TECHMENTOR
IN-DEPTH TRAINING FOR IT PROS

TM03 From Zero to Hero:

Build and Manage an Azure Virtual Desktop Environment

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Level: Advanced

Session Survey

- Your feedback is very important to us
- Please take a moment to complete the session survey found in the mobile app
- Use the QR code or search for “Converge360 Events” in your app store
- Find this session on the Agenda tab
- Click “Session Evaluation”
- Thank you!

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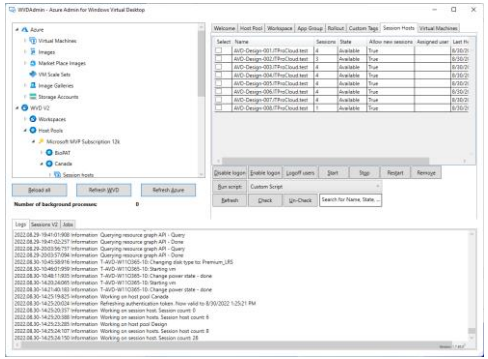
- Focus
  - Azure Virtual Desktop & Log Analytics
  - WVDAdmin & Hydra for AVD
- Blog: blog.ITProCloud.de
- Contact
  - @MarcelMeurer
  - https://www.linkedin.com/in/marcelmeurer/



Microsoft Most Valuable Professional

sepago

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Free tools

Power Shell

Topics for today

- How to use the golden master approach without destroying the master
- Operating Azure Virtual Desktop with PowerShell
- Monitoring and debugging of Azure Virtual Desktop

Golden Master Approach

- How to use the golden master approach without destroying the master
  - Sysprep
  - Optimization
  - Imaging
  - …

Operation of AVD with PowerShell

- Deployment of session hosts
- Secure boot
- Disk size
- Other options
- …

Monitoring and Debugging

- Configure the diagnostic logging
- Create advanced monitoring with Azure Function
- Work with the logs in Log Analytics
- Create workbooks and alerts
- …

Timing

9:00am	Start (2h)
11:00 – 11:15am	Morning Coffee Break (1:45h)
1:00 – 2:00pm	Lunch Break (Mixer)
3:30 – 3:45pm	Afternoon Break (1:30h)
5:00pm	End (1:15h)

~6h

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Azure Virtual Desktop

Azure Virtual Desktop

Windows Server RD Session Host	Azure Virtual Desktop Multi-session	Windows 10 / 11 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 10/11	Windows 10/11
Multiple sessions	Multiple sessions	Single session
Win32	Win32, UWP	Win32, UWP
Office 2019 Perpetual	Microsoft 365 Apps for enterprise	Microsoft 365 Apps for enterprise
Long-Term Servicing Channel	Semi-Annual Channel	Semi-Annual Chann

Based on: Microsoft, AVD Customer Presentation L300

Azure 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 Cal)

Azure Virtual Desktop

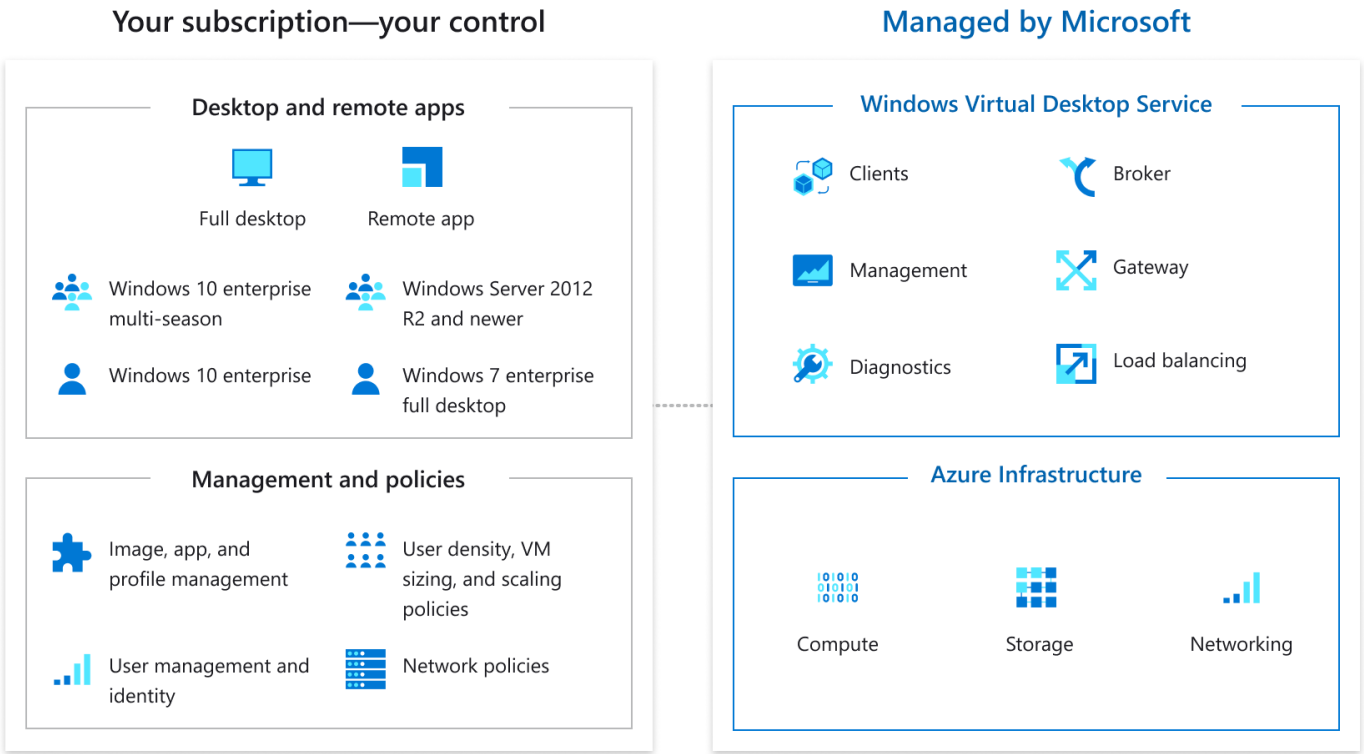
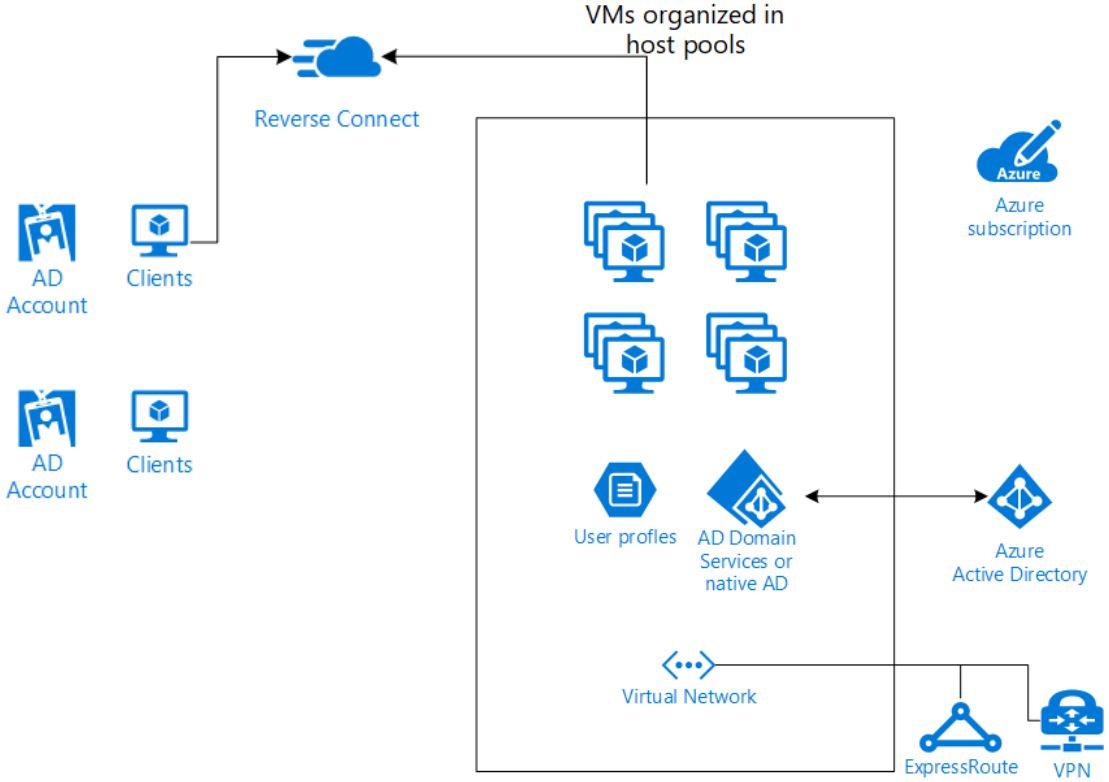


