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**WINDOWS VIRTUAL DESKTOP
HOW TO ENJOY PERFECT PUBLISHED APPS AND DESKTOPS**

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About me

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Windows Virtual Desktop
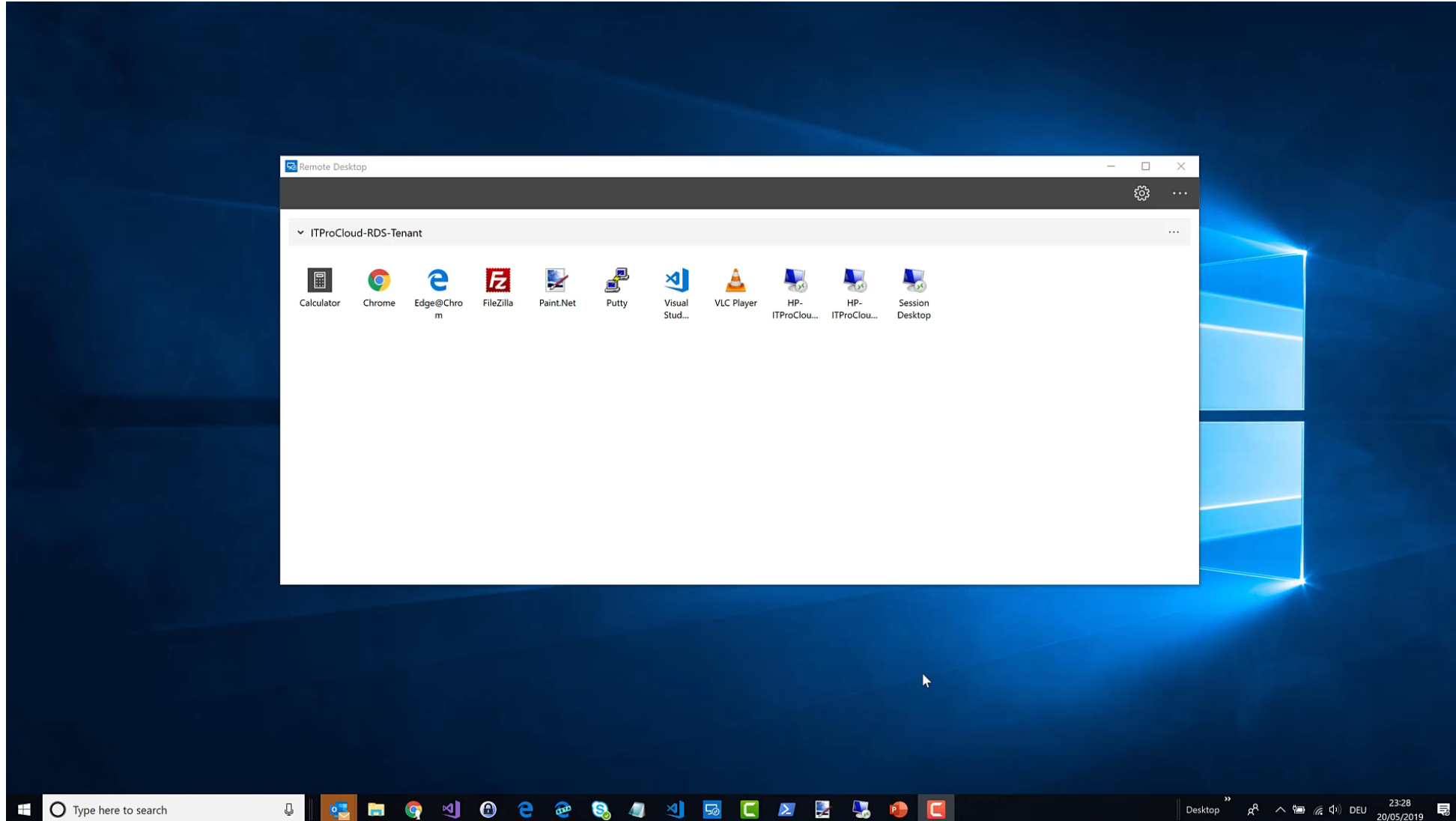
Windows Virtual Desktop

