Azure Virtual Desktop auf Azure Local

Carsten Rachfahl – Microsoft Azure und Cloud and Datacenter Management MVP

AVD Überblick

Closing Subtext

Experts Live Austria

Vorteile von AVD auf Azure Local

Management Plain komplett in der Azure Cloud

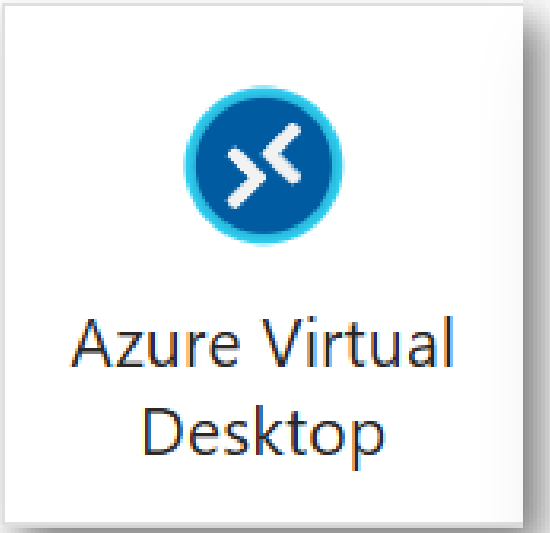
- Microsoft kümmert sich um Bereitstellung, Skalierung und Updates

Bereitstellung von Azure Marketplace Images

- Vorbereitete und optimierte Images

Windows 10/11 Multisession Host

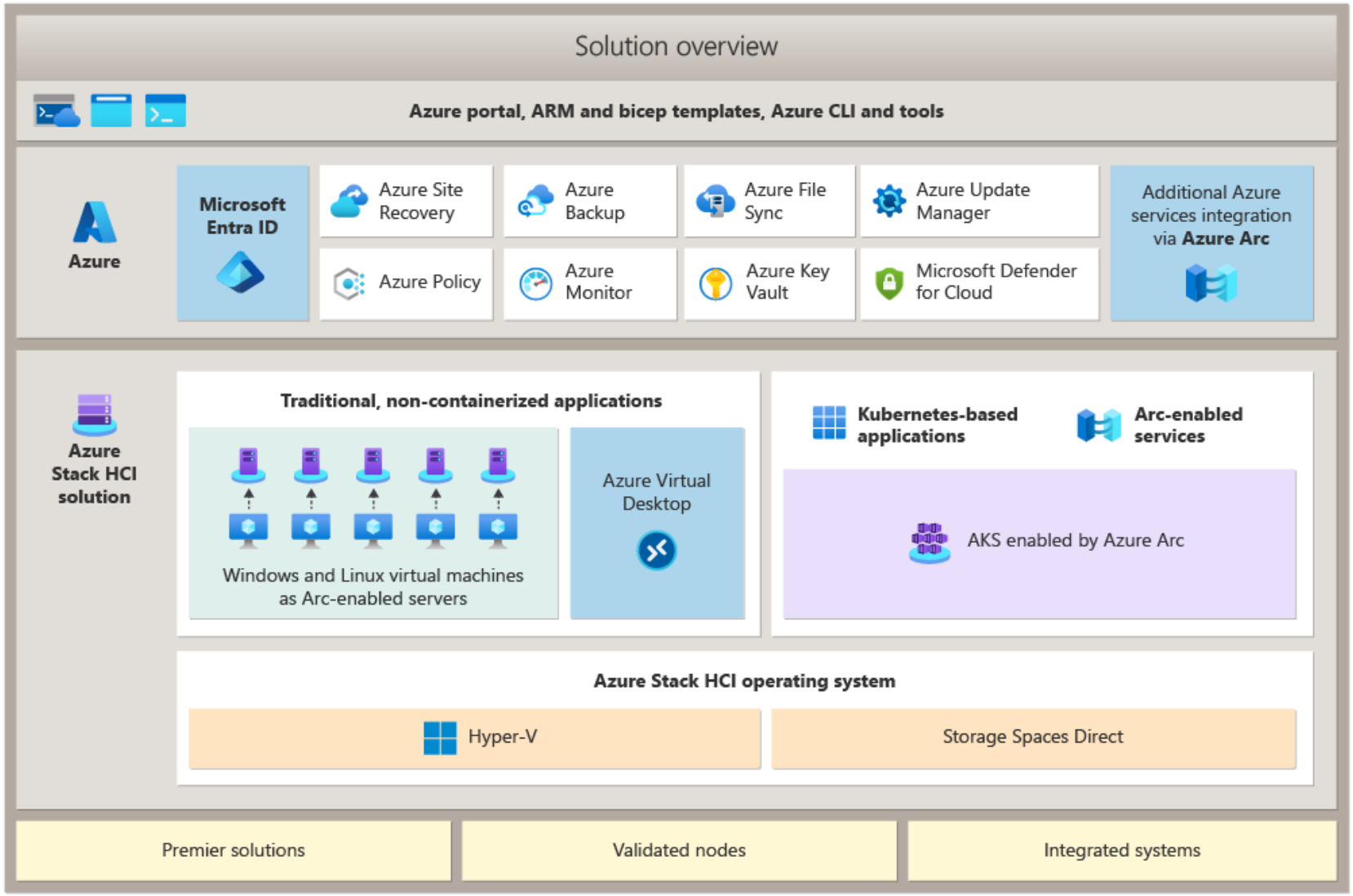
- Betrieb nur in Azure und Azure Local möglich



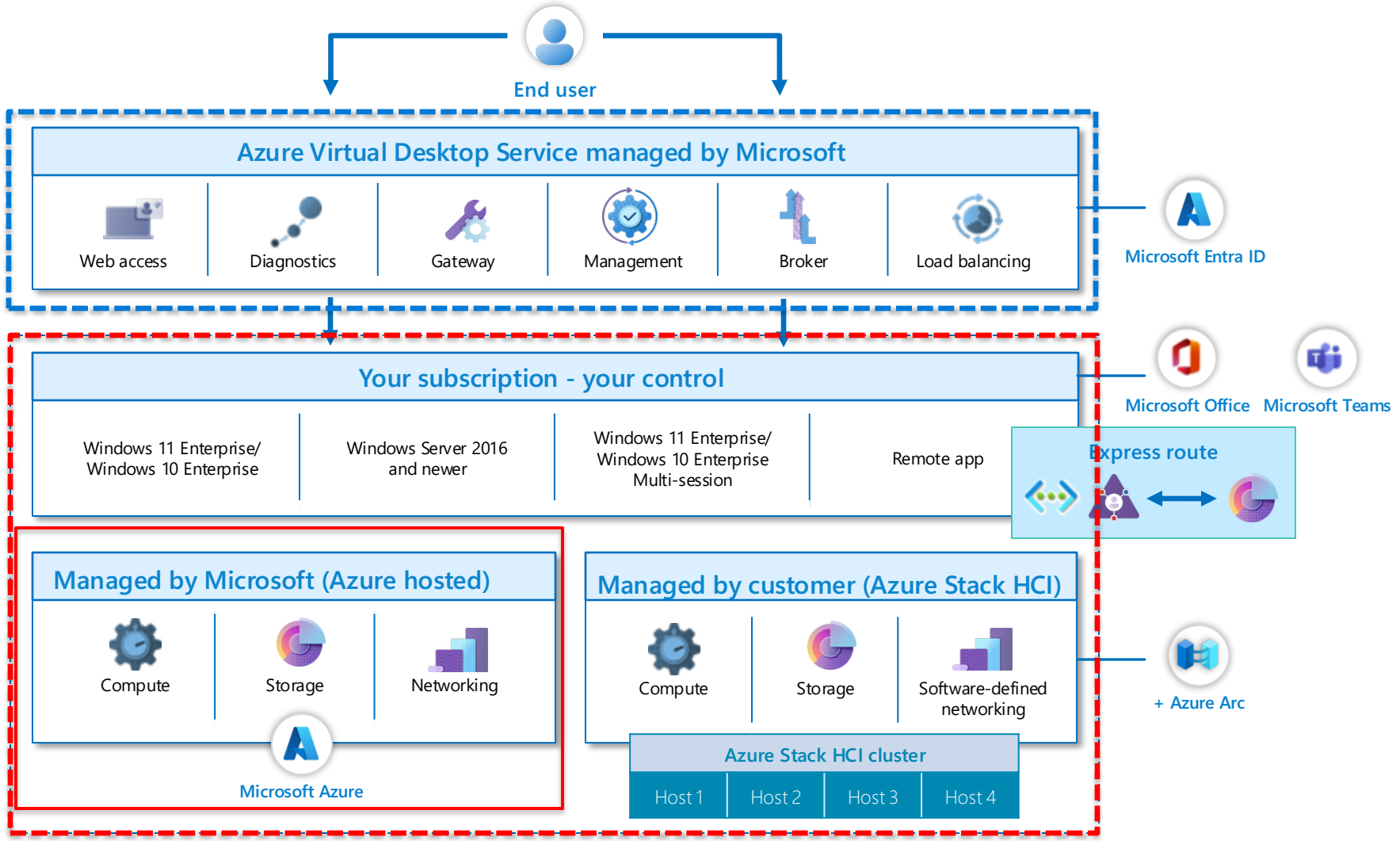
Azure Virtual Desktop auf Azure Local

Cloud

on-Premises



AVD Architektur

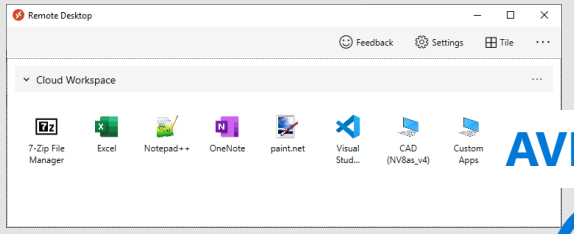


Provide your employees with a secure, remote desktop experience.

