

# AZ 140- Configure and Operate Microsoft Azure Virtual Desktop



**Days:** 4

**Prerequisites:** Candidates for this course must have solid Azure administration skills. This course assumes prior experience, including virtualization, networking, identity, storage, backup and restore, and disaster recovery. Students should have knowledge of on-premises virtual desktop infrastructure technologies as they relate to migrating to Azure Virtual Desktop. Students are expected to have used the tools common to the Azure environment, such as the Azure PowerShell and Cloud Shell.

**Audience:** Students for AZ-140: Configure and Operate Microsoft Azure Virtual Desktop are interested in delivering applications on Azure Virtual Desktop and optimizing them to run in multi-session virtual environments. As an Azure Virtual Desktop administrator, you will closely work with the Azure Administrators and Architects, along with Microsoft 365 Administrators. Azure Virtual Desktop administrator responsibilities include planning, deploying, packaging, updating, and maintaining the Azure Virtual Desktop infrastructure. They also create session host images, implement and manage FSLogix, monitor Azure Virtual Desktop performance, and automate Azure Virtual Desktop management tasks.

**Description:** This course teaches Azure administrators how to plan, deliver, and manage virtual desktop experiences and remote apps, for any device, on Azure. Lessons include implementing and managing networking for Azure Virtual Desktop, configuring host pools and session hosts, creating session host images, implementing, and managing FSLogix, monitoring Azure Virtual Desktop performance and health, and automating Azure Virtual Desktop management tasks. Students will learn through a mix of demonstrations and hands-on lab experiences deploying virtual desktop experiences and apps on Azure Virtual Desktop and optimizing them to run in multi-session virtual environments. Candidates of this course must have solid Azure administration skills. This course assumes prior experience, including virtualization, networking, identity, storage, backup and restore, and disaster recovery. Students should have knowledge of on-premises virtual desktop infrastructure technologies as they relate to migrating to Azure Virtual Desktop. Students are expected to have used the tools common to the Azure environment, such as the Azure PowerShell and Cloud Shell.

**Course Objectives:** By the end of this course, students will be able to configure and operate Microsoft Azure Virtual Desktop environments in enterprise settings. You will also learn to:

- Implement and manage session hosts, host pools, and session host images
- Manage FSLogix for user profile containers and application masking
- Monitor Azure Virtual Desktop performance and health
- Optimize environments to run in multi-session virtual environments
- Automate Azure Virtual Desktop management tasks using Azure-native tools

## OUTLINE:

### LESSON 1 - AZURE VIRTUAL DESKTOP ARCHITECTURE

- Azure Virtual Desktop for the enterprise
- Azure Virtual Desktop components
- Personal and pooled desktops
- Service updates for Azure Virtual Desktop desktops
- Azure limitations for Azure Virtual Desktop
- Virtual machine sizing for Azure Virtual Desktop
- Azure Virtual Desktop pricing
- Module assessment

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## LESSON 2 - DESIGN THE AZURE VIRTUAL DESKTOP ARCHITECTURE

- Assess network capacity and speed requirements for Azure Virtual Desktop
- Azure Virtual Desktop Experience Estimator
- Recommend an operating system for an Azure Virtual Desktop implementation
- Balancing host pools
- Recommendations for using subscriptions and management groups
- Configure a location for the Azure Virtual Desktop metadata
- Recommend a configuration for performance requirements
- Module assessment

## LESSON 3 - DESIGN FOR USER IDENTITIES AND PROFILES

- Select an appropriate licensing model for Azure Virtual Desktop based on requirements
- Personal and multi-session desktop scenarios
- Recommend an appropriate storage solution
- Plan for a desktop client deployment
- Plan for Azure Virtual Desktop client deployment - Remote Desktop Protocol (RDP)
- Windows Desktop client to multiple devices
- Hybrid Identity with Microsoft Entra ID
- Plan for Microsoft Entra Connect for user identities
- Module assessment

## LESSON 4 - IMPLEMENT AND MANAGE NETWORKING FOR AZURE VIRTUAL DESKTOP

- Plan implement remote desktop protocol shortpath
- Analyze connection quality in Azure Virtual Desktop
- Remote Desktop Protocol (RDP) bandwidth requirements
- RDP Shortpath for Azure Virtual Desktop

- RDP Shortpath for Azure Virtual Desktop sample scenarios
- Manage connectivity internet premises Networks
- Plan and implement an Azure Private Link solution for Azure Virtual Desktop
- Create an RDP connection to a Windows VM using Azure Bastion
- Monitor troubleshoot Network Watcher
- Module assessment