- 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
    - Customer have to pay for VMs, storage, network and need the right licenses (M365 or RDS Cals)

Windows Virtual Desktop

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

Windows Virtual Desktop

Windows Server RD Session Host	Windows Virtual Desktop Multi-session	Windows 10 Enterprise
Scalable multi-session **legacy** Windows environment	Scalable multi-session **modern** Windows user experience with Windows 10 Enterprise security	Native single-session **modern** Windows experience
Windows Server	Windows 10	Windows 10
Multiple sessions	Multiple sessions	Single session
Win32	Win32, UWP	Win32, UWP
Office 2019 Perpetual	Office 365 ProPlus	Office 365 ProPlus
Long-Term Servicing Channel	Semi-Annual Channel	Semi-Annual Channel

Based on: Microsoft, Presentation Ignite 2018, BRK2242

Windows Virtual Desktop

Windows Virtual Desktop

VMs organized in host pools

Reverse Connect

AD Account

Clients

AD Account

Clients

Azure subscription

User profiles

AD Domain Services or native AD

Azure Active Directory

Virtual Network

ExpressRoute

VPN
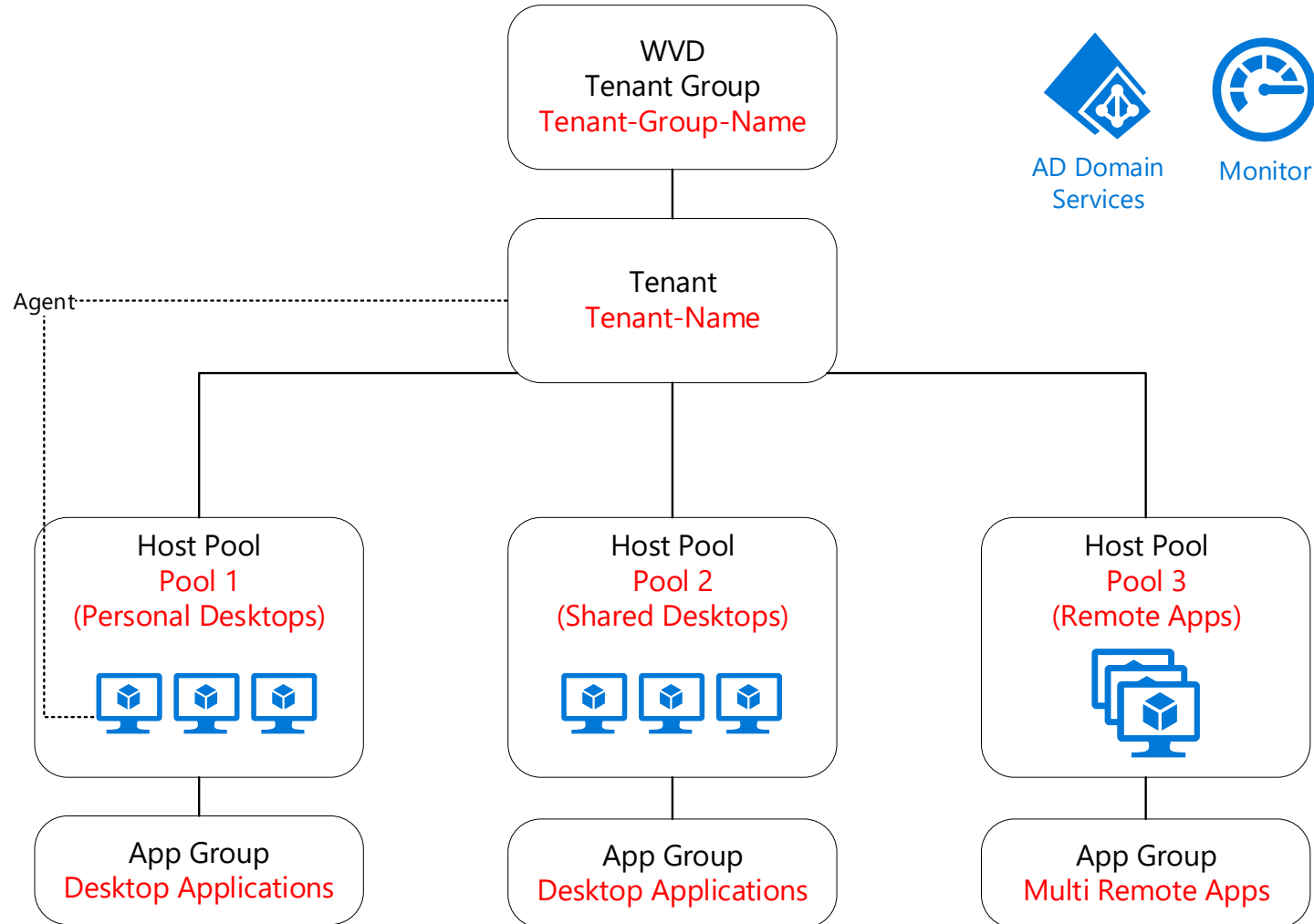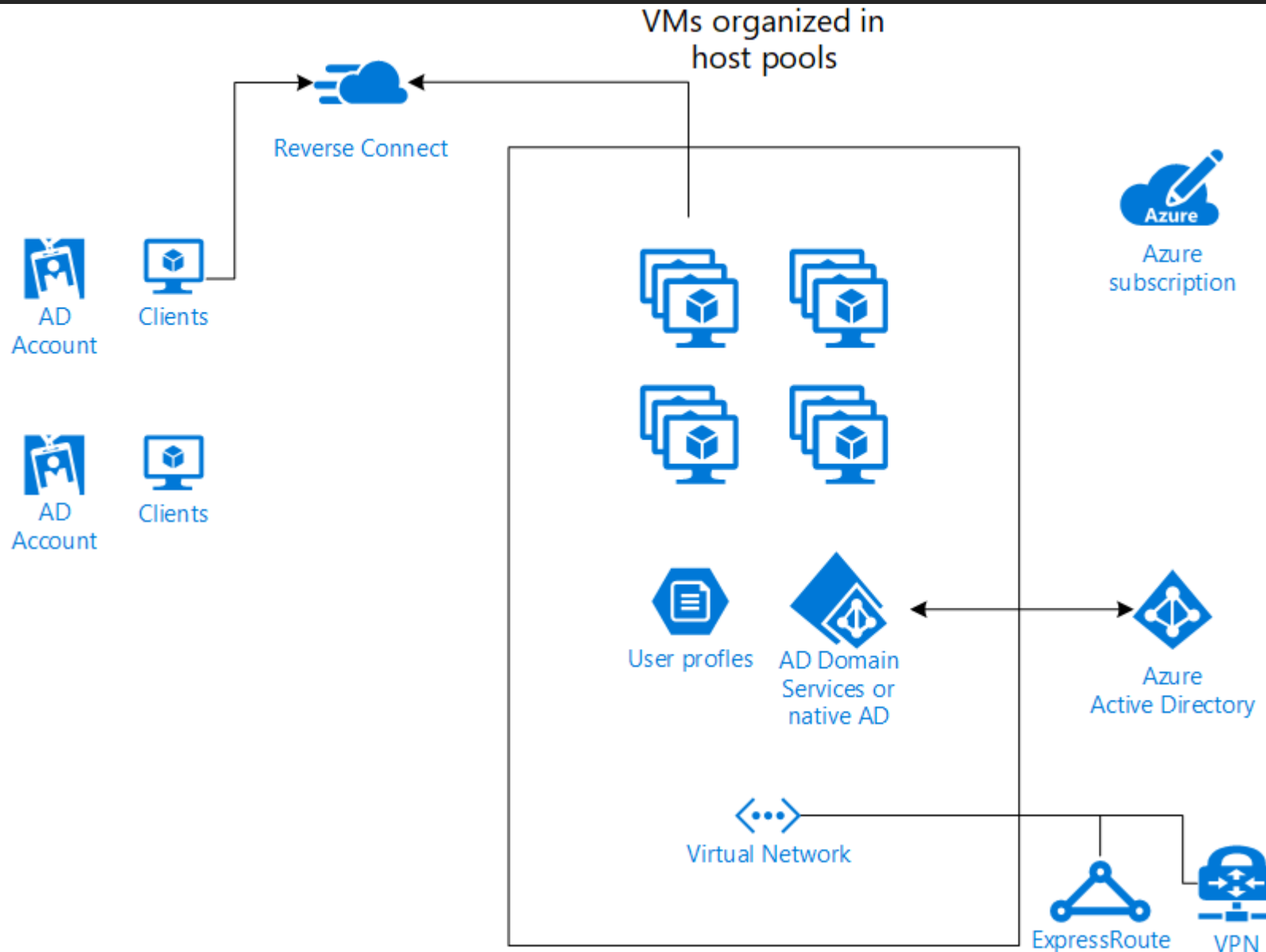
What to you need at least:

- Classic AD environment
- Synced directories (AD->AAD; AADDS)
- 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.

Windows Virtual Desktop

Creating a host pool with WVDAdmin

DEMO

Deployments of Session Hosts

- Deployment from the Azure Market place
    - Vanilla images or syspreped images
    - Have to enter all parameters, like domain credentials, WVD SP, OU, …
    - Limited flexibility
    - Experience for admins :-/

- Deployment from PowerShell
    - You can do anything in a hight automated way
    - You need PS know-how and have to work with the Azure resources directly
    - High flexibility
    - Experience for admins ☺

- Deployment with WVDAdmin (free community tool)
    - Like deployment from PowerShell with a friendly GUI
    - Build-in image creation process from template VMs (re-usable)
    - Experience for admins ;-)

Deployments of Session Hosts
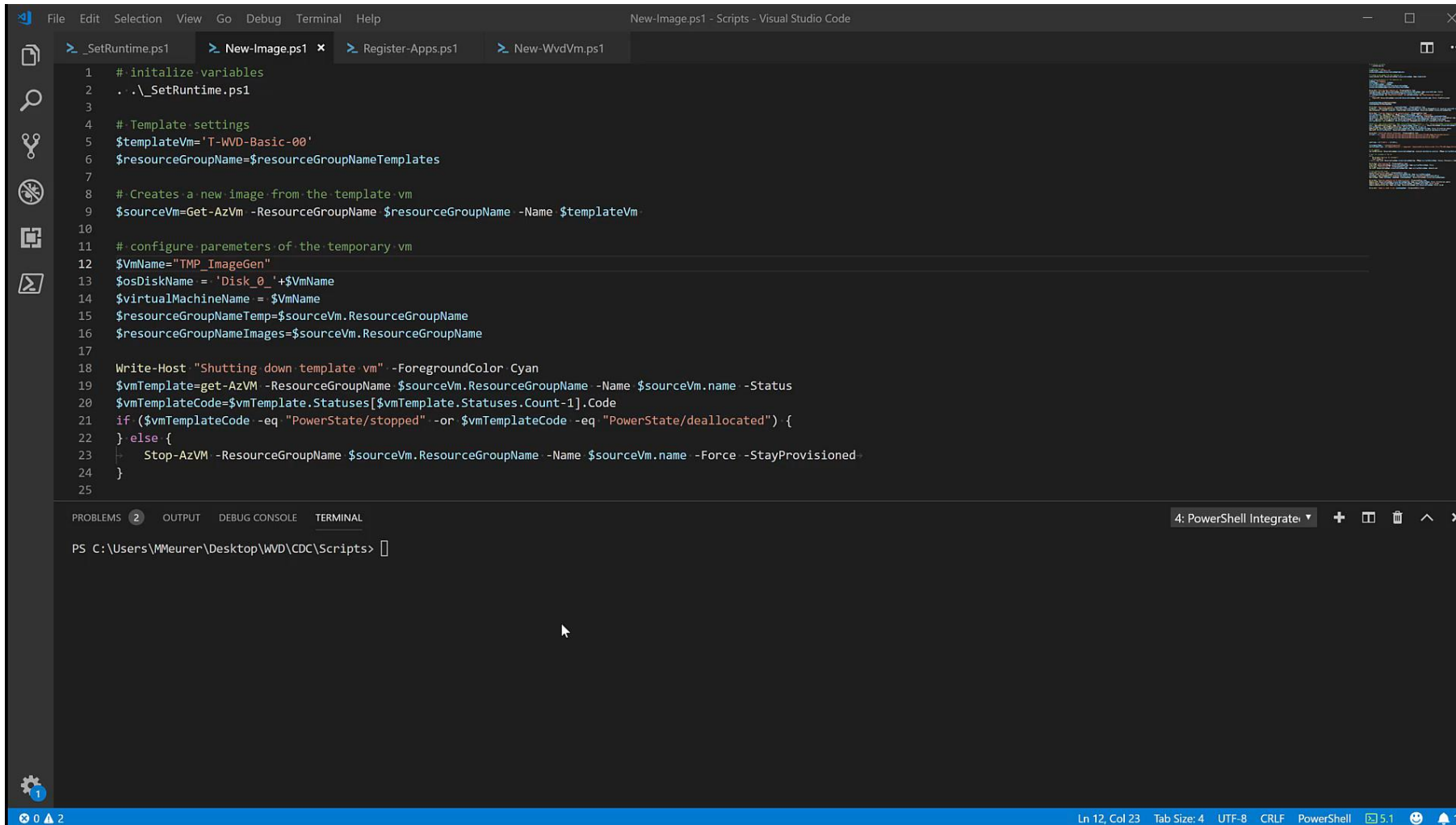
The golden image approach