Image source: https://azure.microsoft.com/de-de/services/virtual-desktop/#featured

Azure Virtual Desktop



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.

Our Lab Environment

Feel free to use your own tenant and subscription

Our Lab Environment

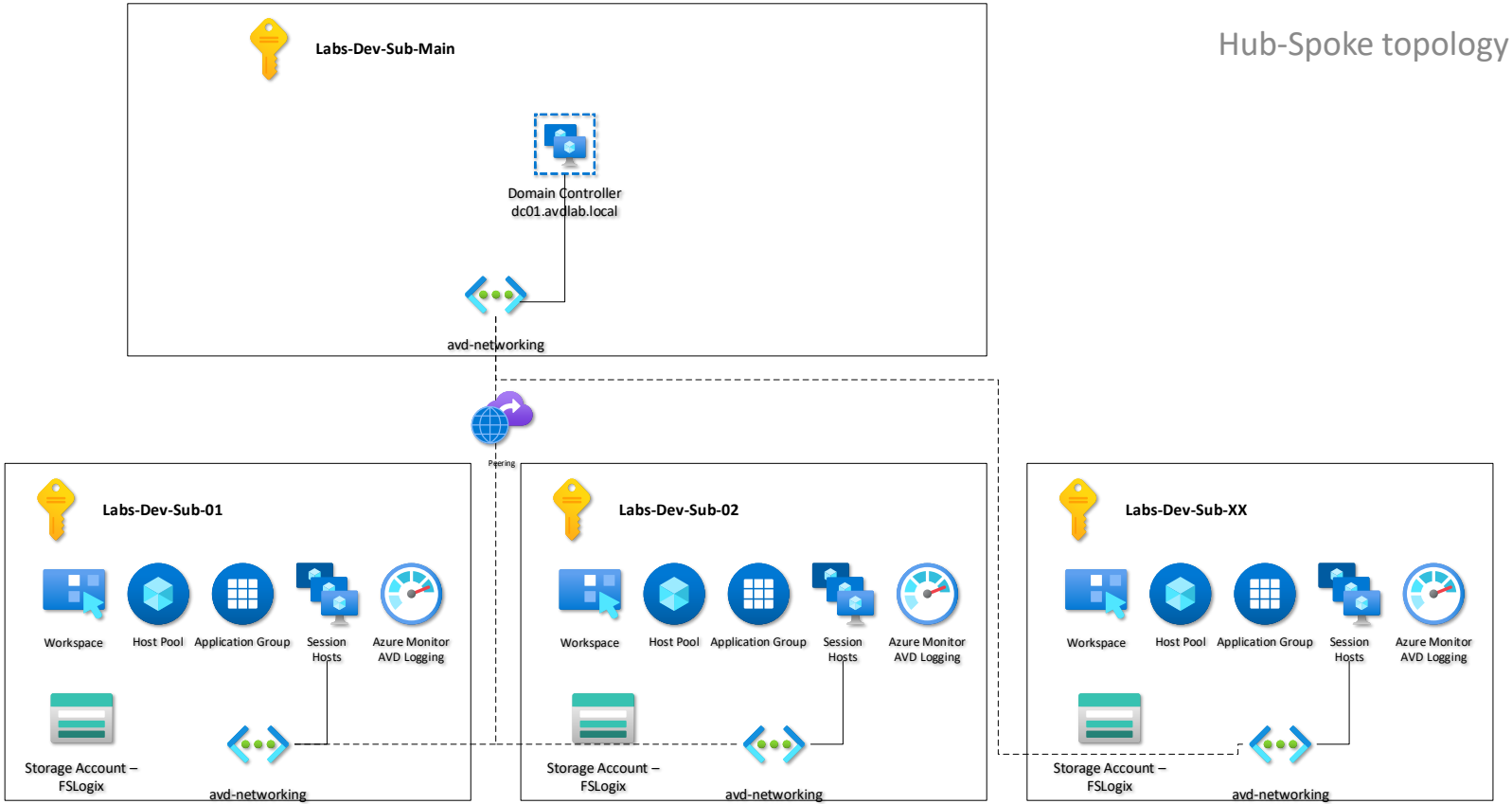
- Azure Tenant: goavdlab.onMicrosoft.com

