

Microsoft meets Community

Tips 'n tricks to
automate &
monitor your
WVD workloads



About me



Responsible for Consulting at sepago GmbH

Microsoft Azure
Machine Learning
Azure Monitor / Log Analytics

Mail: marcel.meurer@sepago.de
Twitter: <https://twitter.com/MarcelMeurer>
GitHub: <https://github.com/MarcelMeurer>
Blog: <https://blog.itprocloud.de/>



sepago[®]

<https://www.sepago.de/en/wvd-value-add-tools/>

Windows Virtual Desktop

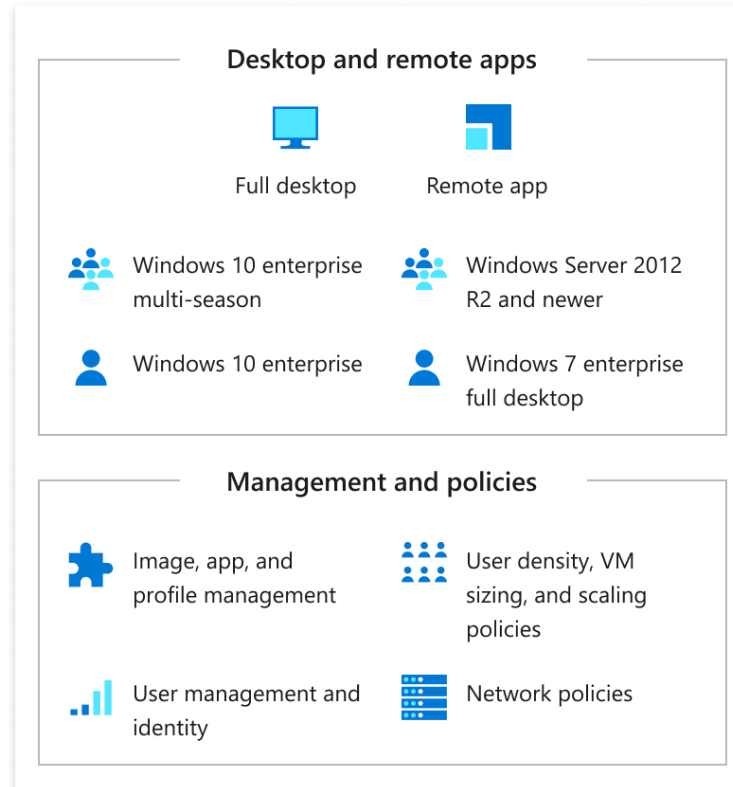
Common sense

Windows Server
RD Session Host

Windows Virtual Desktop Multi-
session

Windows 10
Enterprise

Your subscription—your control



Managed by Microsoft

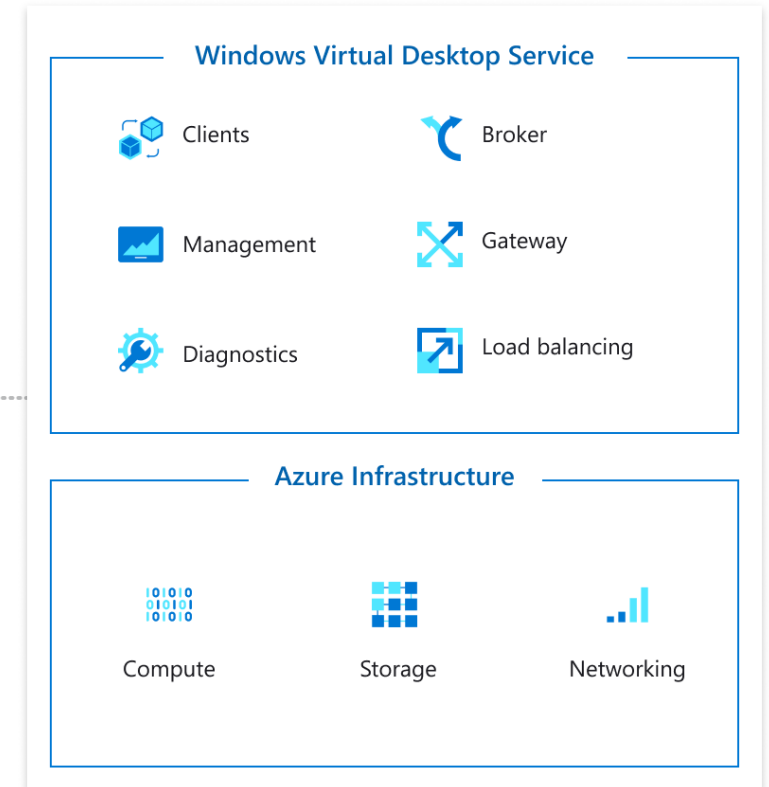
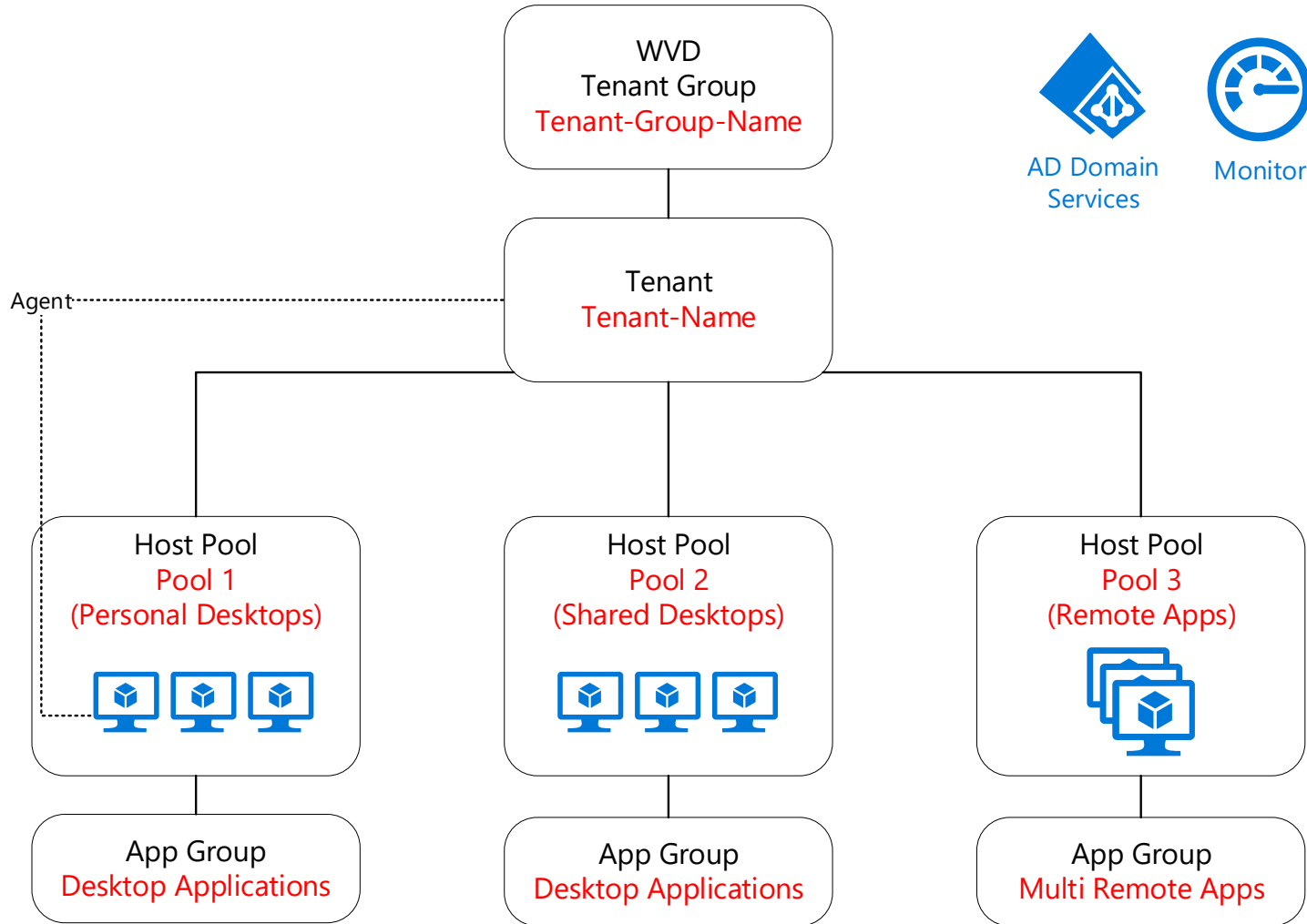


Image source:
<https://azure.microsoft.com/de-de/services/virtual-desktop/#featured>

