

Azure Virtual Desktop - von Azure ins eigene RZ

AZURE HYBRID EXPERIENCE DAY 2024

About me

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Focus:

Azure Virtual Desktop & Log Analytics

WVDAdmin & Hydra for AVD

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Overview

Azure Virtual Desktop

Multi-Session

VDI

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Overview

Windows Server
RD Session Host

Scalable multi-session **legacy**
Windows environment

Windows Server

Multiple sessions

Win32

Office 2021 Perpetual

Long-Term Servicing Channel



Azure Virtual Desktop
Multi-session

Scalable multi-session **modern**
Windows user experience with
Windows 10 Enterprise security

Windows 11

Multiple sessions

Win32, UWP

Microsoft 365 Apps for
enterprise

Semi-Annual Channel

Windows 11
Enterprise

Native single-session **modern**
Windows experience

Windows 11

Single session

Win32, UWP

Microsoft 365 Apps for
enterprise

Semi-Annual Channel



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Overview

- Microsoft's Virtual Desktop environment running only in Azure
- All necessary infrastructure around is operated by Microsoft, compared to RDS
 - RD Gateway
 - RD Web
 - RD Broker
 - Licensing
 - ...
- Necessary infrastructure is
 - Free of charge if you have M365 / W10E / RDS Cal
<https://azure.microsoft.com/en-us/pricing/details/virtual-desktop/>
 - Platform services – invisible for admins and users
- To be clear
 - Customers have to pay for VMs, storage, and network and need the right licenses (M365 or RDS Cals)