- Several subscriptions and prepared resource groups
- Native Active Directory domain: **avdlab.local** with synchronized users

- Everybody gets a couple of accounts for:
  - Administration (AD synchronized, permissions in several resourcegroups)
  - Test users (AD synchronized and AAD only)
  - Service account (for adding a computer to a domain)
  - Service principal for automated administrations

Our Lab Environment

Hub-Spoke topology



Our Lab Environment

Resource groups in subscriptions

Our Lab Environment

Please use your account only (counted by two-digit numbers = ##)

- Use the piece of paper in front of you - it contains the accounts and passwords

Accounts:

- Administration (AD synchronized, permissions in several resource groups):
  LabAdmin##@goavdlab.onMicrosoft.com
- Test users (AD synchronized and AAD only):
  LabUser##-01@goavdlab.onMicrosoft.com - LabUser##-10@goavdlab.onMicrosoft.com
  (Member of group S-G-LabUsers-##)
- Test users (ADD-only):
  LabUserAad##-01@goavdlab.onMicrosoft.com - LabUserAad##-10@goavdlab.onMicrosoft.com
  (Member of group S-G-LabUsersAad-##)
- Service account (for adding a computer to a domain)
  svc-add-host@avdlab.local
- Service principal for automated administrations (created later)
  svc-avd-automation-##

Additional data and step-by-step instructions

https://bit.ly/techmentor-tm03 - PW: TechMentor2023@Seattle

#1 – Azure Portal

Let‘s get started

Login to Azure

(labadmin## ->https://portal.azure.com)

Discover the environment: Resource Groups

#1 – Azure Portal

Existing resource groups:

- avd-networking
  - Contains a vnet connected to the internal network and to the domain controller of avdlab.local
- avd-resources-##
  - The target for the AVD platform resources, like host pools, app groups, and workspaces. Also, log analytics and storage accounts if needed.
- avd-vms-##
  - For all the session hosts' virtual machines.
- avd-templates-##
  - For all Golden Master VMs and images, computes galleries, etc.
- avd-automation-##
  - For own automation, like Azure function

#2 – Create basic resources

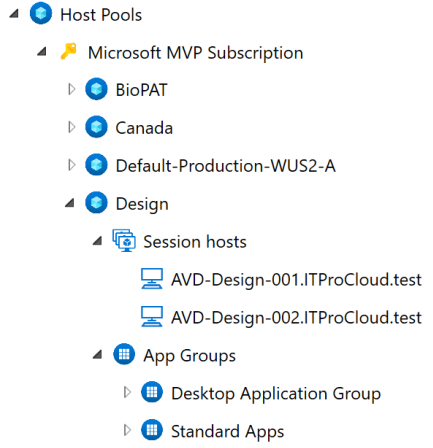
Create AVD Resources in the correct resource groups (avd-resources-##) – West US 3

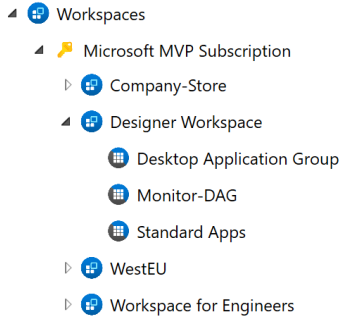
- Log Analytics workspace (for logging and monitoring)
  - Name: la-avd-monitoring

- Host pool with desktop application group and workspace
  - Name: hp-lab-windows11Pooled (multi-session)
  - Session limit: 4
  - No virtual machine
  - Register desktop app group
  - With a new workspace: ws-lab-company-portal
  - Enable diagnostic settings and send data to Log Analytics
    - Select your log analytics workspace from the step before

- Assign your user and group to the desktop application group (S-G-LabUsers-## and : LabAdmin##@goavdlab.onmicrosoft.com)

- Open the Remote Desktop app with one of your users (https://go.microsoft.com/fwlink/?linkid=2139369)

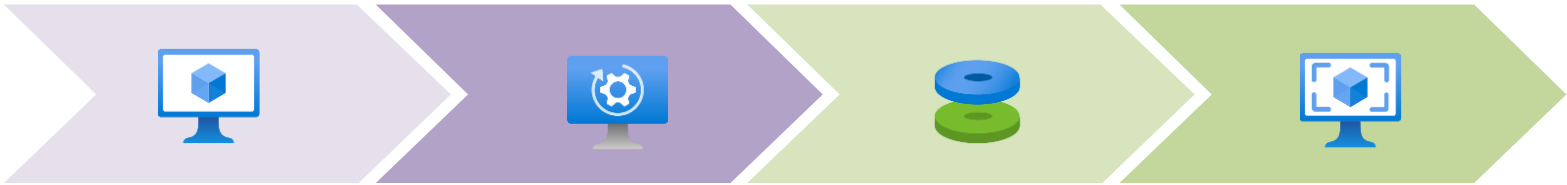




Use your 2-digit number for '##' – Azure region: "US West 3"

Imaging and Deployment

What do we need first? Mostly, a custom image – Golden Master Approach Default



Master VM

Windows 11, domain-joined (opt.)

