uCertify

Course Outline

Mastering Active Directory

06 Jul 2024

1. Pre-Assessment
2. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons

   Syllabus

   Chapter 1: Preface

   Chapter 2: Active Directory Fundamentals

   Chapter 3: Active Directory Domain Services 2022

   Chapter 4: Designing an Active Directory Infrastructure

   Chapter 5: Active Directory Domain Name System

   Chapter 6: Placing Operations Master Roles

   Chapter 7: Migrating to Active Directory 2022

   Chapter 8: Managing Active Directory Objects

   Chapter 9: Managing Users, Groups, and Devices

   Chapter 10: Designing the OU Structure

   Chapter 11: Managing Group Policies

   Chapter 12: Active Directory Services – Part 01

   Chapter 13: Active Directory Services – Part 02

   Chapter 14: Active Directory Certificate Services

   Chapter 15: Active Directory Federation Services

   Chapter 16: Active Directory Rights Management Services

   Chapter 17: Active Directory Security Best Practices

   Chapter 18: Advanced AD Management with PowerShell

   Chapter 19: Hybrid Identity

Chapter 20: Active Directory Audit and Monitoring

Videos and How To

8. Practice Test

Here's what you get

Features

9. Performance Based labs

Lab Tasks

Here's what you get

1. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

2. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

3. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over

- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

4. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

5. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
  1. Best Postsecondary Learning Solution

- **2015**
  1. Best Education Solution
  2. Best Virtual Learning Solution
  3. Best Student Assessment Solution
  4. Best Postsecondary Learning Solution
  5. Best Career and Workforce Readiness Solution
  6. Best Instructional Solution in Other Curriculum Areas
  7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**
    1. Best College and Career Readiness Solution
    2. Best Cross-Curricular Solution
    3. Best Virtual Learning Solution

6. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Preface

- Who this course is for
- What this course covers
- To get the most out of this course

Chapter 2: Active Directory Fundamentals

- Modern access management
- The future of Identity and Access Management (IAM)
- Hybrid Identity and Active Directory Domain Services
- Benefits of using Active Directory
- Understanding Active Directory components
- Understanding Active Directory objects
- Summary

Chapter 3: Active Directory Domain Services 2022

- The features of AD DS 2022
- Privileged Access Management (PAM)
- What does PAM have to do with AD DS 2022?
- Windows Hello for Business
- PowerShell 7
- Summary

Chapter 4: Designing an Active Directory Infrastructure

- What makes a good system?
- Gathering business requirements
- Designing the forest structure
- Creating the forest structure
- Selecting forest design models
- Designing the domain structure
- Deciding on the domain and forest functional levels
- Designing the OU structure

- Designing the physical topology of Active Directory
- Designing a hybrid identity
- Identifying business needs
- Summary

Chapter 5: Active Directory Domain Name System

- What is DNS?
- Hierarchical naming structures
- How DNS works
- DNS infrastructure design
- DNS essentials
- Conditional forwarders
- DNS policies
- Secure DNS client over HTTPS (DoH)
- DNS server operation modes
- Zone transfers
- DNS delegation
- DNS service providers

- Summary

Chapter 6: Placing Operations Master Roles

- FSMO roles
- Active Directory's logical and physical topology
- Best practices
- Moving FSMO roles
- Seizing FSMO roles
- Summary

Chapter 7: Migrating to Active Directory 2022

- AD DS installation prerequisites
- AD DS installation methods
- AD DS deployment scenarios
- How to plan AD migrations
- Summary

Chapter 8: Managing Active Directory Objects

- Tools and methods for managing objects

- AD object administration with PowerShell
- Creating computer objects
- Modifying AD objects
- Removing AD objects
- Finding objects in AD
- Preventing the accidental deletion of objects
- AD recycle bin
- Summary

Chapter 9: Managing Users, Groups, and Devices

- Object attributes
- Custom attributes
- Syncing custom attributes to Azure AD
- User accounts
- Groups
- Devices and other objects
- Best practices
- Summary

Chapter 10: Designing the OU Structure

- OUs in operations
- Containers vs. OUs
- Active Directory Groups vs. OUs
- OU design models
- Managing the OU structure
- Summary

Chapter 11: Managing Group Policies

- Benefits of group policies
- Group Policy capabilities
- Group Policy objects
- The Group Policy template
- Group Policy processing
- Group Policy inheritance
- Group Policy conflicts
- Administrative templates
- Group Policy filtering