Connect from virtually any device of your choice.

Focus on the right policies and controls rather than managing infrastructure.

Architektur



AVD Service

UserX

Azure Subscription

AVD Host Pool X

AVD Application Group X

AVD Workspace X

AVD Scaling Plan X

hlb-PrLn1Cluster

PrLn1Cluster

Session Hosts

powerkurs.net
powerkurs.local

sync'ed

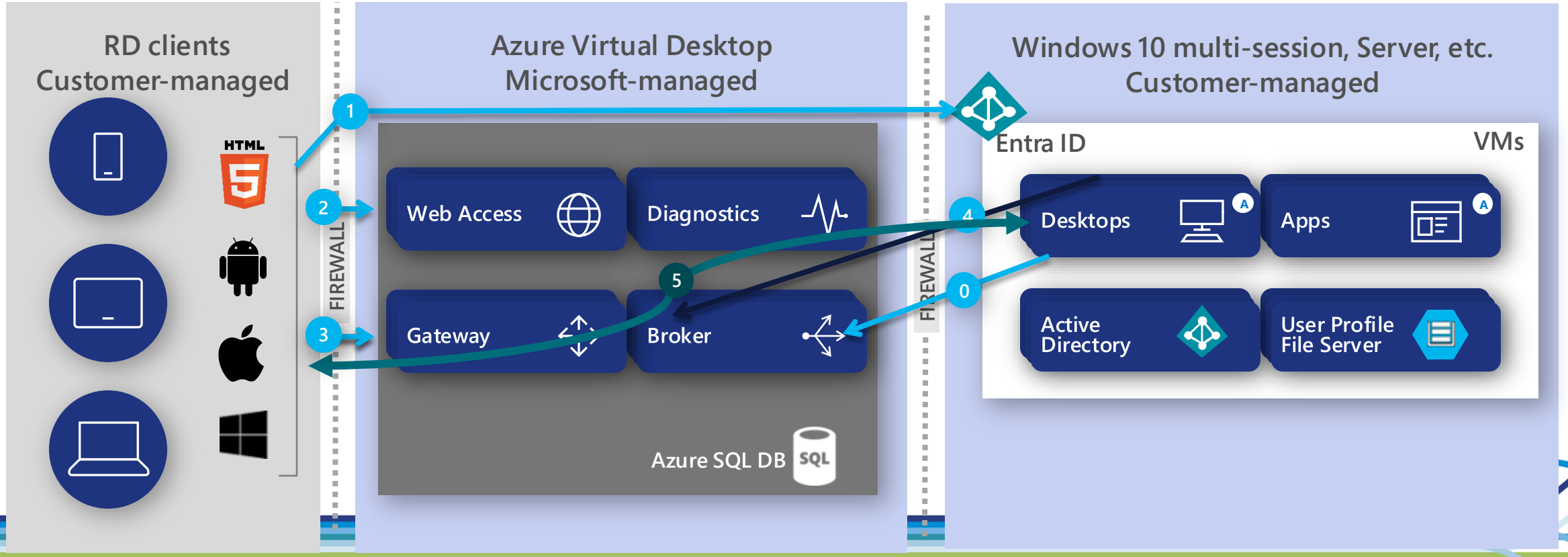
Entra ID

onprem

Azure

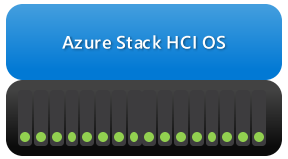
Benutzer Verbindungs Flow

0. Wenn Session Host startet meldet er sich am Broker an
1. Benutzer startet RD Client und meldet sich an Entra ID an, welches einen Token zurück liefert
2. RD Client präsentiert Token dem Web Access, vorauf der Broker die DB nach Resourcen für den Benutzer durchsucht
3. Benutzer wällt Ressource aus und RD Client verbindet sich mit dem Gateway
4. Broker orchestriert Verbindung from Host Agent zum Gateway
5. RDP Traffic fließt zwischen RD Client und Session Host VM über WebSocket Verbindung 3 und 4



AVD auf Azure Local Preise und Lizenzierung

Azure Stack HCI Infrastructure



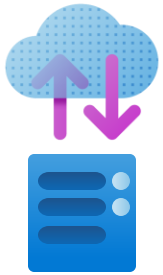
$10/physical core/month

Customer owned hardware and Azure Stack HCI service fee

Learn more

Billing started April 1st, 2024

Azure Virtual Desktop for Azure Stack HCI



Service fee: $0.01 per vCPU/hour

- ☑ Per vCPU/hour for your Azure Virtual Desktop session hosts running on Azure Stack HCI
  (Use of Azure Virtual Desktop service)

User Access Rights

The **same licenses** that grant access to **Azure Virtual Desktop on Azure also apply to** Azure Virtual Desktop with **Azure Stack HCI**. Learn more at Azure Virtual Desktop pricing

You are eligible to access Windows 11 and Windows 10 with Azure Virtual Desktop if you have one of the following **per user** licenses:

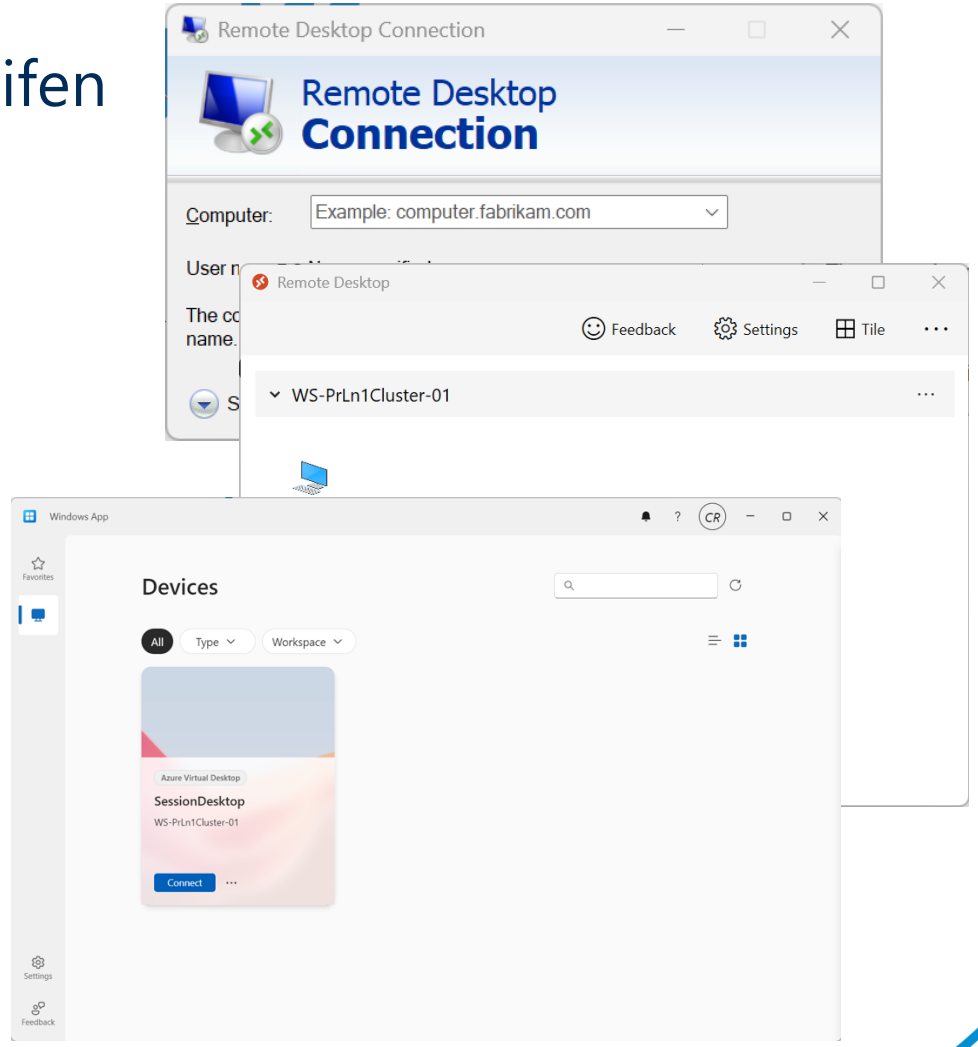
- Microsoft 365 E3/E5
- Microsoft 365 A3/A5/Student Use Benefits
- Microsoft 365 F3
- Microsoft 365 Business Premium
- Windows 11/10 Enterprise E3/E5
- Windows 11/10 Education A3/A5
- Windows 11/10 VDA per user

