Manage Azure File Sync with Windows Admin Center

by Gregor Reimling

Gregor Reimling

Cloud Consultant @Sepago

Cloud and Datacenter, Governance

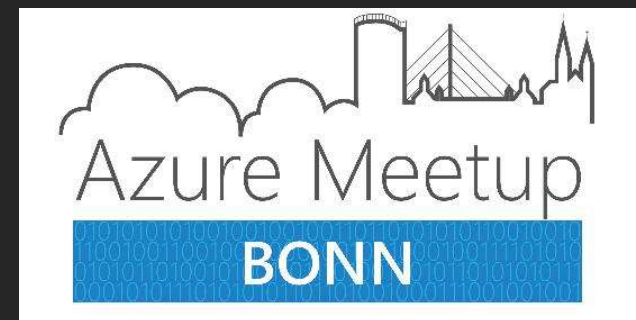Azure Infrastructure (Governance, IaaS, Security)

info@reimling.eu

@GregorReimling | @AzureBonn

www.reimling.eu | www.neutralien.com

Azure File Sync - Agenda

- General
- Functions
- Demo & Configuration
- Migration & Backup
- Conclusion
- Links

General

- AzureFileSync = AFS
- Synchronize Fileserver between Company Boundaries
- General Availability since July 2018
- Fileserver need Agent for syncing
  - Agent registered Fileserver in Azure
  - Monitoring and Syncing
  - Transparent for User
- Files will be synced to an Azure Fileshare

