Azure Files AD Integration – Forget Fileserver

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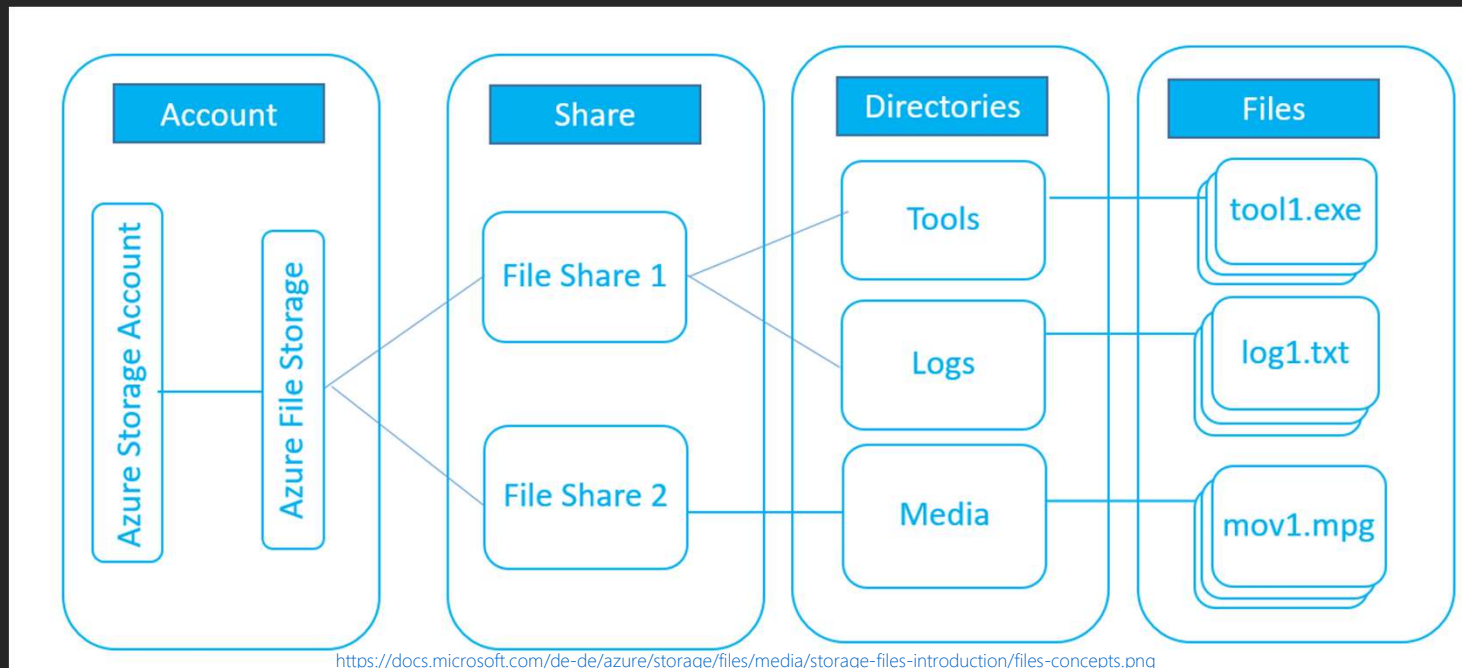
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Agenda