Windows Virtual Desktop



Windows Virtual Desktop

Creating a host pool with PowerShell / WVDAdmin

DEMO

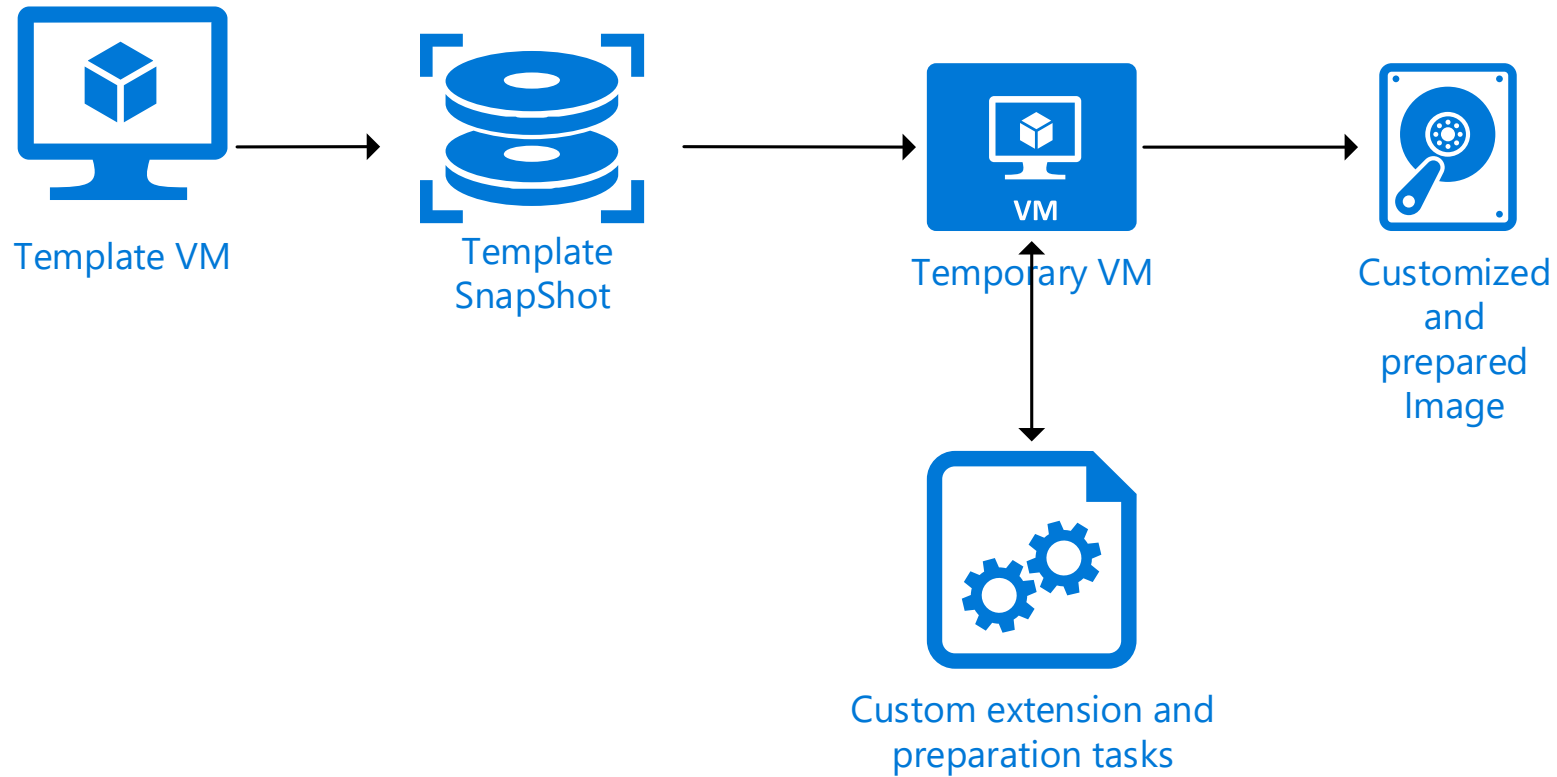
Deployments of Session Hosts

- Deployment from the Azure Market place
 - Vanilla images or syspreped images
 - Have to enter all parameters, like domain credentials, WVD SP, OU, ...
 - Limited flexibility; fails if DSC extensions cannot be loaded from the internet (policies, proxies,...)
 - Experience for admins :-/
- Deployment from PowerShell
 - You can do anything in a high 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

