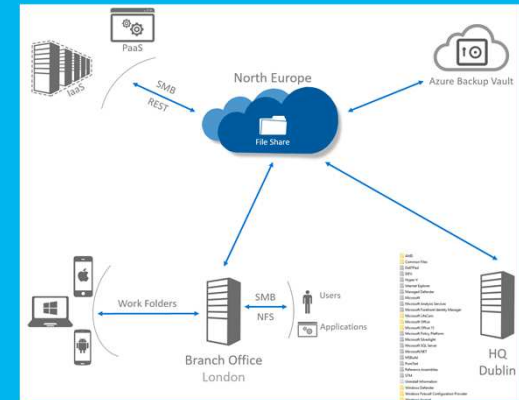


Azure File Sync – Your Cloud File Server

Gregor Reimling | Azure MVP





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Gregor Reimling

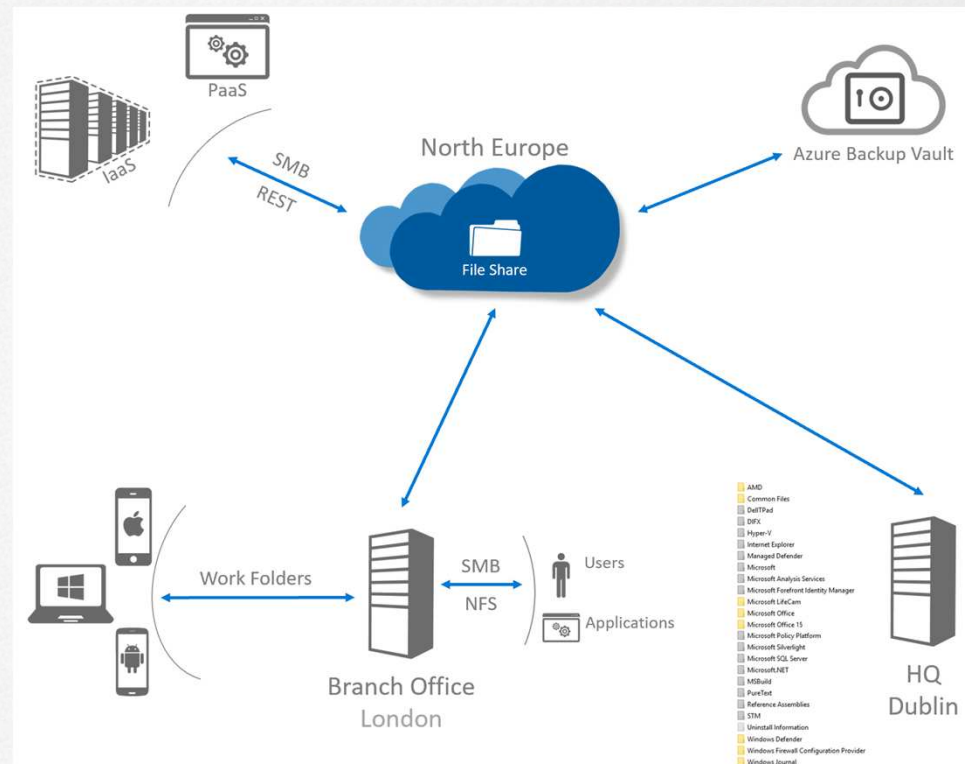
- Cloud Architect
- Orga AzureBonn Meetup
(www.azurebonn.de)
- Microsoft MVP for Azure
- Working for sepago GmbH Cologne
 - Twitter: [@GregorReimling](https://twitter.com/GregorReimling)
 - Blog: <https://www.reimling.eu>



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Azure File Sync – Agenda

General
Functions
Demo & Configuration
Migration & Backup
Conclusion
Links





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AFS - 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



