AZ-140 Agenda

Learning Path 1

1. Azure Virtual Desktop Architecture
2. Design the Azure Virtual Desktop architecture
3. Design for user identities and profiles

Learning Path 2

4. Implement and manage networking for AVD
5. Implement and manage storage for AVD
6. Create and configure host pools and session hosts for AVD
7. Create and manage session host image for AVD

Learning Path 3

8. Manage access for AVD
9. Manage security for AVD

Learning Path 4

10. Implement and manage FSLogix
11. Configure user experience settings
12. Install and configure apps on a session host

Learning Path 5

13. Monitor and manage performance and health
14. Plan and implement updates, backups, and disaster recovery

Microsoft

Create and configure host pools and session hosts for Azure Virtual Desktop

Introduction

After completing this module, you'll be able to:

- Configure host pool assignment type.
- Automate creation of an Azure Virtual Desktop host pool using PowerShell.
- Customize Remote Desktop Protocol (RDP) properties for a host pool.
- Manage licensing for session hosts that run Windows client.

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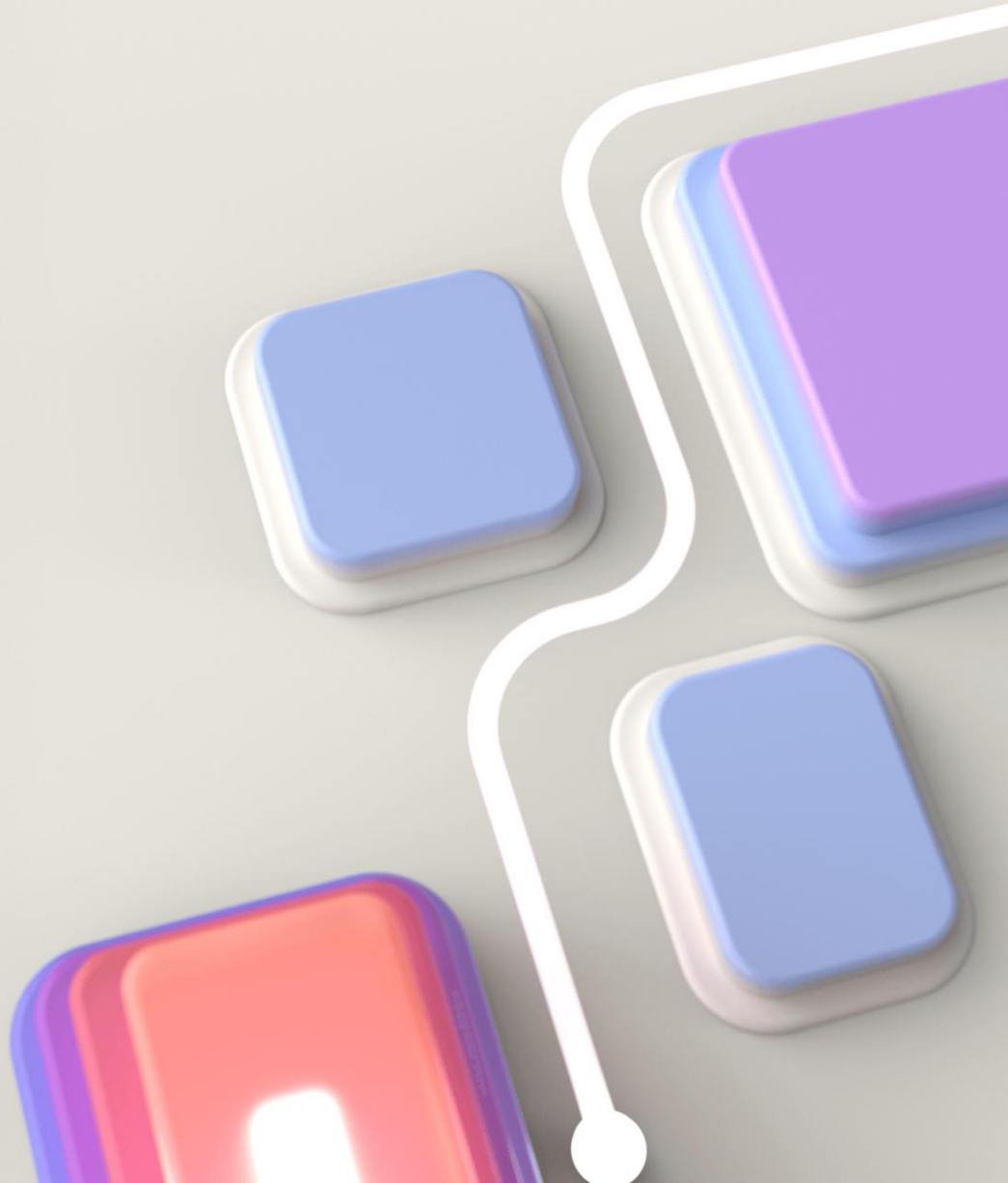
Prerequisites for Azure Virtual Desktop