Preparation

Windows Update, FS-Logix, Application installation, 3rd party tools, optimizations

Sysprep + Generalize

Generalize Windows, often more difficult than expected

Image

Generate an image

Imaging and Deployment

What do we need first? Mostly, a custom image – Golden Master Approach with WVDAdmin or PowerShell

Master VM

Windows 11, domain-joined (opt.)

Preparation

Windows Update, FS-Logix, Application installation, 3rd party tools, optimizations

Temporary VM

Exact copy of the Golden Master

Sysprep + Generalize

Generalize Windows, often more difficult than expected

Image

Generate an image

- Makes a copy from the Golden Master
- Works with the copy (temporary VM)
  - Sysprep
  - Generalization & grab the image
- Remove temporary VM
- The Golden Master can be reused

#3 – Golden Master VM

Create your first Golden Master

- Create a new Azure VM

  Basic
  - Resource group: avd-templates-##
  - Name: T-AVD-##-A (please use your ##)
  - No infrastructure redundancy
  - Security Type: Standard (important)
  - Image: Windows 11 Enterprise multi-session, version 22H2 - x64 Gen2
  - Size: D2as_**v4**
  - Username: avdLocalAdmin - Password: your choice (same as the other passwords)
  - Confirm

  Networking
  - Existing virtual network and subnet: avd-networking
  - With public IP (not recommended at all, use the internal network in production or bastion host)

  Create the VM

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#3 – Create a Golden Master VM

Create your first Golden Master

- Logon to the VM via RDP* (should be possible from the network – otherwise, use jump hosts)
  - Preparation
    - Install Windows update if needed
      - Reboot, if needed
    - Install applications
      - Windows features: RSAT tools for administration (Group Policy Management and Active Directory Management)
      - E.g., 7Zip, Notepad++, Filezilla, Chrome, etc.
      - You can use https://ninite.com/
    - Optimize the VM
    - https://github.com/The-Virtual-Desktop-Team/Virtual-Desktop-Optimization-Tool
    - Configure AppxPackages.json, and Services.json before you run the script
    - Restart the virtual machine on Windows
    - Shutdown the virtual machine in Windows
- Deallocate in the Azure Portal

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#4 – Create an image with PowerShell

Imaging with PowerShell

- Our helper scripts
  - Download: https:\\bit.ly\tobedefine
  - Create-MagicImageFromVM
    - Creates an image without destroying the Master
  - Create-SessionHostFromImage
    - Creates a session host from an image
  - ITPC-WVD-Image-Processing.ps1 – used by the other scripts
    - Runs inside of a VM
    - Prepares, runs, and monitors Sysprep
    - Can be used for the domain- and AVD-join of VMs
    - And some other features

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#4 – Create an image with PowerShell

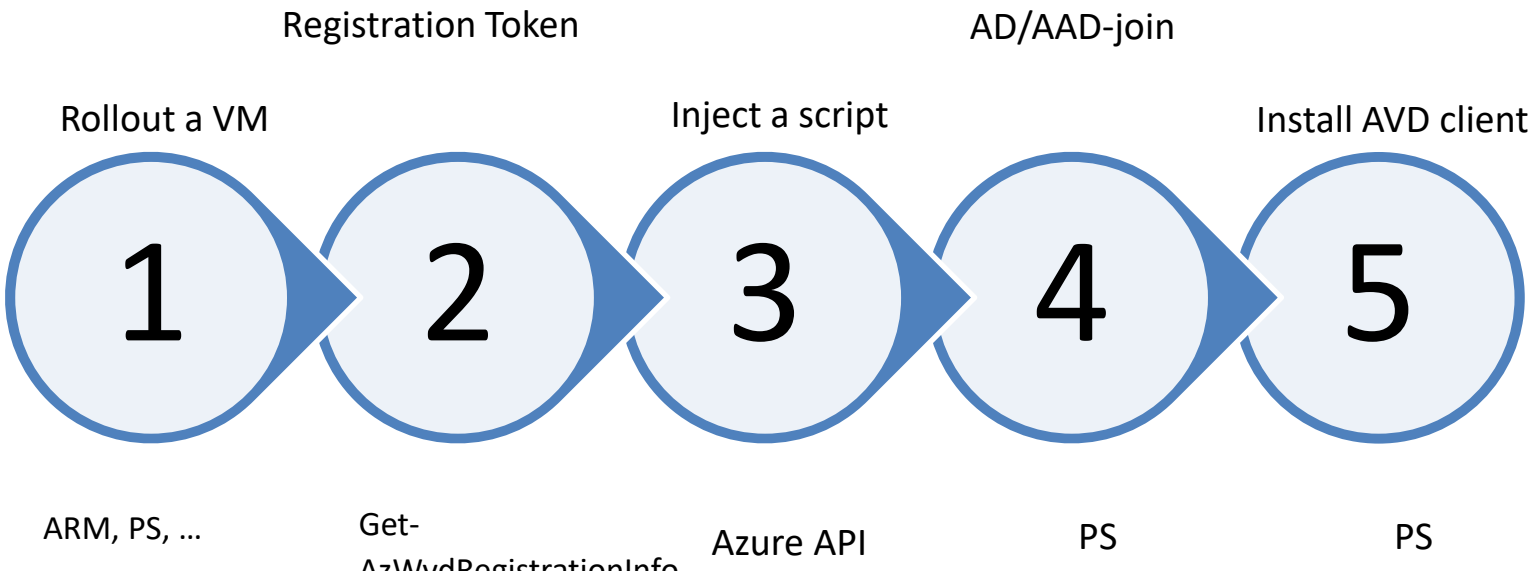
Imaging with PowerShell – the Golden Master stays untouched

- Open PowerShell on your device and connect to Azure:
  - Use: LabAdmin##@goavdlab.onmicrosoft.com
  - *Connect-AzAccount -TenantId "c79b2f74-6012-46c3-ad68-326cca9c012e"*

