Deploying Azure Virtual Desktop on Azure Stack HCI

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MVP Dagen

Takk til våre sponsorer

Takk til vår by-sponsor

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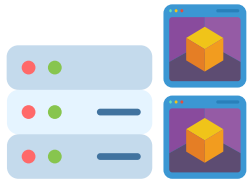
Twitter:jantorep

Azure Virtual Desktop on Azure Stack HCI

Centralized management for Azure Virtual Desktop

Azure Virtual Desktop	Azure Virtual Desktop session hosts	End-user devices
		
Centralized management from the Azure portal	Azure IaaS VMs	Windows
		macOS
	Azure Stack HCI VMs on-premises (preview)	Linux
		HTML5

Azure Virtual Desktop for Azure Stack HCI (preview)

Extending the benefits of cloud-managed VDI to on-premises

Cloud control plane

Fully managed, cloud-hosted
VDI management plane

End-user experience

Windows 10 and 11
Enterprise multi-session

Performance

Direct access to local session hosts with RDP Shortpath,
GPU support,
Storage performance

Benefits of Azure Virtual Desktop for Azure Stack HCI

Cloud-based VDI

- Simplify your VDI deployment—no need to manage brokers, gateways, or underlying servers and storage

Windows 11 multi-session

- Get Windows 10 & Windows 11 multi-session or single session support
- Achieve high utilization & lower operation costs

Performance

- Enjoy optimized Microsoft 365 / Teams experience
- Use RDP ShortPath for low latency user access
- Run graphic-intensive workloads with GPU support

Full control

- Satisfy data locality requirements with efficient, performant on-premises storage and DR

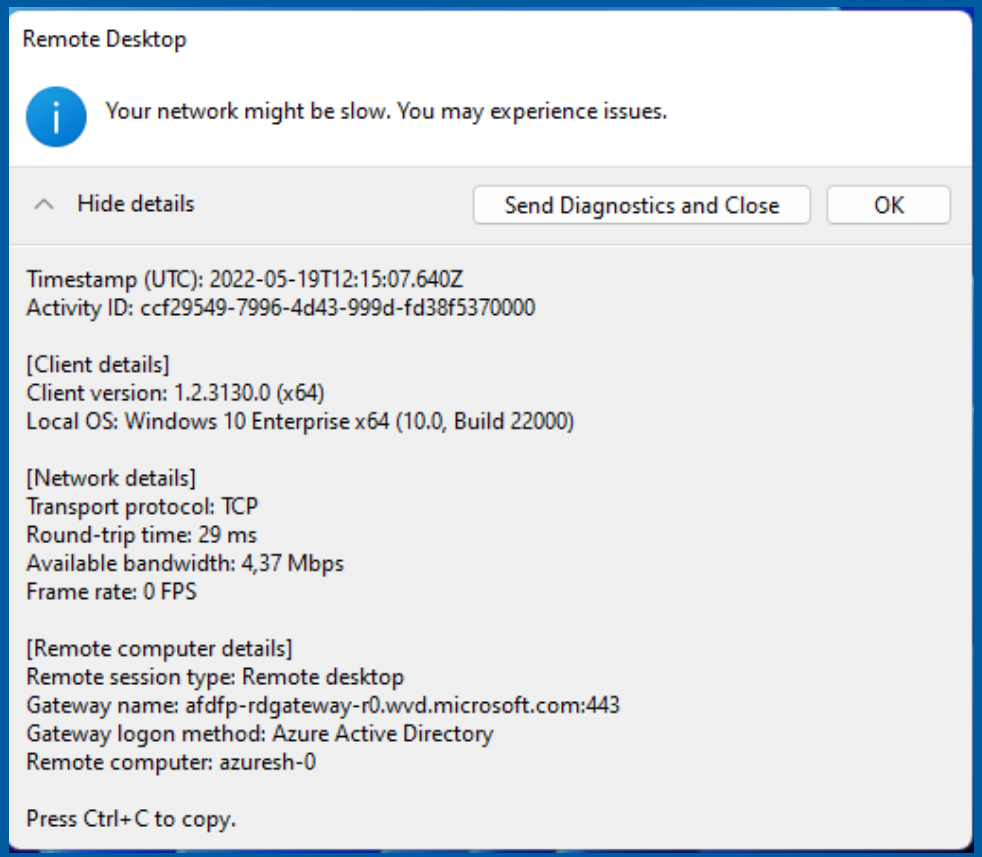
Scale across cloud and on-premises

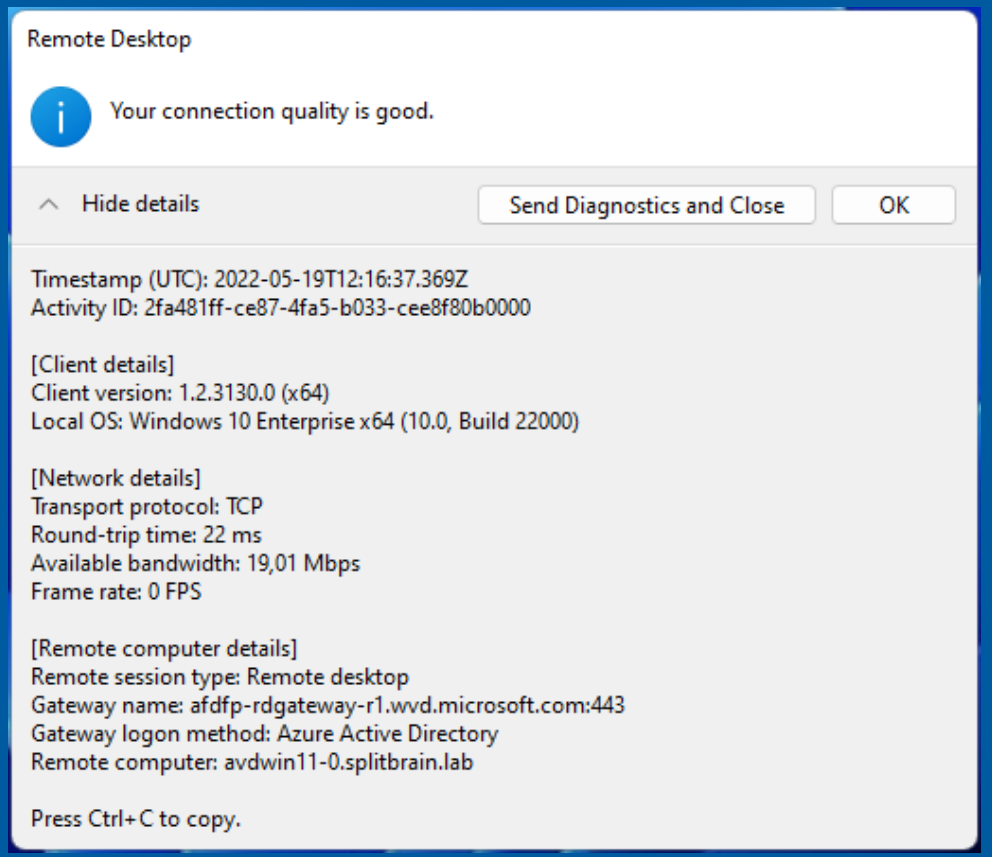
- Manage and scale deployments across both Azure and Azure Stack HCI through a single management experience