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Overview

Your subscription—your control

Desktop and remote apps



Full desktop



Remote app



Windows 10 enterprise
multi-season



Windows Server 2012
R2 and newer



Windows 10 enterprise



Windows 7 enterprise
full desktop

Management and policies



Image, app, and
profile management



User density, VM
sizing, and scaling
policies



User management and
identity



Network policies

Managed by Microsoft

Windows Virtual Desktop Service



Clients



Broker



Management



Gateway



Diagnostics



Load balancing

Azure Infrastructure



Compute



Storage

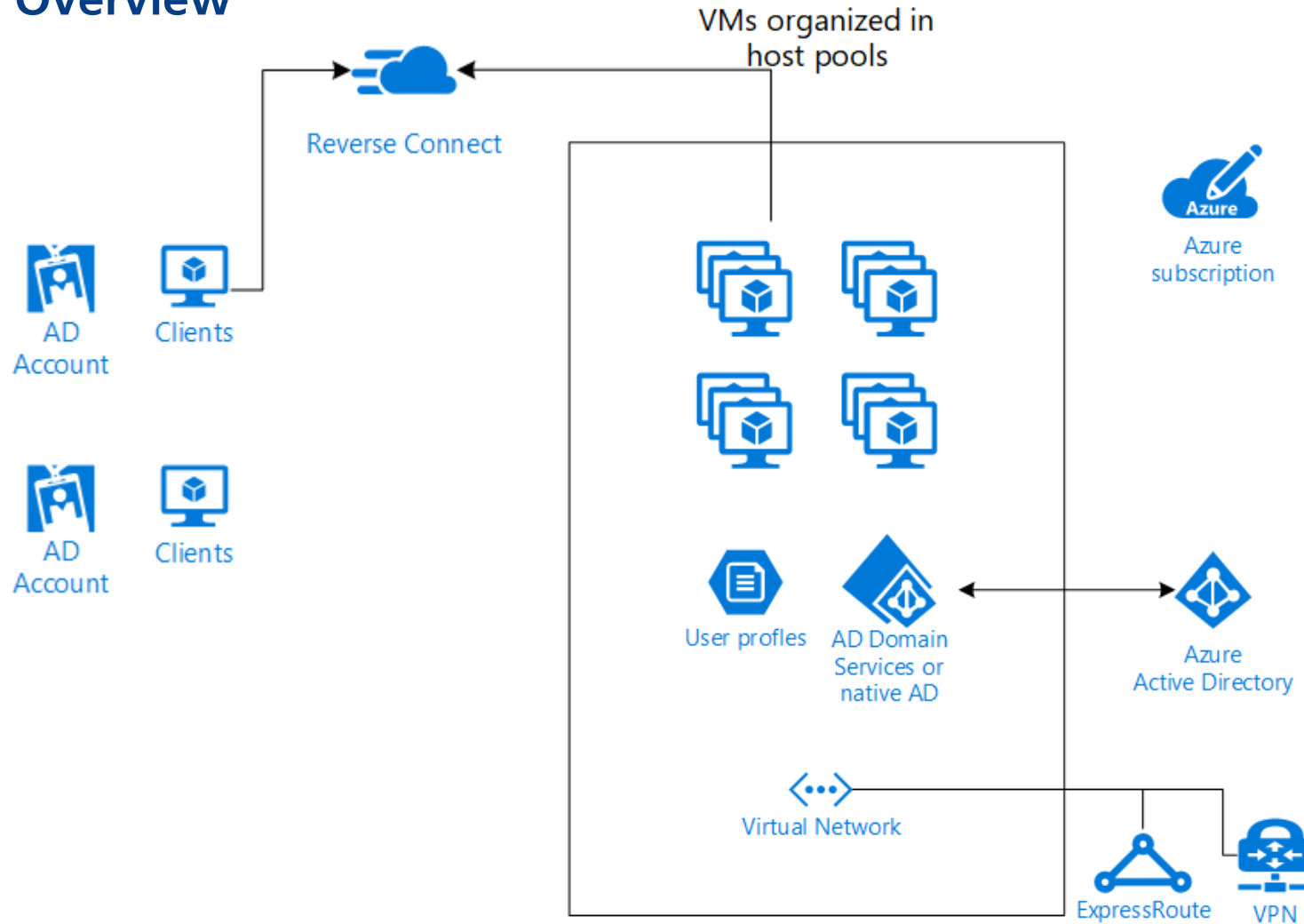


Networking

Image source:
<https://azure.microsoft.com/de-de/services/virtual-desktop/#featured>

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Overview



What to you need at least:

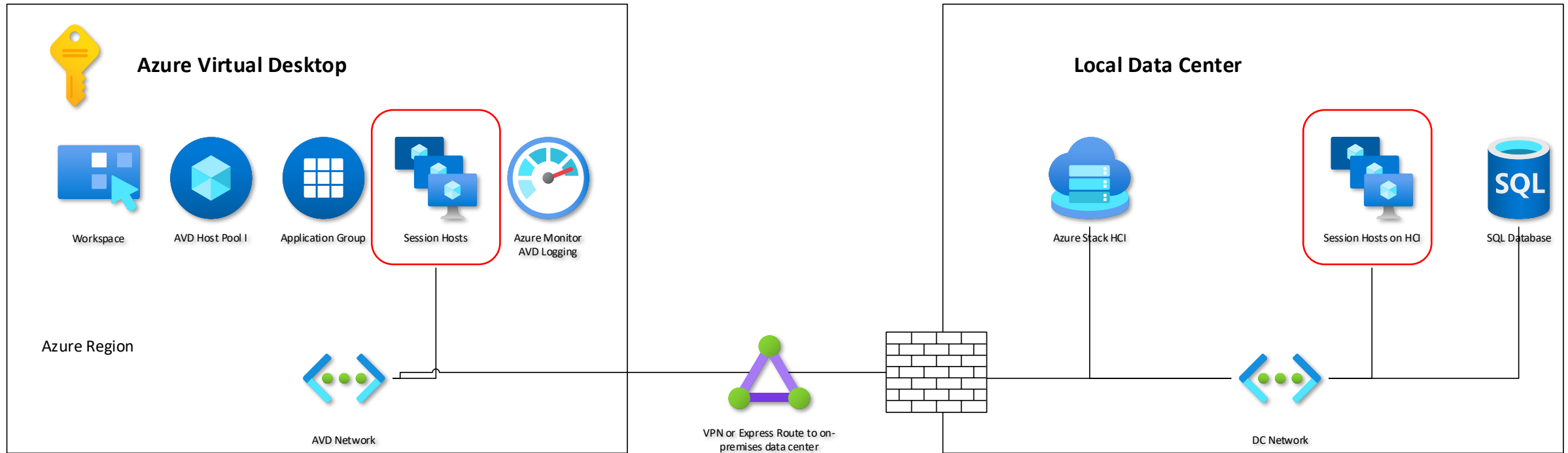
- Classic AD environment
- Synced directories (AD->Entra ID)
- Azure subscription
- Virtual Machines
- Storage for profiles and other stuff
- Clients

Good to have

- VPN/Express route to local data center if needed
- Monitoring, scaling, etc.