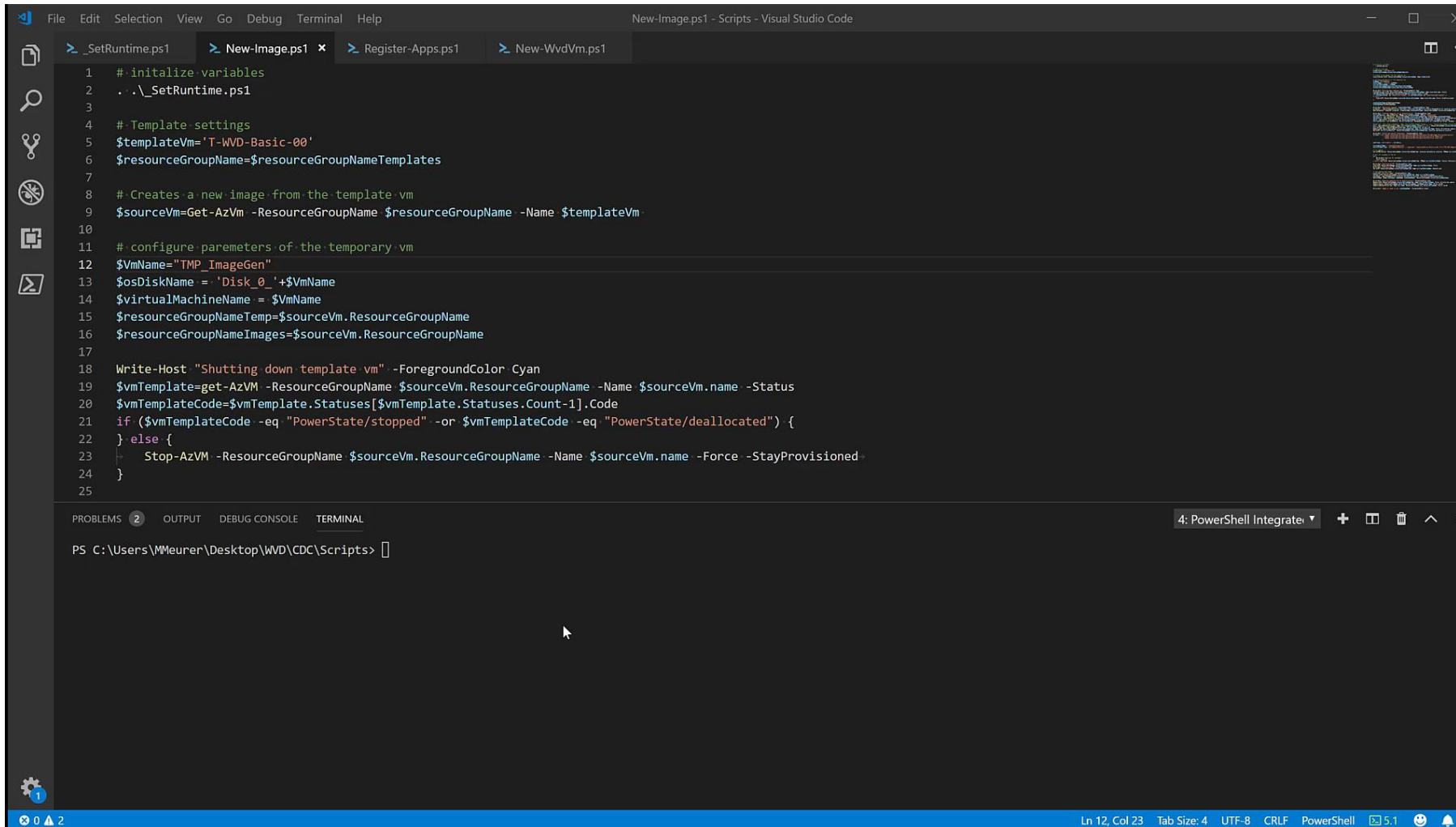
The golden image approach

Who has ever created an image?



Deployments of Session Hosts

PowerShell



The image shows a Visual Studio Code editor window with several PowerShell scripts open. The active script, 'New-Image.ps1', contains the following code:

```
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 -StayProvisioned
24 }
25
```

The terminal window at the bottom shows the PowerShell prompt: `PS C:\Users\WMeurer\Desktop\WVD\CDC\Scripts>`. The status bar at the bottom indicates the current file is 'New-Image.ps1' at line 12, column 23, with a tab size of 4, UTF-8 encoding, and CRLF line endings.

Deployments of Session Hosts

WVDAdmin

The screenshot displays the WVDAdmin interface for managing Windows Virtual Desktop session hosts. The main window is titled "WVDAdmin - Azure Admin for Windows Virtual Desktop".