  - Modify the script Create-MagicImageFromVM to fit your needs
    - The variables in the first lines to match your
      - Golden Master VM
      - Set an image name
  - Run the script step-by-step and check the Azure Portal to figure out what happens:
    - A new NIC for the temporary VM
    - Snapshot of the disk of the Golden Master
    - Disk from snapshot
    - New VM with NIC and disk (from snapshot)
    - Runs ITPC-WVD-Image-Processing.ps1 on the temporary VM with a parameter to do the preparation and sysprep
    - Generalize the VM and capture an image
    - Clean-up

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

Host Deployment



#5 – Create a session host with PowerShell

Imaging with PowerShell

- Open PowerShell on your device and connect to Azure:
  - Use: LabAdmin##@goavdlab.onmicrosoft.com
  - *Connect-AzAccount -TenantId "c79b2f74-6012-46c3-ad68-326cca9c012e"*

  - Modify the script Create-SessionHostFromImage to fit your needs ($ImageName and $myId)
    - The variables in the first lines to match your
      - Image and image resource group
      - Host pool & host pool resource group
      - VM name and VM resource group
      - Id of your subnet (check and correct the subscription ID)
      - The target OU in Active Directory (fit to your ##)
  - Run the script step-by-step and check the Azure Portal to figure out what happens:
    - A new NIC for the host
    - Create VM from the image
    - Get the token of the host pool
    - Runs ITPC-WVD-Image-Processing.ps1 on the temporary VM with parameters to do the preparation and joint to the domain and host pool

  - Use the remote desktop app to logon as LabAdmin##@goavdlab.onmicrosoft.com and validate if the VM is in the right OU (dsa.ex

Use your 2-digit number for '##' – Azure region: "US West 3"

#6 – Optional: Configuring basic GPOs

We can use Group Policies for domain-joined hosts

- Use the remote desktop app to logon as LabAdmin##@goavdlab.onmicrosoft.com
- Open Group Policy Management Console (gpmc.msc)
- Edit your prepared GPO: Lab -> Systems -> Azure -> AVD -> Hosts -> ## -> GPO-M-ComputerPolicy-##

- Configuration:
  - FSLogix
  - Remote Desktop Session Hosts
  - Desktop behavior
  -

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#6 – Optional: Configuring basic GPOs

FSLogix

- Computer Configuration -> Administrative Settings -> FSLogix -> Profile Containers
  - Enabled: Enabled
  - Delete Local Profile When VHD Should Apply
  - VHD Locations: \\ads01.avdlab.local\profiles

- Computer Configuration -> Administrative Settings -> FSLogix -> Profile Containers -> Advanced
  - Redirections XML …: \\ads01.avdlab.local\profiles

Note: There are a lot more option to configure the behavior of the session hosts

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#6 – Optional: Configuring basic GPOs

Remote Desktop Session Hosts

- Computer Configuration -> Administrative Settings -> Windows Components -> Remote Desktop Session Hosts ->Device and Resource Redirection
  - Allow time zone redirection

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#6 – Optional: Configuring basic GPOs

Desktop behavior

- Computer Configuration -> Administrative Settings -> Start Menu and Taskbar
  - Remove and prevent access to the shut down, restart, …

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#6 – Optional: Configuring basic GPOs

Reboot

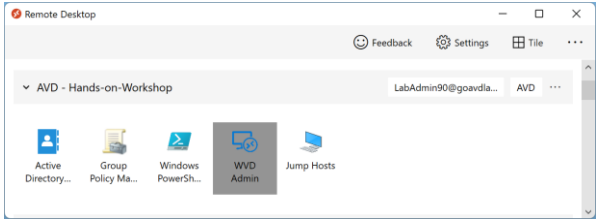
- Reboot your session host and login again to validate FSLogix
  - E.g., from the Azure Portal

- Check FSLogix state
  - "C:\Program Files\FSLogix\Apps\frxtray.exe"

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#7 – Using a free community Tool

WVDAdmin is a license-free community tool for managing AVD, including imaging



- It‘s available in our lab (check the AVD Client with your admin account –> Connect to WVDAdmin or the desktop
  (Alternatively: Download WVDAdmin from: https://blog.itprocloud.de/Windows-Virtual-Desktop-Admin/)

- Configuration:
  - WVDAdmin needs a service account to work with the Azure APIs
  - The service account (service principal) can be create in the Azure Portal (AAD->App registration)
  - The service account needs permission in the subscription
  - DEMO

  - Create a service principal (app registration) for WVDAdmin and give permission to your resource groups (svd-avd-wvdadmin-##)

- Configure WVDAdmin and click on Reload All

- Overview over WVDAdmin

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#8 – Capturing an image with WVDAdmin

In WVDAdmin

- Select your Golden Master
  - Azure -> Virtual Machines -> avd-templates-## -> Please click on your VM
  - Right click -> Create a template image
  - Give the new image a name (not a name from an existing image)

- Finish the process

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#9 – Rollout an image with WVDAdmin

In WVDAdmin

- Select your image
  - Azure -> Images -> avd-templates-## -> Please click on your image
  - Right click -> Create a session host from image
  - Fill out the rollout to fit your environment
    - Hostpool, subnet, resource group
    - Size of VM: D2as_v5
    - Domain user: svc-add-host@avdlab.local and passwort
    - OU: OU=##,OU=Hosts,OU=AVD,OU=Azure,OU=Systems,OU=Lab,DC=avdlab,DC=local
    - Domain FQDN: avdlab.local
    - Local Admin & password: avdLocalAdmin / avdLocalAdmin123---###

- Finish the process

- Remove the older host: WVD V2 -> Host Pools -> resource group -> Your host pool -> Session hosts -> Select -> Remove

- Logon to the other host with the Remote Desktop Client and verify AD-join

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#10a – Rollout secure boot enabled hosts

In the Azure Portal

- Create an Azure Compute Gallery
  - Basic
    - Resource group: avd-templates-##
    - Name: acg_avd_images_## (please use your ##)
  - Sharing
    - Role-based access control (RBAC)
  - Create

- Add a VM Image Definition in the gallery
  - Basic
    - VM image definition name: imd-lab-windows11-EVD
    - Name: acd-avd-secboot_## (please use your ##)
    - Security Type: Trusted launch
    - Publisher/Offer/SKU: -
  - Create