AVD Benutzer Zugriff

Benutzer Zugriff

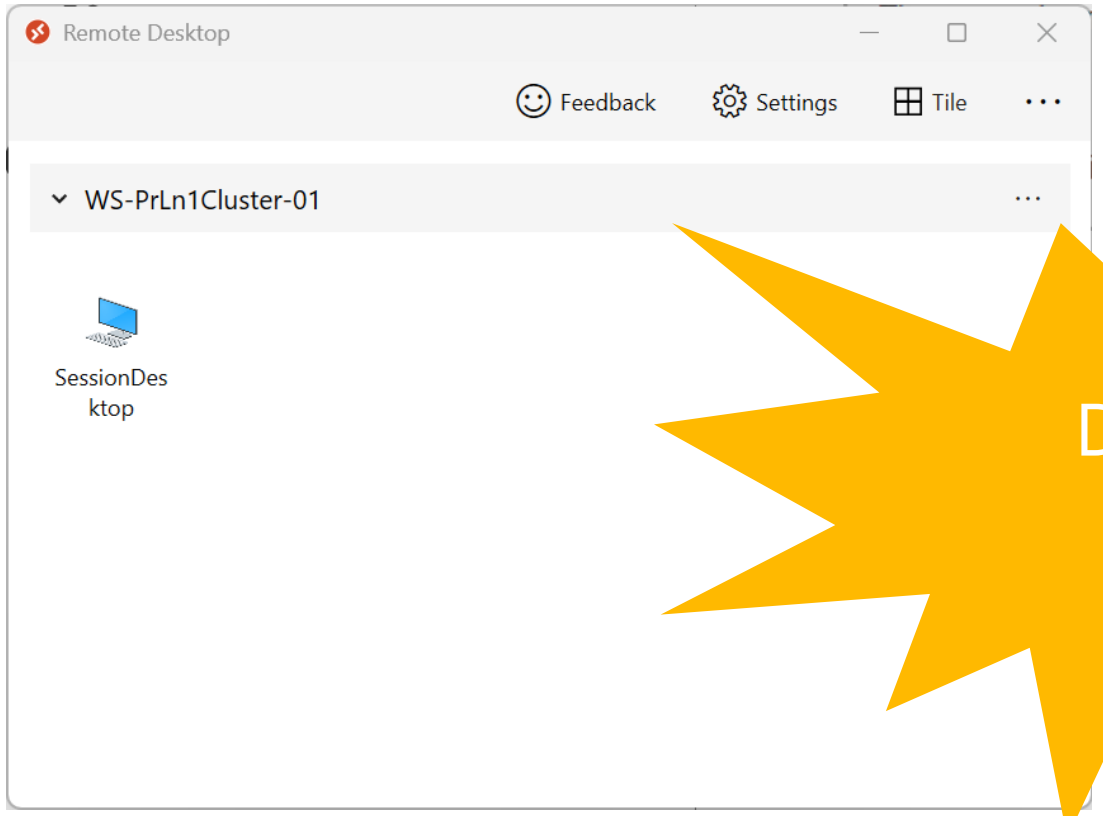
Wie können Benutzer auf die AVD Hosts zugreifen

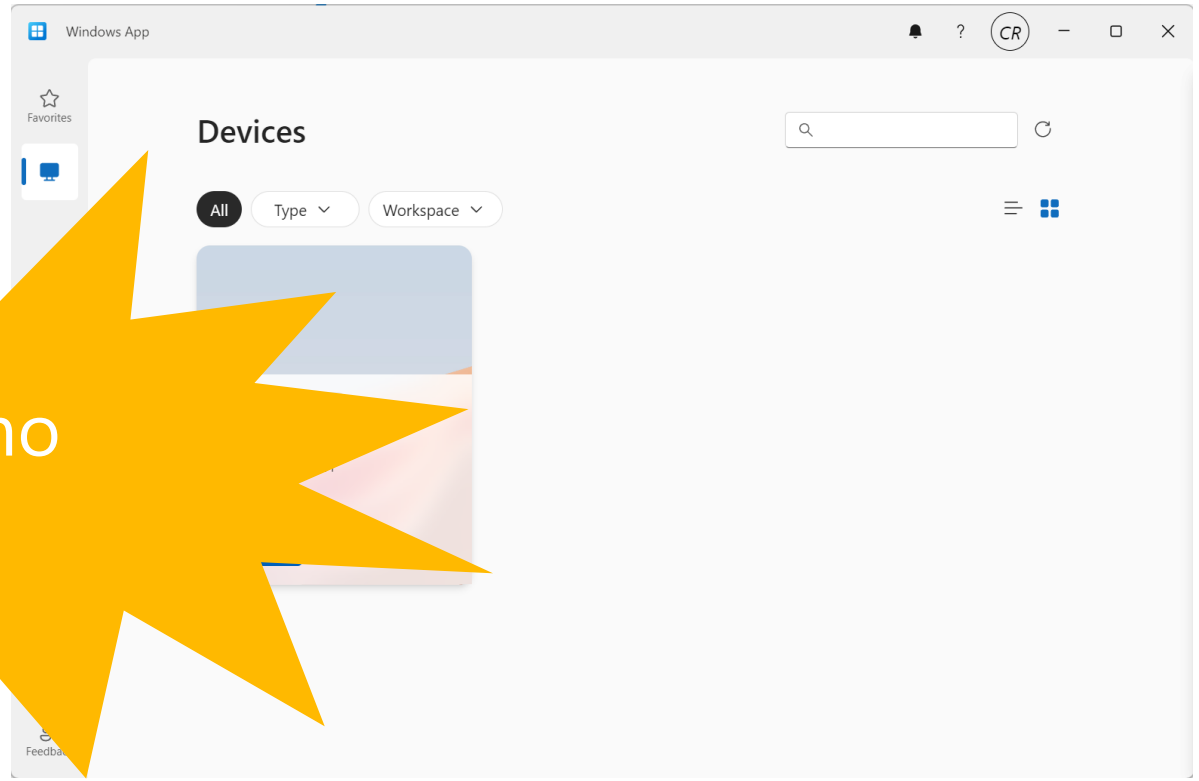
- **MSTSC (Microsoft Terminal Server Client)**
  - Nicht möglich da die Anmeldung mit einer Entra ID erfolgt
- **Remote Desktop client (support Ende Mai 25)**
  - Windows
  - Web browser
  - macOS
  - iOS/iPadOS
  - Android/Chrome OS
- **Windows App**
  - Windows
  - macOS
  - iOS/iPadOS
  - Android/Chrome OS (preview)
  - Web browsers
  - Meta Quest VR headset (preview)