Azure Files Introduction
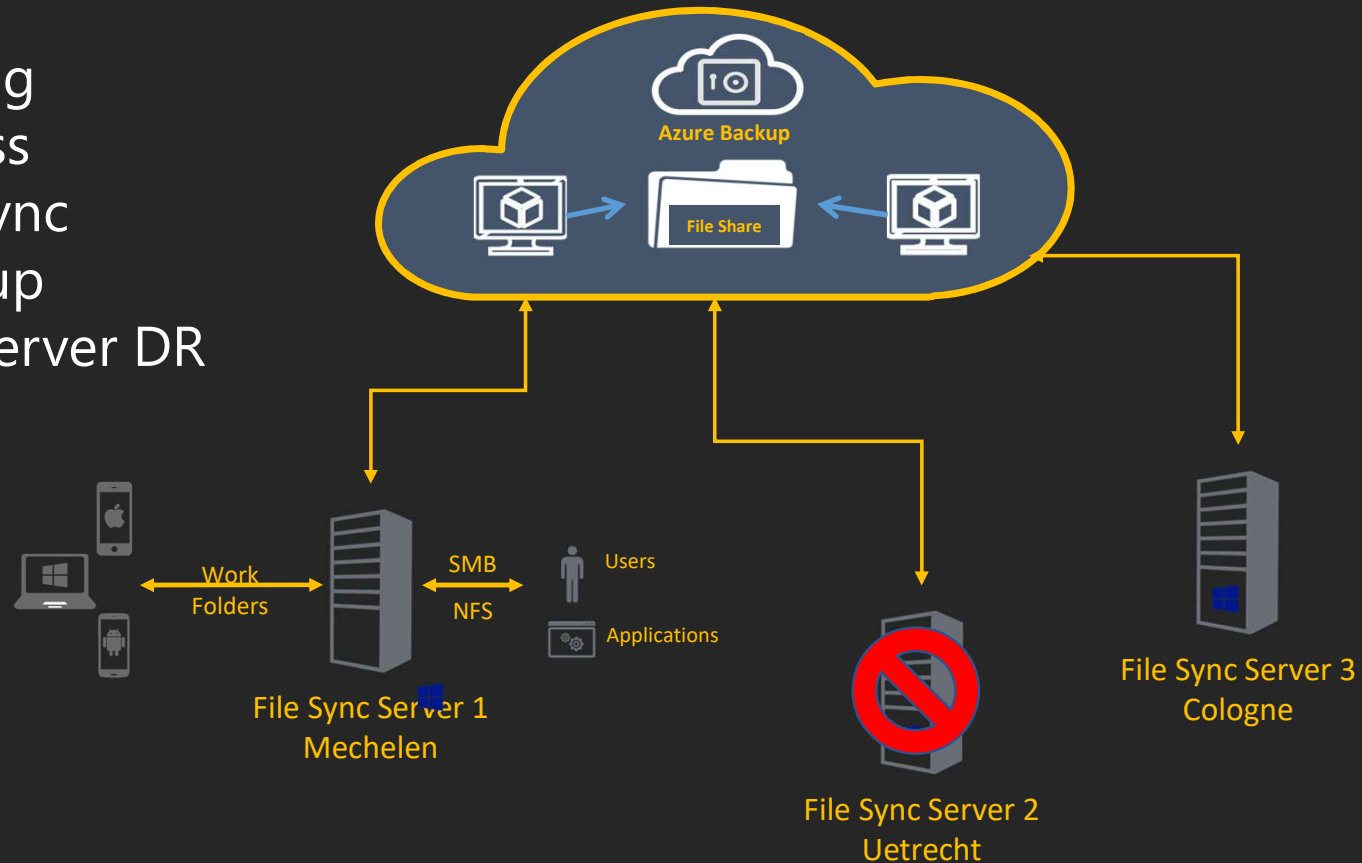
https://docs.microsoft.com/de-de/azure/storage/files/media/storage-files-introduction/files-concepts.png
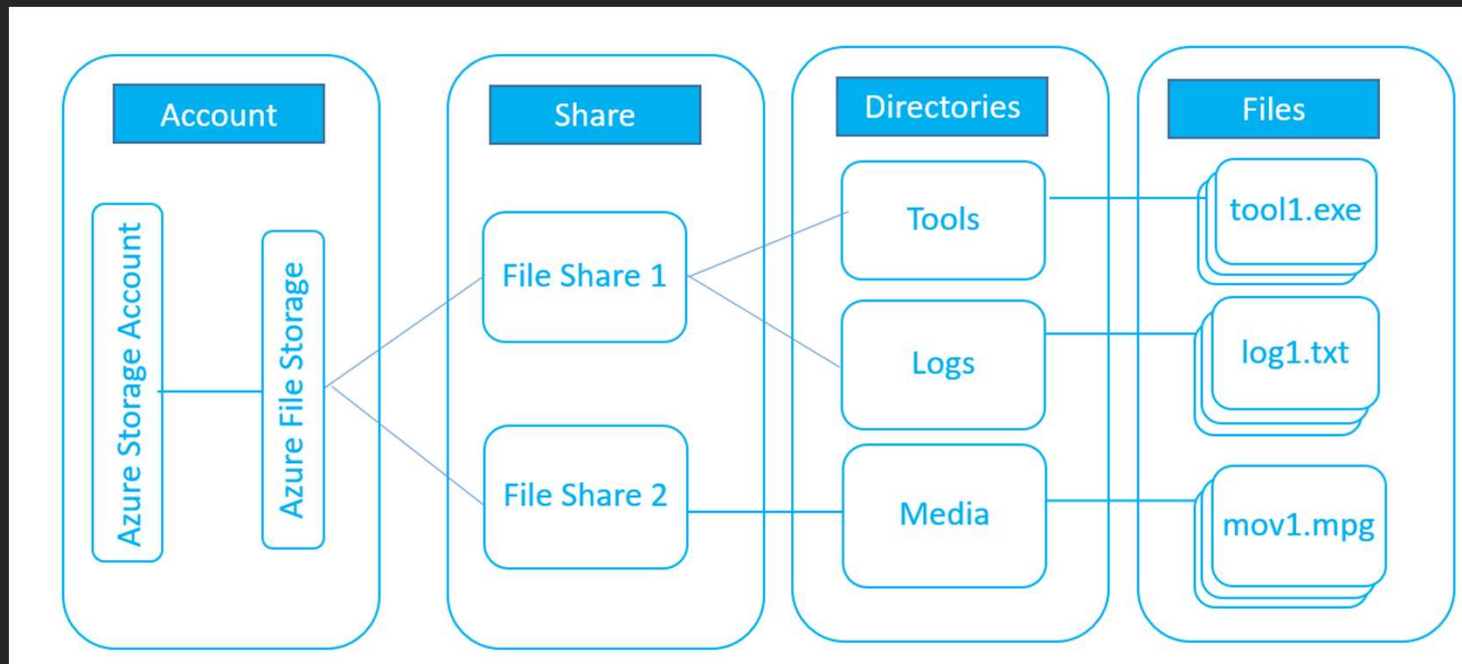
First some basically Introduction into Azure Files

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
- cloudbrew.blob.core.windows.net -> Storageaccount Name
- cloudbrewfiles.file.core.windows.net -> Fileshare Name