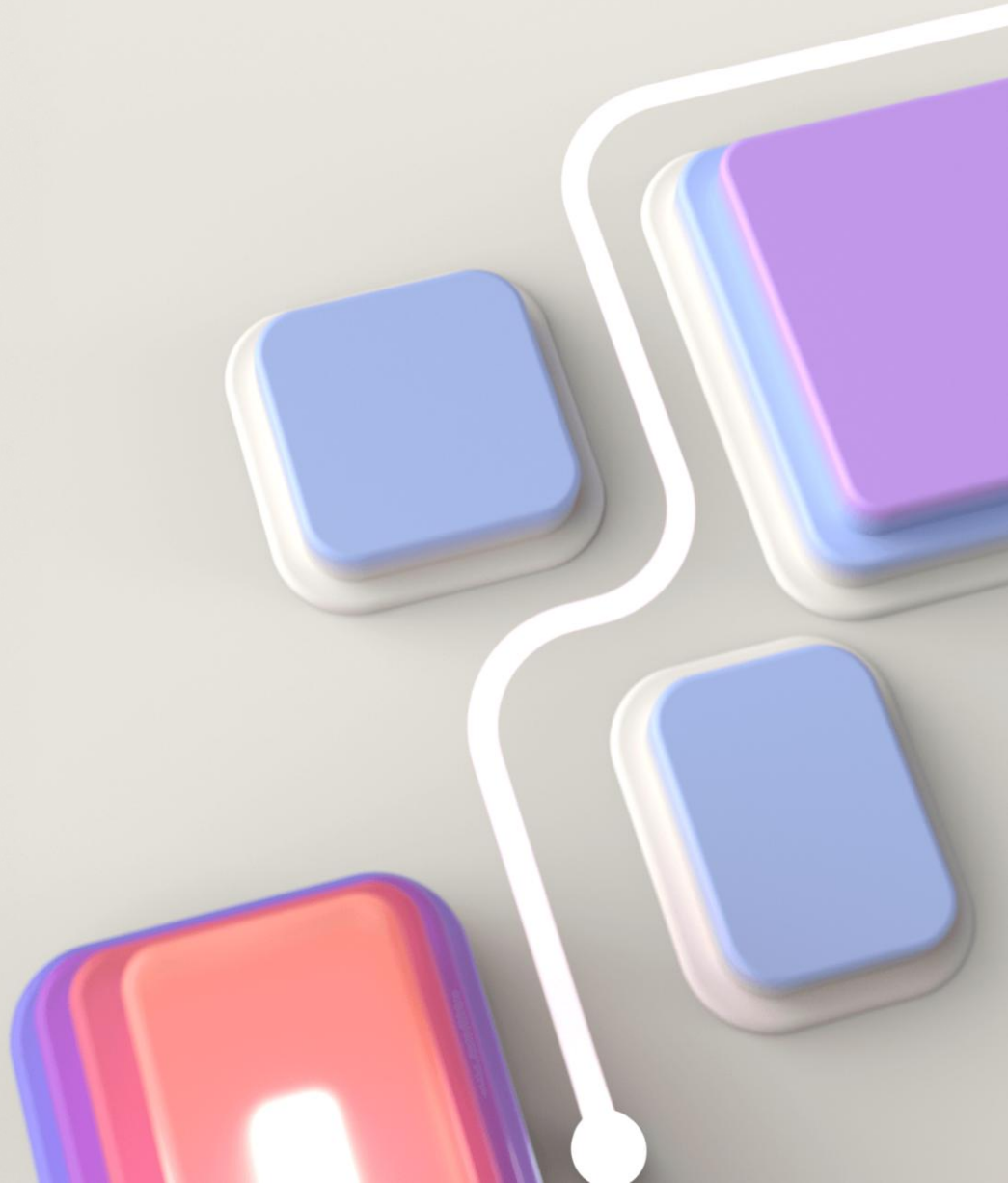
Prerequisites for Azure Virtual Desktop

The prerequisites you need to complete to successfully provide your users with desktops and applications:

- An Azure account with an active subscription
- A supported identity provider
- A supported operating system for session host virtual machines

Identity scenario (AVD)	Session hosts	User accounts
Microsoft Entra ID + AD DS	Joined to AD DS	In Microsoft Entra ID and AD DS, synchronized
Microsoft Entra ID + AD DS	Joined to Microsoft Entra ID	In Microsoft Entra ID and AD DS, synchronized
Microsoft Entra ID + Microsoft Entra Domain Services	Joined to Microsoft Entra Domain Services	In Microsoft Entra ID and Microsoft Entra Domain Services, synchronized
Microsoft Entra ID + Microsoft Entra Domain Services + AD DS	Joined to Microsoft Entra Domain Services	In Microsoft Entra ID and AD DS, synchronized
Microsoft Entra ID + Microsoft Entra Domain Services	Joined to Microsoft Entra ID	In Microsoft Entra ID and Microsoft Entra Domain Services, synchronized
Microsoft Entra-only	Joined to Microsoft Entra ID	In Microsoft Entra ID