Quelle: Azure Virtual Desktop user documentation | Microsoft Learn

Benutzer Zugriff

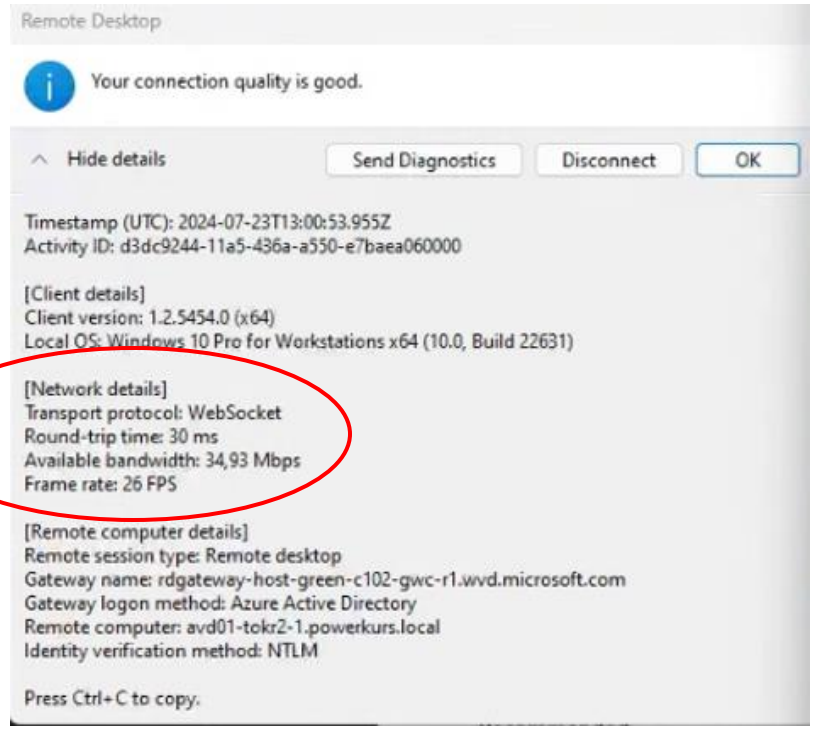


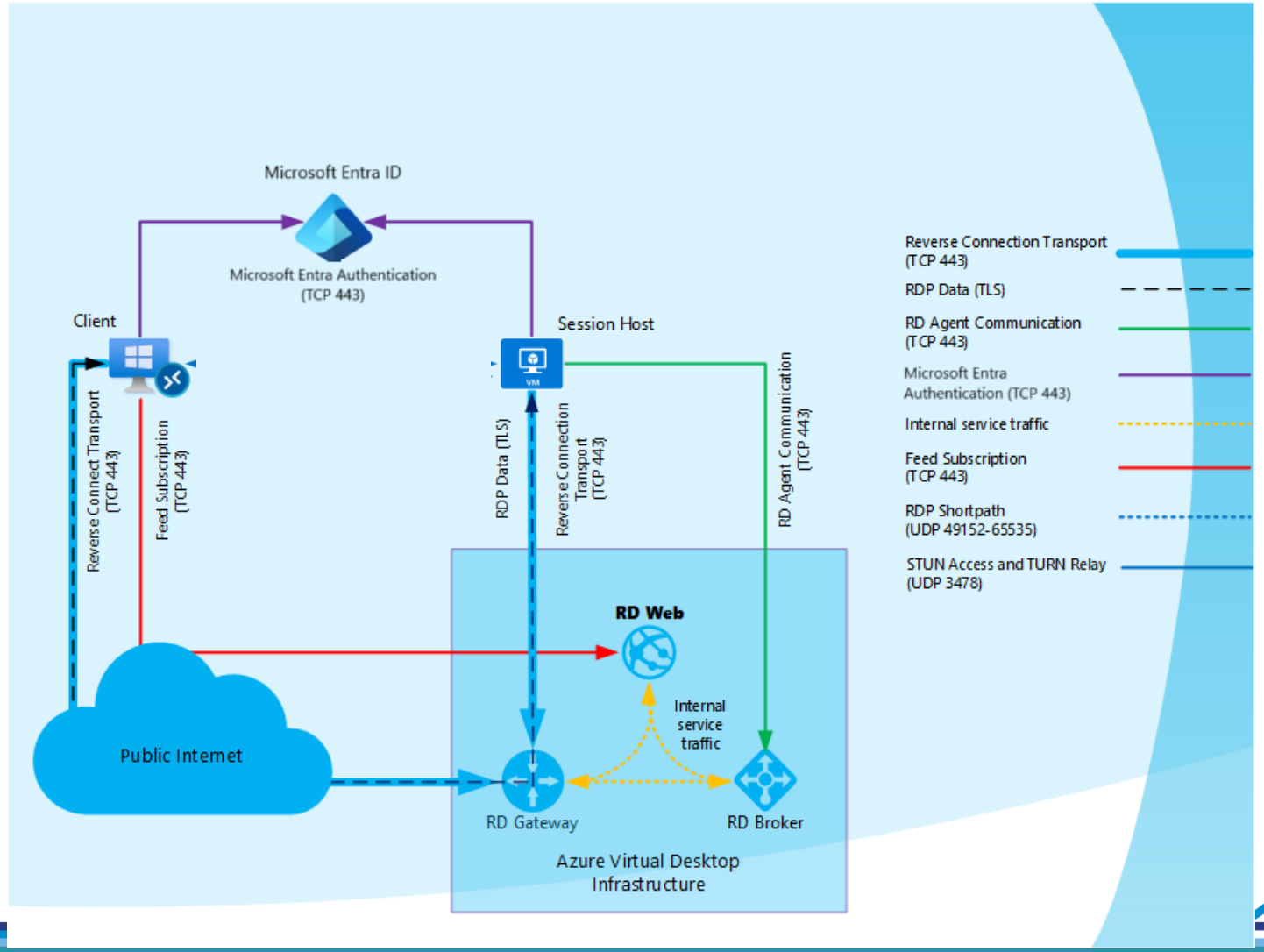


Demo

UPD Shortpath

Azure Virtual Desktop Netzwerk Zugriff via https

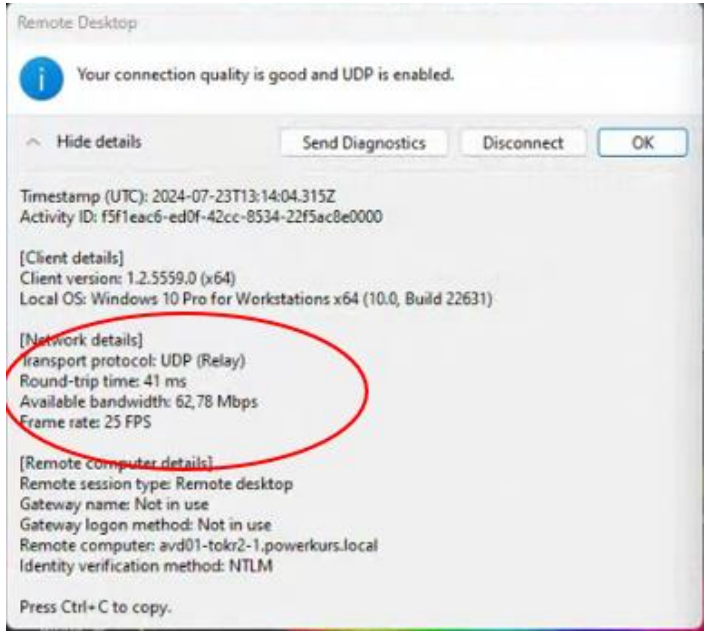




Experts Live Austria

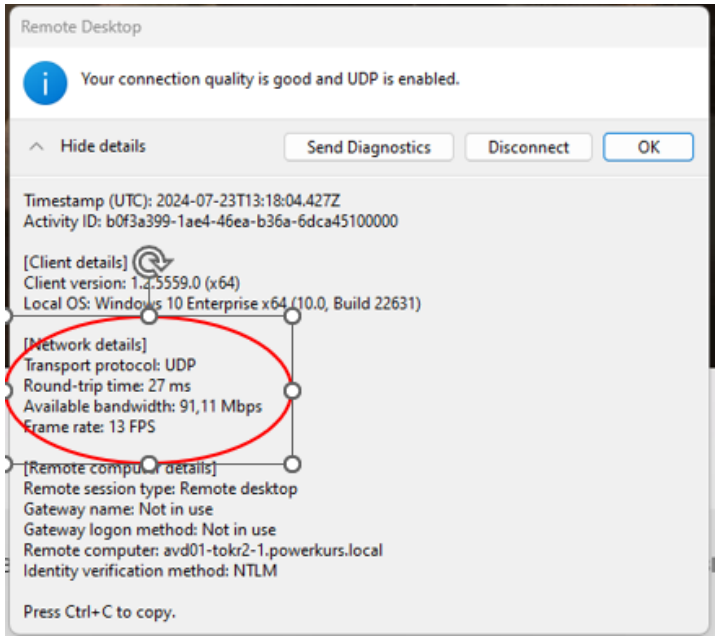
RDP Shortpath Varianten

★★



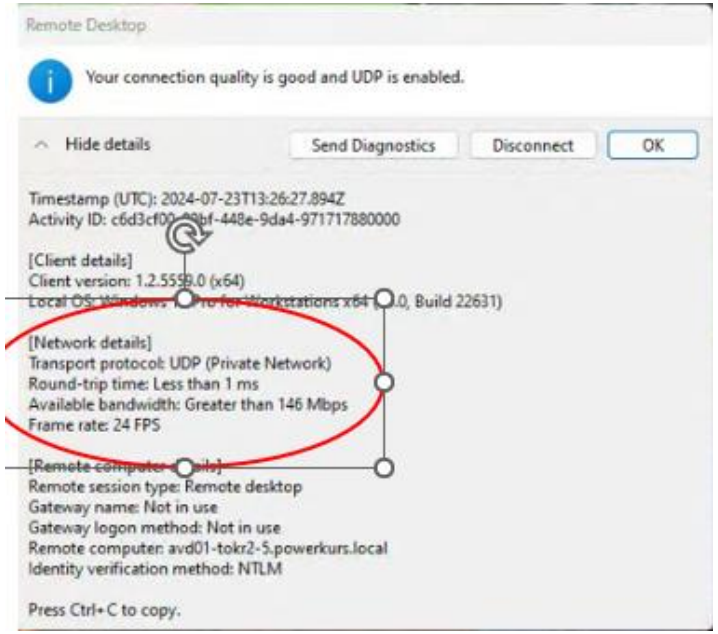
RDP Shortpath für Public Netzwerke via TURN