Azure Files Announcements (MS Ignite)

- 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
- New tiers coming
  - Premium, Transaction-optimized, Hot, Cool

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)
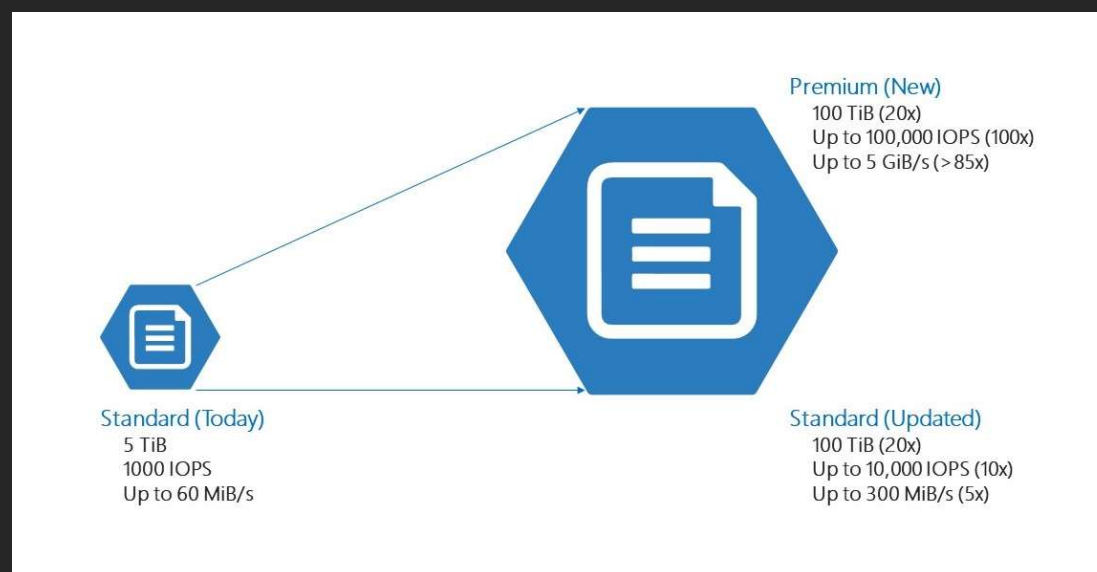
Azure Files – How it works
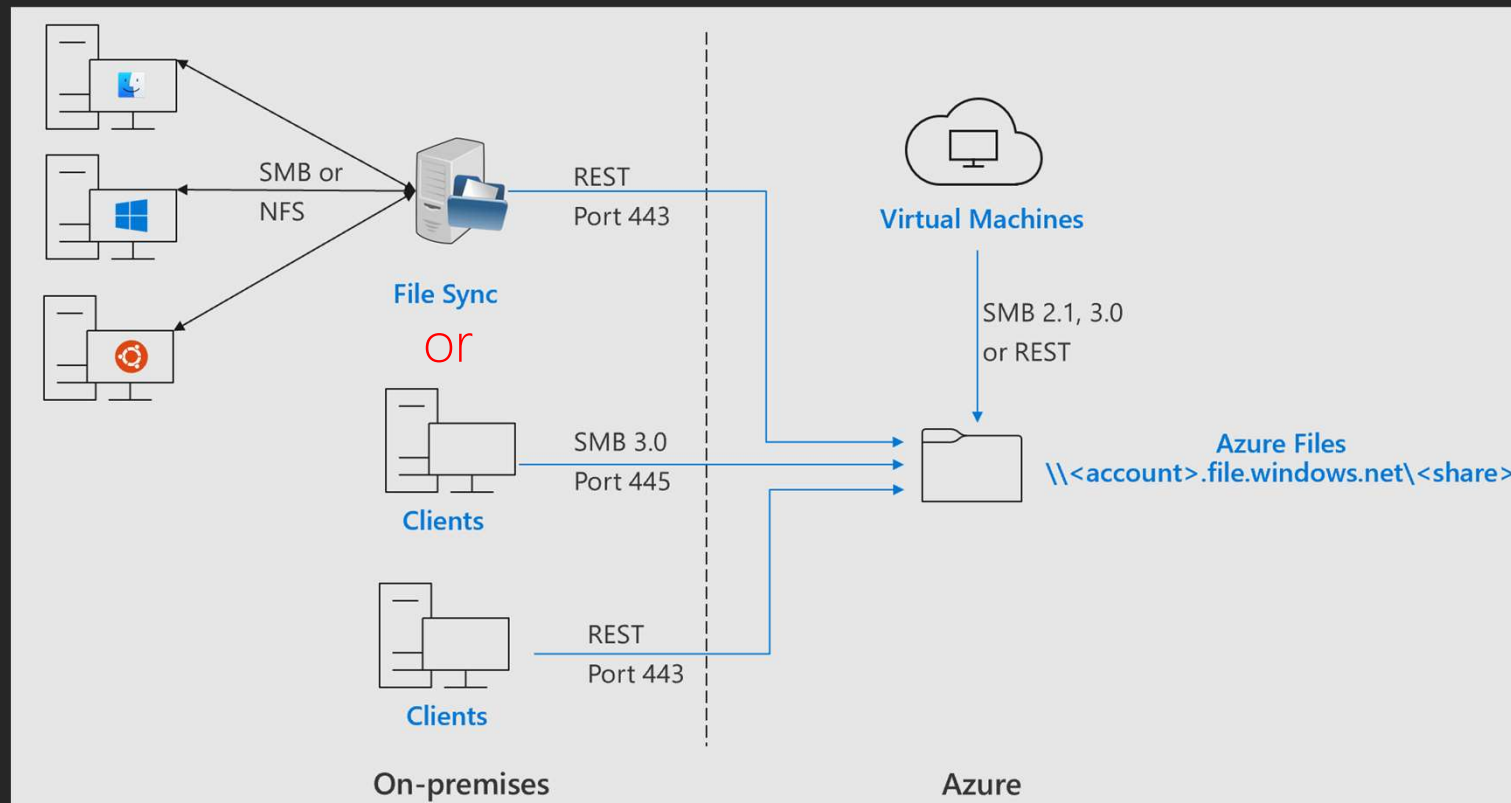
AFS – Requirements