Who has ever created an image?

Template VM → Template SnapShot → Temporary VM → Customized and prepared Image

Custom extension and preparation tasks
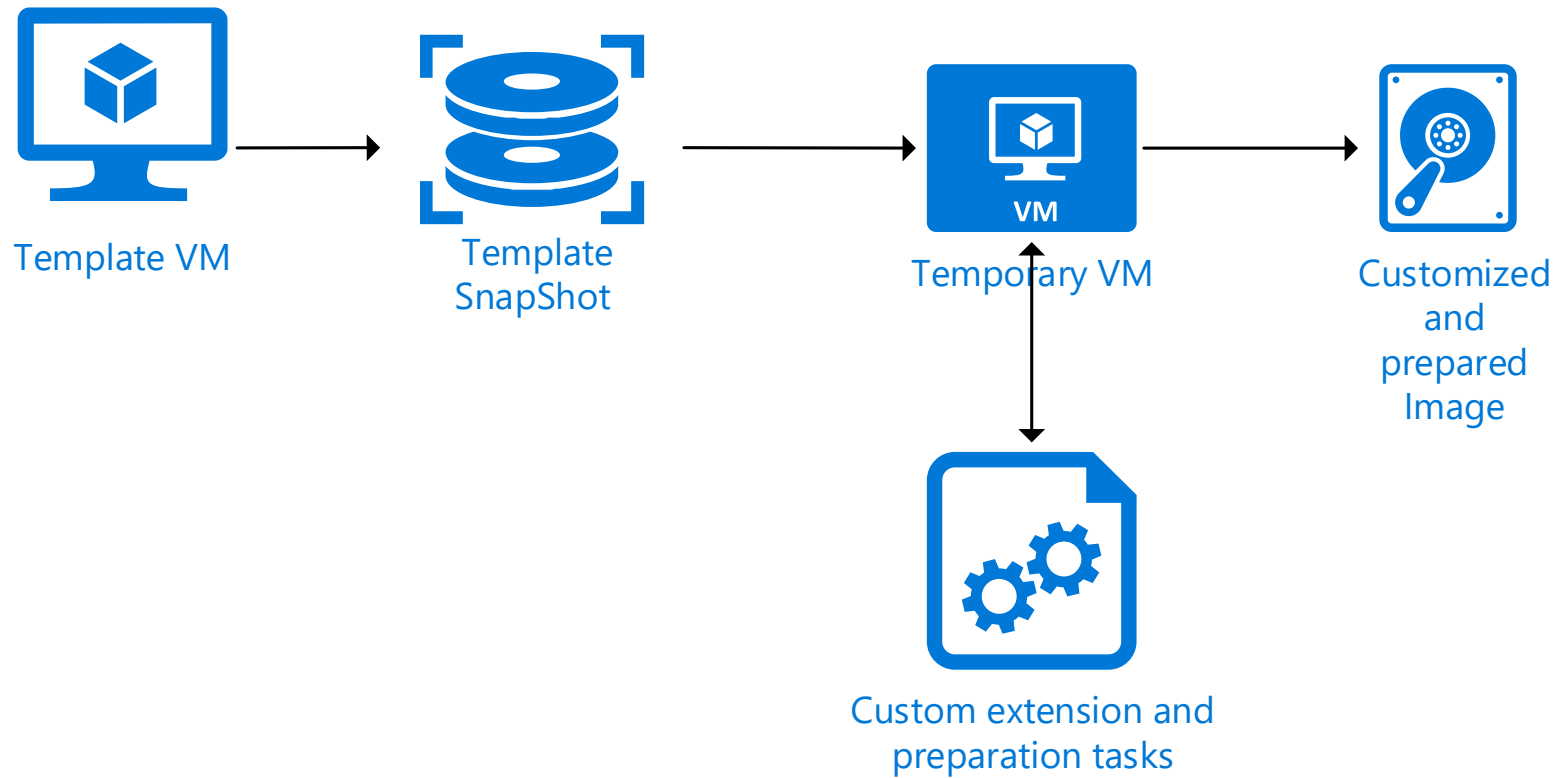
Deployments of Session Hosts