★★★



RDP Shortpath für Private & Public Netzwerke mit ICE/STUN

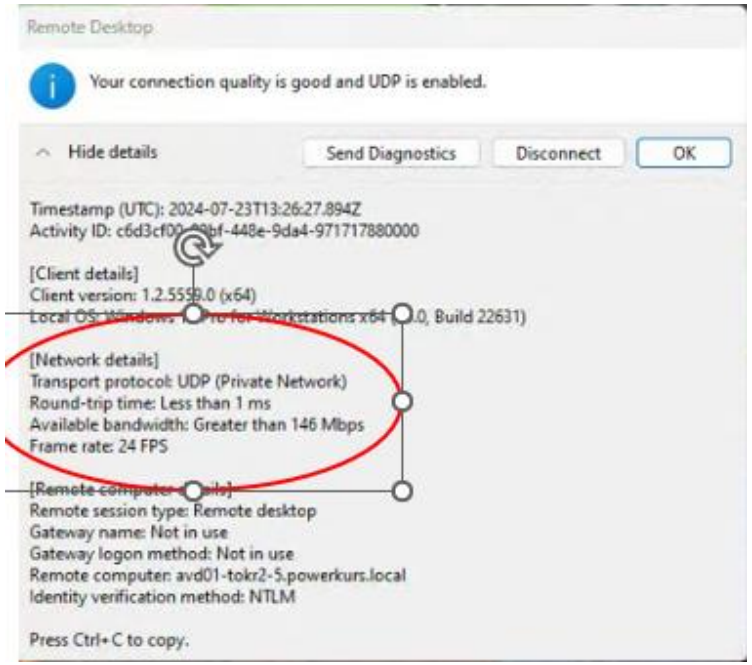
★★★★

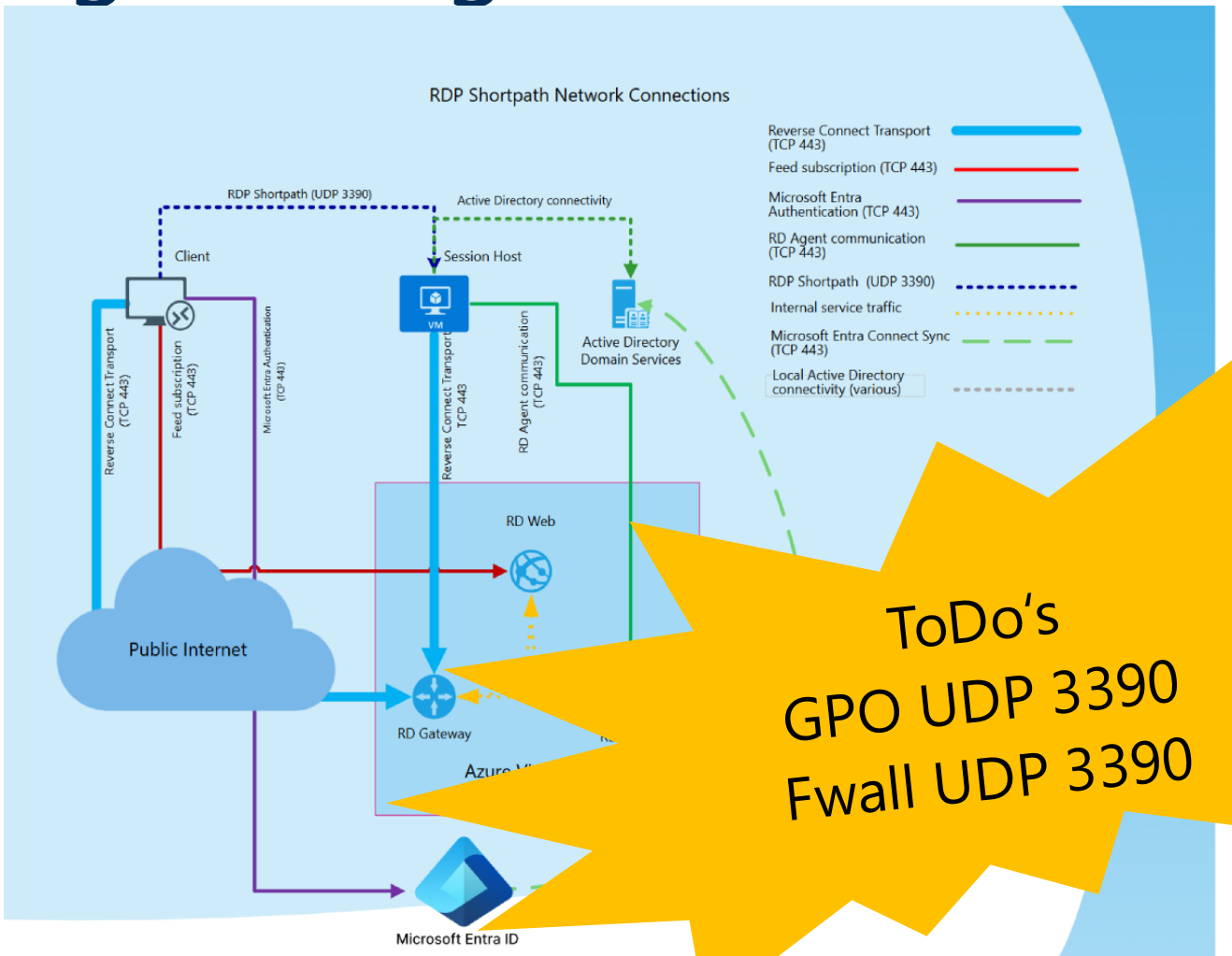


RDP Shortpath für gemanagte (Private) Netzwerke

https://docs.microsoft.com/en-us/azure/virtual-desktop/shortpath#configure-rdp-shortpath-for-managed-networks