- Azure Files
- AD Integration
- How does it work
- Summary

Azure Files Introduction

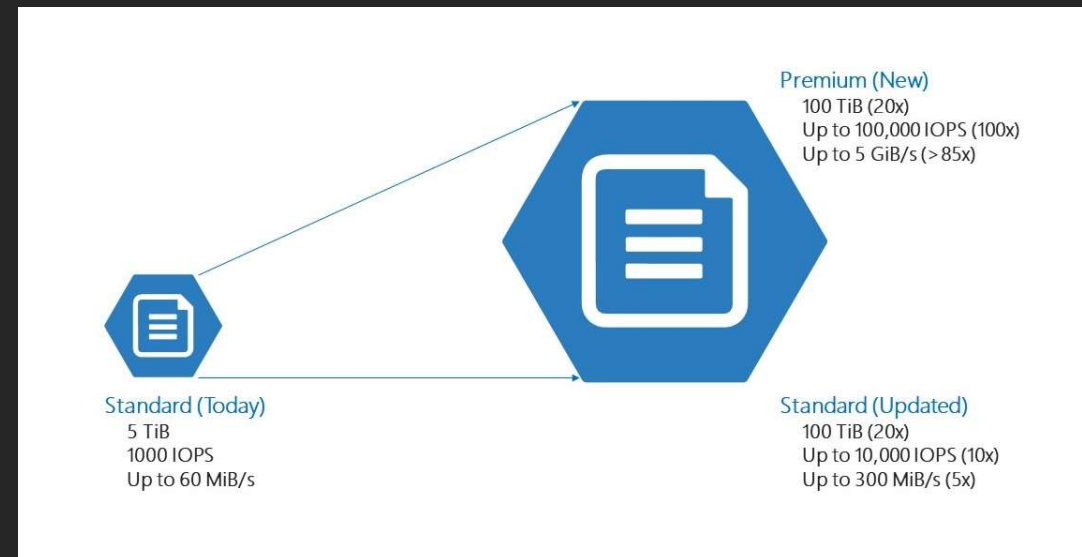https://docs.microsoft.com/de-de/azure/storage/files/media/storage-files-introduction/files-concepts.png

First some basically Introduction into Azure Files

Azure Files

- Hosted SMB 3.1 Share for you on Azure
- PaaS solution
- You don´t need to spin up and manage VM´s
- No Volume layout
- Unique namespace, based on Azure Storage
- globalazure.blob.core.windows.net -> Storageaccount Name
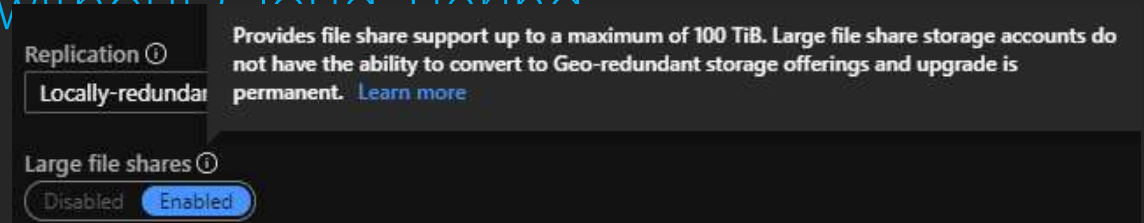- globalazure.file.core.windows.net -> Fileshare Name

Azure Files

- Active Directory File Integration for Azure Fileshares

- Standard
  - ~~5TB~~ -> 100TB Fileshare
  - ~~1000~~ -> up to 10000 IOPS
  - ~~60MB~~/sec -> up to 300MB/sec

- Premium (new)
  - Up to 100.000 IOPS*
  - Up to 5GB/sec*
  - Based on the fileshare size

Premium (New)
100 TiB (20x)
Up to 100,000 IOPS (100x)
Up to 5 GiB/s (>85x)

Standard (Today)
5 TiB
1000 IOPS
Up to 60 MiB/s

Standard (Updated)
100 TiB (20x)
Up to 10,000 IOPS (10x)
Up to 300 MiB/s (5x)

AFS - Limitations

- Max. Size of Azure Fileshare 100TB
- Using more than one Fileshare possible (max. 500TB)
- Servers can only registered in one AFS group
- Filesystem only NTFS – No ReFS is supported
- Data duplication possible -> without Cloud Tiering

Replication ⓘ

Locally-redundar

Large file shares ⓘ

Disabled Enabled

Provides file share support up to a maximum of 100 TiB. Large file share storage accounts do not have the ability to convert to Geo-redundant storage offerings and upgrade is permanent. Learn more