Optimize for cost

- Use existing eligible Windows licenses
- Save with Windows 10/11 multi-session support

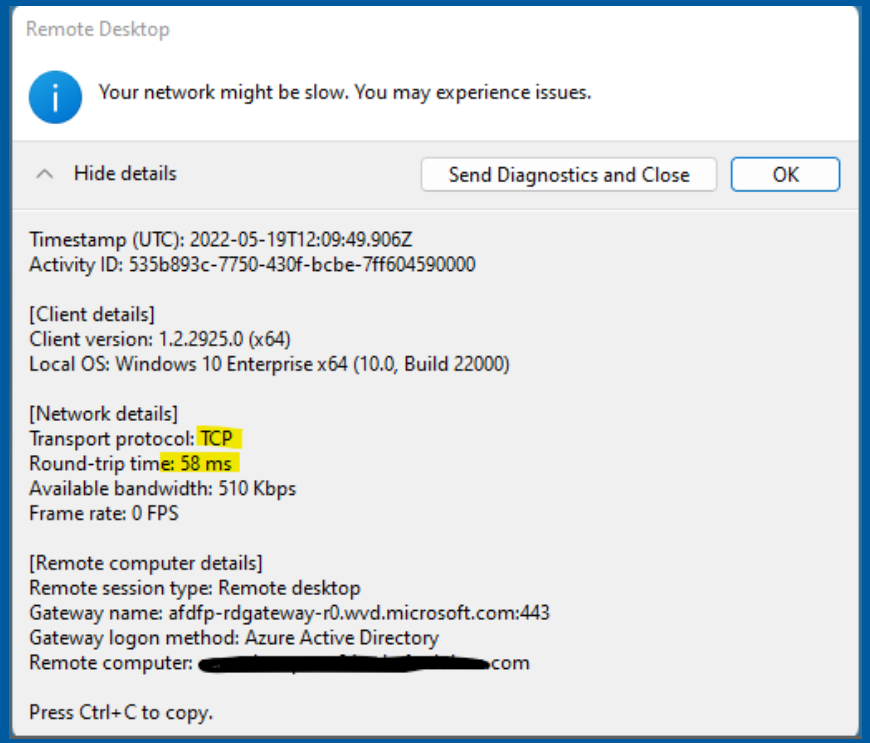
DEMO

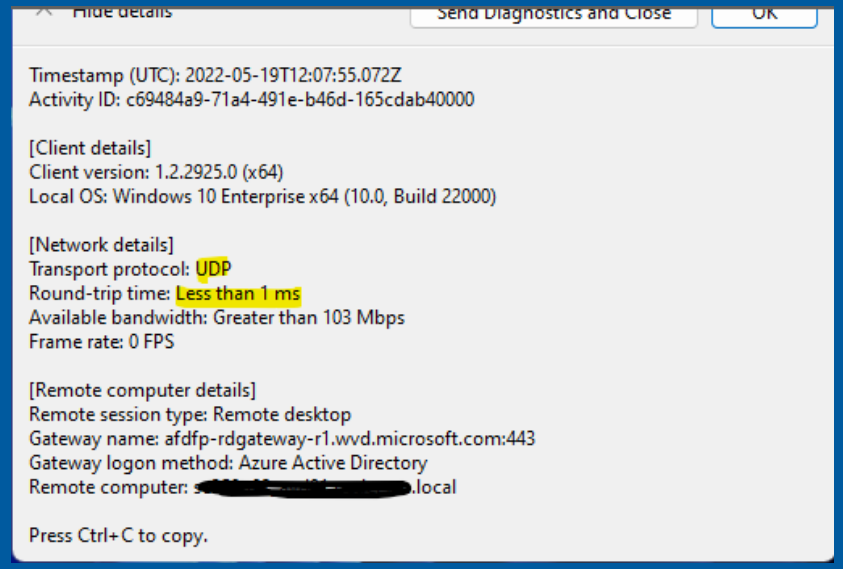




Azure Amsterdam - Amsterdam

HCI Amsterdam - Rotterdam


Remote Desktop
Your network might be slow. You may experience issues.
Hide details
Send Diagnostics and Close
OK
Timestamp (UTC): 2022-05-19T12:09:49.906Z
Activity ID: 535b893c-7750-430f-bcbe-7ff604590000
[Client details]
Client version: 1.2.2925.0 (x64)
Local OS: Windows 10 Enterprise x64 (10.0, Build 22000)
[Network details]
Transport protocol: TCP
Round-trip time: 58 ms
Available bandwidth: 510 Kbps
Frame rate: 0 FPS
[Remote computer details]
Remote session type: Remote desktop
Gateway name: afdfp-rdgateway-r0.wvd.microsoft.com:443
Gateway logon method: Azure Active Directory
Remote computer: [redacted]com
Press Ctrl+C to copy.


Send Diagnostics and Close
OK
Timestamp (UTC): 2022-05-19T12:07:55.072Z
Activity ID: c69484a9-71a4-491e-b46d-165cdab40000
[Client details]
Client version: 1.2.2925.0 (x64)
Local OS: Windows 10 Enterprise x64 (10.0, Build 22000)
[Network details]
Transport protocol: UDP
Round-trip time: Less than 1 ms
Available bandwidth: Greater than 103 Mbps
Frame rate: 0 FPS
[Remote computer details]
Remote session type: Remote desktop
Gateway name: afdfp-rdgateway-r1.wvd.microsoft.com:443
Gateway logon method: Azure Active Directory
Remote computer: [redacted].local
Press Ctrl+C to copy.