- https://learn.microsoft.com/en-us/azure/security/fundamentals/secure-boot

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#10a – Rollout secure boot enabled hosts

In WVDAdmin

- Click Reload all
- Copy the image to compute the gallery
  - Go to your last created image: Azure -> Images -> Resource group -> Select your image
  - Right-click -> Copy to shared image gallery
  - Select the gallery
  - Select the gallery definition
  - Enter a version x.y.z
  - Select your replication targets (only West US 3 is fine)
- Copying the image takes a while
- Time for a break
- Note: Compute Gallery images can be used cross-region and cross-subscriptions

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#10a – Rollout secure boot enabled hosts

In WVDAdmin

- Select your image version
  - Azure -> Image Galleries -> Please click on your image version
  - Right-click -> Create a session host from gallery image
  - Fill out the rollout to fit your environment
    - Hostpool, subnet, resource group
    - Size of VM: D2as_v5
    - Domain user: svc-add-host@avdlab.local and passwort
    - OU: OU=##,OU=Hosts,OU=AVD,OU=Azure,OU=Systems,OU=Lab,DC=avdlab,DC=local
    - Domain FQDN: avdlab.local
    - Local Admin & password: avdLocalAdmin / avdLocalAdmin123---###
    - Disk size: 256 GByte
    - Tick: Secure Boot

- Finish the process

- Remove the older host: WVD V2 -> Host Pools -> resource group -> Your host pool -> Session hosts -> Select -> Remove

- Logon to the other host with the Remote Desktop Client and verify AD-join and the disk is around 256 Gbyte in size

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#10b – Optional: Secure boot with ADE Disk

In WVDAdmin

- Create a Key Vault
  - Access configuration to the service account and your admin account
  - Enable ADE on the Vault
  - Create a key (ADE)
  - Copy key resource id and resource id of the vault to notepad

- Modify the host pool
  - Add two new tags to the host pool with the values from notepad
    - Name: WVD.Default.KeyVault.Id
    - Value: subscriptions/8c548bd3-06d3-4b10-838a-67a4cd58524d/resourceGroups/avd-resources-90/providers/Microsoft.KeyVault/vaults/kv-lab-techmentor2023-##

    - Name: WVD.Default.KeyVault.KeyUri
    - Value: https://kv-lab-techmentor2023-99.vault.azure.net/keys/ADE/b3d6c4d6e39b43e9b05a853ecb7def36

- Rollout a new session host
  - In WVDAdmin click: Reload all
  - Fill out the rollout to fit your environment
    - Hostpool, subnet, resource group
    - Size of VM: D2as_v5
    - Domain user: svc-add-host@avdlab.local and passwort
    - OU: OU=##,OU=Hosts,OU=AVD,OU=Azure,OU=Systems,OU=Lab,DC=avdlab,DC=local
    - Domain FQDN: avdlab.local
    - Local Admin & password: avdLocalAdmin / avdLocalAdmin123---###
    - Disk size: 256 GByte

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

#11 – Updates and app install with WVDAdmin

In WVDAdmin

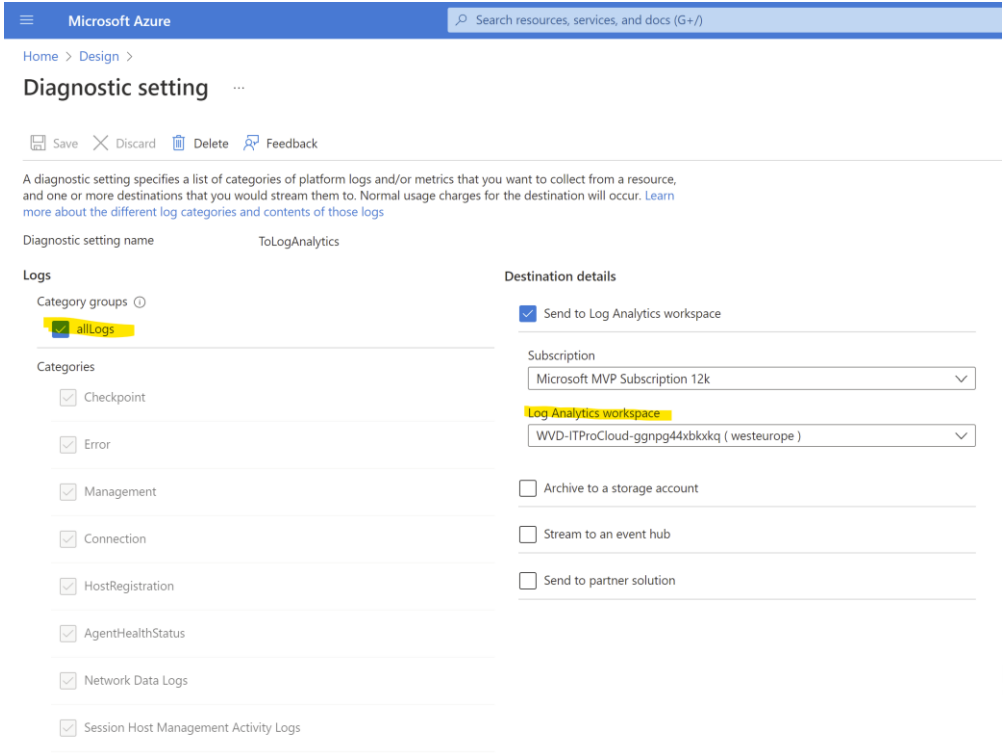
- Select your virtual machines
  - Azure -> Click on virtual machines -> Refresh
  - You can see all VMs on the right site
  - Select all
  - Start the VMs and wait
  - Select the script “Run Windows Updates”
  - Click on the run script button
  - Wait to finish (Note: If updates are installed, a reboot is mostly needed)
- Installing apps with the package Manager from Microsoft on the Golden Master
  - Select only the Golden Master
  - out the rollout to fit your environment
  - Select the script “Microsoft Package Manger”
  - Click on the run script button
  - Select some software. E.g., Greenshot, Storage Explorer, Acrobat Reader
  - Click OK to install the apps
  - Optional: Capture a new image from master and rollout a new VM with the updated software
- Optionally, you can grab a new image and deploy a new host directly from the image (without using the gallery)
- Delete the older hosts