Operating systems and Azure regions



Operating systems and Licensing

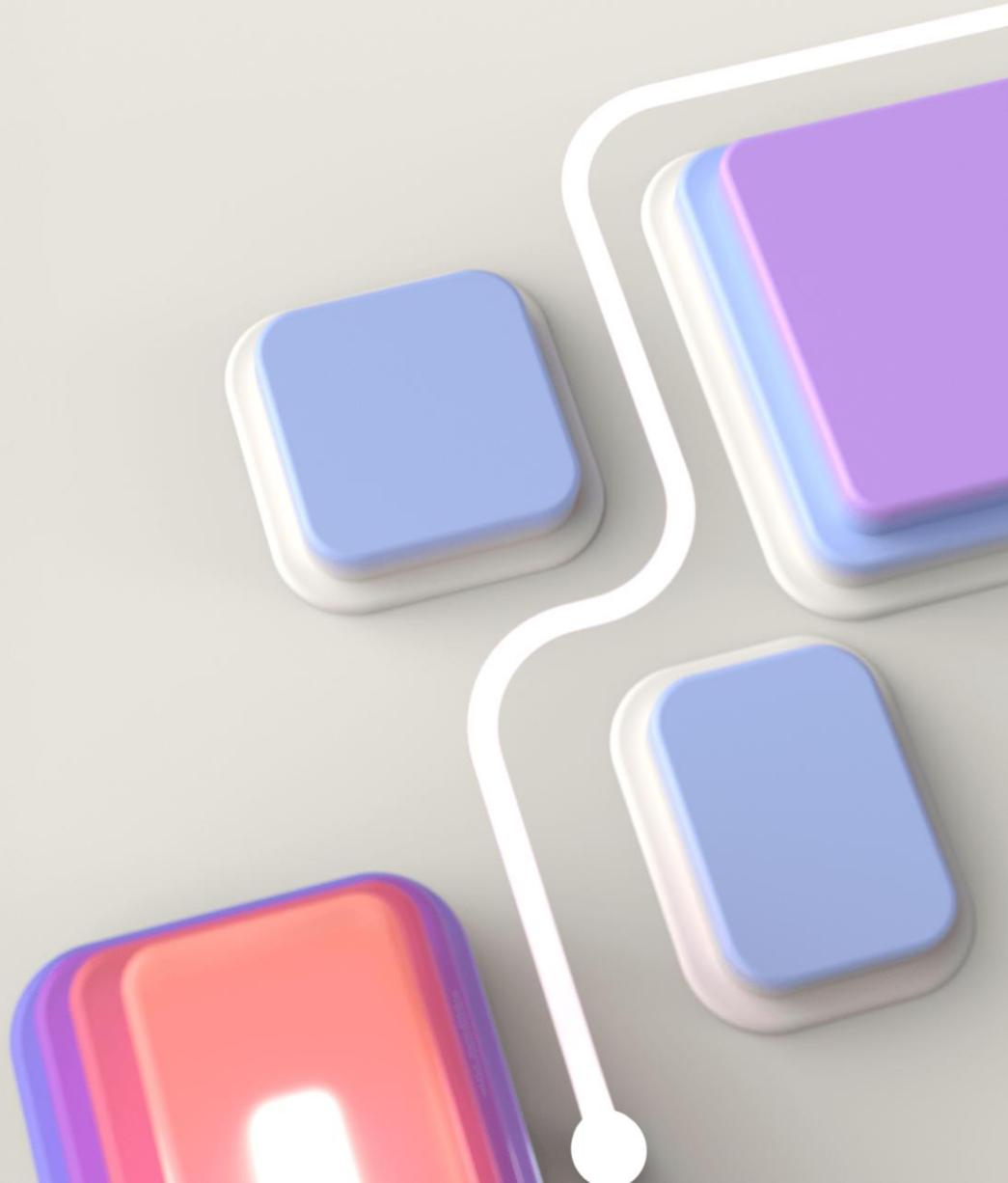
Operating system (64-bit only)	Licensing method (Internal commercial purposes)	Licensing method (External commercial purposes)
Windows 11 Enterprise multi-session Windows 11 Enterprise Windows 10 Enterprise multi-session Windows 10 Enterprise	Microsoft 365 E3, E5, A3, A5, F3, Business Premium, Student Use Benefit Windows Enterprise E3, E5 Windows Education A3, A5 Windows VDA per user	Per-user access pricing by enrolling an Azure subscription.
Windows Server 2022 Windows Server 2019 Windows Server 2016	Remote Desktop Services (RDS) Client Access License (CAL) with Software Assurance (per-user or per-device) RDS User Subscription Licenses.	Windows Server 2022 RDS Subscriber Access License (SAL). Per-user access pricing isn't available for Windows Server operating systems.

Azure Regions for Deployment

You can deploy host pools, workspaces, and application groups in the following Azure regions.

- Australia East
- Canada Central
- Canada East
- Central India
- Central US
- East US
- East US 2
- Japan East
- North Central US
- North Europe
- South Central US
- UK South
- UK West
- West Central US
- West Europe
- West US
- West US 2
- West US 3

Network and Remote Desktop client planning



Network and Remote Desktop client planning

To successfully deploy Azure Virtual Desktop, you need to meet the following:

- Virtual network and subnet for your session hosts.
    - If you create your session hosts at the same time as a host pool, you must create this virtual network in advance for it to appear in the drop-down list. Your virtual network must be in the same Azure region as the session host.
- The virtual network must connect to your domain controllers and relevant DNS servers if you're using AD DS or Microsoft Entra Domain Services.
    - You need to join session hosts to the domain.
- Session hosts and users need to be able to connect to the Azure Virtual Desktop service. These connections also use TCP on port 443 to a specific list of URLs.