Left Navigation Panel:

- Builder City
 - VDI-GPU
 - Desktop Application Group
 - Session Hosts (1)
 - WVD-VDI-G-01.ITProCloud.test
 - User Sessions (0)
 - VDI
 - Desktop Application Group
 - Session Hosts (2)
 - WVD-VDI-4.ITProCloud.test
 - WVD-VDI-5.ITProCloud.test
 - User Sessions (0)
 - MSIX-Builder
 - Development

Main Content Area:

Current view: **Session Host**

Name	WVD-VDI-5.ITProCloud.test	Sessions	0
Tenant Path	Builder City/Default Tenant Group		
Host Pool	VDI		
Last Heart Beat	3/19/2020 5:03:47 PM	<input checked="" type="checkbox"/> Allow New Session	
Agent Version	1.0.1632.1200		
Assigned User	wvd002@itprocloud.de		
Os Version	10.0.18362		
SxS Version	rdp-sxs191031003		
Update State	Succeeded		
Last Update	2/2/2020 7:58:21 PM		
Update Error Message			

Buttons: Reload all, Refresh WVD, Refresh Azure, Save Changes

Number of background processes: 0

Logs (Sessions V2):

```
2020.04.21-11:29:16:586 Information Working on app group Desktop Application Group
2020.04.21-11:29:16:586 Information Found desktop VDI Desktops
2020.04.21-11:29:16:646 Information Found 1 apps in app group
2020.04.21-11:29:16:868 Information Found desktop Design Desktop Yeah
2020.04.21-11:29:16:872 Information Found desktop Development
2020.04.21-11:29:16:879 Information Working on app group MyAppGroup
2020.04.21-11:29:16:892 Information Getting the power state of all vms and Scale Set instances...
2020.04.21-11:29:27:340 Information Reading from Azure API finished.
2020.04.21-11:29:27:359 Information Found 11 apps in app group
2020.04.21-11:29:27:361 Information Working on app group SecondAppGroup
2020.04.21-11:29:27:675 Information Found 3 apps in app group
2020.04.21-11:29:27:677 Information Reading WVD API finished.
2020.04.21-11:29:29:742 Information Reading user sessions from ARM
2020.04.21-11:29:30:850 Information Working on session hosts. Session host count: 8
2020.04.21-11:29:31:420 Information Working on session hosts. Session host count: 2
2020.04.21-11:29:32:030 Information Reading app and desktops from ARM
2020.04.21-11:37:34:992 Information Multit AAD-Tenant mode is enabled (02000-3297-42be-ab08-3ed1fb8a41c5)
2020.04.21-11:37:37:939 Information Multit AAD-Tenant mode is enabled (8fbdeb20-138e-4339-ba6b-5fea1e6efb54)
```

Version: 1.5.0.0

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/disk-types>

Deployments of Session Hosts

Ephemeral disks and scale sets

DEMO

Scare Resources

What can be done if resources (Azure VM) become scared?

- Work with reserved instances
- Use resources in other regions at night time

The screenshot shows the WVDAdmin interface for a Desktop Application Group. The 'Session Hosts (10)' section is expanded, showing a list of session hosts. Three groups of session hosts are highlighted with colored boxes and arrows pointing to explanatory text:

- Green box:** WVD-HO-WEU-01.ITProCloud.test, WVD-HO-WEU-02.ITProCloud.test, WVD-HO-WEU-03.ITProCloud.test, WVD-HO-WEU-04.ITProCloud.test. Arrow points to: "Standard Session Hosts for West Europe - running".
- Red box:** WVD-HO-WEU-05.ITProCloud.test, WVD-HO-WEU-06.ITProCloud.test. Arrow points to: "Failed Session Hosts in Europe (no resources available for this VM size)".
- Blue box:** WVD-HO-WUS2-01.ITProCloud.test, WVD-HO-WUS2-02.ITProCloud.test. Arrow points to: "Backup / alternatively Session Hosts in West US 2 (same image, same hostpool, peered networks)".

Other visible elements include the 'Welcome', 'Host Pool', 'Session Host', and 'Rollout' tabs, a 'Design' section, and buttons for 'Reload all', 'Refresh WVD', and 'Refresh Azure'. The 'Number of background processes' is 4. The 'Logs' section at the bottom shows system information and activity logs.

Azure Monitor for WVD

Architecture

HostPool

(remote apps)



Azure Monitor
Agent for WVD

HostPool

(remote apps)



Azure Monitor
Agent for WVD



Workspace



- Customers Azure Monitor Workspace
- Data transmission each minute
- https:443
- 100% native Azure
- Free for non-commercial use (community, trial)

<https://azuremarketplace.microsoft.com/en-us/marketplace/apps/sepagogmbh.loganalytics-agent-rds>

Azure Monitor for WVD

DEMO

Questions

