

# Exam 70-411: Administrating Windows Server 2012 R2

## Course Overview

This course teaches students server deployment and image management, managing servers and updates, file and print services, configuring network services and access, network policy servers, Active Directory, and Group Policy.

### Course Introduction

7m

Course Introduction

### Module 01 - Server Deployment and Image Management

1h 34m

Server Deployment and Image Management

WDS Server Role Services

Windows Deployment Services

Functionality

PowerShell Cmdlets for WDS

Prerequisites for Installing WDS Deployment and Transport Server (AD Integrated)

Prerequisites for Installing WDS Deployment and Transport Server (Standalone)

Demo - Installing WDS

Installing with Windows PowerShell

Demo - Installing with Windows PowerShell and WDSUTIL

Configuring WDS Role

Types of Images

Steps for Adding Images

Demo - Configuring WDS

Demo - WDS Install Images and Server Configuration

Client Prerequisites for Installing Images

Client Steps for Installing Images

Configuring Boot Menu

Creating Capture Image

Custom Install Images

Creating Custom Install Images

Discover Images

Creating Discover Images

Creating Media for Discover Image

Demo - Creating Media for Discover Image

Unattended Installations

Unattended Steps

Sample Unattended File

Multicast Transmissions

Demo - Configuring Transmissions

Demo - Adding Second Image Files

Adding Driver Packages to Boot Images

Common Administrative Tasks

Phases of Automated Deployments

Tools to Create and Service Images  
Module 01 Review

**Module 02 - Managing Servers and Updates**

2h 13m

WSUS  
Implementing Update Management  
WSUS 3.0 SP2 Prerequisites  
Computer Groups  
Approval - Updates  
WSUS Management Process  
Group Policy and Automatic Updates  
Demo - Configuring WSUS Group Policy  
WSUS Management with PowerShell  
Demo - Installing and Configuring WSUS  
Demo - Approve Updates  
Monitoring Servers  
Monitor Servers  
Tools  
Demo - Task Manager and Resource Monitor  
Demo - Performance Monitor  
Demo - Performance Monitor Counters  
Demo - Data Collector Sets  
Virtual Machine Overview  
Demo - Monitoring Virtual Machines  
Monitoring Event Logs  
Demo - Event Viewer  
Demo - Event Forwarding  
Monitoring Network Infrastructure  
Demo - Monitoring Network Infrastructure  
Module 02 Review

**Module 03 - File and Print Services**

2h 25m

FSRM  
File System Resource Manager (FSRM)  
Installing FSRM  
Demo - Installing and Configuring FSRM  
Managing FSRM with PowerShell 3.0  
Demo - Managing FSRM with PowerShell 3.0  
Demo - Legacy FSRM Commands  
Remote Management of FSRM  
Quota Management  
Demo - Creating and Using Quota Templates  
Demo - Testing Quota Limits  
File Screening Management  
File Screen Templates  
File Groups  
Demo - File Groups and File Screens  
Storage Reports  
Storage Report Types  
Reports Continued

Demo - Storage Reports  
Report Tasks  
Classification Management  
Classification Properties  
Handling Classification Property Conflicts  
Classification Rule Properties  
Classification Examples  
File Management  
New and Changed Functionality Windows Server 2012 R2  
DFS  
DFS Role Services  
Domain Based Namespaces  
Standalone Namespaces  
Demo - Installing DFS  
Demo - Configure DFS  
DFS Replication with Windows Server 2012 R2  
Configure File and Disk Encryption  
EFS  
EFS and Network Shares  
Encryption Keys  
EFS File Encryption Process  
EFS File Decryption Process  
EFS File Recovery  
Managing Recovery Agents  
Demo - EFS Encryption  
BitLocker Device Encryption  
Audit Policies  
Configure Advanced Audit Policies  
Audit Policies (Cont.)  
Demo - Configuring Audit Policies  
Module 03 Review

#### **Module 04 - Configuring Network Services and Access**

1h 29m

Configuring Network Services and Access  
DNS Components  
DNS Zones  
Demo - DNS Zones  
Stub Zones vs. Conditional Forwarders  
DNS Records  
Demo - DNS Zones and Records  
Demo - Using DNSCMD  
How DNS Forwarding Works  
Demo - Adding DNS and Conditional Forwarders  
DNS Namespaces  
DNS Naming Contexts and Rules  
External vs. Internal Namespaces  
Zone Transfers  
Demo - Using DNSCMD and Zone Transfers  
Demo - Troubleshooting DNS  
Zone Scavenging