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

MONITORING

Monitoring

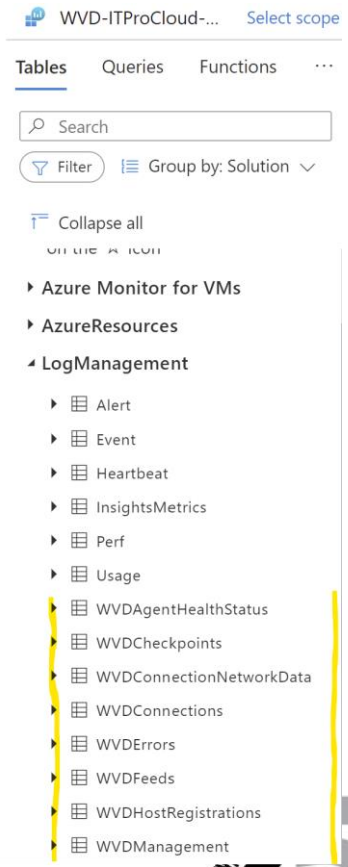
Validate Diagnostic Logging



Monitoring

- Enjoy the Diagnostic Logging
- Key: CorrelationId

Log Type	Note
WVDAgentHealthStatus	Details about the session hosts
WVDConnections	All about connections from a user to a session host
WVDErrors	Error message from different sources (client, RDGateway, Loadbalancer, ...)
WVDFeeds	Log about clients downloading information about the AVD resources
WVDHostRegistrations	Logs if a host tries to register to a host pool
WVDManagement	Log about administrative tasks
WVDCheckpoints	Detailed information related to logins, errors, ...
WVDConnectionNetworkData	Network information (bandwidth and RTT)



- https://blog.itprocloud.de/AVD-Azure-Virtual-Desktop-Error-Drill-Down-Workbook/

#12 – Diagnostic logging

In the Azure Portal

- Open the log analytics workspace you have created before
  - Check out the different log in Logs -> LogManagement -> Starting with WVD….
  - Use the prepared KUSTO queries to get information about (run the queries one by one)
    - Logon
    - Errors
    - Connection
    - Etc.
  - Optionally: Create some error: Shutdown all hosts and try to connect
    - After a minute, an error event should be in the WVDErrors Log

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

Monitoring

Ready-to-use Workbook

https://bit.ly/avd-mon-1

Azure Virtual Desktop - Deep-Insights

This workbook gives you an insight into the logs coming from the Azure Virtual Backplane. These data can be used to resolve issues while user connecting or running sessions.

Check for an update of this Workbook - Current version: v1.5

Check-out the ITProCloud Blog

- blog.itprocloud.de
- WVDAdmin
- Hydra

Time Range: Last 30 days | Host Pool: design | Opt: Session Host: <unset> | Opt: User: <unset> | Error Selector: <unset>

RTT and Bandwidth by User

Search

UserName	ShortPath	Avg. RTT	Max. RTT	P90 RTT	Avg. Bandwidth	Max. Bandwidth	P90 Bandwidth
mm-admin@ITProCloud.de		62ms	100ms	95ms	2.6MiB/s	4.4MiB/s	4.2MiB/s
vds01@ITProCloud.de	Public	35ms	91ms	37ms	8.6MiB/s	12.5MiB/s	10.6MiB/s
vds01@ITProCloud.de		29ms	33ms	33ms	5.6MiB/s	9.9MiB/s	9.3MiB/s
vds02@ITProCloud.de		41ms	53ms	49ms	2.0MiB/s	3.6MiB/s	3.0MiB/s
vds03@ITProCloud.de		44ms	62ms	53ms	3.8MiB/s	5.3MiB/s	5.1MiB/s
vds03@ITProCloud.de	Public	17ms	18ms	18ms	13.8MiB/s	14.9MiB/s	14.9MiB/s
wvd001@itprocloud.de		25ms	39ms	33ms	992.6KiB/s	2.1MiB/s	1.3MiB/s
wvd002@itprocloud.de		31ms	52ms	45ms	794.7KiB/s	1.5MiB/s	1.1MiB/s
wvd003@itprocloud.de		23ms	167ms	42ms	936.7KiB/s	2.3MiB/s	2.3MiB/s
wvd004@itprocloud.de		26ms	47ms	46ms	1.2MiB/s	1.5MiB/s	1.5MiB/s
wvd005@itprocloud.de		21ms	96ms	34ms	1.1MiB/s	1.8MiB/s	1.8MiB/s

RTT and Bandwidth per User by IP segment (class C)

Search

IPSegmentC	ShortPath	Avg. RTT	Max. RTT	P90 RTT	Avg. Bandwidth	Max. Bandwidth	P90 Bandwidth
91.7.231		49ms	100ms	59ms	3.2MiB/s	5.3MiB/s	4.6MiB/s
20.4.15		39ms	479ms	36ms	1.1MiB/s	2.0MiB/s	1.5MiB/s
91.7.231	Public	38ms	91ms	59ms	8.9MiB/s	12.5MiB/s	10.6MiB/s

#13 – Install the ready to use workbook

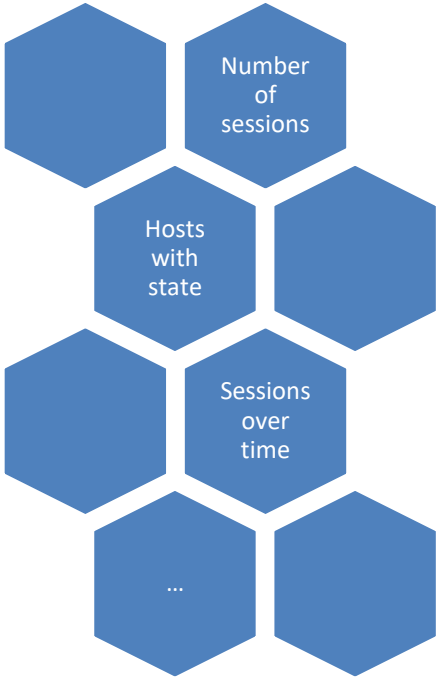
- Got to this link and install the workbook in the avd-resources-## resource group
  - https://bit.ly/avd-mon-1