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Overview – Using local hosts on HCI





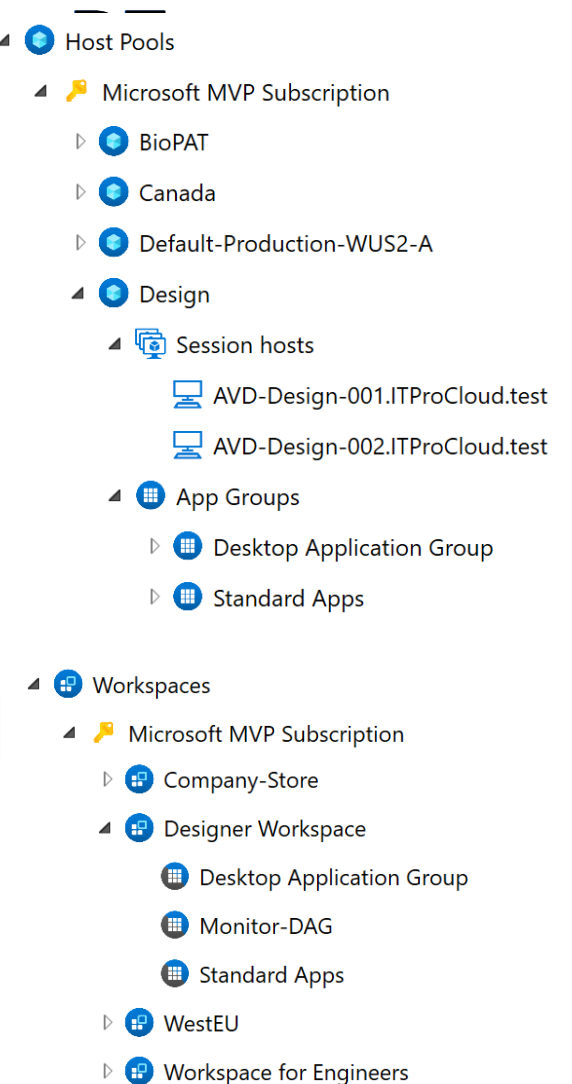
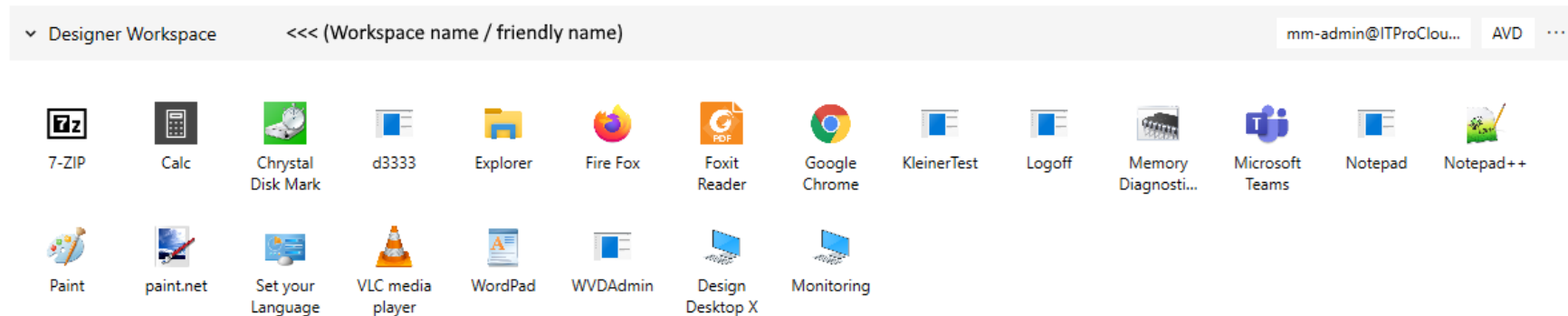
DEMO TIME

How an AVD session looks like in Azure

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AVD Resources

- Host Pools
 - Session Hosts -> Virtual Machine
 - App Groups
 - User Sessions



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Session Hosts in Azure Portal

- Create session hosts in Azure Portal
 - Retype information for each rollout
 - Remember:
 - Local admin account
 - Domain join account
 - OU
 - ...