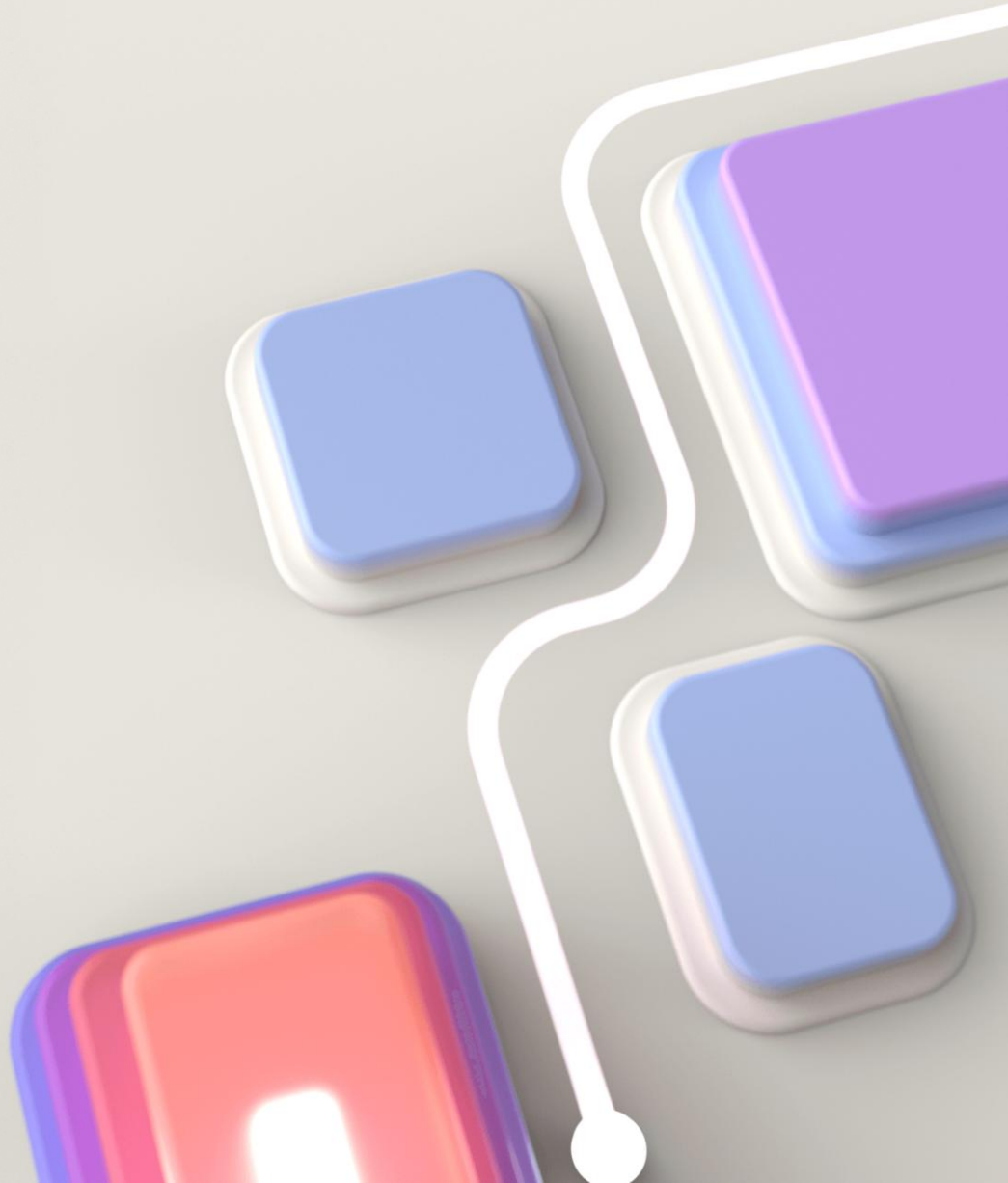
Remote Desktop clients

Users need a Remote Desktop client to connect to desktops and applications. The following clients support Azure Virtual Desktop:

- Windows Desktop client
- Azure Virtual Desktop Store app for Windows
- Web client
- macOS client
- iOS and iPadOS client
- Android and Chrome OS client
- Remote Desktop app for Windows

Azure Virtual Desktop doesn't support connections from the RemoteApp and Desktop Connections (RADC) client or the Remote Desktop Connection (MSTSC) client.

Create a host pool



Create a host pool using the Azure Portal

To create a pooled host pool using the breadth-firstload-balancing algorithm and Desktop as the preferred app group type, run the following command:

```
$parameters = @{
Name = '<Name>'
ResourceGroupName = '<ResourceGroupName>'
HostPoolType = 'Pooled'
LoadBalancerType = 'BreadthFirst'
PreferredAppGroupType = 'Desktop'
MaxSessionLimit = '<value>'
Location = '<AzureRegion>'
}

New-AzWvdHostPool @parameters
```