How to try Azure Virtual Desktop for Azure Stack HCI

Buy a validated hardware solution or re-use existing hardware if it matches a solution in the Azure Stack HCI Catalog

Browse solutions

Install Azure Stack HCI software with a free 60-day trial

Download software

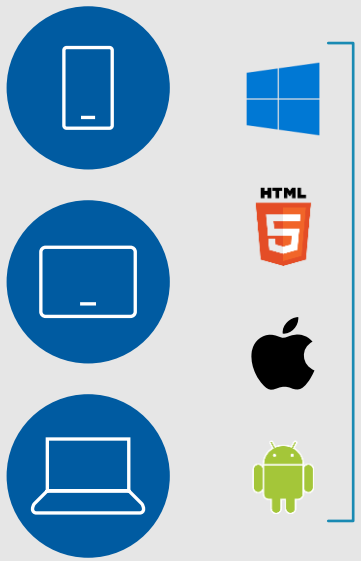
Visit the documentation page to install Azure Virtual Desktop

No charge during preview

Solution overview

3 BIG PIECES

Clients
Customer/Partner-managed



FIREWALL

Azure Virtual Desktop
Microsoft-managed

- Web Access
- Diagnostics
- Gateway
- Broker
- Azure SQL DB

FIREWALL

Azure Stack HCI VMs & Services
Customer/Partner-managed

VMs

- Desktops
- Apps
- Azure & legacy Active Directory
- FSLogix User Profile File Server

Clients

Full Clients

Windows 11, 10, 7

HTML5

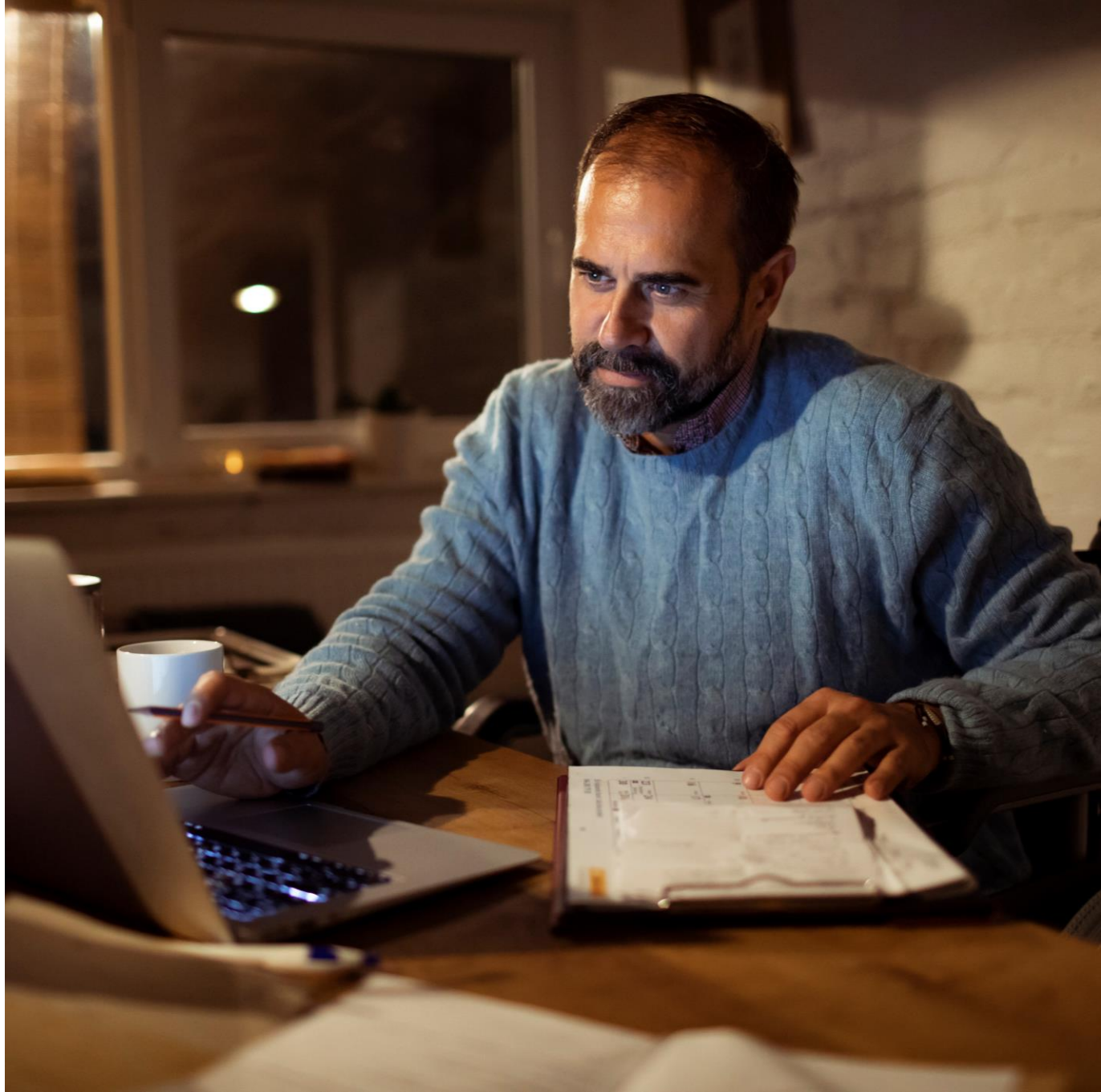
Android

macOS & iOS

Thin Clients

Windows 10 IoT Enterprise

Linux SDK



Microsoft-managed Components

Web Access

Publishes user-specific remote apps and virtual desktops

Provides access to virtual desktops and remote apps through an HTML5-compatible web browser

Remote Connection Gateway

Grants access to remote apps and desktops from any device that can run an Azure Virtual Desktop client

Remote Connection Br

Manages user connections to virtual desktops and remote apps

Provides load-balancing and reconnection to existing sessions

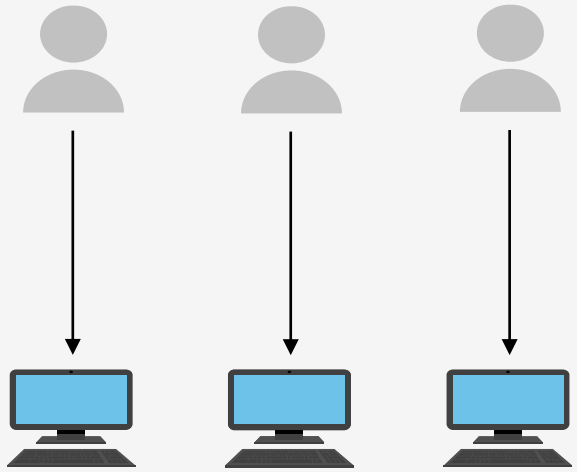
Remote Desktop Diagnostics

Event-based aggregator that marks each user or administrator action on the AVD deployment as a success or failure

Administrators can query the aggregation of events to identify failing components.