## LESSON 5 - IMPLEMENT AND MANAGE STORAGE FOR AZURE VIRTUAL DESKTOP

- Plan storage for Azure Virtual Desktop user data
- Azure storage management
- Azure Files tiers
- Azure NetApp Files tiers
- Implement storage accounts for Azure Virtual Desktop
- Module assessment

## LESSON 6 - CREATE AND CONFIGURE HOST POOLS AND SESSION HOSTS FOR AZURE VIRTUAL DESKTOP

- Prerequisites for Azure Virtual Desktop
- Operating systems and Azure regions
- Network and Remote Desktop client planning
- Create a host pool
- Create a host pool using the Azure portal
- Add session hosts to a host pool
- Customize Remote Desktop Protocol (RDP) properties for a host pool
- Module assessment

## LESSON 7 - CREATE AND MANAGE SESSION HOST IMAGE FOR AZURE VIRTUAL DESKTOP

- Create a golden image in Azure
- Using Azure VM Image Builder
- Create an Azure Virtual Desktop image by using VM Image Builder and PowerShell
- Plan for image update and management

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- Manage licensing for session hosts that run Windows client
- Install language packs in Azure Virtual Desktop
- Module assessment

## LESSON 8 - MANAGE ACCESS FOR AZURE VIRTUAL DESKTOP

- Selecting an identity strategy for Azure Virtual Desktop
- Selecting an authentication strategy for Azure Virtual Desktop
- Role-based access control (RBAC) for Azure Virtual Desktop
- Plan and implement Azure roles and role-based access control (RBAC) for Azure Virtual Desktop
- Assign RBAC roles to the Azure Virtual Desktop service principals
- Enforce Microsoft Entra multifactor authentication for Azure Virtual Desktop using Conditional Access
- Using Azure Virtual Desktop with Microsoft Intune
- Module assessment

## LESSON 9 - MANAGE SECURITY FOR AZURE VIRTUAL DESKTOP

- Security recommendations for Azure Virtual Desktop
- Connect your Azure subscriptions to Microsoft Defender for Cloud
- Microsoft Defender for Endpoint for Azure Virtual Desktop sessions
- Apply Zero Trust principles to an Azure Virtual Desktop deployment
- Plan and implement Conditional Access policies for connections to Azure Virtual Desktop
- Security posture management and threat protection
- Module assessment

## LESSON 10 - IMPLEMENT AND MANAGE FSLOGIX

- Overview of FSLogix

- Understand FSLogix containers
- Configure FSLogix Profile Containers
- Configure FSLogix Office Containers
- Configure profile containers with Cloud Cache
- Using FSLogix Apps RuleEditor and Rule Sets
- Create and Implementing Rule Sets for Application Masking
- Implement Azure NetApp Files for Azure Virtual Desktop
- Module assessment

## LESSON 11 - CONFIGURE USER EXPERIENCE SETTINGS

- Connect to Azure Virtual Desktop with the Remote Desktop client for Windows
- Configure session timeout properties
- Implement the Start Virtual Machine on Connect feature
- Configure Universal Print
- Configure device redirections
- Troubleshoot Azure Virtual Desktop clients
- Module assessment

## LESSON 12 - INSTALL AND CONFIGURE APPS ON A SESSION HOST

- Create and configure an application group
- Assign users to application groups
- Publish an application as a RemoteApp
- Implement and manage OneDrive, including multisession environments
- Implement and manage Microsoft Teams for Remote Desktop
- Implement and manage Microsoft 365 Apps on Azure Virtual Desktop session hosts
- Configure dynamic application delivery by using app attach or MSIX app attach
- Create an application package for app attach or MSIX app attach
- Module assessment

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## LESSON 13 - MONITOR AND MANAGE PERFORMANCE AND HEALTH

- Configure log collection and analysis for Azure Virtual Desktop session hosts
- Monitor Azure Virtual Desktop by using Azure Monitor
- Customize Azure Monitor workbooks for Azure Virtual Desktop Insights
- Monitor Azure Virtual Desktop by using Azure Advisor
- Implement scaling plans in host pools
- Optimize capacity and performance
- Module assessment

## LESSON 14 - PLAN AND IMPLEMENT UPDATES, BACKUPS, AND DISASTER RECOVERY

- Disaster recovery for Azure Virtual Desktop
- Design and implement a backup strategy for Azure Virtual Desktop
- Monitor costs by using Azure Cost Management
- Module assessment