- WS2012R2 GUI + PowerShell 5.1
- WS2016 GUI + Core
- WS2019 GUI + Core
- Internet Connection
- Dedicated Storage account (Recommended)
- Azure Fileshare
- Fileserver needed Powershell Module AzureRM
- Agent Installation

> ⚠ **Pre-requisites are missing**
>
> Retry server registration after performing the following actions:
>
> Install the latest AzureRM PowerShell module by following the documentation: https://go.microsoft.com/fwlink/?linkid=856959.

AFS – Components

Storage Sync Service

Sync Group

Registered Server

- Associate with Sync Group (1:1)

Cloud Endpoint

- Azure Fileshare

Server Endpoint

- Serverpath

Azure File Sync Service Agent

AFS – Cloud Tiering

- Bring your Fileserver in caching mode
- Sync agent build a heatmap of local files
- Hottest data will be stored locally
- Cold data only available in the Cloud
- Transparent for the User
- Local file have an pointer to the cloud file

Configure steps for Azure File Sync

Azure File Sync
can help you move your data into cloud while keeping your frequently accessed data near you

Windows File Server

Azure Storage Sync Service

Azure Files share

Create Sync Group

Register Server

Create server endpoint

On prem and Cloud Access

Existing End Users Access

No change in Application config
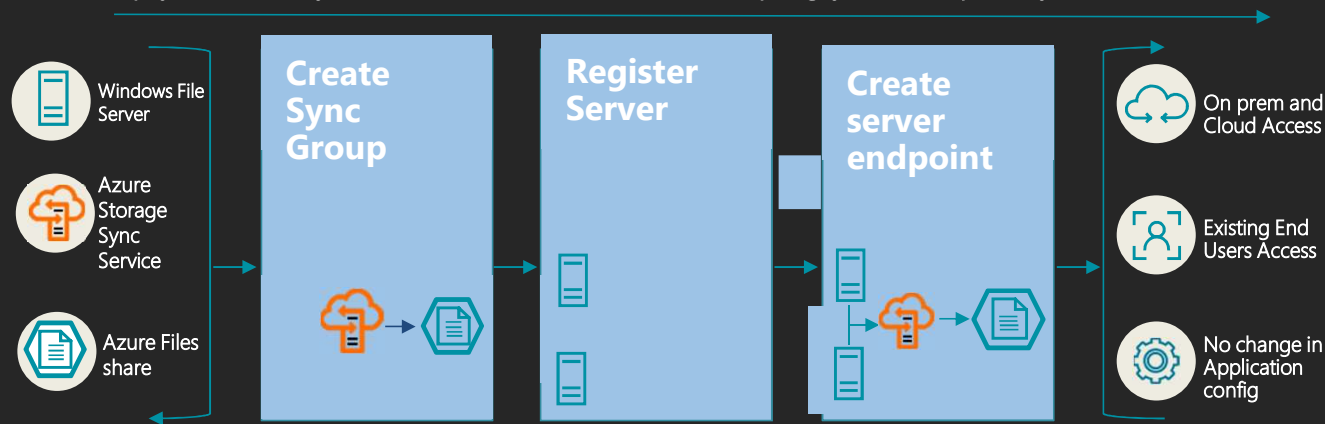
Windows Admin Center