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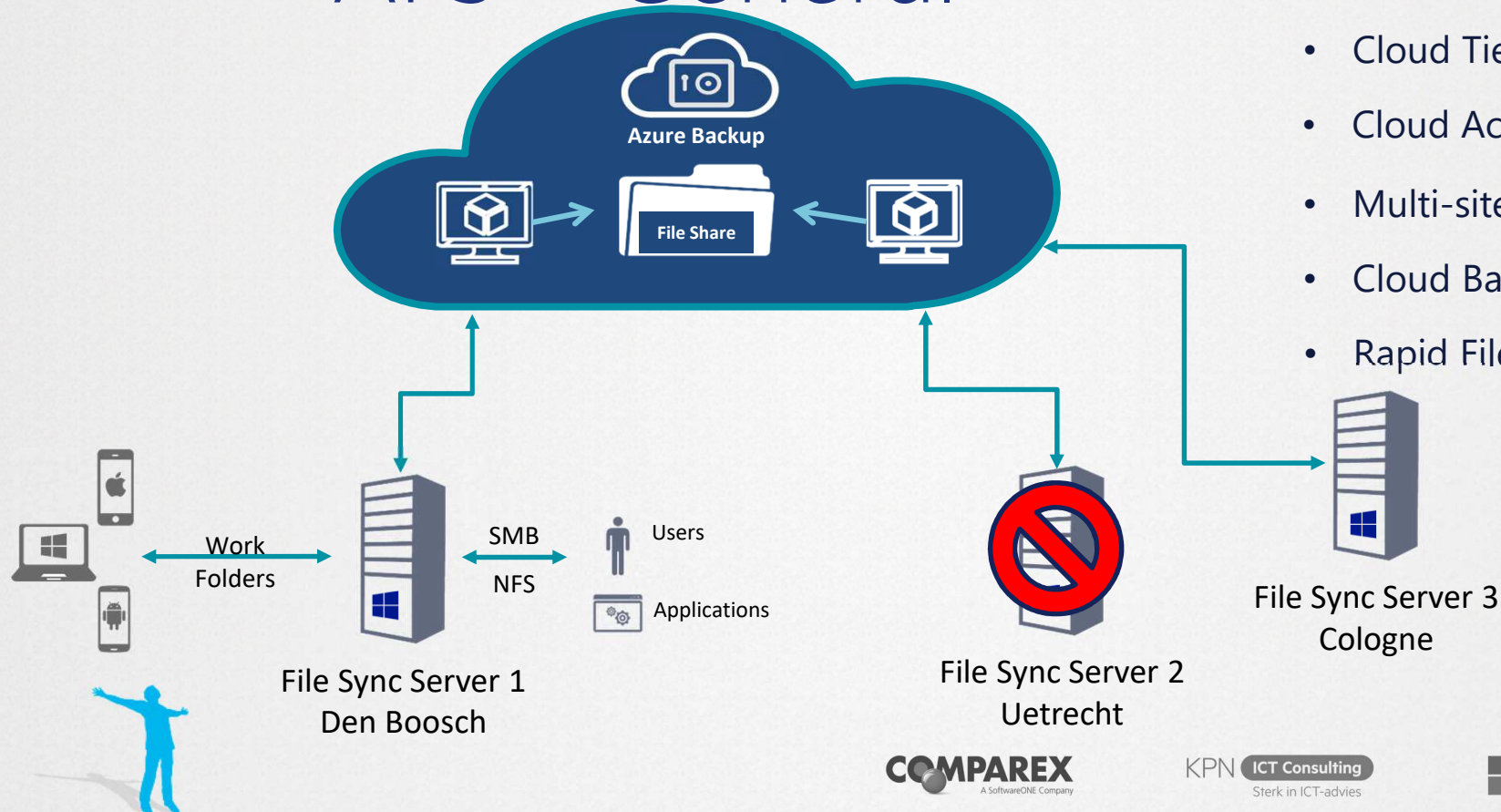
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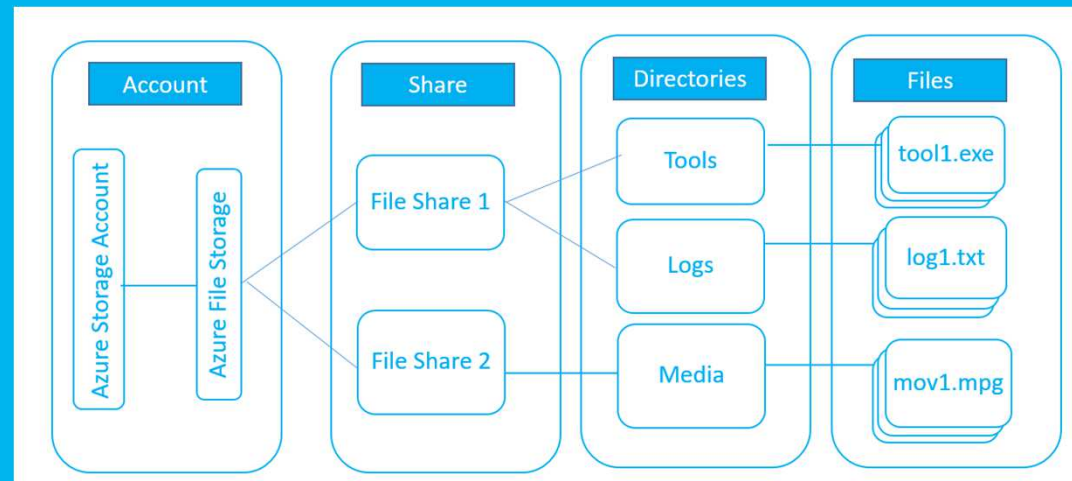
AFS – General

