

# uCertify

## Course Outline

### MS Server I



20 Apr 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: Installing, Upgrading, and Migrating

Chapter 2: Installing and Configuring Nano

Chapter 3: Working with Images

Chapter 4: Disks and Volumes

Chapter 5: Server Storage

Chapter 6: Data Deduplication

Chapter 7: Installing Hyper-V

Chapter 8: Working with Virtual Machines

Chapter 9: Hyper-V Storage

Chapter 10: Hyper-V Networking

Chapter 11: Deploying Containers

Chapter 12: Managing Containers

Chapter 13: High Availability in Hyper-V

Chapter 14: Managing VM Movement

Chapter 15: Network Load Balancing (NLB)

Chapter 16: Maintaining Servers

Chapter 17: Installing and Configuring DNS Servers

Chapter 18: Creating and Configuring DNS Zones and Records

Chapter 19: Configuring and Managing DNS Policies

Chapter 20: Understanding and Configuring DNSSEC

Chapter 21: Installing and Configuring Windows Server 2016 DHCP Server

Videos and How To

8. Practice Test

Here's what you get

Features

9. Live labs

Lab Tasks

Here's what you get

10. Post-Assessment

## 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. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.



## 3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

**185**

**QUIZZES**

#### 4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.

**157**

**FLASHCARDS**

#### 5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

**157**

**GLOSSARY OF  
TERMS**

## 6. 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.

## 7. 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.

## 8. 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.

## 9. 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

## 10. 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: Installing, Upgrading, and Migrating

- What's New in Windows Server 2016
- Installation Requirements
- Windows Server 2016 Editions

- Installing Windows Server 2016
- Performing Upgrades and Migrations
- Determining the Appropriate Activation Model
- Review All Key Topics
- Q&A

## Chapter 2: Installing and Configuring Nano

- Determining Appropriate Usage Scenarios
- Requirements for Nano Server
- Installing Nano Server
- Implementing Roles and Features on Nano Server
- Managing and Configuring Nano Server
- Managing Nano Server Remotely Using Windows PowerShell
- Review All Key Topics
- Q&A

## Chapter 3: Working with Images

- Planning for Windows Server Virtualization



- Networking
- The Microsoft Assessment and Planning (MAP) Toolkit
- Considerations for Deploying Workloads into Virtualized Environments
- Updating Images with Patches, Hotfixes, and Drivers
- Installing Roles and Features in Offline Images
- Managing and Maintaining Windows Server Core, Nano Server Images, and VHDs Using Windows PowerShell
- Review All Key Topics
- Q&A

## Chapter 4: Disks and Volumes

- Creating Disks
- SMB and NFS Shares
- File and Folder Permissions
- Review All Key Topics
- Q&A

## Chapter 5: Server Storage

- Storage Spaces

- Storage Area Networks
- Storage Replica
- Review All Key Topics
- Q&A

## Chapter 6: Data Deduplication

- Usage Scenarios for Deduplication
- Implementing Deduplication
- Deduplication Monitoring
- Review All Key Topics
- Q&A

## Chapter 7: Installing Hyper-V

- Preparing for Installation
- Installing Hyper-V
- Managing VMs
- Review All Key Topics
- Q&A

## Chapter 8: Working with Virtual Machines

- Basic Virtual Machine Deployment
- Advanced Virtual Machine Deployment
- Review All Key Topics
- Q&A

## Chapter 9: Hyper-V Storage

- Creating VHD, VHDX, and VHDS Virtual Hard Disks
- Checkpoints
- Storage Quality of Service
- Review All Key Topics
- Q&A

## Chapter 10: Hyper-V Networking

- Network Interface Cards
- Virtual Switches
- Virtual Network Performance
- Review All Key Topics

- Q&A

## Chapter 11: Deploying Containers

- An Overview of Containers
- Docker
- Host Installation
- Container Deployment
- Review All Key Topics
- Q&A

## Chapter 12: Managing Containers

- Docker Daemon and Windows PowerShell
- Windows Container Networking
- Other Management Topics
- Review All Key Topics
- Q&A

## Chapter 13: High Availability in Hyper-V

- Hyper-V Replica

- Live Migration
- Storage Migration
- Review All Key Topics
- Q&A

## Chapter 14: Managing VM Movement

- Moving VMs
- More VM Management
- Review All Key Topics
- Q&A

## Chapter 15: Network Load Balancing (NLB)

- Installing and Configuring NLB
- More NLB Configurations
- Review All Key Topics
- Q&A

## Chapter 16: Maintaining Servers

- Windows Server Update Services

- Windows Defender
- Backup and Restore
- Review All Key Topics
- Q&A

## Chapter 17: Installing and Configuring DNS Servers

- DNS Fundamentals
- Windows Server 2016 DNS Installation
- Configure and Implement DNS Global Settings Using Windows PowerShell
- Configure Forwarders
- Configure DNS Delegation
- Configure DNS Socket Pool
- Configure Cache Locking
- Configure DNS Logging
- Configure DNS Delegated Administration
- Review All the Key Topics

## Chapter 18: Creating and Configuring DNS Zones and Records

- Zone Type Overview

- Secondary Zones
- Stub Zones
- Primary Zones
- GlobalNames Zones
- DNSSEC
- Analyzing Zone-Level Statistics
- Zone Scavenging
- Record Options
- DNS Audit and Analytical Events
- Review All the Key Topics

