS Group Strategy | Theory and Lecture | |
| 8 | Designing and Implementing a Group Policy Object Strategy | <ul style="list-style-type: none"> • Collecting the Information Required for a GPO Design • Designing and Implementing GPOs • Designing GPO Processing • Planning Group Policy Management | Theory and Lecture | |
| | Summary challenge advance lap for Designing and Implementing an Active Directory Domain Services Forest Infrastructure and OU , GPOs | <p>Lab 1</p> <ul style="list-style-type: none"> - Design an Active Directory forest. - Design and implement Active Directory forest trusts. - Design Active Directory integration with Windows Azure Active Directory. - Design and implement Active Directory domains. - Design DNS namespaces in an Active - Directory environment. - Design and implement Active Directory domain trusts. <p>Lab 2</p> <ul style="list-style-type: none"> - Plan an Active Directory administrative tasks delegation model. - Design an OU structure. - Design and implement an AD DS group strategy. <p>Lab 3</p> <ul style="list-style-type: none"> - Collect and analyze the information required to facilitate a GPO design. - Create a GPO design and implement it. - Create a GPO processing design. - Plan GPO management. | <p>(Lab 1 to 3)</p> <p>Real Device</p> <p>Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version</p> | |

Day 4

| Item | Subject | Details | Trainee Lab and devices | Workgroup Lab and devices |
|--------------|---|--|--|---------------------------|
| 9 | Designing and Implementing an AD DS Physical Topology | <ul style="list-style-type: none"> • Designing and Implementing Active Directory Sites • Designing Active Directory Replication • Designing the Placement of Domain Controllers • Virtualization Considerations for Domain Controllers • Designing Highly Available Domain Controllers | Theory and Lecture | |
| Break | | | | |
| 10 | Planning and Implementing Storage and File Services | <ul style="list-style-type: none"> • Planning and Implementing iSCSI SANs • Planning and Implementing Storage Spaces • Optimizing File Services for Branch Offices | Theory and Lecture | |
| | Summary challenge advance lap for Design and Implement AD DS, AD FS | <p>Lab 1</p> <ul style="list-style-type: none"> - Design and implement Active Directory sites. - Design and configure Active Directory replication. - Design domain controller placement. - Plan for virtualization of the domain controller role. - Design domain controller deployments for high availability. <p>Lab 2</p> <ul style="list-style-type: none"> - Plan and implement an Internet Small Computer - System Interface (iSCSI) SAN. - Plan and implement storage spaces. - Optimize file services for branch offices. | <p>(Lab 1 to 2)</p> <p>Real Device</p> <p>Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version</p> | |

Day 5

| Item | Subject | Details | Trainee Lab and devices | Workgroup Lab and devices |
|--------------|--|---|--|---------------------------|
| 11 | Designing and Implementing Network Protection | <ul style="list-style-type: none">• Overview of Network Security Design• Designing and Implementing a Windows Firewall Strategy• Designing and Implementing a NAP Infrastructure | Theory and Lecture | |
| Break | | | | |
| 12 | Designing and Implementing Remote Access Services | <ul style="list-style-type: none">• Planning and Implementing DirectAccess• Planning and Implementing VPN• Planning and Implementing Web Application Proxy• Planning a Complex Remote Access Infrastructure | Theory and Lecture | |
| | Summary challenge advance lap for Network Protection and Network access services | Lab 1 - Describe the design process for network security. - Design and implement a Windows Firewall strategy. - Design and implement Network Access Protection (NAP). Lab 2 - Plan and implement DirectAccess. - Plan and implement a virtual private network (VPN). - Plan and implement a Web Application Proxy. - Plan a complex remote access infrastructure. | (Lab 1 to 2) Real Device Catalyst 3560-CX 1 Unit Cisco UCS Server C-Series ESXi 6.5 trial version VMWare vSphere Windows server 2016 trial version | |

Course Post-Test

Not Required

Course Materials

Not include in this class training (but you can requested from sale team)

Course Devices Training (Per 1 Person)



Cisco Server UCS C-Series



Cisco Catalyst 3560-CX



Storage QNAP