- Cloud Tiering
- Cloud Access
- Multi-site Sync
- Cloud Backup
- Rapid File Server DR



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Azure Files



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

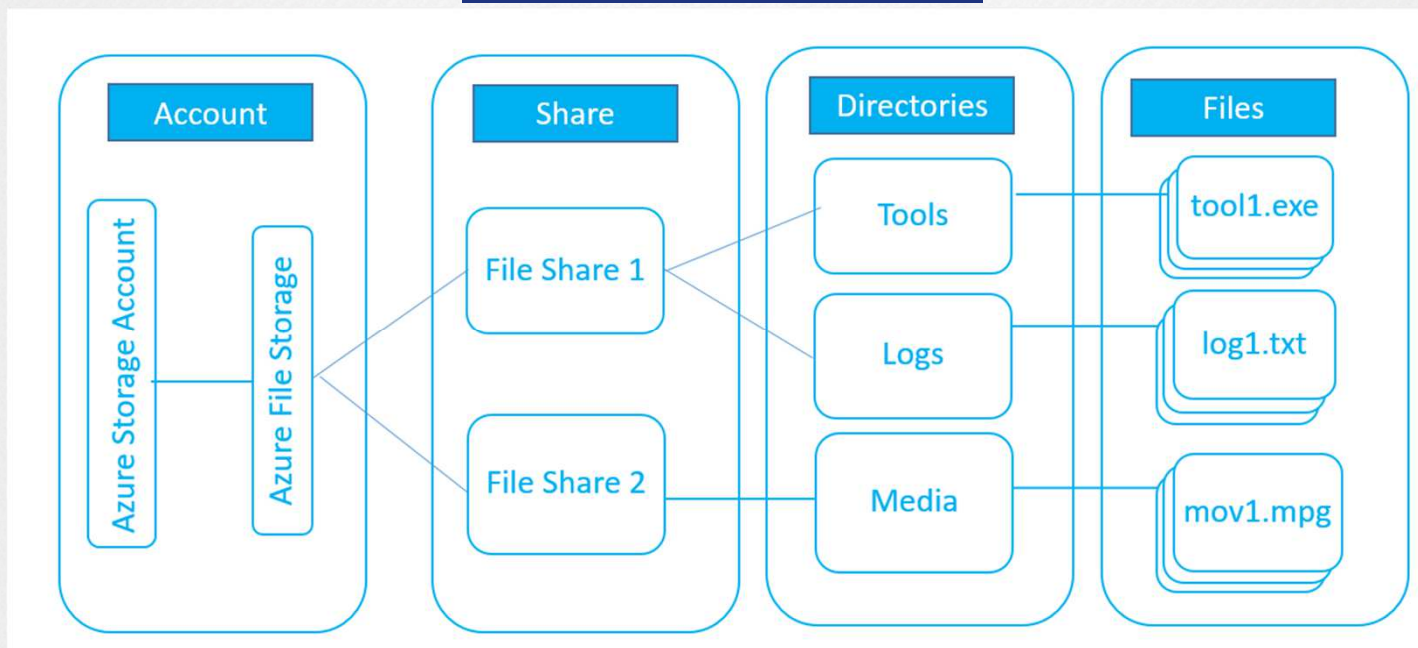
First some basically Introduction into Azure Files