Microsoft Azure

Home > Azure Virtual Desktop | Host pools > HCI-WEU-Office-Desktop-HP | Session hosts >

Add virtual machines to a host pool

Basics **Virtual Machines** Tags Review + create

A host pool is a collection of one or more identical virtual machines within an Azure Virtual Desktop environment. Here you can give details to create Azure virtual machines for your host pool now, or you can create and add them later, for example if you plan to add virtual machines from Azure Stack HCI. [Learn more](#)

Add virtual machines ☐ No ☒ Yes

Host pools are a collection of one or more identical virtual machines within Azure Virtual Desktop environments. Here you provide a common set of properties to update the Session hosts within your host pool.

Resource group

Name prefix * ✓

i Session host name must be unique within the Resource Group.

Virtual machine type ☐ Azure virtual machine ☒ Azure Stack HCI virtual machine

⚠ To create a session host virtual machine on Azure Stack HCI, you must be on Azure Stack HCI, version 23H2. [Learn more](#)

Custom location *

Image * [Manage VM images](#)

i If you do not see an image in the dropdown, the image has not been made available on your Azure StackHCI cluster yet. To create new images on your cluster, click 'Manage VM Images'

[Review + create](#) [< Previous](#) [Next: Tags >](#)



DEMO TIME

Deploy a session host from the Azure Portal

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The challenge of managing AVD

Deployment

Management

- 
- Create a “Golden Master” for the session hosts
 - Configure your master
 - Deploy Session Hosts
 - Configure the session hosts
 - Work with users
 - Work with Azure resources
 - Update session hosts
 - Save some money while using AVD

Add virtual machines to a host pool

Basics Virtual Machines Tags Review + create

Project details

Subscription ① Microsoft MVP Subscription 12k

Resource group ① WVD.Design2

Host pool name Design

Location ①

Validation environment ① ☒ No ☐ Yes

Host pool type

If you select pooled (shared), users will still be able to access their personalization and user data, using FSLogix.

Host pool type Pooled

Review + create

< Previous

Next: Virtual Machines >

Approach #1

The AzurePortal

- Vanilla images or syspreped images
- You have to enter all parameters, like domain credentials, AVD SP, OU, ...
- Limited flexibility; fails if the DSC extensions cannot be load from the internet (policies, proxies,...)
- Experience for admins :-/

```
Help New-Image.ps1 - Scripts - Visual Studio Code
> _SetRuntime.ps1 > New-Image.ps1 x > Register-Apps.ps1 > New-WvdVm.ps1
1 # initialize variables
2 ..\_SetRuntime.ps1
3
4 # Template settings
5 $templateVm='T-WVD-Basic-00'
6 $resourceGroupName=$resourceGroupNameTemplates
7
8 # Creates a new image from the template vm
9 $sourceVm=Get-AzVm -ResourceGroupName $resourceGroupName -Name $templateVm
10
11 # configure parameters of the temporary vm
12 $VmName="TMP_ImageGen"
13 $osDiskName = 'Disk_0_'+$VmName
14 $virtualMachineName = $VmName
15 $resourceGroupNameTemp=$sourceVm.ResourceGroupName
16 $resourceGroupNameImages=$sourceVm.ResourceGroupName
17
18 Write-Host "Shutting down template vm" -ForegroundColor Cyan
19 $vmTemplate=get-AzVM -ResourceGroupName $sourceVm.ResourceGroupName -Name $sourceVm.name -Status
20 $vmTemplateCode=$vmTemplate.Statuses[$vmTemplate.Statuses.Count-1].Code
21 if ($vmTemplateCode -eq "PowerState/stopped" -or $vmTemplateCode -eq "PowerState/deallocated") {
22 } else {
23     Stop-AzVM -ResourceGroupName $sourceVm.ResourceGroupName -Name $sourceVm.name -Force -StayProvi
24 }
25
```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL

