Introduction
Get hands-on instruction and practice administering Active Directory technologies in Windows Server 2012 and Windows Server 2012 R2 in this 5-day Microsoft Official Course. You will learn the skills you need to better manage and protect data access and information, simplify deployment and management of your identity infrastructure, and provide more secure access to data. You will learn how to configure some of the key features in Active Directory such as Active Directory Domain Services (AD DS), Group Policy, Dynamic Access Control (DAC), Work Folders, Work Place Join, Certificate Services, Rights Management Services (RMS), Federation Services, as well as integrating your on premise environment with cloud based technologies such as Windows Azure Active Directory. As part of the learning experience, you will perform hands-on exercises in a virtual lab environment.

Audience Profile
This course is intended for Information Technology (IT) Professionals who have Active Directory Domain Services (AD DS) experience and are looking to for a single course that will further develop knowledge and skills using Access and Information Protection technologies in Windows Server 2012 and Windows Server 2012 R2. This would typically include:
- AD DS Administrators who are looking to further develop skills in the latest Access and Information Protection technologies with Windows Server 2012 and Windows Server 2012 R2
- System or Infrastructure administrators with general AD DS experience and knowledge who are looking to build upon that core knowledge and cross-train into advanced Active Directory technologies in Windows Server 2012 and Windows Server 2012 R2
- IT Professionals who have taken the 10967A: Fundamentals of a Windows Server Infrastructure course and are looking to build upon that Active directory knowledge

Prerequisites
Before attending this course, students must have working knowledge of:
- Experience working with Active Directory Domain Services (AD DS)
- Experience working in a Windows Server Infrastructure enterprise environment
- Experience working with and troubleshooting core networking infrastructure technologies such as name resolution, IP Addressing, Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP)
- Experience working with Hyper-V and Server Virtualization concepts
- An awareness and understanding of general security best practices
- Experience working hands on with Windows client operating systems such as Windows Vista, Windows 7 or Windows 8

Course Objectives
After completing this course, students will be able to:
- Understand available solutions for identity management and be able to address scenarios with appropriate solutions
- Deploy and administer AD DS in Windows Server 2012
- Secure AD DS deployment
- Implement AD DS sites, configure and manage replication
- Implement and manage Group Policy
- Manage user settings with Group Policy
- Implement certification authority (CA) hierarchy with AD CS and how to manage CAs
- Implement, deploy and manage certificates
- Implement and manage AD RMS
- Implement and administer AD FS
- Secure and provision data access using technologies such as Dynamic Access Control, Work Folders and Workplace Join
- Monitor, troubleshoot and establish business continuity for AD DS services
- Implement Windows Azure Active Directory
- Implement and administer Active Directory Lightweight Directory Services (AD LDS)

Course Content
Module 1: Overview of Access and Information Protection
This module provides an overview of multiple Access and Information Protection (AIP) technologies and services what are available with Windows Server 2012 and Windows Server
### Module 2: Advanced Deployment and Administration of AD DS

This module explains how to deploy AD DS remotely and describes the virtualization safeguards, cloning abilities and extending AD DS to the cloud.

**Lessons**
- Deploying AD DS
- Deploying and Cloning Virtual Domain Controllers
- Deploying Domain Controllers in Windows Azure
- Administering AD DS

**Lab:** Deploying and Administering AD DS
- Deploying AD DS
- Deploying Domain Controllers by Performing Domain Controller Cloning
- Administering AD DS

After completing this module, students will be able to:
- Describe and perform various deployment techniques for AD DS
- Describe virtual domain controller deployment considerations
- Explain how new technologies in Windows Server 2012 and Windows Server 2012 R2 support virtual domain controllers
- Describe Domain Controller cloning
- Implement AD DS using the tools provided in Windows Server 2012 and Windows Server 2012 R2

### Module 3: Securing AD DS

This module describes the threats to domain controllers and what methods can be used to secure the AD DS and its domain controllers.

**Lessons**
- Securing Domain Controllers
- Implementing Account Security
- Implementing Audit Authentication

**Lab:** Securing AD DS
- Implementing Security Policies for Accounts, Passwords, and Administrative Groups
- Deploying and Configuring an RODC

After completing this module, students will be able to:
- Understand the importance of securing domain controllers
- Describe the benefit of read-only domain controllers (RODCs)
- Explain and implement password and account lockout policies
- Implement audit authentication

### Module 4: Implementing and Administering AD DS Sites and Replication

This module explains how AD DS replicates information between domain controllers within a single site and throughout multiple sites. This module also explains how to create multiple sites and how to monitor replication to help optimize AD DS replication and authentication traffic.

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

**Lab:** Implementing AD DS Sites and Replication
- Creating Subnets and Sites
- Deploying an Additional Domain Controller
- Configuring AD DS Replication
- Troubleshooting AD DS Replication

After completing this module, students will be able to:
- Describe AD DS replication
- Configure AD DS sites
- Configure and monitor AD DS replication

### Module 5: Implementing Group Policy

This module describes Group Policy, how it works, and how best to implement it within your organization.