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Azure Files



First some basically Introduction into Azure Files





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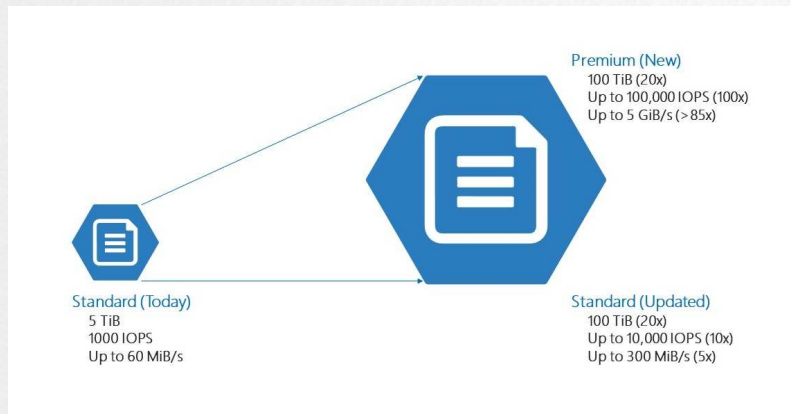
Azure Files

- 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
- Expertslive1.blob.core.windows.net -> Storageaccount Name
- expertslivefiles.file.core.windows.net -> Fileshare Name



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Azure Files – Announcements



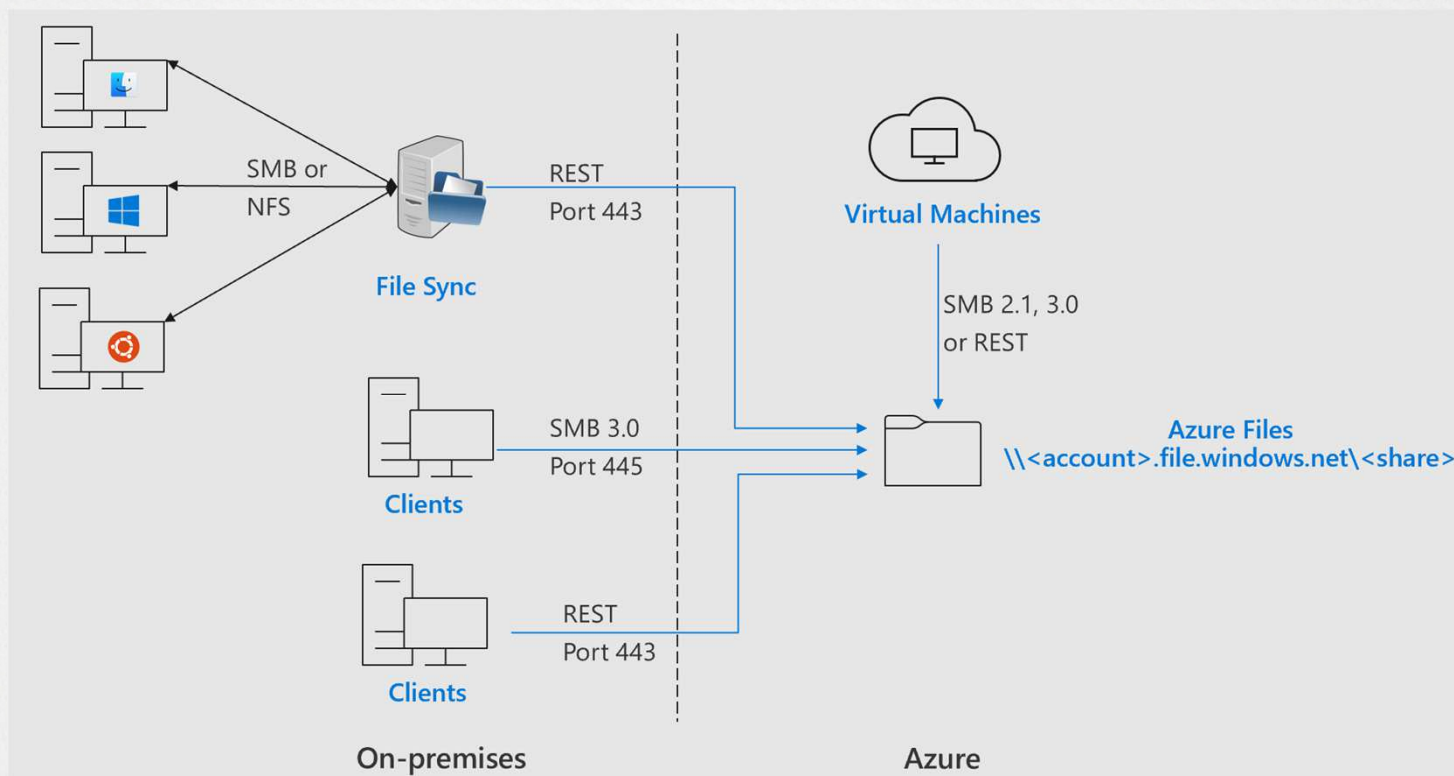
- Standard
 - 5TB -> 100TB Fileshare
 - Planned for Q3/2019
 - 1000 -> up to 10000 IOPS
 - 60MB/sec -> up to 300MB/sec
- Premium (new)
 - Up to 100.000 IOPS*
 - Up to 5GB/sec*
 - Based on the fileshare size