Configuring Zone Scavenging  
Demo - Scavenging DNS  
Other Configuration Options  
DNS Caching  
Commands for DNS Cache  
Storage of Information  
Considerations  
Module 04 Review

**Module 05 - Network Policy Servers**

2h 23m

Network Policy Servers  
Remote Access Methods  
Components of Network Access Services  
Roles and Features  
VPN and Routing Configuration Components  
Demo - Configure Routing and Remote Access  
Network Authentication  
PKI Components  
DHCP Relationship with Remote Access  
VPN Access  
Requirements of VPN Server  
Properties of VPN Connection  
Tunneling Protocols for VPN Connections  
VPN Reconnect  
Demo - Advanced RAS Configuration  
VPN Post Installation Checklist  
Demo - Using CMAK  
Components of Network Policy  
Properties of Network Policy  
Network Policy Processing  
Direct Access Features  
What's New in Direct Access  
Deployment Phases of Direct Access  
Required Infrastructure: Server  
Required Infrastructure: Clients  
Required Infrastructure: Network Location Server  
Required Infrastructure: Internal Resources  
Required Infrastructure: Active Directory Domain | Group Policy | DNS  
Required Infrastructure: PKI | NAP  
Name Resolution Policy Table  
Internal Client Interaction with Direct Access  
External Client Interaction with Direct Access  
Troubleshooting Tools  
VPN Connectivity Troubleshooting  
Common Error Codes  
Network Address Translation  
Configure Remote Dial-in Settings for Users  
Network Policy and Access Services  
Network Policy Server  
Demo - Installing NPS Role

Network Policy Server Tools  
RADIUS Clients  
RADIUS Proxy  
Certificates  
Required Certificates  
Monitoring NPS  
Module 05 Review

**Module 06 - Active Directory**

2h 39m

Active Directory  
Active Directory Directory Services (AD DS)  
AD DS Forest Structure  
AD DS Schema  
AD DS Domain Structure  
AD DS Domain Controllers  
AD DS Default Containers  
Organizational Units  
Virtualized Domain Controllers  
Cloning Virtual Domain Controllers  
Process: Cloning Server 2012 VDC  
DcCloneConfig.xml Syntax  
DcCloneConfig.xml Parameters  
Domain Controller Safe Backup and Restore  
PowerShell for Hyper-V Snapshot Management  
Demo - Introduction to Active Directory Administration Tools  
Importing User Accounts  
Common LDAP Attributes  
Demo - Advanced AD Attributes  
Demo - Using CSVDE  
Demo - Export User Accounts Using CSVDE  
Demo - Importing Accounts Using LDIF  
Demo - Active Directory and PowerShell  
Managed Service Accounts  
Requirements for Service Accounts  
Configuring Managed Service Accounts Using PowerShell  
Kerberos Version 5 – Server 2012 Features  
Kerberos Configurations Available  
Service Principal Names (SPNs)  
Passwords  
Create Account Policies and User Rights Assignments  
Demo - Creating Password Policies  
Notes Create Fine Grained Password Policies  
Demo - Password Settings Container  
Universal Group Membership Caching (UGMC)  
Operations Master Roles  
Demo - Operations Master Roles  
Maintain Active Directory Domain Services  
Demo - AD Recycle Bin  
Demo - Restore Deleted Items  
Demo - AD DB Maintenance and Snapshots

Read Only Domain Controllers (RODC)  
Demo - Installing RODC  
Manage RODC Caching  
Module 06 Review

**Module 07 - Group Policy**

2h 30m

Group Policy  
Defining Options  
Group Policy and IPv6  
Group Policy Examples of Usage  
Demo - Group Policy Management Console  
Group Policy Objects  
Group Policy Application  
CSE Policy Refresh  
Windows Client Policy Processing  
Scripts Node of Group Policy  
Group Policy Nodes  
Default Group Policies  
Group Policy Storage  
Replication of GPO's  
Starter GPO's  
Slow Link Processing  
Configure Loopback Processing  
Security Templates  
Demo - Group Policy Folder Redirection  
Demo - Group Policy Software Installation  
Demo - Administrative Templates  
Group Policy Links  
Group Policy Processing  
Group Policy Inheritance and Precedence  
Precedence – How to Handle Multiple Linked GPO's  
Demo - Local Policies  
Other Group Policy Options  
WMI Filters  
Security Templates (Cont.)  
Demo - Group Policy Objects  
Group Policy Preferences  
Demo - Configure Group Policy Preferences  
Maintaining GPO's  
Group Policy and PowerShell  
Demo - Creating Login Policies  
Demo - Configuring User Desktops  
Module 07 Review  
Course Closure

**Total Duration: 15hrs 21m**