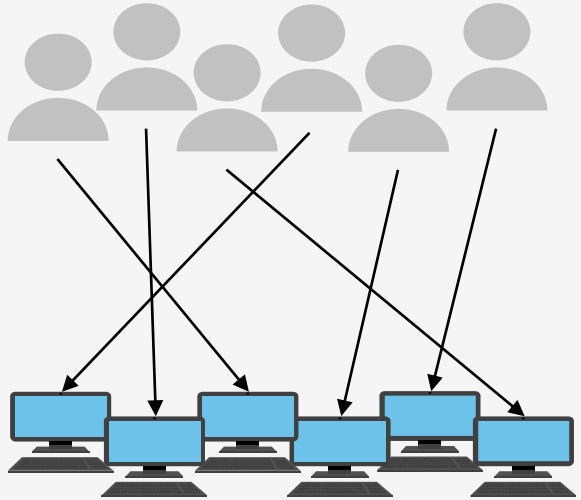
Session-based vs. Machine-based

Personal – Single Session



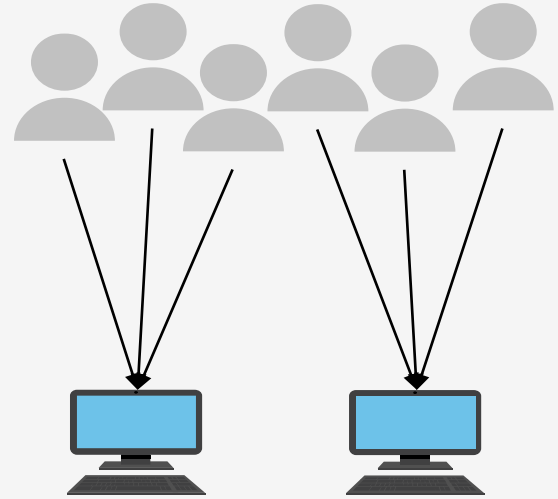
Static 1:1 Assignment

Pooled – Single Session



Floating 1:1 usage

Pooled – Multi Session



Multiple User per Machine
n:m usage

Designing Azure Virtual Desktop on HCI

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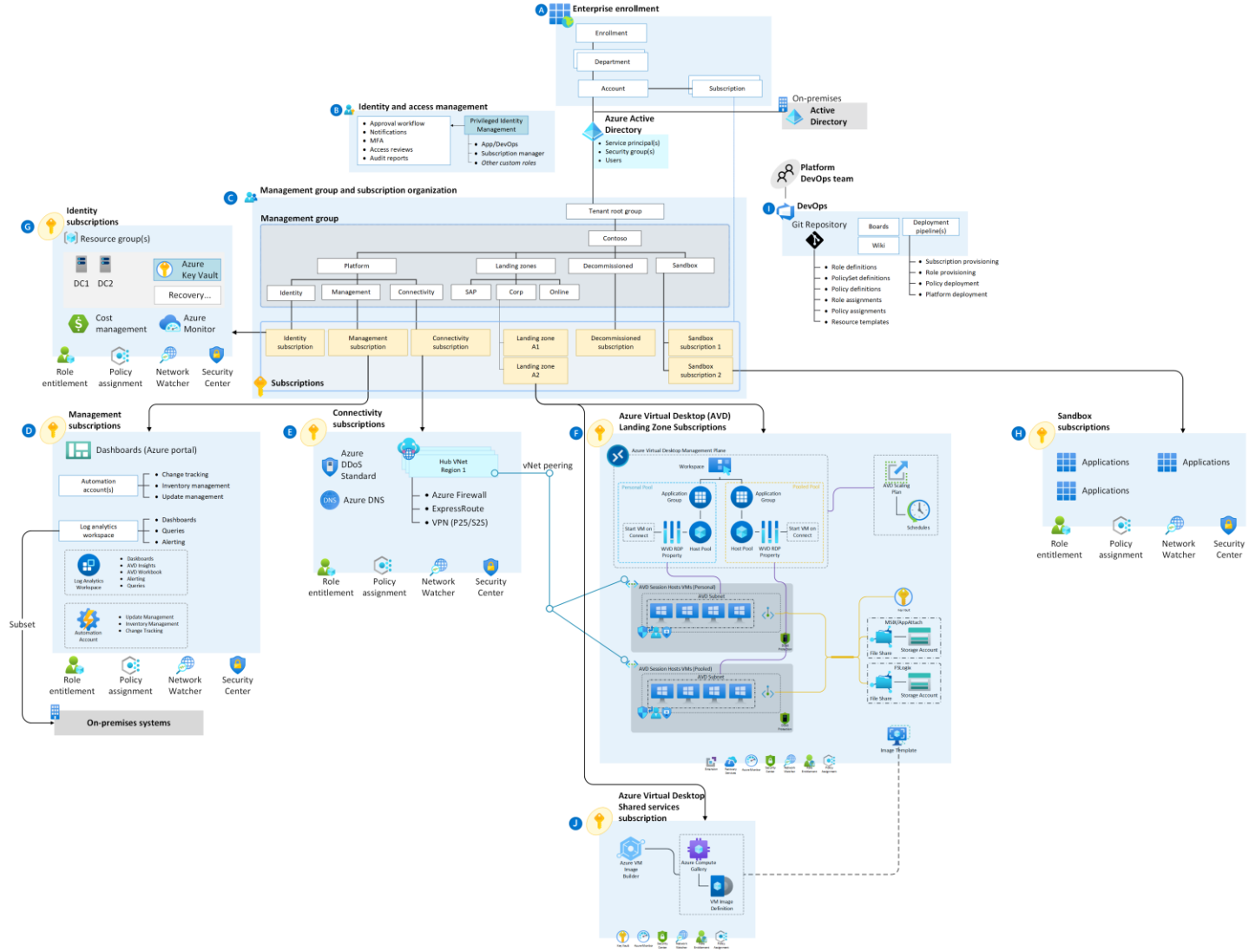
Landing Zone



