

Advanced Active Directory Training

Duration: 40 hrs

Course Overview

This Advanced Active Directory (AD) training course provides a comprehensive deep-dive into the key components, functionalities, and advanced management techniques of Active Directory Domain Services (AD DS). The course covers crucial topics such as domain controller management, group policy implementation, Active Directory Certificate Services (AD CS), Active Directory Lightweight Directory Services (AD LDS), and more. Participants will gain hands-on experience and advanced skills to effectively manage and troubleshoot AD DS in a dynamic IT environment.

Prerequisites

Before taking this course, participants should have:

- Basic knowledge of networking concepts
- Familiarity with Windows Server operating systems
- Experience with Active Directory basic administration

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1. Active Directory Fundamentals

- Overview of AD DS: Understanding forests, domains, sites, domain controllers, organizational units (OUs), users, and groups
- AD DS Architecture: Detailed study of AD DS components and their interactions

2. Domain Controller Management

- Deployment and Configuration: Best practices for deploying domain controllers, including read-only domain controllers (RODCs)
- FSMO Roles: Understanding Flexible Single Master Operations (FSMO) roles and their management
- Backup and Recovery: Techniques for backing up and restoring AD DS, including system state backups

3. Group Policy Management

- GPO Creation and Implementation: Advanced techniques for creating and implementing Group Policy Objects (GPOs)
- Troubleshooting GPOs: Methods for diagnosing and resolving GPO-related issues

4. Advanced AD DS Administration

- Trust Relationships: Creating and managing trust relationships between domains and forests
- Replication Monitoring and Troubleshooting: Monitoring AD DS replication and resolving replication issues
- Custom AD DS Partitions: Creating and managing custom partitions in AD DS

5. Active Directory Certificate Services (AD CS)

- Certification Authorities (CAs): Types of CAs and their roles
- Certificate Issuance and Revocation: Processes for issuing and revoking certificates
- Certificate Trusts: Establishing and managing certificate trusts

6. Active Directory Lightweight Directory Services (AD LDS)

- AD LDS Overview: Understanding the role and use cases of AD LDS
- Installation and Configuration: Steps to install and configure AD LDS instances
- Schema Management: Managing and extending the AD LDS schema
- Replication and Synchronization: Configuring replication between AD LDS instances
- Security and Authentication: Implementing security measures and authentication mechanisms in AD LDS

7. Active Directory Federation Services (AD FS)

- AD FS Overview: Understanding the role and use cases of AD FS
- Installation and Configuration: Steps to install and configure AD FS
- Claims-Based Authentication: Implementing and managing claims-based authentication
- Federation Trusts: Creating and managing federation trusts
- Single Sign-On (SSO): Configuring SSO for internal and external applications

8. Security and Compliance

- AD DS Security Best Practices: Implementing security measures to protect AD DS
- Compliance and Auditing: Ensuring AD DS complies with organizational policies and regulatory requirements

9. PowerShell for AD DS

- Automation with PowerShell: Using PowerShell scripts to automate AD DS tasks
- Advanced Scripting: Writing and debugging advanced PowerShell scripts for AD DS management

10. Monitoring and Performance Tuning

- AD DS Monitoring Tools: Utilizing tools like Performance Monitor, Event Viewer, and AD DS-specific monitoring solutions
- Performance Optimization: Techniques for optimizing AD DS performance

11. Troubleshooting and Support

- Common Issues: Identifying and resolving common AD DS issues
- Advanced Troubleshooting: Techniques for diagnosing and fixing complex AD DS problems

12. Migration and Upgrades

- AD DS Migration: Strategies for migrating AD DS from older versions to newer ones
- Upgrade Paths: Planning and executing upgrades to AD DS

13. Integration with Other Services

- AD DS and Azure AD: Integrating on-premises AD DS with Azure Active Directory
- Third-Party Integrations: Connecting AD DS with third-party applications and services

14. Real-World Scenarios and Case Studies

- Practical Applications: Studying real-world scenarios and case studies to understand practical applications of AD DS