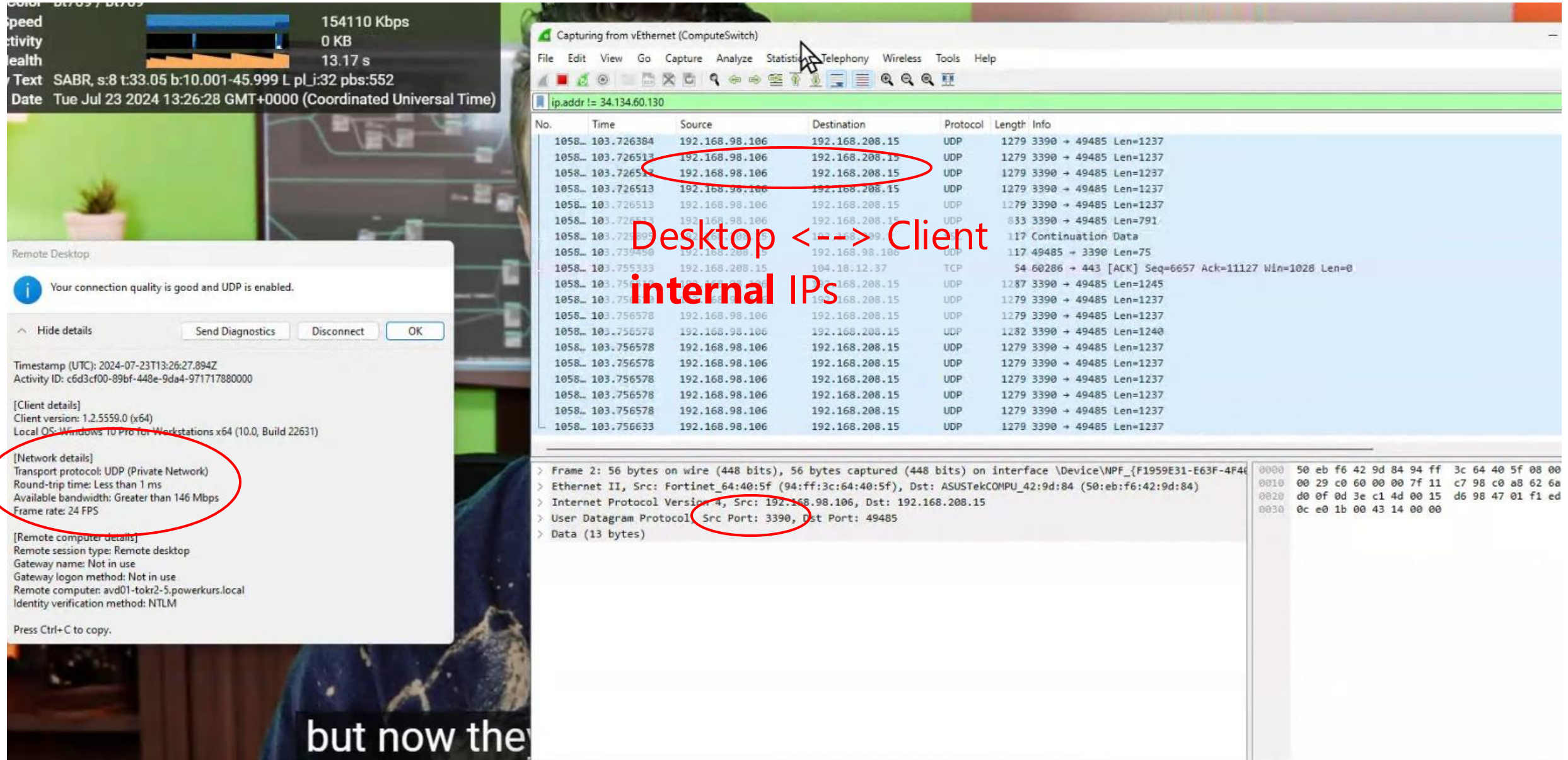
RDP Shortpath für gemanagte Netzwerke



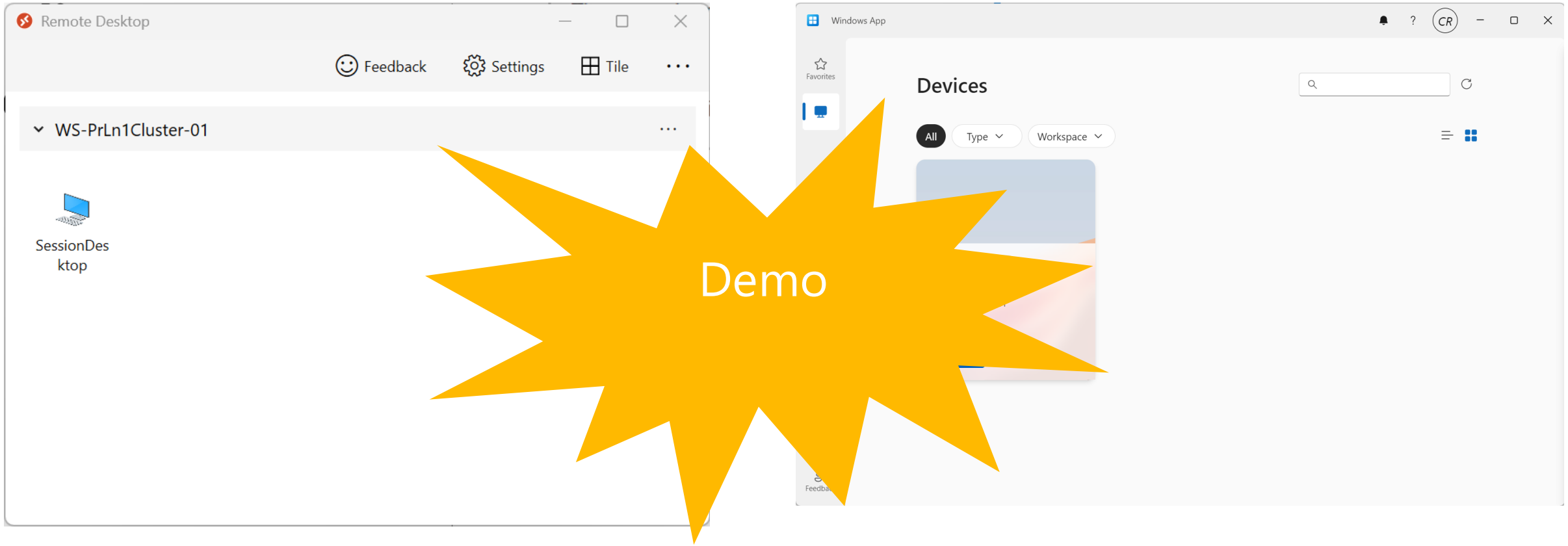


ToDo's
GPO UDP 3390
Fwall UDP 3390

RDP Shortpath für gemanagte (Private) Netzwerke



Demo Short Path



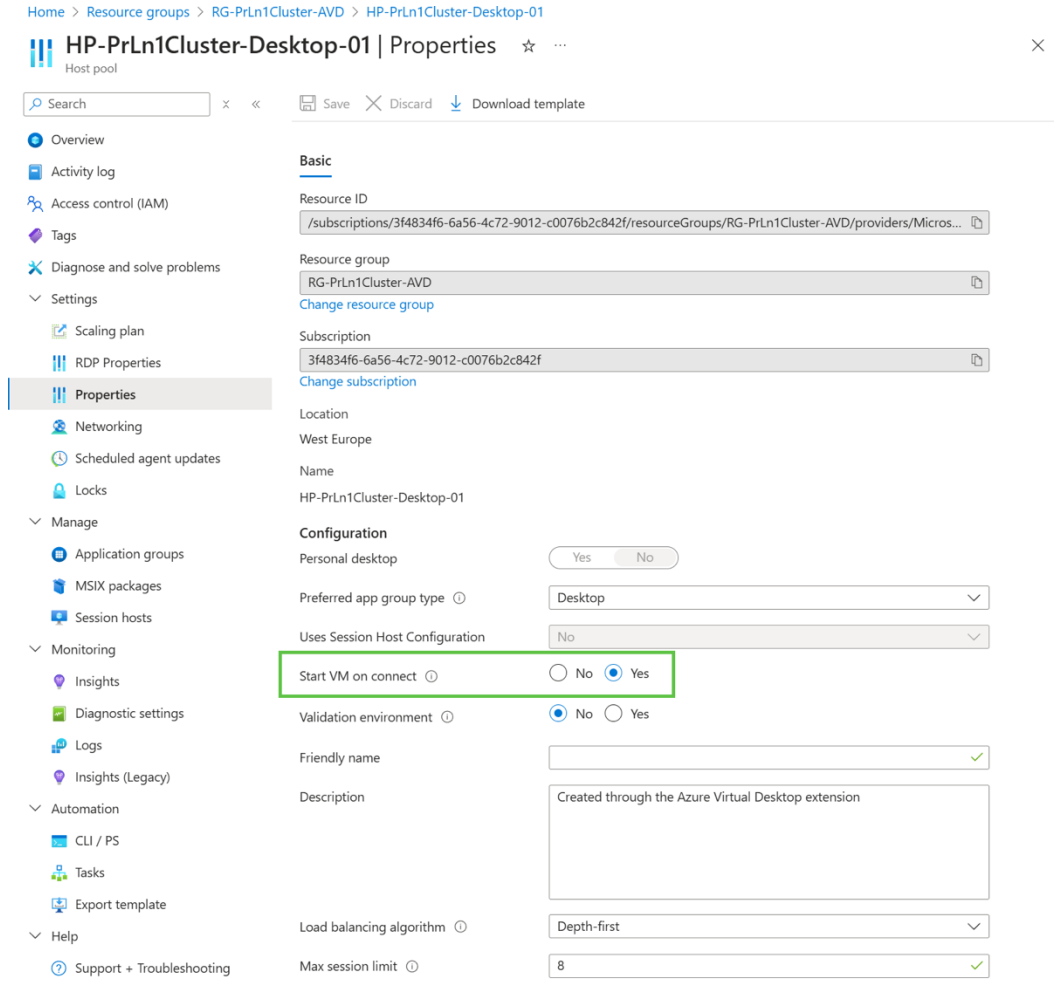
Kosten Optimierung

Start VM on Connect

„Start VM on Connect“ ermöglicht das:

- **Personal Desktops** nur laufen, wenn Benutzer damit arbeitet
- **Pooled Desktops** außerhalb der Arbeitszeiten heruntergefahren werden können

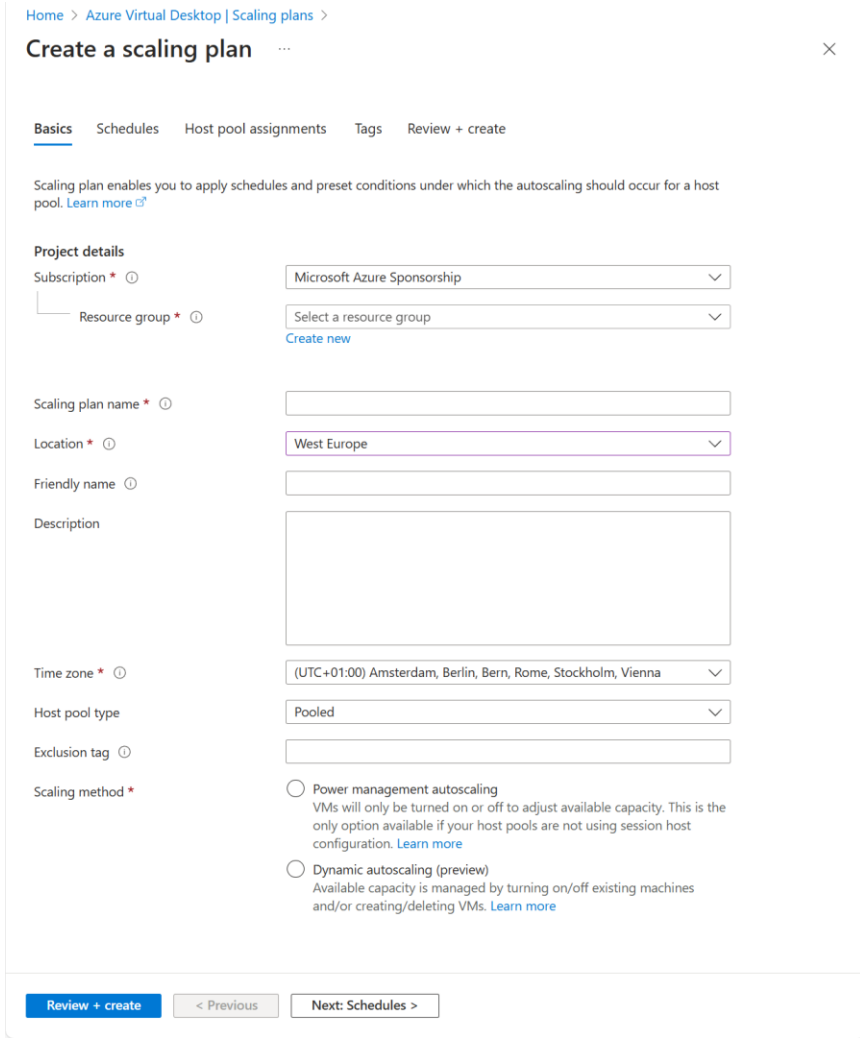
Start VM on Connect kombiniert mit einem **Scaling Plan** ermöglicht es, vermeidbare Kosten zu sparen