On-Prem

- Subnet Segregering
- VM Størrelse
- Image Håndtering

Deploying Azure Virtual Desktop on HCI

Requirements

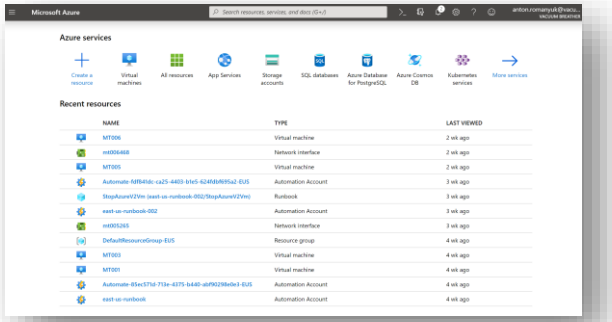
Registered Azure Stack HCI Cluster

Azure Subscription with all AVD Required Permissions

On Premises Active Directory Synced with Azure Active Directory

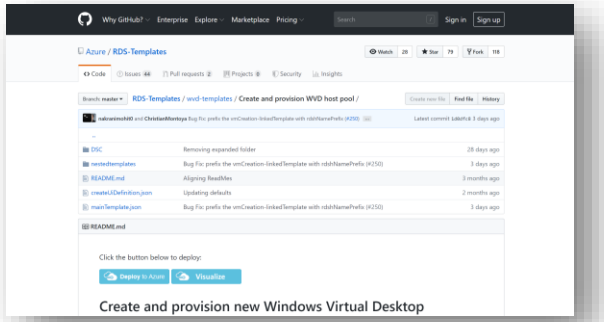
Network Access to AVD URLs

Deployment Options // Overview



Azure Portal

- Use the Azure Portal to provision a new host pool via a wizard-based process



ARM Template

- Use the Azure Resource Manager template for provisioning a new host pool

PowerShell / REST API / ...

- Use your PowerShell client or REST API calls to create a host pool

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Deploying AVD on ASHCI

Create Empty Host Pool	Preview Only- So that means its' a Validation Host Pool	Create AVD Workspace	Deploy Multisession Client VMs
Enable Azure ARC on new Session Host VMs	Register Session Hosts with AVD Services	Create Workspace & Application Groups	Optional Configurations FSLogix, Teams, etc.

General Requirements

Admin level access to manage infrastructure level services

An **Azure tenant environment** along with at least **1 active subscription**.

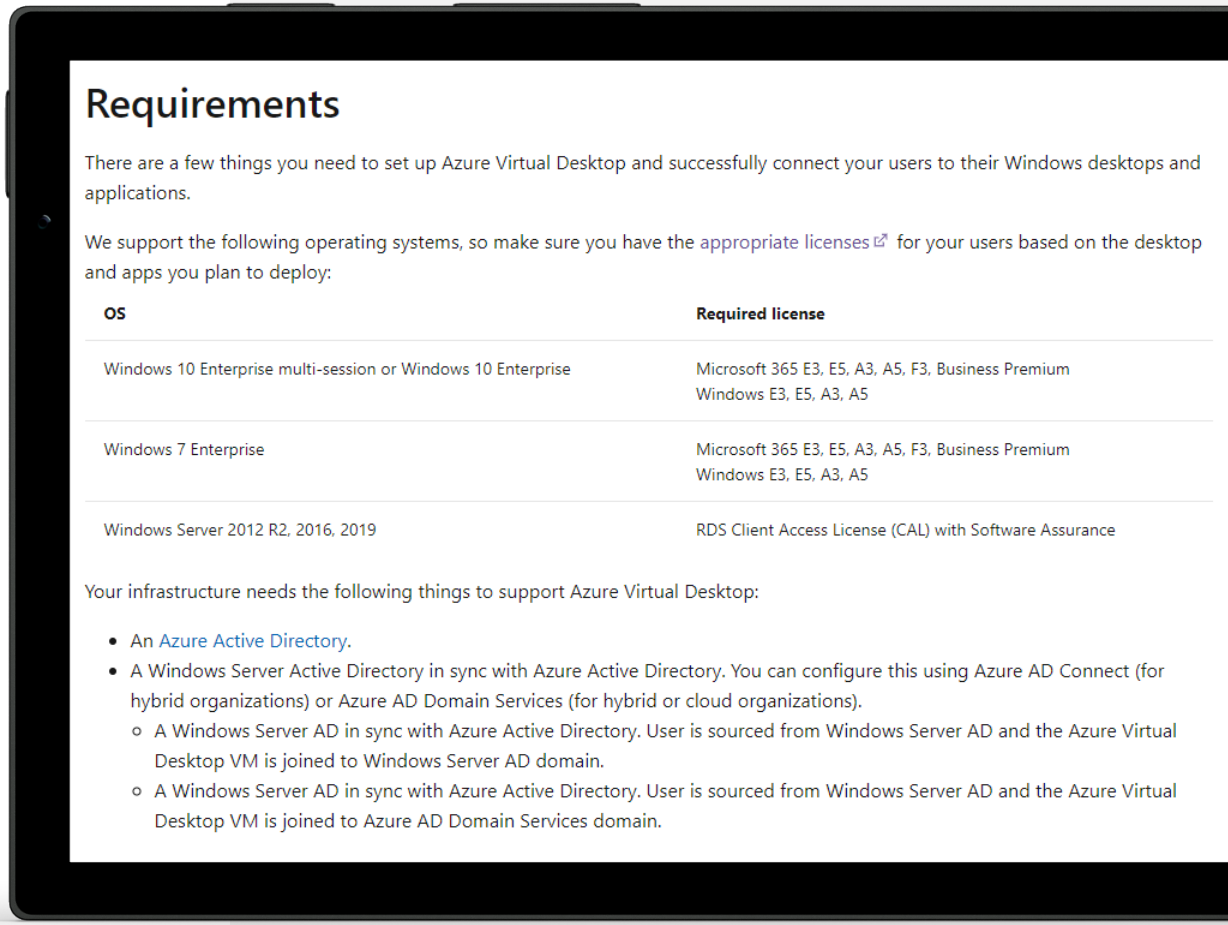
Admin permission to **enable resource provider** on subscription

An **Active Directory environment** must be present.

A S2S IPSEC tunnel OR Express Route may be used to **extend on-premises network into Azure**.