- Do prepare another issue: Delete a session host VM in the Azure Portal

- Explore the AVD Deep Insights workbook
  - Go to the log analytics workspace -> Workbooks -> AVD Deep Insights
  - Explorer the different part
  - Check for orphan resources

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

Store AVD data to Log Analytics



Store AVD data to Log Analytics

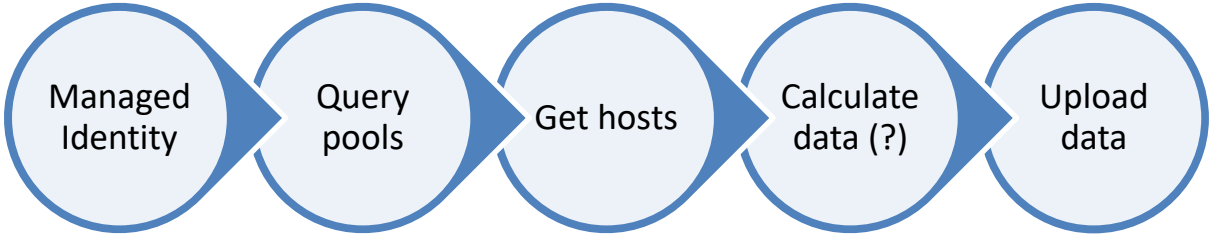
Challenge: Query data from Azure and store it to log analytics (each minute)
(sessions, session host state, capacity)

- Logic App
  - + modern, cloud service, easy to use
  - - expensive (12 operations each 30 seconds > 120 Euro/month)

- Azure Functions
  - + modern, cloud service, mostly cheap
  - - needs code

- Azure Automation
  - + cloud service, cheap
  - - not so modern needs code and workarounds

Store AVD data to Log Analytics

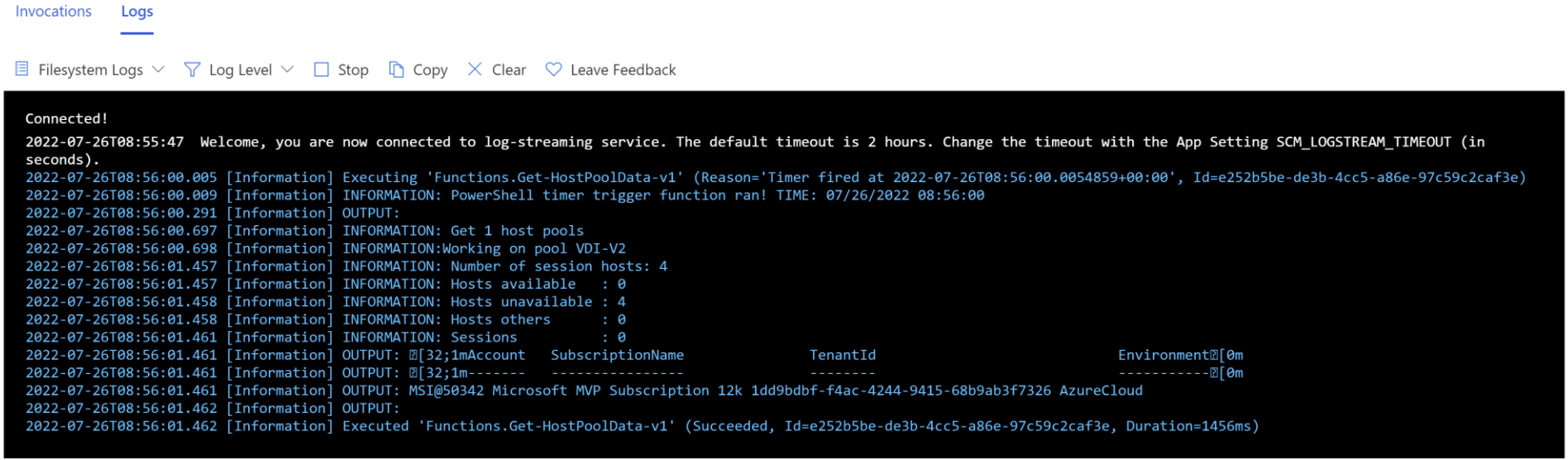


Store AVD data to Log Analytics

Challenge:

Query data from Azure and store it to log analytics (each minute)

(sessions, session host state, capacity)



#14 – Function App to collect and store data

In the Azure Portal

- Create a Function App
  - Resource group: avd-automation-##
  - Name: techmentor-avdlab-##
  - Runtime stack: PowerShell Core
  - All others: On default, including storage and application insights
  - Create

- Open the Function App
  - Enable identity of the function app
  - Give identity Read access to resource group (avd-resources-##)
  - Configure: App files -> requirements.psd1 (add Az.Accounts and Az.DesktopVirtualization)
  - Overview -> Create in Azure Portal -> Name: AVDCollector -> Time trigger -> “*/60 * * * * *”
  - => Code + Test
  - Copy the PowerShell script content: AzureFunctionMonitoring.ps1 into script field
  - Modify the variables to fit your needs:
    - $WorkspaceId and $WorkspaceKey from your log analytics workspace => Agents => Workspace Id and Key

- Open log analytics and wait for the first data (also check monitoring on the function app)
  - Note: It could take a while before the first data are visible in log analytics

Use your 2-digit number for ‘##’ – Azure region: “US West 3”

If we have time left…

Questions and discussion

Let’s do some load tests

Thank you so much!

Enjoy TechMentor 

Session Survey

- Your feedback is very important to us
- Please take a moment to complete the session survey found in the mobile app
- Use the QR code or search for “Converge360 Events” in your app store
- Find this session on the Agenda tab
- Click “Session Evaluation”
- Thank you!

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