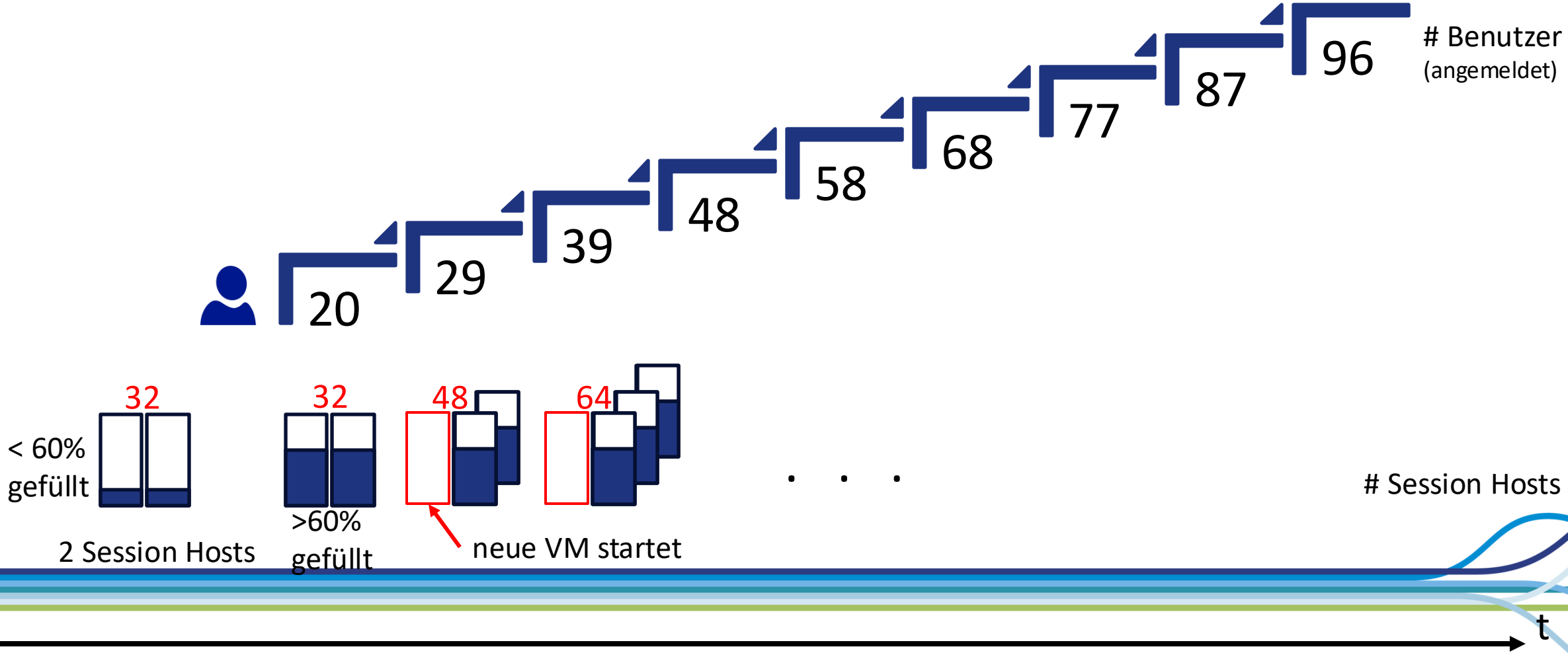
Scaling Plan

„Scaling Plan“ ermöglicht das:

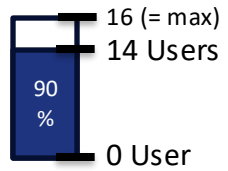
- **Session Hosts** flexibel nach Benutzer aufkommen bereitgestellt werden
- **Scale Up** wenn mehr Session Hosts benötigt werden
- **Scale Down** wenn Benutzer sich abmelden oder konsolidiert werden können

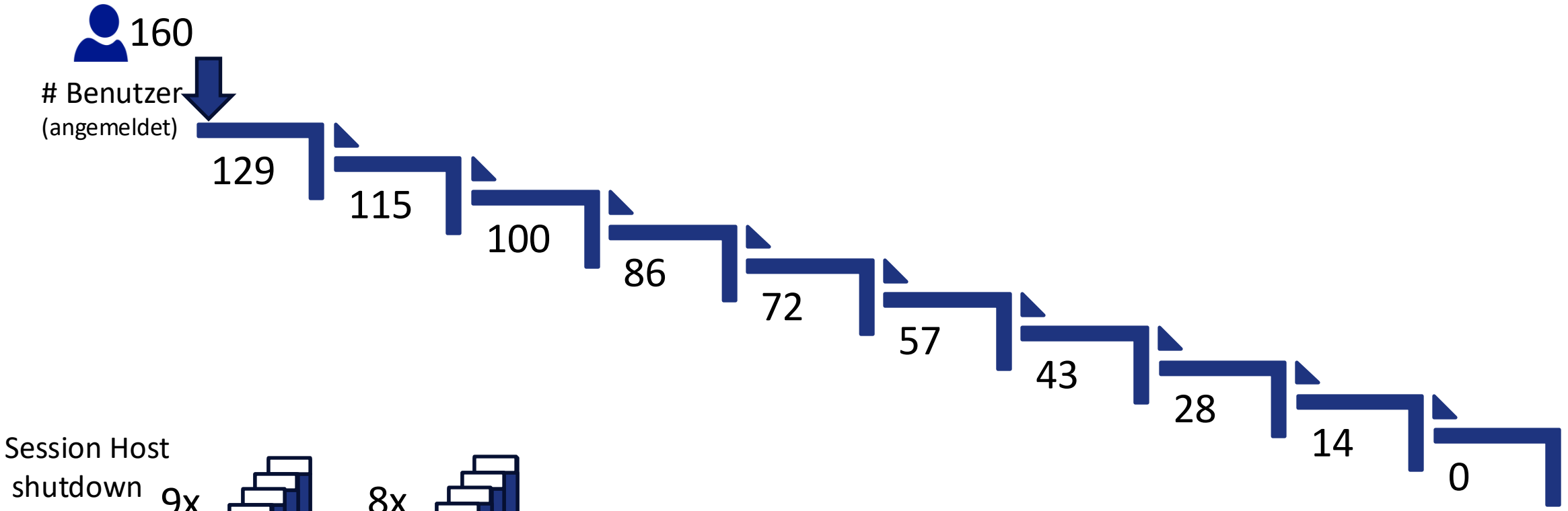


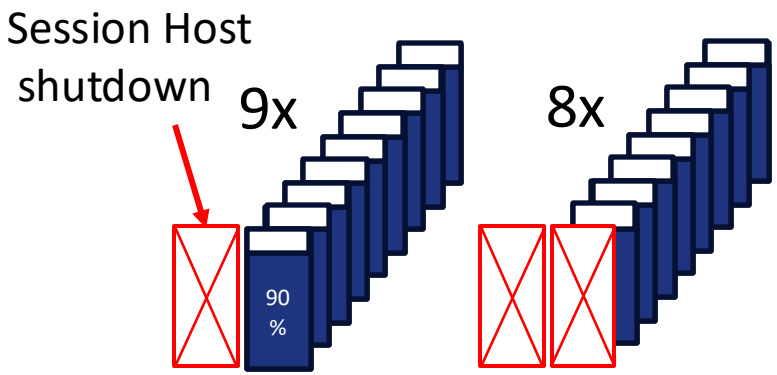
Ramp-Up Phase



Ramp-Down Phase







t

Video Scaling Pläne

Work | HP-PrLn1Cluster-Desktop-01 - M

https://portal.azure.com/#@crachfahlrachfahl.onmicrosoft.com/resource/subscriptions/3f4834f6-6a56-4c72-9012-c0076b2c842f/resourceGroups/RG-PrLn1Cluster-AVD/providers/Microsoft.DesktopVirtualization/hostpools/HP-PrL...

Microsoft Azure | Search resources, services, and docs (G+/) | Copilot | powerkurs@crachfahlra... RACHFAHL IT-SOLUTIONS GMBH...

Home >

HP-PrLn1Cluster-Desktop-01

Host pool

Search

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
  - Scaling plan
  - RDP Properties
  - Properties
  - Networking
  - Scheduled agent updates
  - Locks
- Manage
  - Application groups
  - MSIX packages
  - Session hosts
- Monitoring
  - Insights
  - Diagnostic settings
  - Logs
  - Insights (Legacy)

Registration key | Refresh | Delete | Start | Restart | Stop

Essentials

JSON View

Resource group (move)	: RG-PrLn1Cluster-AVD	Host pool type	: Pooled
Location	: West Europe	Assignment type	: ---
Subscription (move)	: Microsoft Azure Sponsorship	Uses Session Host Config...	: No
Subscription ID	: 3f4834f6-6a56-4c72-9012-c0076b2c842f	OS disk type	: -
Tags (edit)	: Add tags		