The **AVD requirements** must be satisfied.

https://docs.microsoft.com/en-us/azure/virtual-desktop/overview#requirements



Requirements

There are a few things you need to set up Azure Virtual Desktop and successfully connect your users to their Windows desktops and applications.

We support the following operating systems, so make sure you have the appropriate licenses for your users based on the desktop and apps you plan to deploy:

OS	Required license
Windows 10 Enterprise multi-session or Windows 10 Enterprise	Microsoft 365 E3, E5, A3, A5, F3, Business Premium Windows E3, E5, A3, A5
Windows 7 Enterprise	Microsoft 365 E3, E5, A3, A5, F3, Business Premium Windows E3, E5, A3, A5
Windows Server 2012 R2, 2016, 2019	RDS Client Access License (CAL) with Software Assurance

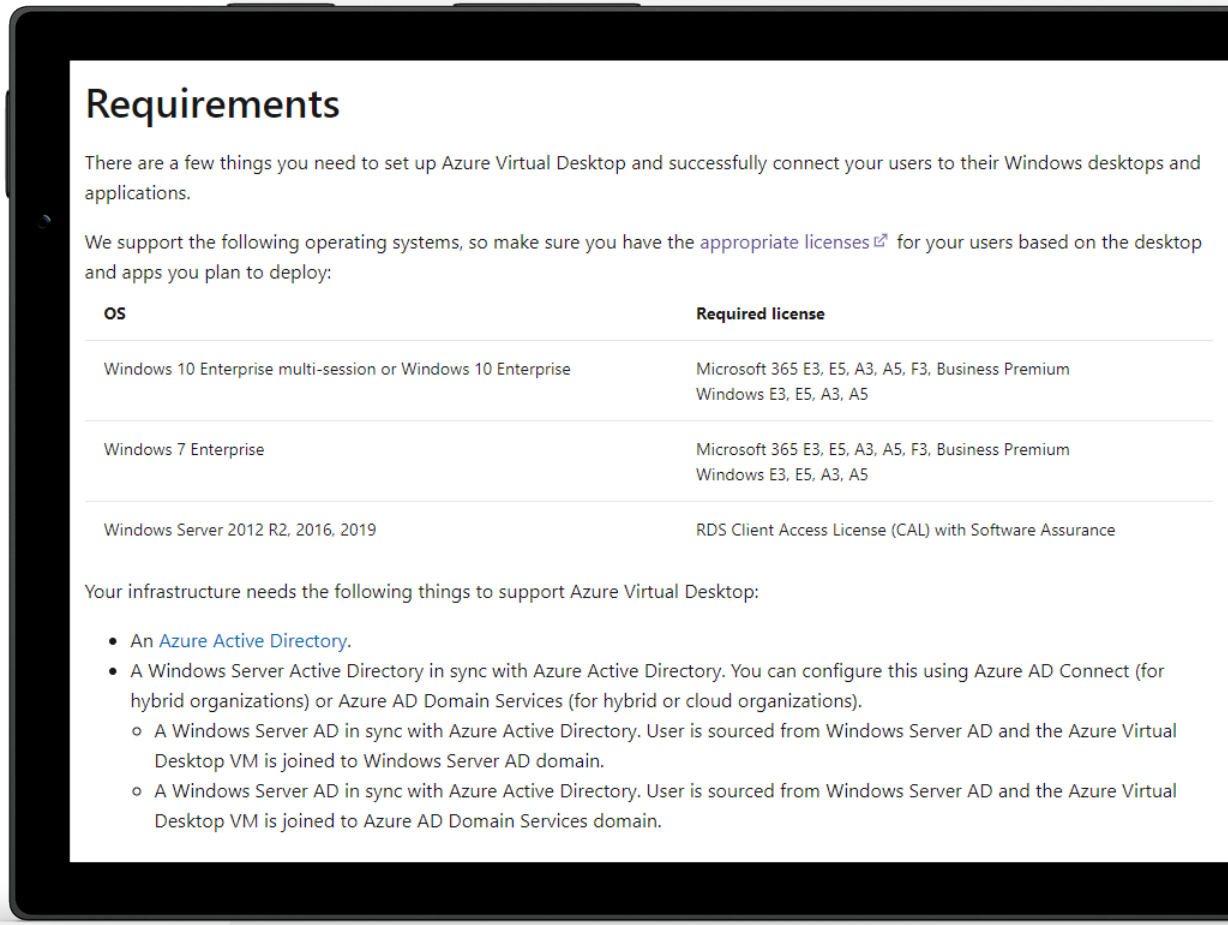
Your infrastructure needs the following things to support Azure Virtual Desktop:

- An Azure Active Directory.
- A Windows Server Active Directory in sync with Azure Active Directory. You can configure this using Azure AD Connect (for hybrid organizations) or Azure AD Domain Services (for hybrid or cloud organizations).
  - A Windows Server AD in sync with Azure Active Directory. User is sourced from Windows Server AD and the Azure Virtual Desktop VM is joined to Windows Server AD domain.
  - A Windows Server AD in sync with Azure Active Directory. User is sourced from Windows Server AD and the Azure Virtual Desktop VM is joined to Azure AD Domain Services domain.

AVD specific Requirements

- **Active Directory Domain Services**
  - Connectivity to a Domain Controller
    AD Connect configured to sync objects between DCs and AAD
    - OR (for cloud native deployments) –
    Azure Active Directory Domain Services
- **A storage solution** (SMB File Share) for user profile data
- An **image** and **patch management solution**
- Session hosts need **connectivity to AVD specific endpoints**
- **Required licenses**/entitlements/CALs/SALs