Name :

Building image

ResourceGroupName : WVD_Templates

SourceVirtualMachine : Microsoft.Azure.Management.Compute.Models.SubResource

StorageProfile : Microsoft.Azure.Management.Compute.Models.ImageStorageProfile

ProvisioningState : Succeeded

HyperVGeneration : V1

Id : /subscriptions/dcdce2ee-c9c0-4765-acd5-197126d21978/resourceGroups/WVD_Templates/providers/Microsoft.Compute/images/TMP_ImageGen

Name : WVD-HSH-Basic-Image-005

Type : Microsoft.Compute/Images

Location : westeurope

Tags : {}

Removing temporary vm for generalization

Approach #2

PowerShell

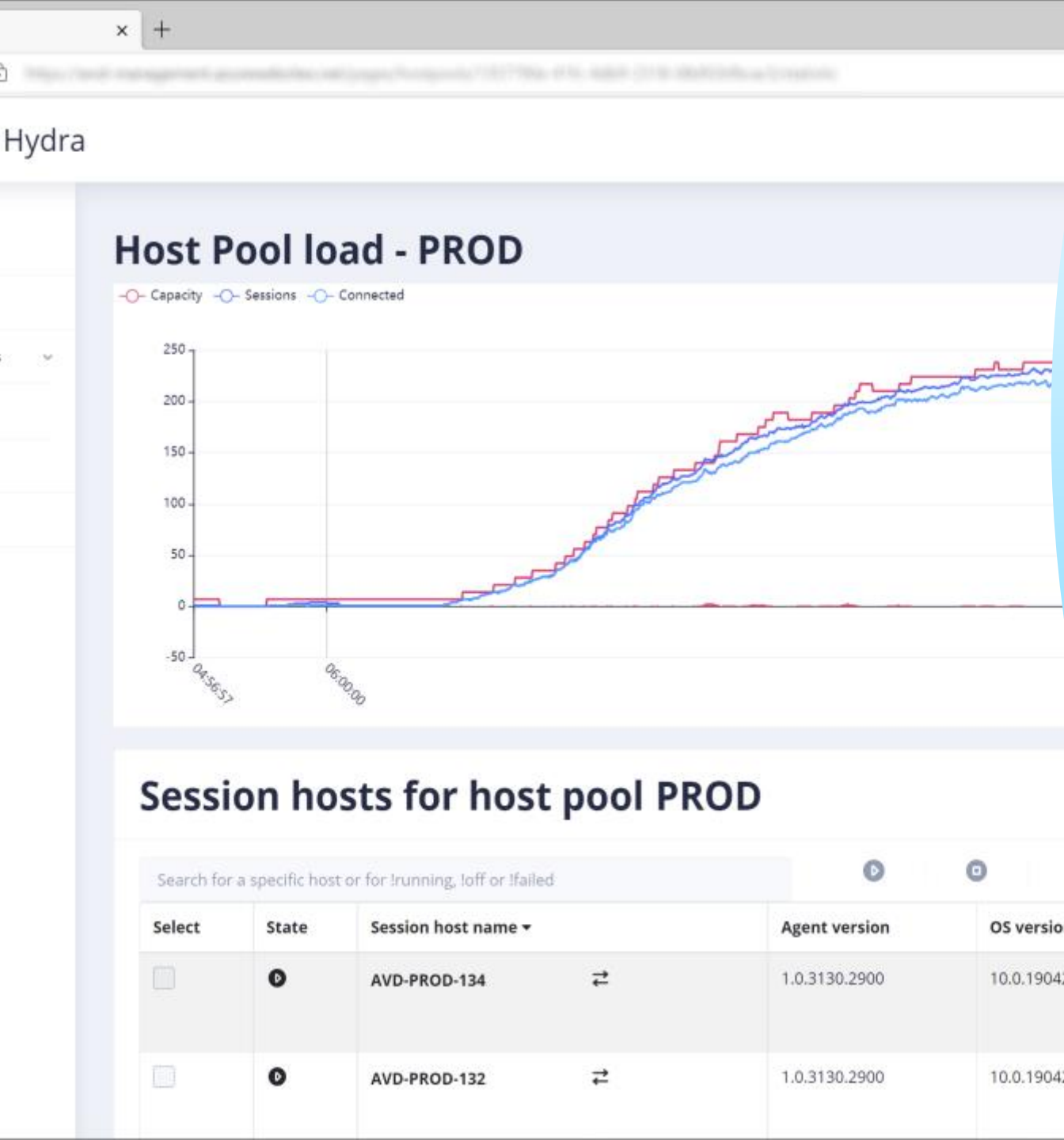
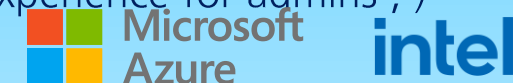
- You can do anything in a highly automated way
- You need PS know-how and have to work with the Azure resources directly
- High flexibility
- Experience for admins 😊