Virtual machines

Total machines	Can connect	Can't connect
10	2	8

Active sessions	Disconnected sessions	Pending sessions	Total sessions
0	0	0	0

Applications

Application groups	Applications
1	1

Documentation

Add a RemoteApp application group

1°C Stark bewölkt

Search

GPU Unterstützung

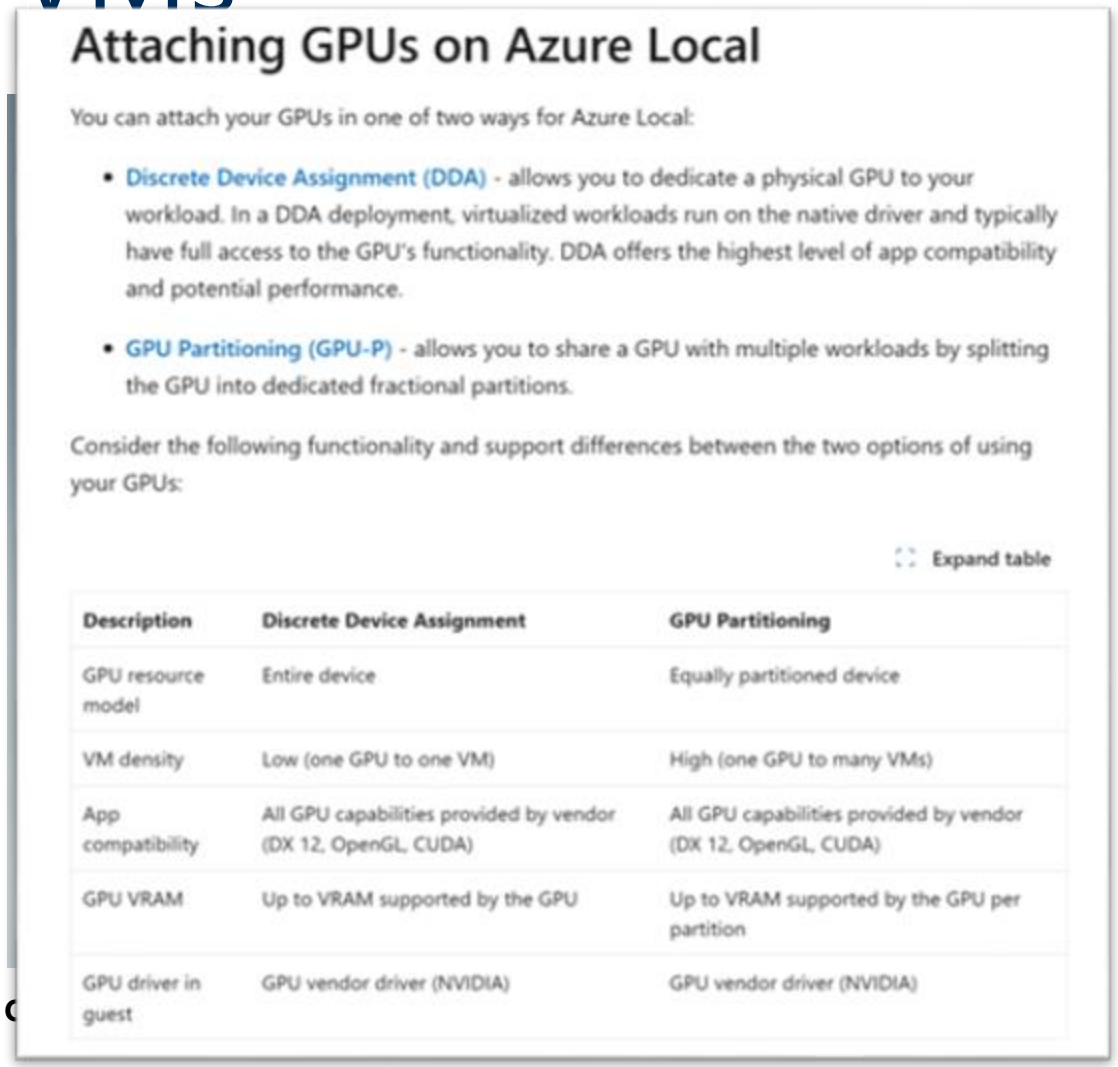
GPU-Unterstützung in VMs

Viele Anwendung benötigen GPUs

- grafikintensive Anwendungen
- Multisession Hosts
- KI-Anwendungen

Supportete Technologien

- Discrete Device Assignment (DDA)
- GPU Partitioning (GPU-P)



Attaching GPUs on Azure Local

You can attach your GPUs in one of two ways for Azure Local:

- Discrete Device Assignment (DDA) - allows you to dedicate a physical GPU to your workload. In a DDA deployment, virtualized workloads run on the native driver and typically have full access to the GPU's functionality. DDA offers the highest level of app compatibility and potential performance.
- GPU Partitioning (GPU-P) - allows you to share a GPU with multiple workloads by splitting the GPU into dedicated fractional partitions.

Consider the following functionality and support differences between the two options of using your GPUs:

Expand table

Description	Discrete Device Assignment	GPU Partitioning
GPU resource model	Entire device	Equally partitioned device
VM density	Low (one GPU to one VM)	High (one GPU to many VMs)
App compatibility	All GPU capabilities provided by vendor (DX 12, OpenGL, CUDA)	All GPU capabilities provided by vendor (DX 12, OpenGL, CUDA)
GPU VRAM	Up to VRAM supported by the GPU	Up to VRAM supported by the GPU per partition
GPU driver in guest	GPU vendor driver (NVIDIA)	GPU vendor driver (NVIDIA)

Quelle: https://learn.microsoft.com/en-us/azure/azure-local/manage/gpu-preparation?view=azloc-24112#attaching-gpus-on-azure-local

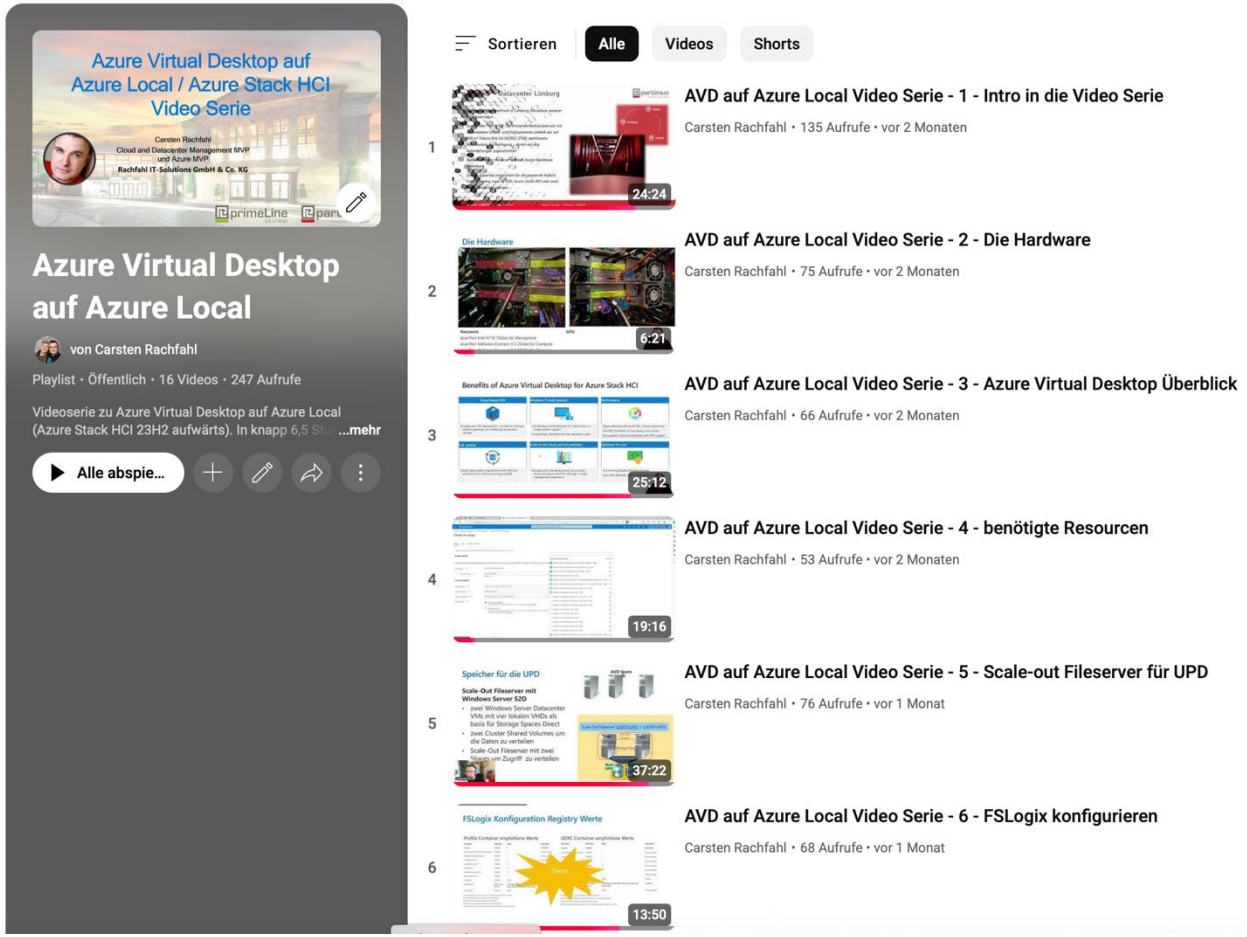
GPU-P Demo


Each VM receives a fraction of a GPU
Migration
vGPU Driver
1/2
1/2
Azure Local
Azure Local
Physical host 1
Physical host 2
Host GPU Driver
Host GPU Driver
Azure Local Cluster
Demo

Wer mehr wissen will

Video Serie mit mehr als 6 Stunden (16 Videos)

https://bit.ly/3HLgomI



Q&A

Closing Subtext

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