https://docs.microsoft.com/en-us/azure/virtual-desktop/overview#requirements



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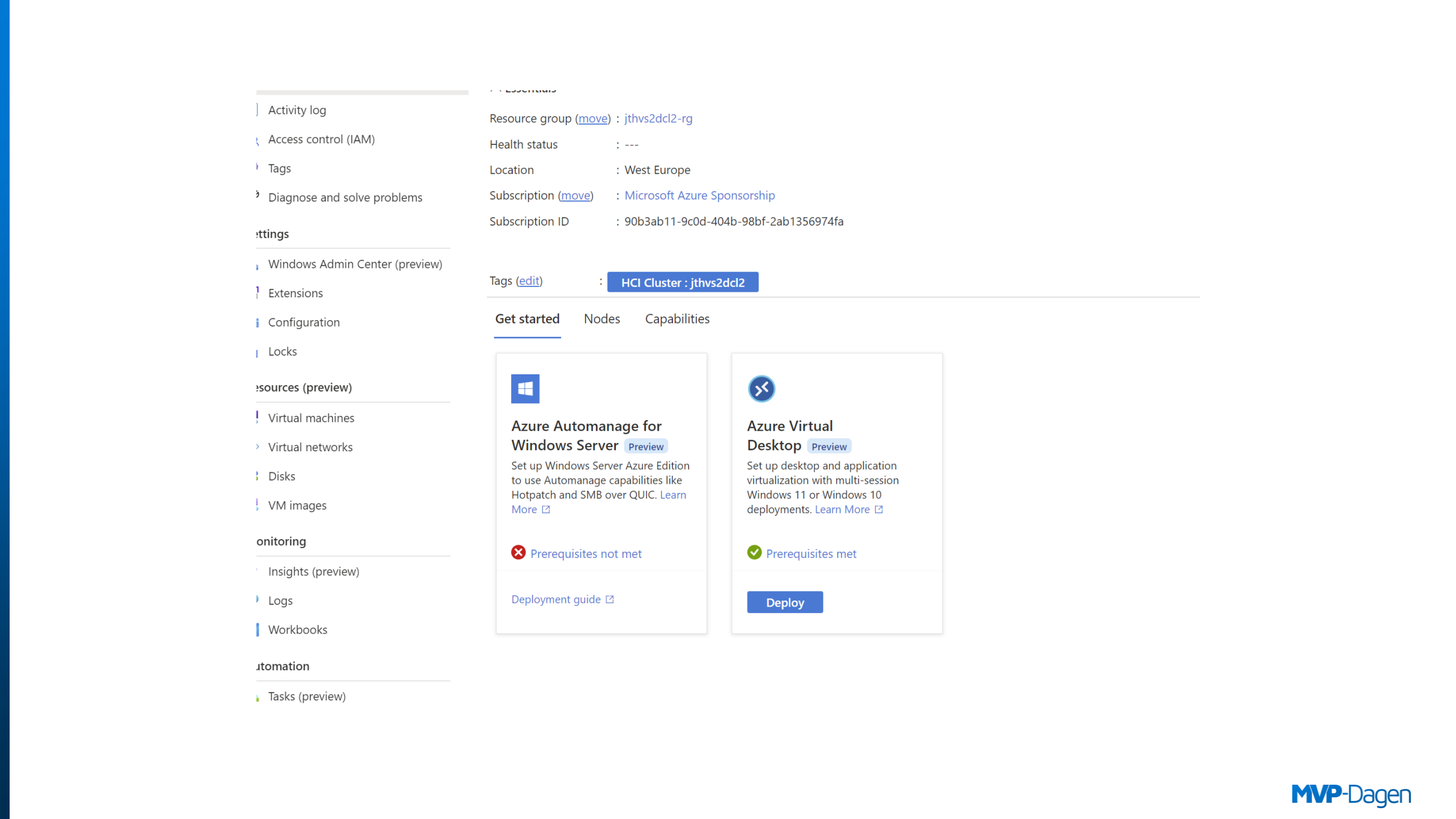

Activity log
Access control (IAM)
Tags
Diagnose and solve problems
ttings
Windows Admin Center (preview)
Extensions
Configuration
Locks
sources (preview)
Virtual machines
Virtual networks
Disks
VM images
onitoring
Insights (preview)
Logs
Workbooks
utomation
Tasks (preview)
Resource group (move) : jthvs2dcl2-rg
Health status : ---
Location : West Europe
Subscription (move) : Microsoft Azure Sponsorship
Subscription ID : 90b3ab11-9c0d-404b-98bf-2ab1356974fa
Tags (edit) : HCI Cluster : jthvs2dcl2
Get started
Nodes
Capabilities
Azure Automanage for Windows Server Preview
Set up Windows Server Azure Edition to use Automanage capabilities like Hotpatch and SMB over QUIC. Learn More
Prerequisites not met
Deployment guide
Azure Virtual Desktop Preview
Set up desktop and application virtualization with multi-session Windows 11 or Windows 10 deployments. Learn More
Prerequisites met
Deploy

Managing Azure Virtual Desktop on HCI

Management of AVD on HCI

- Same Experience as managing your AVD Deployments in Azure
  - Create Application Groups and Workspaces, as well as User Assignments in Portal
- Control Monitoring, Automation, Defender for Cloud via Azure Arc
- VM Operations controlled at HCI level (Live Migrations, Deployment, Etc.)
- Group Policy or Intune Policies can of coarse be utilized.

DEMO

Why FSLogix Containers?

