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## Identity with Windows Server 2016

**Duration: 5 Days**    **Course Code: M20742**    **Version: B**    **Delivery Method: Blended Learning**

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### Overview:

This blended training course teaches IT Pros how to deploy and configure Active Directory Domain Services (AD DS) in a distributed environment, how to implement Group Policy, how to perform backup and restore, and how to monitor and troubleshoot Active Directory–related issues with Windows Server 2016. Additionally, this course teaches how to deploy other Active Directory server roles such as Active Directory Federation Services (ADFS) and Active Directory Certificate Services (AD CS).

This blended training solution consists of: six instructor led training sessions self study components learning support

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### Target Audience:

This course is primarily intended for existing IT professionals who have some AD DS knowledge and experience and who aim to develop knowledge about identity and access technologies in Windows Server 2016. This would typically include: AD DS administrators who are looking to train in identity and access technologies with Windows Server 2012 or Windows Server 2016. System or infrastructure administrators with general AD DS experience and knowledge who are looking to cross-train in core and advanced identity and access technologies in Windows Server 2012 or Windows Server 2016.

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### Objectives:

- Install and configure domain controllers.
  - Manage objects in AD DS by using graphical tools and Windows PowerShell.
  - Implement AD DS in complex environments.
  - Implement AD DS sites, and configure and manage replication.
  - Implement and manage Group Policy Objects (GPOs).
  - Manage user settings by using GPOs.
  - Secure AD DS and user accounts.
  - Implement and manage a certificate authority (CA) hierarchy with AD CS.
  - Deploy and manage certificates.
  - Implement and administer ADFS.
  - Implement and administer Active Directory Rights Management Services (AD RMS).
  - Implement synchronization between AD DS and Azure AD.
  - Monitor, troubleshoot, and establish business continuity for AD DS services.
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### Prerequisites:

- Some exposure to and experience with AD DS concepts and technologies in Windows Server 2012 or Windows Server 2016.
- Experience working with and configuring Windows Server 2012 or Windows Server 2016
- Experience and an understanding of core networking technologies such as IP addressing, name resolution, and Dynamic Host Configuration Protocol (DHCP).
- Experience working with and an understanding of Microsoft Hyper-V and basic server virtualization concepts.
- An awareness of basic security best practices.
- Hands-on working experience with Windows client operating systems such as Windows 7, Windows 8, Windows 8.1, or Windows 10.
- Basic experience with the Windows PowerShell command-line interface.

### Testing and Certification

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## Content:

This delivery format includes both instructor-led sessions and On-Demand sessions.

Week 1 – Kick-off and introduction to domain controller and managing objects in AD DS modules

- Introduction to course, review course schedule, expectations, etc.
- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

On-Demand modules to complete by next

- Module 1: Installing and Configuring Domain Controllers (DCs)
- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying domain controller
- Module 2: Managing Objects in AD DS
- Managing user accounts
- Managing groups in AD DS
- Managing computer accounts
- Using Windows PowerShell for AD DS administration
- Implementing and managing organizational units
- Module 3: Advanced AD DS Infrastructure Management
- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts
- Module 4: Implementing and Administering AD DS Sites and Replication
- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication
- Module 5: Implementing Group Policy
- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

Week 3 – Multi-Site Active Directory challenge and introduction to Group Policy and security modules

- Introduction to course, review course schedule, expectations, etc.
- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

On-Demand modules to complete by next

- Module 1: Installing and Configuring Domain Controllers (DCs)
- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying domain controller
- Module 2: Managing Objects in AD DS
- Managing user accounts
- Managing groups in AD DS
- Managing computer accounts
- Using Windows PowerShell for AD DS administration
- Implementing and managing organizational units
- Module 3: Advanced AD DS Infrastructure Management
- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts
- Module 4: Implementing and Administering AD DS Sites and Replication
- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

Week 5 – AD CS challenge and introduction to AD RMS, Azure AD, monitoring and recovery modules

- Introduction to course, review course schedule, expectations, etc.
- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