Az
Az.Compute
Az.DesktopVirtualization

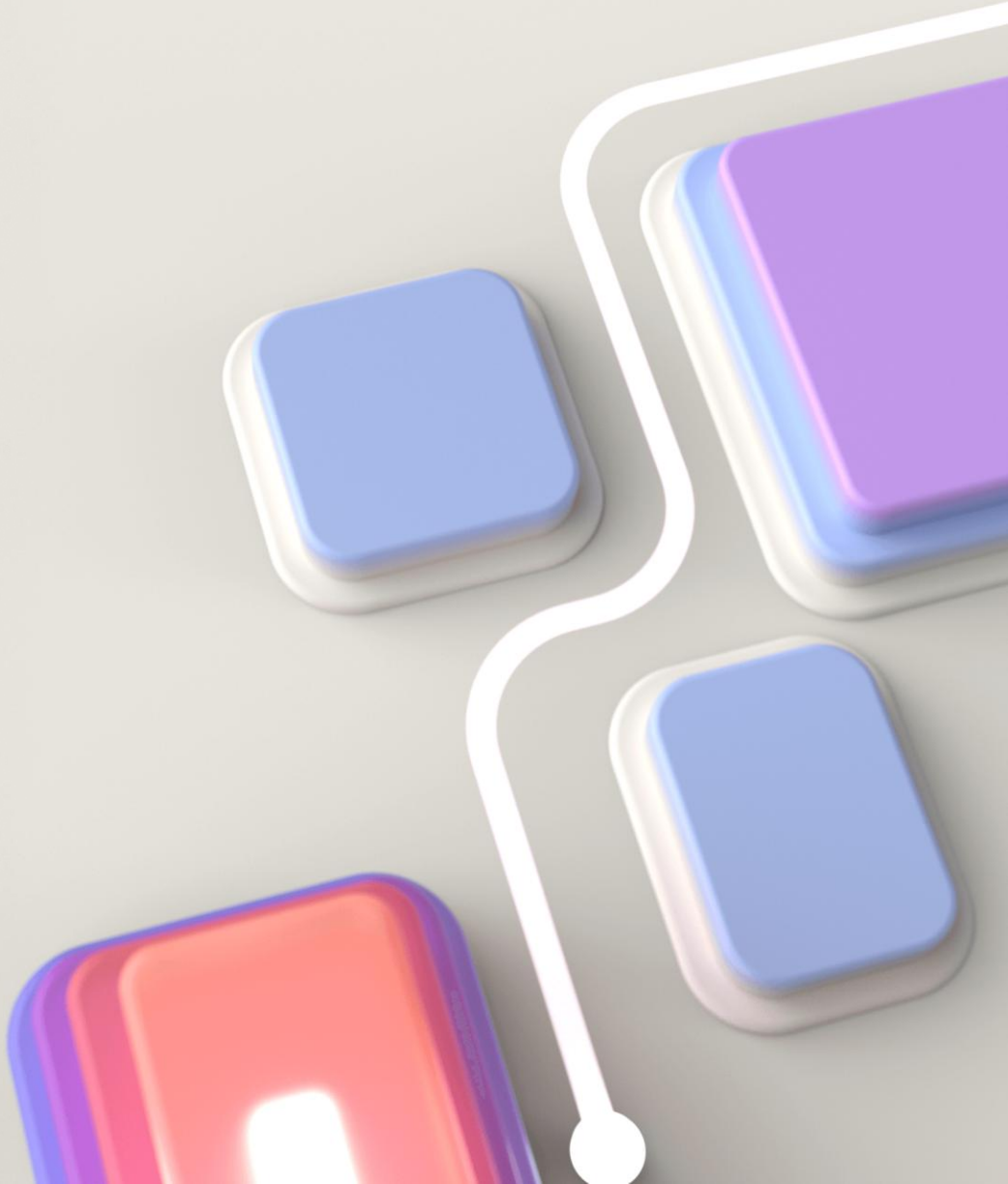
Personal Host Pools

To create a personal host pool using the *Automatic* assignment type and *Desktop* as the preferred app group type, run the following command:

```
$parameters = @{
Name = '<Name>’
ResourceGroupName = '<ResourceGroupName>'
HostPoolType = 'Personal’
LoadBalancerType = 'Persistent’
PreferredAppGroupType = 'Desktop'
PersonalDesktopAssignmentType = 'Automatic’
Location = '<AzureRegion>’
}

@parameters
```

Apply a license to a session host based on a custom image



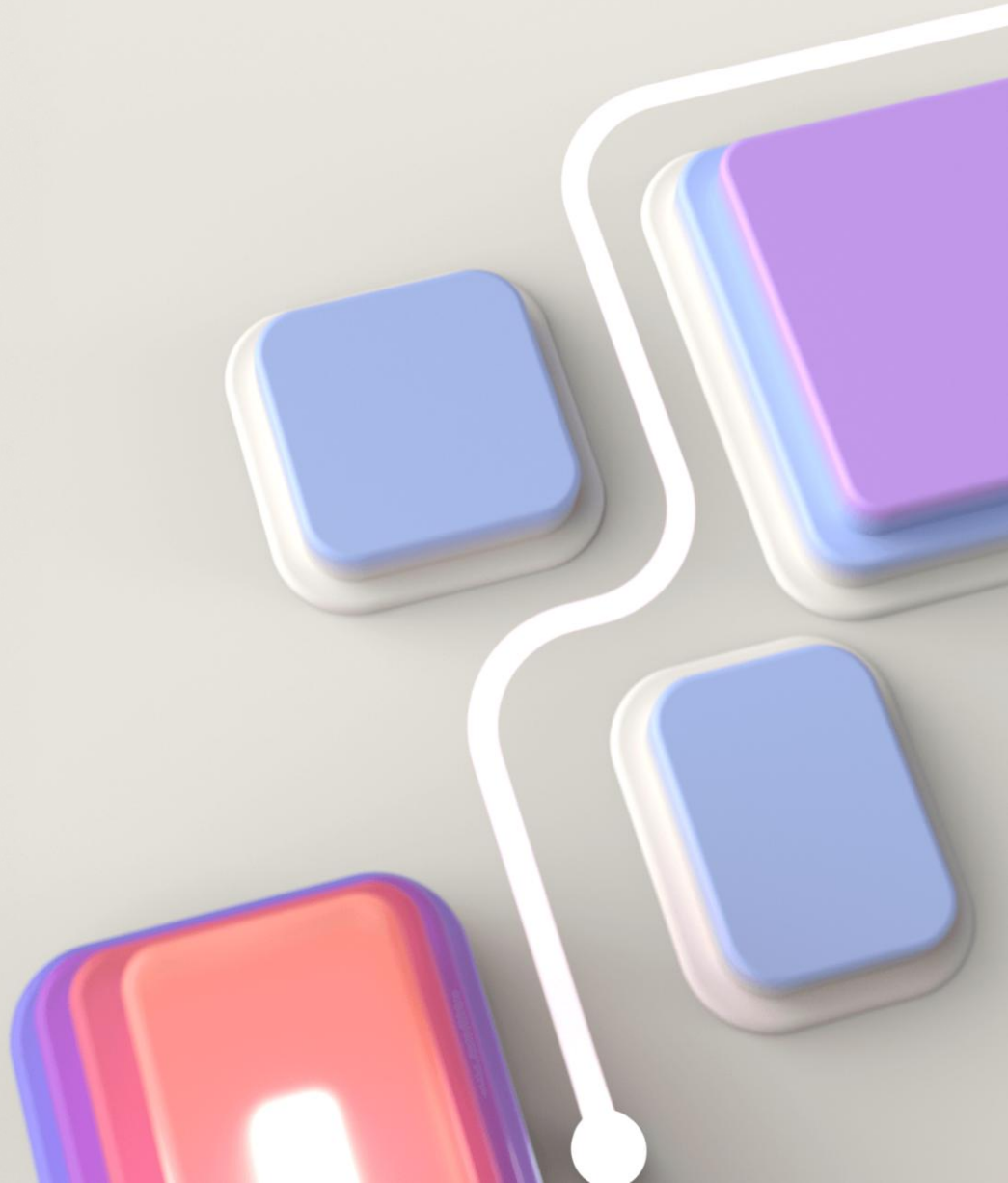
Apply a Windows license to a session host virtual machine