Approach #3

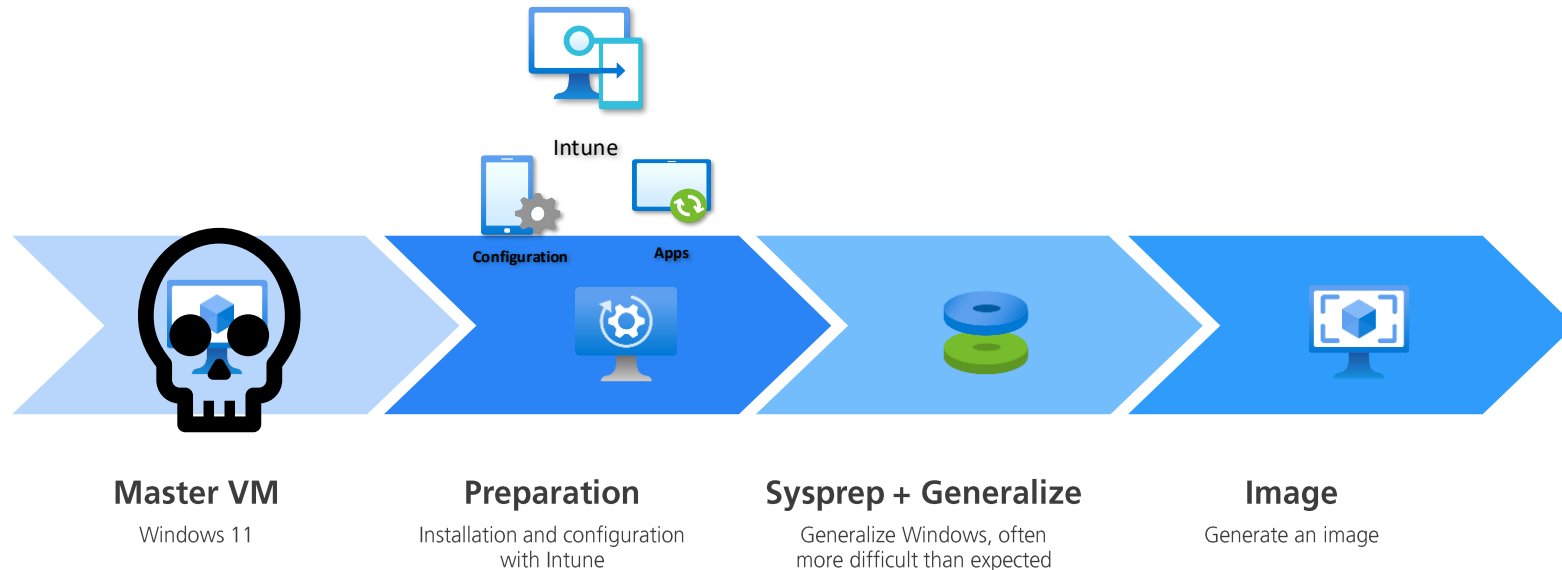
Using Hydra for AVD

- Like deployment from PowerShell with a friendly GUI
- Build-in image creation process from template VMs (re-usable)
- Manage user, session hosts, AVD in an easy way
- Mass-processing of session hosts and VMs
- Ephemeral Disk and “dynamic” disks
- Add hosts to Loadbalancer, ASGs, Azure Monitor directly
- Scaling, Auto-change disks, Multi-tenant
- Experience for admins ;-)