- Group Policy preferences
- Item-level targeting
- Loopback processing
- Group Policy best practices
- Useful group policies
- Summary

Chapter 12: Active Directory Services – Part 01

- Overview of AD LDS
- Where to use LDS
- The LDS installation
- AD replication
- Sites
- Summary

Chapter 13: Active Directory Services – Part 02

- Active Directory trusts
- RODCs

- Active Directory database maintenance
- Active Directory Backup and Recovery
- Summary

Chapter 14: Active Directory Certificate Services

- PKI in action
- SSL certificates
- AD CS components
- Planning PKI
- PKI deployment models
- Setting up a PKI
- Certificate templates
- Requesting certificates
- Migrating AD CS from Windows Server 2008 R2 to Windows Server 2022
- AD CS disaster recovery
- Summary

Chapter 15: Active Directory Federation Services

- How does AD FS work?

- AD FS components
- AD FS configuration database
- AD FS deployment topologies
- AD FS deployment
- Azure AD federation with AD FS
- Summary

Chapter 16: Active Directory Rights Management Services

- What is AD RMS?
- AD RMS components
- How does AD RMS work?
- How do we deploy AD RMS?
- Azure Information Protection (AIP)
- Summary

Chapter 17: Active Directory Security Best Practices

- AD authentication
- The Kerberos protocol

- Authentication in an AD environment
- Delegating permissions
- Predefined AD administrator roles
- Using object ACLs
- Using the delegate control method in AD
- Implementing fine-grained password policies
- Limitations
- Resultant Set of Policy (RSoP)
- Configuration
- Pass-the-hash attacks
- The Protected Users security group
- Restricted admin mode for RDP
- Authentication policies and authentication policy silos
- Authentication policies
- Authentication policy silos
- Creating authentication policies
- Creating authentication policy silos
- Secure LDAP

- Microsoft Local Administrator Password Solution (LAPS)
- On-prem Azure AD Password Protection
- Summary

Chapter 18: Advanced AD Management with PowerShell

- AD management with PowerShell – preparation
- AD management commands and scripts
- Replication
- Replicating a specific object
- Users and groups
- Last logon time
- Last login date report
- Login failures report
- Finding the locked-out account
- Password expire report
- Review the membership of the high-level administrative groups
- Dormant accounts
- Users with the Password Never Expires setting

- Azure Active Directory PowerShell
- Installation
- General commands
- Managing users
- Managing groups
- Microsoft Graph
- Microsoft Graph Explorer
- Summary

Chapter 19: Hybrid Identity

- Extending on-prem AD to Azure AD
- Evaluating the present business requirements
- Evaluating an organization's infrastructure road map
- Evaluating the security requirements
- Selecting the Azure AD version
- Federation with Azure AD
- Step-by-step guide to integrating an on-prem AD environment with Azure AD
- Creating a virtual network

- Setting up an Azure AD managed domain
- Adding DNS server details to the virtual network
- Creating a Global Administrator account for Azure AD Connect
- Setting up Azure AD Connect
- Installing the Pass-through Authentication agent
- Azure AD Connect configuration
- Syncing NTLM and Kerberos credential hashes to Azure AD
- Enabling secure LDAP (LDAPS) for an Azure AD DS managed domain
- Enable secure LDAP (LDAPS)
- Summary

Chapter 20: Active Directory Audit and Monitoring

- Auditing and monitoring AD using built-in Windows tools and techniques
- Windows Event Viewer
- Custom Views
- Windows Logs
- Applications and Services Logs
- Subscriptions

- AD DS event logs
- AD DS log files
- AD audit
- Demonstration
- Setting up event subscriptions
- Security event logs from domain controllers
- Enabling advanced security audit policies
- Enforcing advanced auditing
- Reviewing events with PowerShell
- Microsoft Defender for Identity
- What is Microsoft Defender for Identity?
- Defender for Identity benefits
- Azure AD Connect Health
- Prerequisites
- Configuration
- Summary

7. Practice Test

Here's what you get

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

8. Performance Based Labs

uCertify's performance-based labs are simulators that provides virtual environment. Labs deliver hands on experience with minimal risk and thus replace expensive physical labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available

- Videos on how to perform

Lab Tasks

Here's what you get

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