Azure Virtual Desktop licensing allows you to apply a license to any Windows or Windows Server virtual machine that is registered as a session host in a host pool receiving user connections.

Run the following PowerShell cmdlet to apply the Windows license:

```
$vm = Get-AzVM -ResourceGroup <resourceGroupName> -Name <vmName>
$vm.LicenseType = "Windows_Client"
Update-AzVM -ResourceGroupName <resourceGroupName> -VM $vm
```

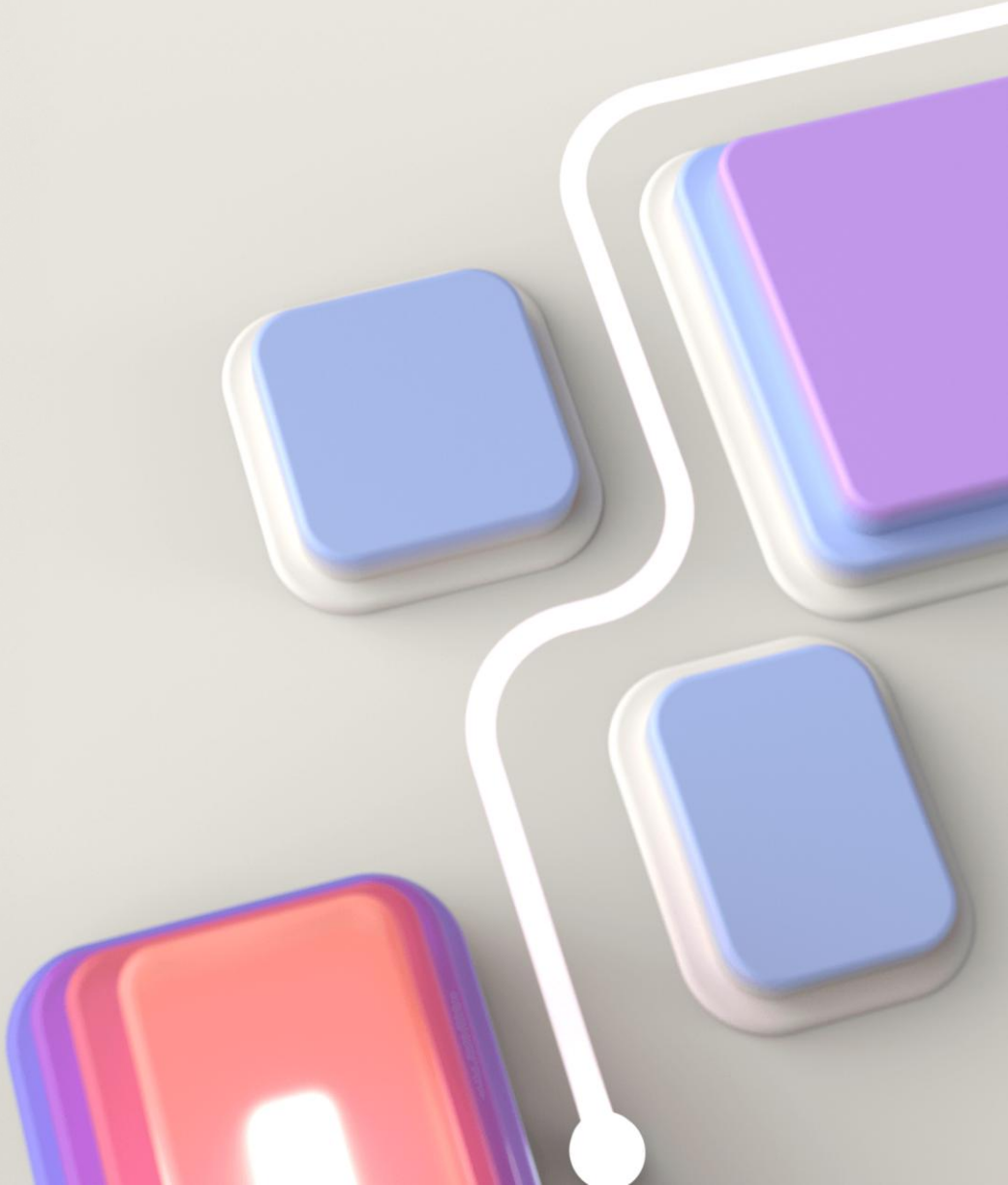
Add session hosts to a host pool



Add session hosts to a host pool

- When you add session hosts to a host pool, first you'll need to generate a registration key.
- A registration key needs to be generated per host pool and it authorizes session hosts to join that host pool.
  - It's only valid for the duration you specify.
- If an existing registration key has expired, you can also use these steps to generate a new key.