PowerShell

Deployments of Session Hosts

WVDAdmin

Deployments of Session Hosts

Building Images and roll out Session Hosts

DEMO

Kind of Disks and VM's

- Different disk sizes
    - HDD (don't use this one except for a template VM)
    - Standard SSD (my favorite)
    - Premium SSD
    - And very special: Ephemeral disks

- VMs
    - „Normal" VMs
    - Virtual Machine Scale Sets (they don't scale in a WVD perspective!)

Disk comparison 🔗

The following table provides a comparison of ultra disks, premium solid-state drives (SSD), standard SSD, and standard hard disk drives (HDD) for managed disks to help you decide what to use.

	Ultra disk	Premium SSD 21,68$*	Standard SSD 9,60$*	Standard HDD 5,89$*
Disk type	SSD	SSD	SSD	HDD
Scenario	IO-intensive workloads such as SAP HANA, top tier databases (for example, SQL, Oracle), and other transaction-heavy workloads.	Production and performance sensitive workloads	Web servers, lightly used enterprise applications and dev/test	Backup, non-critical, infrequent access
Max disk size	65,536 gibibyte (GiB)	32,767 GiB	32,767 GiB	32,767 GiB
Max throughput	2,000 MiB/s	900 MiB/s	750 MiB/s	500 MiB/s
Max IOPS	160,000	20,000	6,000	2,000