- Managing via Azure Portal
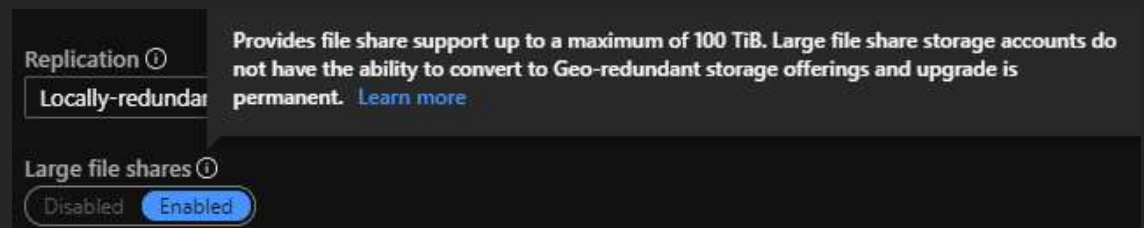- Or use Windows Admin Center integration
- No managing options on the local Server
- Windows Admin Center = WAC
- Next Generation Servermanager – Webbased on HTML 5

- Central surface for all server
- Easy installation - (MSI Paket) On-Premise or Cloud VM
- All Functions from the Servermanagers + many more included
- Import of existing Server easy via Textfile
- Serveranalysis agentless – WMI and PS

Manage AFS with WAC ☺

- Easy deployment of Azure File Sync on the servers
- Doesn´t need for logon to the Server
- Central view blade for Azure File Sync
- Easy to step to Azure Portal blade for additional configuration

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

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

Large file shares ⓘ

Disabled Enabled

16

Centralize Backup for On-Prem Fileservers

- Enable Azure File Sync on the Server (it can be a single server)
- Create a Backup Vault
- Create a Backup Policies for Fileshares
- Integrate the Azure File Sync Fileshare into the Backup
- That`s it – Now you have a fully backup for yor Server to the Cloud

AFS – Need to know

- Self-service restore is now possible (Cloud Tiering supports now VSS)

- File collision today -> saving two files with same name, the 2nd file get the servername appended

- Don´t remove Server Endpoint and add them new – can cause data lost
  - Cloudtiering enabled - then first disable it via Powershell

- Bandwith - It depends on fileshare size
  - Import-Module "C:\Program Files\Azure\StorageSyncAgent\StorageSync.Management.ServerCmdlets.dll"
  - New-StorageSyncNetworkLimit -Day Monday, Wednesday, Friday -StartHour 9 - EndHour 17 -LimitKbps 10000

AFS - Conclusion

- Fast installing and stable syncronizing ☺
- Costs: 1 Server Free, 5$ each additional server ☺
- DRaaS for Fileservers ☺
- Supporting for DFS-R and SOFS ☺
- Easily migrate Backup ☺
- Fileshare Limit 100TB since MSIgnite ☺
- Can not change sync frequency ☺
- No support for ACLs in Azure Files (will be coming) ☺
- 1:1 binding between Server and Sync Group ☹

AFS - Links

- Planning for an Azure File Sync deployment
- Manage registered servers with Azure File Sync
- Release notes for the Azure File Sync agent
- Introducing backup for Azure file shares
- Feedback for AzureFiles Product Group
- MS Ignite 2019 – Migrate SMB and NFS to Azure File Sync BRK3241
- MS Ignite 2019 – Windows Admin Center – Unlock Azure Hybrid value - BRK2379
- MS Ignite 2018 – Azure Files & Azure File Sync technical foundation THR2253
- Azure File Sync DSC from Jan Egil Ring
- Azure File Sync Blog entries on Reimling.eu (German)
- Azure Pricing Calculator

Thank you!

@GregorReimling | @AzureBonn
www.reimling.eu | www.neutralien.com