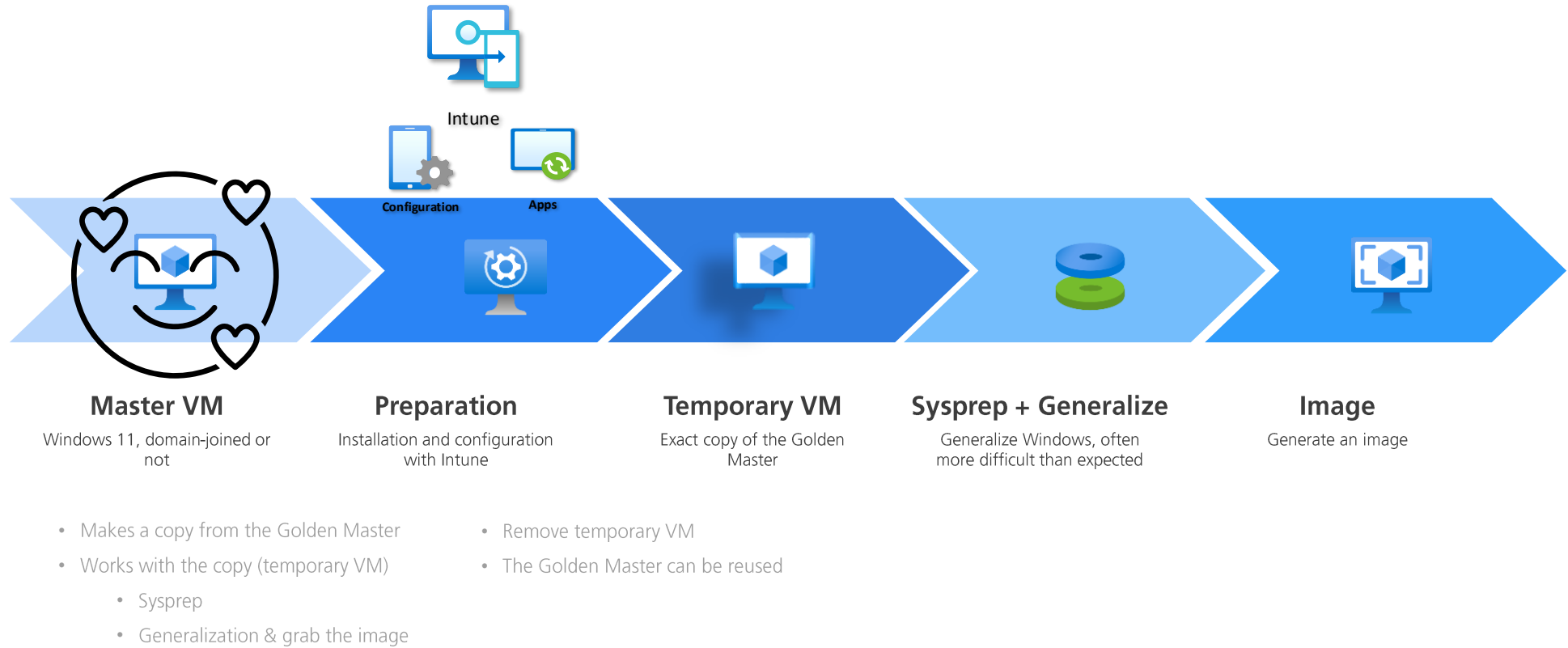
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Managing AVD – Golden Master Approach



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Managing AVD – Golden Master Approach





DEMO TIME

Golden Master Approach – Capturing and deployment with Hydra

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Managing AVD – Autoscaling

- AVD costs an additional \$0.01 per hour per session host 😞
- Autoscaling
 - Integrated with the Azure Portal
 - Smart with Hydra for AVD