Source:
https://docs.microsoft.com/en-us/azure/virtual-machines/windows/disks-types
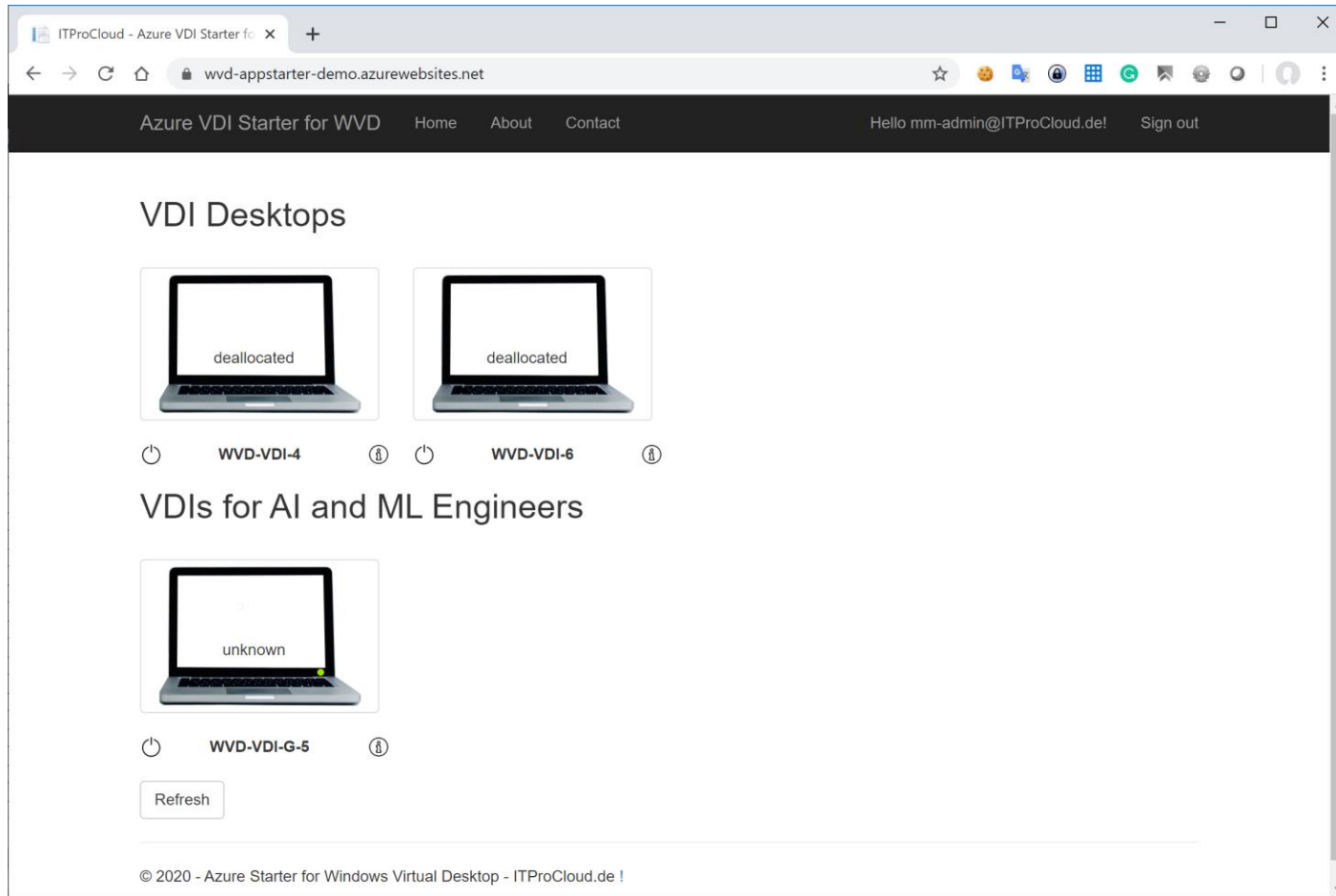
Deployments of Session Hosts

Ephemeral disks and scale sets

DEMO

Azure VDI Starter for WVD – V1

Start and deallocate your personal assigned VDIs / session hosts

- User can login with AAD to the web site

- Start there personal assigned desktop(s) (don't need permissions to the Azure portal)

- Use Remote Desktop Client to connect

- User can deallocate desktop

- Auto-deallocating after a specific time of no usage

- Free for non-commercial use

- https://github.com/MarcelMeurer/Azure-Starter-for-WVD

Did you know?

All Session Hosts are using FSLogix

| Profile Container | Application Masking | Office 365 Container | Java Control |

Questions

Feedback:

http://feedback.azurecgn.de/