

(20414C)–Implementing an Advanced Server Infrastructure

OBJECTIVE

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 two 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 to plan and implement a highly available, secure infrastructure with focus on Active Directory Federation Service (AD FS), public key infrastructure (PKI), and Active Directory Rights Management Services (AD RMS). You will also learn the skills needed to plan and deploy virtual machines including self-service and automation of virtual machine deployments as well as planning and implementing a monitoring strategy that includes Microsoft System Center 2012 R2-Operations Manager. This course maps directly to and is the preferred choice for hands-on preparation for Microsoft Certified Solutions Expert (MCSE): Exam 414: Implementing an Advanced Server Infrastructure, which is the fifth 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 TOPICS

Module 1: Overview of Management in an Enterprise Data Center

- Overview of the Enterprise Data Center
- Overview of the Microsoft System Center 2012 R2 Components

Module 2: Planning and Implementing a Server Virtualization Strategy

- Planning a VMM Deployment
- Planning and Implementing a Server Virtualization Host Environment

Module 3: Planning and Implementing Networks and Storage for Virtualization

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

Module 4: Planning and Deploying Virtual Machines

- Planning a Virtual Machine Configuration
- Preparing for Virtual Machine Deployments with VMM
- Deploying Virtual Machines
- Planning and Implementing Hyper-V Replica

Module 5: Planning and Implementing a Virtualization Administration Solution

- Planning and Implementing Automation with System Center 2012
- Planning and Implementing System Center 2012 Administration
- Planning and Implementing Self-Service Options in System Center 2012
- Planning and Implementing Updates in a Server Virtualization Infrastructure

Module 6: Planning and Implementing a Server Monitoring Strategy

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

Module 7: Planning and Implementing High Availability for File Services and Applications

- Planning and Implementing Storage Spaces
- Planning and Implementing a DFS
- Planning and Implementing NLB

Module 8: Planning and Implementing a High Availability Infrastructure Using Failover Clustering

- Planning an Infrastructure for Failover Clustering
- Implementing Failover Clustering
- Planning and Implementing Updates for Failover Clusters
- Integrating Failover Clustering with Server Virtualization
- Planning a Multisite Failover Cluster

Module 9: Planning and Implementing a Business Continuity Strategy

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

Module 10: Planning and Implementing a Public Key Infrastructure

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

Module 11: Planning and Implementing an Identity Federation Infrastructure

- 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

- Planning and Implementing Web Application Proxy

Module 12: Planning and Implementing Data Access for Users and Devices

- Planning and Implementing DAC
- Planning Workplace Join
- Planning Work Folders

Module 13: Planning and Implementing an Information Rights Management Infrastructure

- AD RMS Overview
- 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

After completing this course, students will be able to:

- Describe an enterprise data center.
- Plan and implement a server virtualization strategy using System Center 2012.
- Plan and implement the network and storage infrastructure required to deploy a virtualized server infrastructure.
- Plan and deploy virtual machines on Windows Hyper-V.
- Plan and implement a virtualization administration solution by using System Center 2012.
- Plan and implement a server monitoring strategy using the Windows Server 2012 tools and using Microsoft System Center 2012 - Operations Manager.
- Plan and implement an application and a file services infrastructure that is highly available.
- Plan and implement a highly available server infrastructure by using the failover clustering features in Windows Server 2012.
- Plan and implement a business continuity strategy in a Windows Server 2012 environment.
- Plan and implement a PKI deployment, and plan and implement a certificate management solution.
- Plan and implement an AD FS server deployment and claims aware application access.
- Plan and implement Dynamic Access Control, Workplace Join and Work Folders.
- Plan and implement an AD RMS deployment, plan and manage AD RMS templates and access, and plan and implement external access to AD RMS services.

PREREQUISITES

Before attending this course, students must have:

- An understanding of TCP/IP and networking concepts.
- An understanding of Windows Server 2012 and AD DS, including planning, designing and deploying.
- An understanding of scripts and batch files.
- An understanding of security concepts such as authentication and authorization.

- An understanding of deployment, packaging, and imaging tools.
- Experience working in a team or a virtual team.
- Achieved the Windows Server 2012 MCSA certification as well as information in the course 20413C: Designing and Implementing an Enterprise Server Infrastructure.

TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

COURSE DURATION

24 Hours (in 3 days)

CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course