Customize Remote Desktop Protocol (RDP) properties for a host pool



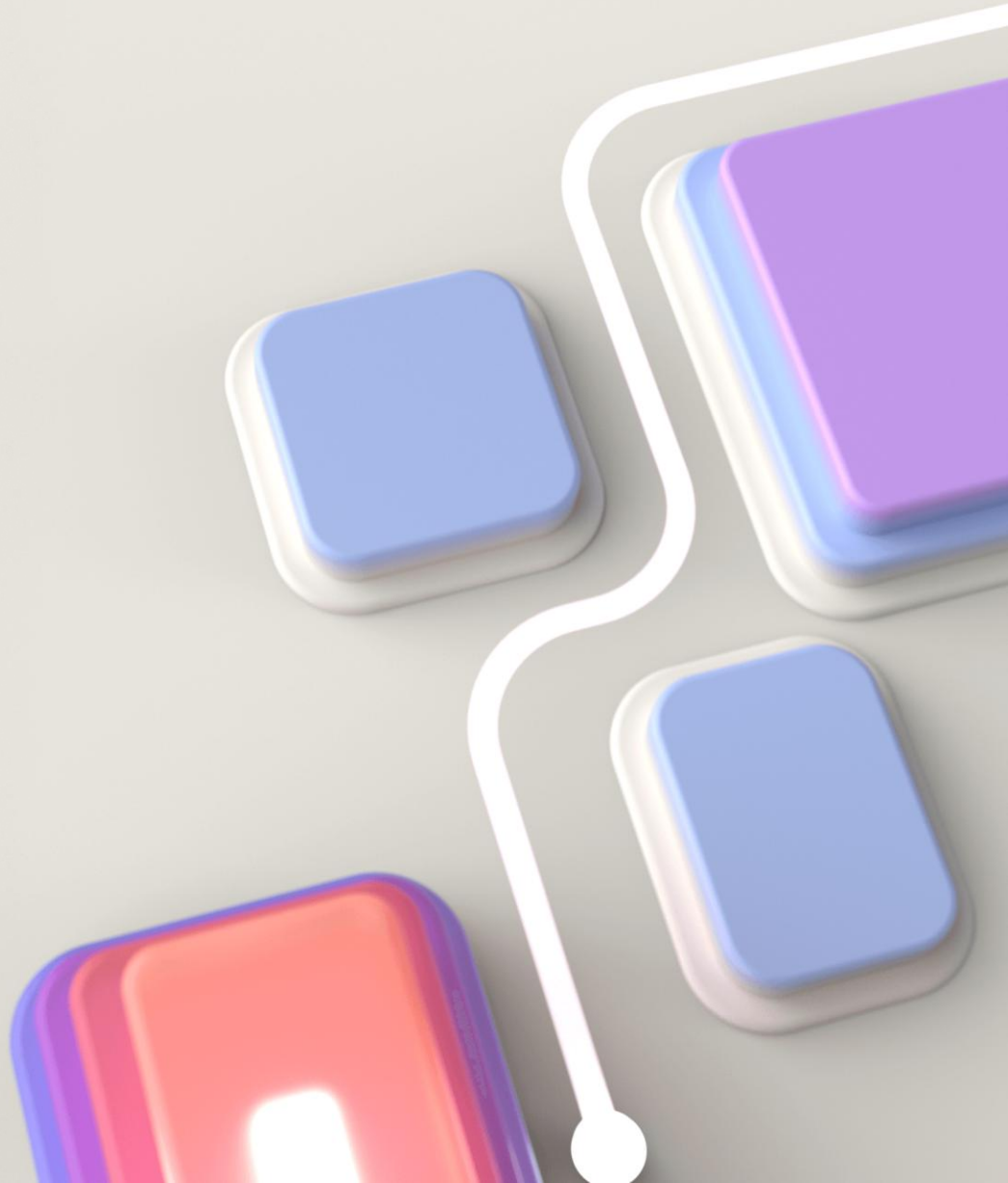
Customize Remote Desktop Protocol (RDP) properties for a host pool

Customizing a host pool's Remote Desktop Protocol (RDP) properties, such as multi-monitor experience and audio redirection, lets you deliver an optimal experience for your users based on their needs.
You can RDP properties in Azure Virtual Desktop using the -**CustomRdpProperty** parameter in the **Update-AzWvdHostPool** cmdlet.

Default Remote Desktop Protocol file properties:

RDP properties	Desktops	RemoteApps
Multi-monitor mode	Enabled	N/A
Drive redirections enabled	Drives, clipboard, printers, COM ports, USB devices, and smartcards	Drives, clipboard, and printers
Remote audio mode	Play locally.	Play locally.

Knowledge check



Knowledge check

A system administrator needs to assign a session host to a specific user. What is the correct procedure to accomplish this task?