## Chapter 19: Configuring and Managing DNS Policies

- DHCP Options
- DHCP Name Protection
- Manage DNS Client Settings with PowerShell
- Manage DNS Server Settings with PowerShell
- Network Troubleshooting with PowerShell
- Understanding Routing

- Split DNS
- DNS Policies
- Review All the Key Topics

## Chapter 20: Understanding and Configuring DNSSEC

- DNSSEC Planning
- Enabling DNSSEC
- DNSSEC Functionality
- DNSSEC Zone Signing Wizard
- DNSSEC Monitoring
- Trust Anchors
- ZSK/KSK Rollover Process
- DNSSEC Clients
- DNSSEC and Delegation
- Chain of Trust
- DNSSEC Record Types
- Review All the Key Topics



## Chapter 21: Installing and Configuring Windows Server 2016 DHCP Server

- DHCP Fundamentals
- DHCP Server Installation
- DHCP Scopes
- DHCP Options
- DHCP Relay Agent
- DHCP Security Options
- DHCP High Availability
- DHCP Policies
- Review All the Key Topics

### Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

**12**

VIDEOS

**45**

MINUTES

## 11. Practice Test

Here's what you get

**79**

PRE-ASSESSMENTS  
QUESTIONS

**2**

FULL LENGTH TESTS

**74**

POST-ASSESSMENTS  
QUESTIONS

### 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.

## 12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations

- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

## Lab Tasks

### **Installing, Upgrading, and Migrating**

- Installing Windows Server Migration Tools
- Installing Windows Server 2016 using Hyper-V

### **Installing and Configuring Nano**

- Creating the Nano Server in a Virtual Machine
- Managing the Nano Server Remotely Using Windows PowerShell

### **Working with Images**

- Enabling Windows Features Offline on a WIM

### **Disks and Volumes**

- Converting a basic disk into a dynamic disk
- Converting disk to GPT
- Creating and Mounting VHD Files Using Disk Management
- Running PowerShell cmdlets Related to Disk Management
- Converting Disk to GPT Using PowerShell
- Configuring SMB and NFS Shares using Server Manager
- Setting NTFS permissions

### **Server Storage**

- Creating an iSCSI Disk
- Installing the iSNS feature
- Configuring the iSNS feature
- Installing a Multipath Input/Output (MPIO) Feature

### **Data Deduplication**

- Installing and Enabling Data Deduplication

### **Installing Hyper-V**

- Installing the Hyper-V Management Tools feature
- Installing Hyper-V
- Delegating Virtual Machine Management

### **Working with Virtual Machines**

- Creating a virtual machine
- Importing a virtual machine
- Exporting a Virtual Machine
- Moving a Virtual Machine's Storage Using PowerShell

### **Hyper-V Storage**

- Creating a differencing disk
- Creating a fixed-size virtual hard disk
- Converting a virtual hard disk
- Creating a VM with an Existing Virtual Hard Disk
- Creating checkpoints
- Changing a Checkpoint to a Standard Checkpoint Using PowerShell
- Disabling Checkpoints

### **Hyper-V Networking**

- Changing the MAC Address for a Virtual Machine
- Adding a Virtual Network Interface Card (vNIC)

## **Deploying Containers**

- Installing Docker

## **Managing Containers**

- Running Docker daemon Commands

## **High Availability in Hyper-V**

- Implementing Hyper-V Replica
- Installing the Windows Migration feature using PowerShell

## **Managing VM Movement**

- Configuring Drain On Shutdown Using PowerShell
- Disabling the VM Network health protection feature

## **Network Load Balancing (NLB)**

- Installing and Configuring NLB
- Configuring NLB Operations

## **Maintaining Servers**

- Installing the Active Directory Domain Services role
- Installing the Web Server IIS server role

## **Installing and Configuring DNS Servers**

- Setting aging and scavenging properties
- Creating a zone delegation
- Installing AD DS with the Server Manager
- Configuring forwarders
- Configuring DNS Delegation with PowerShell
- Configuring Cache Locking

- Enabling debug logging on the DNS server

### **Creating and Configuring DNS Zones and Records**

- Modifying zone transfer settings
- Creating the GlobalNames zone
- Managing a GlobalNames Zone with PowerShell
- Starting Scavenging process
- Enabling scavenging

### **Configuring and Managing DNS Policies**

- Enabling DHCP Name Protection at the IPv6 Node Level
- Enabling DHCP name protection at the scope level
- Installing and Configuring DirectAccess
- Creating a Zone-Level Zone Transfer Policy

### **Understanding and Configuring DNSSEC**

- Signing a Zone
- Adding a DNSKEY Trust Anchor

### **Installing and Configuring Windows Server 2016 DHCP Server**

- Installing DHCP
- Unauthorizing a DHCP Server
- Installing DHCP using PowerShell
- Configuring DHCP server post-installation
- Authorizing a DHCP Server
- Creating an IPv4 Superscope
- Creating a Reservation in the DHCP Manager
- Enabling DHCP audit logging
- Enabling DHCP name protection
- Configuring DHCP Failover
- Creating and Configuring a DHCP Policy

## Here's what you get

**72**

LIVE LABS

**45**

VIDEO TUTORIALS

**03:19**

HOURS

### 13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

**GET IN TOUCH:**

 3187 Independence Drive  
Livermore, CA 94551,  
United States



+1-415-763-6300



support@ucertify.com



www.ucertify.com