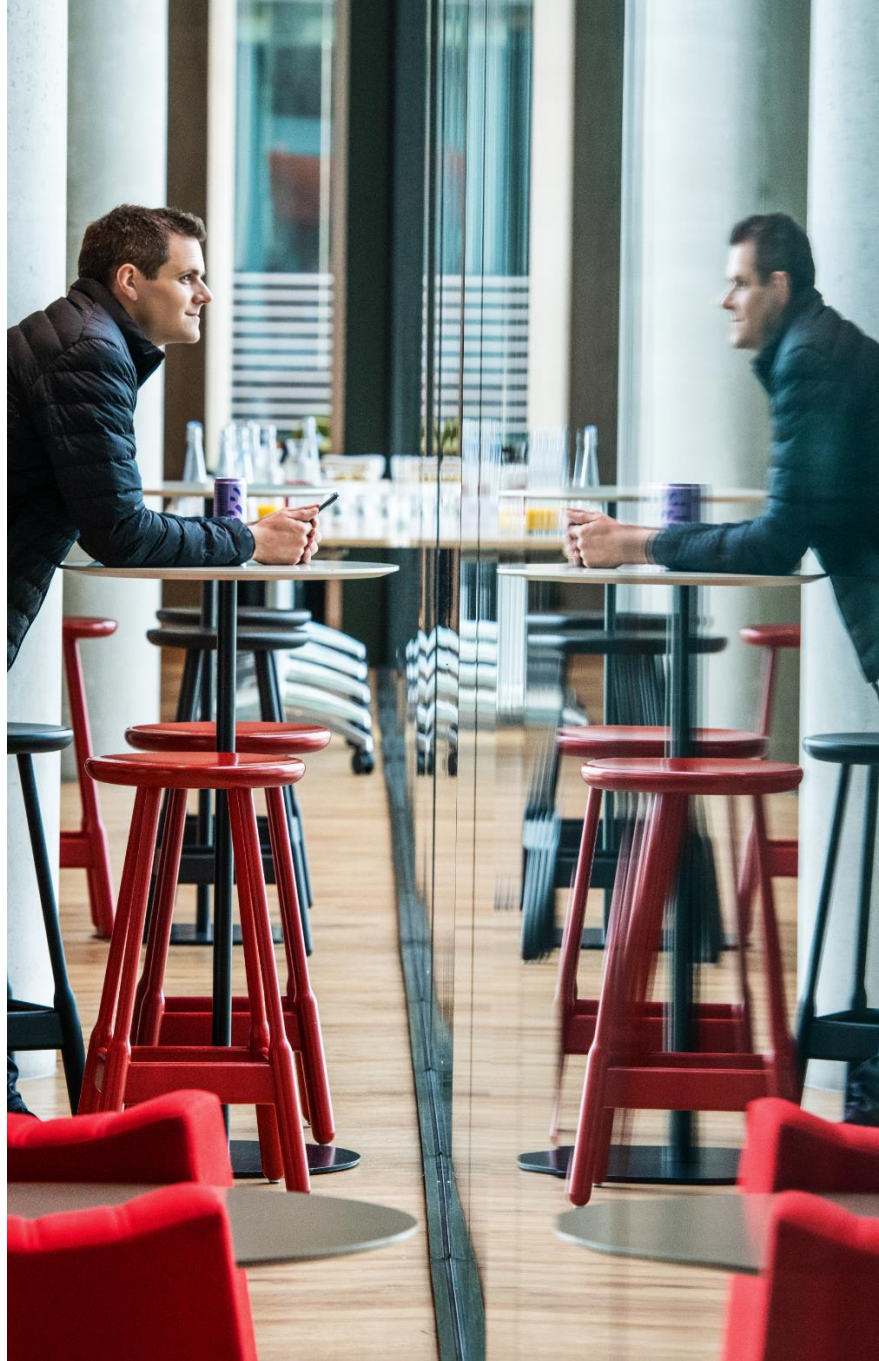
Addresses blocking items for implementing virtual environments

Best solution for Office with unique performance and compatibility integration

Uses and enhances standard Microsoft technologies

Provide flexible implementation as full solution or to enhance Office performance and function with other profile solutions

Optimize resource utilization

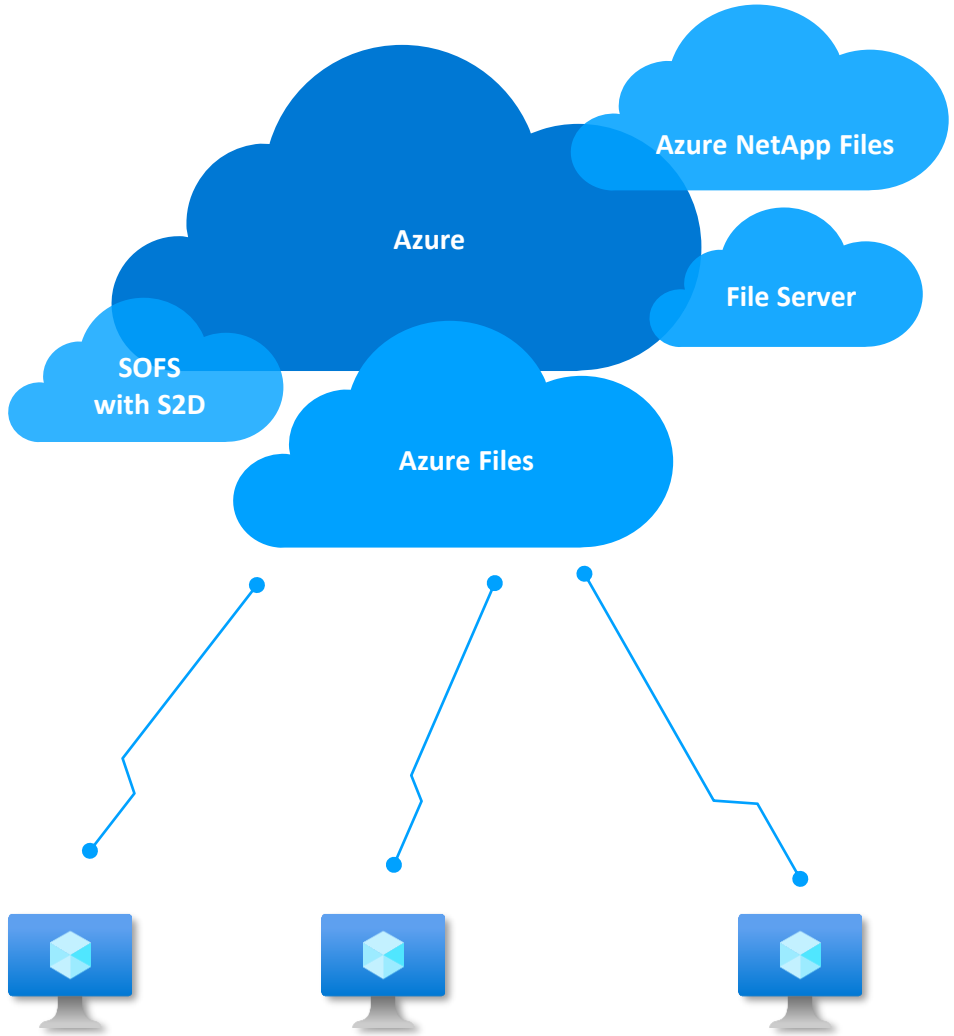


Storage Options

Understand requirements for user profile sizes and deploy one of the following:

- ~~Azure Files~~
- ~~NetApp Files~~
- Scale out File Server with Storage Spaces Direct (SOFS with S2D)
- Deployments with < 50 users can also utilize a single File Server

Note: With Azure Stack HCI, it is advisable to utilize a Windows File Server or a Windows Scale File Server with S2D



Licensing

Purchasing Azure Virtual Desktop for Azure Stack HCI

	Azure Virtual Desktop	Azure Virtual Desktop for Azure Stack HCI
End-user licensing (access rights)	Windows license rights or per-user access pricing – See pricing page	Windows license rights or per-user access pricing – See pricing page
Infrastructure	Azure compute, storage, networking	AVD service fee for ASHCI No charge during preview
		Fee for base Azure Stack HCI service $10/physical core/month
		Azure Stack HCI hardware from catalog


Tusen takk!
MVP-Dagen