**Lessons**
- Introducing Group Policy
- Implementing and Administering GPOs
- Group Policy Scoping and Group Policy Processing
- Troubleshooting the Application of GPOs

**Lab:** Implementing and Troubleshooting a Group Policy Infrastructure
- Creating and Configuring GPOs
- Managing GPO Scopes
- Verifying GPO Application
- Managing GPOs
- Troubleshooting GPOs

After completing this module, students will be able to:
- Describe Group Policy
- Implement and administer GPOs
- Describe Group Policy scope and Group Policy processing
- Troubleshoot the application of GPOs

### Module 6: Managing User Settings with Group Policy

This module describes how to use GPO Administrative Templates, Folder Redirection, and Group Policy features to configure users’ computer settings.

**Lessons**
- Implementing Administrative Templates
- Configuring Folder Redirection and Scripts
- Configuring Group Policy Preferences

**Lab:** Managing User Desktops with Group Policy
- Implementing Settings by Using Group Policy Preferences
- Configuring Folder Redirection

After completing this module, students will be able to:
- Implement Administrative Templates
- Configure Folder Redirection and scripts
- Configure Group Policy preferences

### Module 7: Deploying and Managing AD CS

This module explain how to deploy and manage Certificate Authorities (CAs) with Active Directory Certificate Services (AD CS).

**Lessons**
- Deploying CAs
- Administering CAs
Module 8: Deploying and Managing Certificates
This module describes certificate usage in business environments and explains how to deploy and manage certificates, configure certificate templates and manage enrolment process. This module also covers the deployment and management of smart cards.
Lessons
- Using Certificates in a Business Environment
- Deploying and Managing Certificate Templates
- Managing Certificates Deployment, Revocation, and Recovery
- Implementing and Managing Smart Cards
Lab: Deploying and Using Certificates
- Configuring Certificate Templates
- Enrolling and using certificates
- Configuring and Implementing Key Recovery
After completing this module, students will be able to:
- Use certificates in business environments
- Deploy and manage certificate templates
- Manage certificates deployment, revocation and recovery
- Implement and manage smart cards

Module 11: Implementing Secure Shared File Access
This module explains how to use Dynamic Access Control (DAC), Work Folders, Work place Join and how to plan and implement these technologies.
Lessons
- Overview of Dynamic Access Control
- Implementing DAC Components
- Implementing DAC for Access Control
- Implementing Access Denied Assistance
- Implementing and Managing Work Folders
- Implementing Workplace Join
Lab: Implementing Secure File Access
- Preparing for DAC Deployment
- Implementing DAC components
- Implement DAC for access control
- Implement access-denied assistance
- Implement and manage Work Folders
- Implement Workplace Join

Module 9: Implementing and Administering AD RMS
This module introduces Active Directory Rights Management Services (AD RMS). It also describes how to deploy AD RMS, how to configure content protection, and how to make AD RMS–protected documents available to external users.
Lessons
- Overview of AD RMS

Module 10: Implementing and Administering AD FS
This module explains AD FS, and then provides details on how to configure AD FS in both a single organization scenario and in a partner organization scenario. This module also describes the Web Application Proxy feature in Windows Server 2012 R2 that functions as an AD FS proxy and reverse proxy for web-based applications.
Lessons
- Overview of AD FS
- Deploying AD FS
- Implementing AD FS for a Single Organization
- Deploying AD FS in a Business-to-Business Federation Scenario
- Extending AD FS to External Clients
Lab: Implementing AD FS
- Installing and Configuring AD FS
- Configure an Internal Application for AD FS
- Configuring AD FS for a Federated Business Partner
- Configuring Web Application Proxy
After completing this module, students will be able to:
- Describe AD FS
- Explain how to configure the AD FS prerequisites, and deploy AD FS services
- Describe how to implement AD FS for a single organization

Module 12: Monitoring, Managing, and Recovering AD DS
This module explains how to use tools that help monitor performance in real time, and how to record performance over time to spot potential problems by observing performance trends. This module also explains how to optimize and protect your directory service and related identity and access solutions so that if a service does fail, you can restart it as quickly as possible.
Lessons
- Monitoring AD DS
- Managing the AD DS Database
- AD DS Backup and Recovery Options for AD DS and Other Identity and Access Solutions
Lab: Monitoring AD DS
Module 13: Implementing Windows Azure Active Directory
This module explains the concepts and technologies in Windows Azure Active Directory and how to implement and integrate it within your organization.
Lessons
• Overview of Windows Azure AD
• Managing Windows Azure AD Accounts
Lab: Implementing Windows Azure AD
• Implementing Windows Azure AD for Office 365
• Implementing Windows Azure AD for a Cloud-Based Application
After completing this module, students will be able to:
• Monitor AD DS
• Manage the AD DS database
• Recover objects from the AD DS database

Module 14: Implementing and Administering AD LDS
This module explains how to deploy and configure Active Directory Lightweight Directory Services (AD LDS).
Lessons
• Overview of AD LDS
• Deploying AD LDS
• Configuring AD LDS Instances and Partitions
Lab: Implementing Windows Azure AD
• Configuring AD LDS Replication
• Integrating AD LDS with AD DS
Lab: Implementing and Administering AD LDS
• Configuring AD LDS Instances and Partitions
• Configuring AD LDS Replication
• Synchronizing AD LDS with AD DS
After completing this module, students will be able to:
• Describe AD LDS.
• Explain how to deploy AD LDS.
• Explain how to configure AD LDS instances and partitions.
• Explain how to configure AD LDS replication

Associated Certifications & Exam
On successful completion of this course students will receive a Torque IT attendance certificate.