Choices:

1. The administrator should directly modify the user's profile to include the session host.

2. The administrator should create a new session host and automatically assign it to the user.

3. The administrator should select 'Assign', choose the user from the list of available users, select the session host, and then click 'Select'.

Knowledge check

A system administrator needs to license and activate the virtual machines before using them with Azure Virtual Desktop. What is the correct method for activating Windows 10 and Windows 11 Enterprise multi session, and Windows Server 2022 Datacenter Azure Edition?

Choices:

1. Use existing activation methods

2. Issue them a Remote Desktop Services (RDS) Client Access License (CAL) from a Remote Desktop Licensing Server

3. Use Azure verification for VMs

Knowledge check

A system administrator needs to license and activate the virtual machines before using them with Azure Virtual Desktop. What should the administrator do to activate Windows 10 and Windows 11 Enterprise multi session, and Windows Server 2022 Datacenter Azure Edition?

Choices:

1. Issue them a Remote Desktop Services (RDS) Client Access License (CAL) from a Remote Desktop Licensing Server

2. Use existing activation methods

3. Use Azure verification for VMs

Knowledge check

A system administrator needs to license and activate the virtual machines before using them with Azure Virtual Desktop. What is the correct method for activating Windows 10 and Windows 11 Enterprise multi session, and Windows Server 2022 Datacenter Azure Edition?

Choices:

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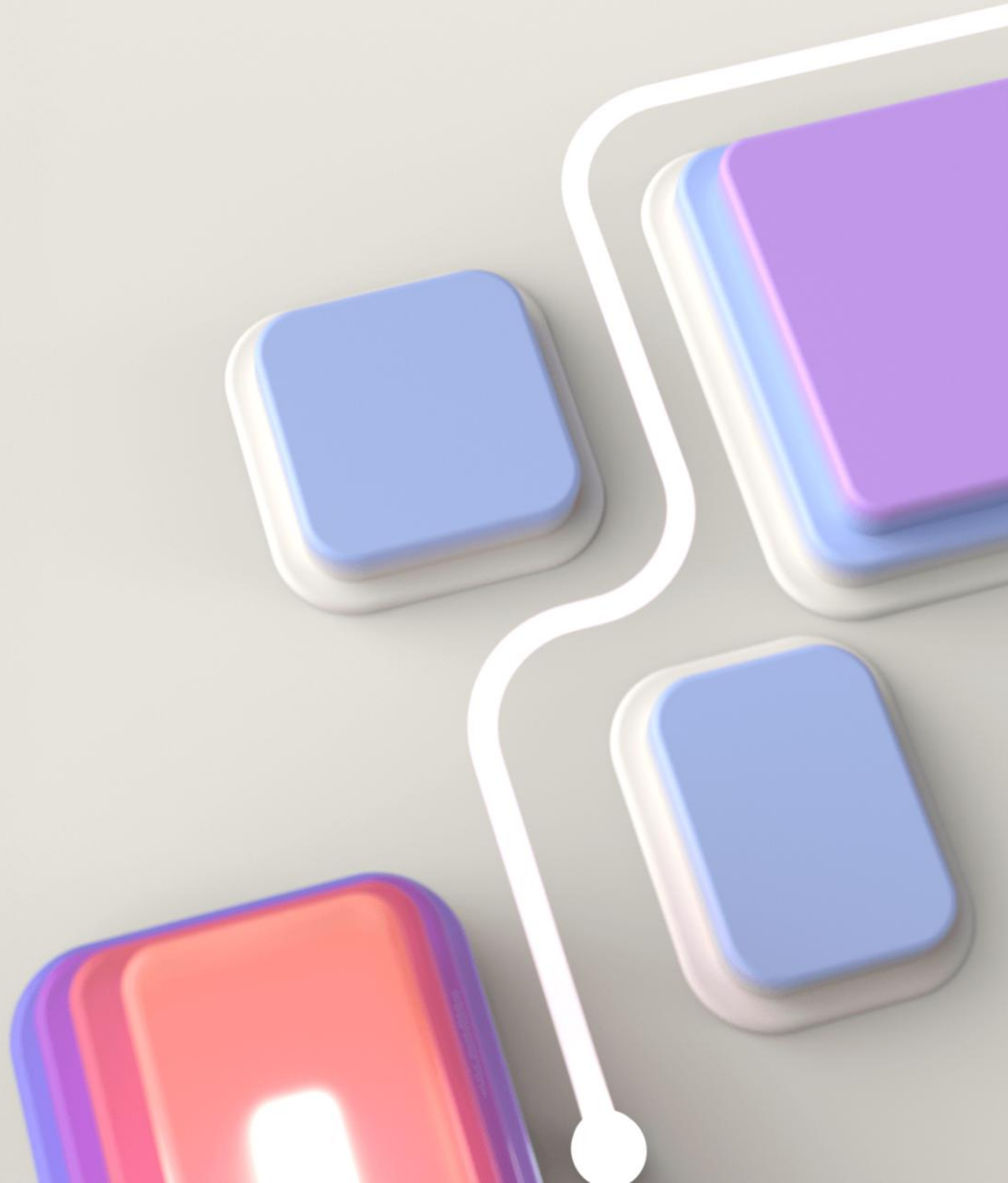
Summary



Summary

In this module, you learned:

- Configure host pool assignment type.
- Automate creation of an Azure Virtual Desktop host pool using PowerShell.
- Customize Remote Desktop Protocol (RDP) properties for a host pool.
- Manage licensing for session hosts that run Windows client.