Azure Files AD Integration

- Available in all Global regions
- When Azure Fileshare join the domain means the Storage Account joins the domain
- Deactivate GPOs on the selected OU
- AD Accounts needs rights to create domain objects
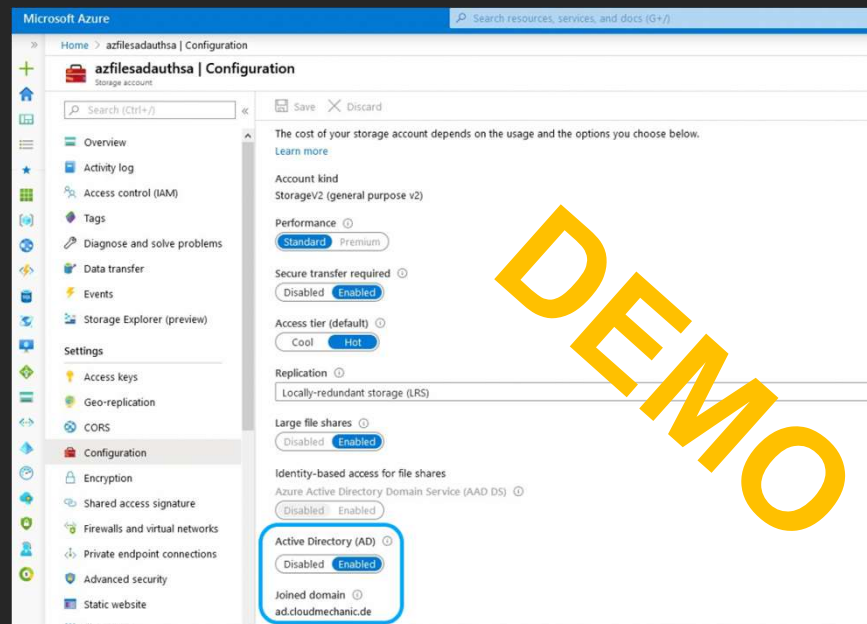
Azure Files AD Integration - Requirements

- Existing Windows Server AD on a Windows Server
- Identites used for Ad Integration must be synced to Azure AD
- Azure AD Tenant and Fileshare must be associate with the same Sub
- VM must be joined in the same AD DS
- Use region near by location
- Needs Azure Files PowerShell Module
- Use separate Storage Account
- Create separate OU in AD DS

Azure Files AD Integration

```
Assert-DotNetFrameworkVersion : This module/cmdlet requires at least .NET Framework4.7.2 to be installed. Please
upgrade to the newest .NET Framework available.
In C:\Users\RogerG781\Documents\WindowsPowerShell\Modules\AzFilesHybrid\0.2.0.0\AzFilesHybrid.psm1:5552 Zeichen:13
+             Assert-DotNetFrameworkVersion
+             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : NotSpecified: (:) [Write-Error], WriteErrorException
    + FullyQualifiedErrorId : Microsoft.PowerShell.Commands.WriteErrorException,Assert-DotNetFrameworkVersion
```

- Install latest Az PowerShell Module

- Download and Import AzFilesHybrid Module

- Connect-AzAccount

- Run join-AzStorageAccountsforAuth

- join-AzStorageAccountForAuth -ResourceGroupName "<resource-group-name-here>" -Name "<storage-account-name-here>" -DomainAccountType "<ServiceLogonAccount|ComputerAccount>" -OrganizationUnitName "<ou-name-here>"

Azure Files AD Integration

Azure Files AD Integration - Recap

- Perfect to move Fileservers to Azure ☺
- Or to host Fileshares for Application in Azure ☺
- Useful as WVD Profile Share ☺
- Full secure possible with Azure Private Link ☺
- Easy to install, but a little strange about the manual process ☹
- Accounts must be Domain- and Azure AD joined ☹

Links

- https://docs.microsoft.com/en-us/azure/storage/files/storage-files-introduction
- https://docs.microsoft.com/en-us/azure/storage/files/storage-files-identity-auth-active-directory-enable
- https://www.reimling.eu/2020/06/configure-azure-files-on-premises-active-directory-ad-ds-authentication-for-fileserver-or-wvd/
- https://azure.microsoft.com/en-us/updates/active-directory-for-authentication-on-smb-access-to-azure-file-in-preview/
- https://github.com/Azure-Samples/azure-files-samples/releases

Questions? ->
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