On-Demand modules to complete by next

- Module 1: Installing and Configuring Domain Controllers (DCs)
- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying domain controller
- Module 2: Managing Objects in AD DS
- Managing user accounts
- Managing groups in AD DS
- Managing computer accounts
- Using Windows PowerShell for AD DS administration
- Implementing and managing organizational units
- Module 3: Advanced AD DS Infrastructure Management
- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts
- Module 4: Implementing and Administering AD DS Sites and Replication
- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication
- Module 5: Implementing Group Policy

- Troubleshooting the application of GPOs
- Module 6: Managing User Settings with Group Policy
- Implementing administrative templates
- Configuring Folder Redirection and scripts
- Configuring Group Policy preferences
- Module 7: Securing Active Directory Domain Services
- Securing domain controllers
- Implementing account security
- Implementing Audit authentication
- Configuring managed service accounts (MSAs)
- Module 8: Deploying and Managing AD CS
- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs
- Module 9: Deploying and Managing Certificates
- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Using certificates in a business environment
- Implementing and managing smart cards
- Module 10: Implementing and Administering AD FS
- Overview of AD FS
- AD FS requirements and planning
- Deploying and configuring AD FS
- Overview of Web Application Proxy
- Module 11: Implementing and Administering AD RMS
- Overview of AD RMS
- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection
- Module 12: Implementing AD DS Synchronization with Azure AD
- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect
- Managing identities with directory synchronization
- Module 13: Monitoring, Managing, and Recovering AD DS
- Monitoring AD DS
- Managing the Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

Week 2 – Configure Active Directory Domain challenge and introduction to AD DS infrastructure management modules

- Introduction to course, review course

- replication
- Module 5: Implementing Group Policy
- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs
- Module 6: Managing User Settings with Group Policy
- Implementing administrative templates
- Configuring Folder Redirection and scripts
- Configuring Group Policy preferences
- Module 7: Securing Active Directory Domain Services
- Securing domain controllers
- Implementing account security
- Implementing Audit authentication
- Configuring managed service accounts (MSAs)
- Module 8: Deploying and Managing AD CS
- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs
- Module 9: Deploying and Managing Certificates
- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Using certificates in a business environment
- Implementing and managing smart cards
- Module 10: Implementing and Administering AD FS
- Overview of AD FS
- AD FS requirements and planning
- Deploying and configuring AD FS
- Overview of Web Application Proxy
- Module 11: Implementing and Administering AD RMS
- Overview of AD RMS
- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection
- Module 12: Implementing AD DS Synchronization with Azure AD
- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect
- Managing identities with directory synchronization
- Module 13: Monitoring, Managing, and Recovering AD DS
- Monitoring AD DS
- Managing the Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs
- Module 6: Managing User Settings with Group Policy
- Implementing administrative templates
- Configuring Folder Redirection and scripts
- Configuring Group Policy preferences
- Module 7: Securing Active Directory Domain Services
- Securing domain controllers
- Implementing account security
- Implementing Audit authentication
- Configuring managed service accounts (MSAs)
- Module 8: Deploying and Managing AD CS
- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs
- Module 9: Deploying and Managing Certificates
- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Using certificates in a business environment
- Implementing and managing smart cards
- Module 10: Implementing and Administering AD FS
- Overview of AD FS
- AD FS requirements and planning
- Deploying and configuring AD FS
- Overview of Web Application Proxy
- Module 11: Implementing and Administering AD RMS
- Overview of AD RMS
- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection
- Module 12: Implementing AD DS Synchronization with Azure AD
- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect
- Managing identities with directory synchronization
- Module 13: Monitoring, Managing, and Recovering AD DS
- Monitoring AD DS
- Managing the Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

Week 6 – Hybrid cloud identity access challenge and final course review

schedule, expectations, etc.

- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

On-Demand modules to complete by next

- Module 1: Installing and Configuring Domain Controllers (DCs)
- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying domain controller
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- Managing user accounts
- Managing groups in AD DS
- Managing computer accounts
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- Implementing and managing organizational units
- Module 3: Advanced AD DS Infrastructure Management
- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts
- Module 4: Implementing and Administering AD DS Sites and Replication
- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication
- Module 5: Implementing Group Policy
- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs
- Module 6: Managing User Settings with Group Policy
- Implementing administrative templates
- Configuring Folder Redirection and scripts
- Configuring Group Policy preferences
- Module 7: Securing Active Directory Domain Services
- Securing domain controllers
- Implementing account security
- Implementing Audit authentication
- Configuring managed service accounts (MSAs)

Week 4 – Enterprise GPO challenge and introduction to AD CS and AD FS modules

- Introduction to course, review course schedule, expectations, etc.
- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

On-Demand modules to complete by next

- Module 1: Installing and Configuring Domain Controllers (DCs)
- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying domain controller
- Module 2: Managing Objects in AD DS
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- Managing groups in AD DS
- Managing computer accounts
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- Module 3: Advanced AD DS Infrastructure Management
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- Configuring AD DS trusts
- Module 4: Implementing and Administering AD DS Sites and Replication
- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication
- Module 5: Implementing Group Policy
- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs

- Introduction to course, review course schedule, expectations, etc.
- Introduction to domain controller and managing objects in AD DS modules
- Challenge lab: Install and configure an Active Directory Domain
- Introduction to AD DS infrastructure management modules
- Challenge lab: Design a Multi-Site Active Directory infrastructure
- Introduction to Group Policy and security modules
- Challenge lab: Design an enterprise GPO
- Introduction to AD CS and AD FS modules
- Challenge lab: Design an Active Directory Certificate Services solution
- Introduction to AD RMS, Azure AD, monitoring and recovery modules
- Challenge lab: Design a hybrid cloud identity access solution with Active Directory Domain Services and Azure AD
- Course review and wrap-up

*Reminder:* To maximize your time and participation in next week's lab exercises, please complete the above modules prior to class.

- Module 8: Deploying and Managing AD CS
  - Deploying CAs
  - Administering CAs
  - Troubleshooting and maintaining CAs
  - Module 9: Deploying and Managing Certificates
  - Deploying and managing certificate templates
  - Managing certificate deployment, revocation, and recovery
  - Using certificates in a business environment
  - Implementing and managing smart cards
  - Module 10: Implementing and Administering AD FS
  - Overview of AD FS
  - AD FS requirements and planning
  - Deploying and configuring AD FS
  - Overview of Web Application Proxy
  - Module 11: Implementing and Administering AD RMS
  - Overview of AD RMS
  - Deploying and managing an AD RMS infrastructure
  - Configuring AD RMS content protection
  - Module 12: Implementing AD DS Synchronization with Azure AD
  - Planning and preparing for directory synchronization
  - Implementing directory synchronization by using Azure AD Connect
  - Managing identities with directory synchronization
  - Module 13: Monitoring, Managing, and Recovering AD DS
  - Monitoring AD DS
  - Managing the Active Directory database
  - Active Directory backup and recovery options for AD DS and other identity and access solutions
- Module 6: Managing User Settings with Group Policy
  - Implementing administrative templates
  - Configuring Folder Redirection and scripts
  - Configuring Group Policy preferences
  - Module 7: Securing Active Directory Domain Services
  - Securing domain controllers
  - Implementing account security
  - Implementing Audit authentication
  - Configuring managed service accounts (MSAs)
  - Module 8: Deploying and Managing AD CS
  - Deploying CAs
  - Administering CAs
  - Troubleshooting and maintaining CAs
  - Module 9: Deploying and Managing Certificates
  - Deploying and managing certificate templates
  - Managing certificate deployment, revocation, and recovery
  - Using certificates in a business environment
  - Implementing and managing smart cards
  - Module 10: Implementing and Administering AD FS
  - Overview of AD FS
  - AD FS requirements and planning
  - Deploying and configuring AD FS
  - Overview of Web Application Proxy
  - Module 11: Implementing and Administering AD RMS
  - Overview of AD RMS
  - Deploying and managing an AD RMS infrastructure
  - Configuring AD RMS content protection
  - Module 12: Implementing AD DS Synchronization with Azure AD
  - Planning and preparing for directory synchronization
  - Implementing directory synchronization by using Azure AD Connect
  - Managing identities with directory synchronization
  - Module 13: Monitoring, Managing, and Recovering AD DS
  - Monitoring AD DS
  - Managing the Active Directory database
  - Active Directory backup and recovery options for AD DS and other identity and access solutions

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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