Host Pool configuration - HCI-WEU-Office-Desktop-HP

BASE AUTO HEALTH NEW SESSION HOST ROLLOUT **AUTOSCALE & AUTOSHUTDOWN** SESSION TIMEOUTS SCRIPT SCHEDULES HOSTS TAGS

Autoscale Configuration

Enabled ☒ Use Power-On-Connect ☒

Session hosts running 24/7 0 Default Loadbalancer Type Depth-First

Min. number of available sessions 0 Min. number of hosts without sessions (Warning: Read tooltip) 0

Dynamically rollout new session hosts up to a max. number of hosts in the pool 20 Concurrent starts/rollout of session hosts at the same time 1

Advanced settings

Schedules

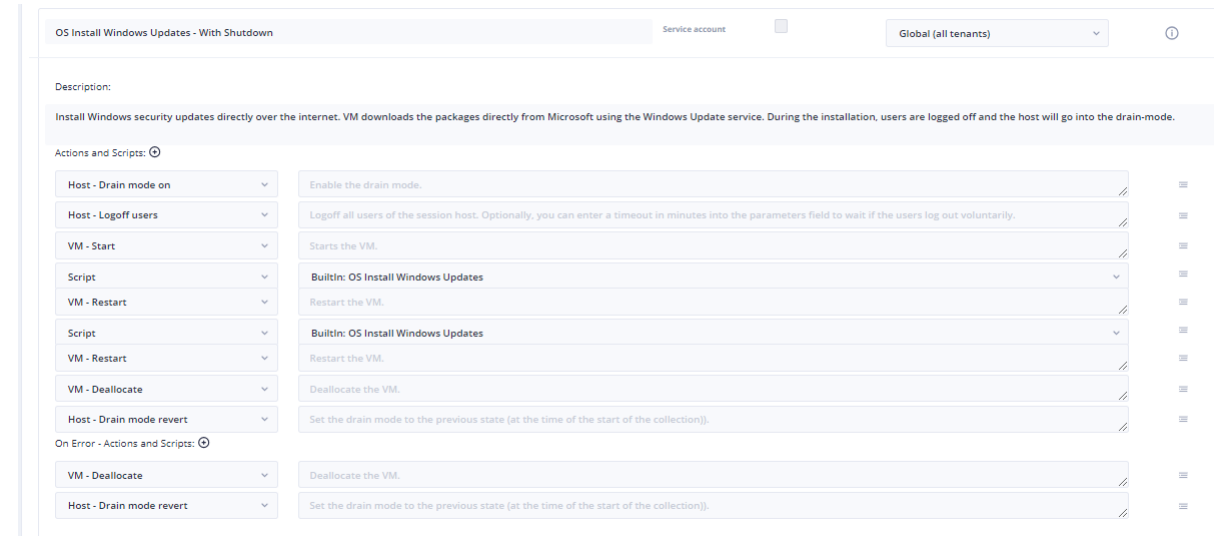
Use schedules to define a minimum number of session hosts for a specific time range to handle login storms. E.g. five session hosts between 6:00 am to 8:00 am, weekdays. If more hosts are needed, autoscale will provide additional hosts automatically. [Show advanced schedule settings.](#)

Enabled	Active Only	Min. Hosts	Min. Free Sessions	Weekdays	From (local time)	To (local time)	From date	To date	Load-Balancer	Build-First	Remove
☒	☐	0	8	☒ ☒ ☒ ☒ ☒ ☐ ☐	06:00 am	10:00 am	Start date	End date	Breadth-First	☐	Remove
☒	☒	1	4	☒ ☒ ☒ ☒ ☒ ☐ ☐	10:00 am	05:00 pm	Start date	End date	Breadth-First	☐	Remove

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Managing AVD – Updates, Deployment, Management

- What about the Windows and Application life-cycle?
- Multi-User pools
 - Refresh images and deploy new hosts
 - Update existing hosts
- Personal pools
 - Update existing hosts





DEMO TIME

Managing Azure Virtual Desktop on HCI

Vielen Dank für Ihre Teilnahme!

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Track 1
Raum Redmond



Peter Sommer

Migration, Backup und
Disaster Recovery
Möglichkeiten auf einen
Blick



Manfred Helber

Betrieb- und Self-Service
von Azure
Stack HCI powered by
Azure Arc

Track 2
Raum Chicago

15:45 Uhr