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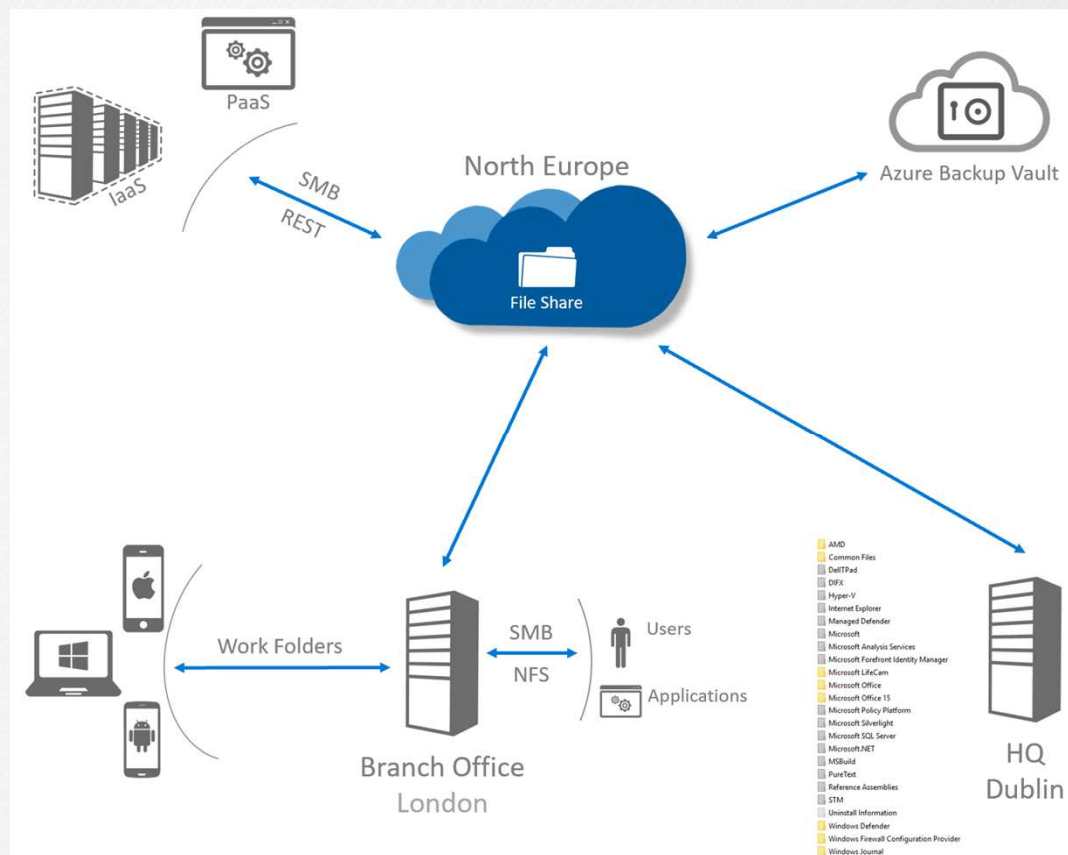
Azure Files – How it works





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Azure File Sync



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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>.



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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



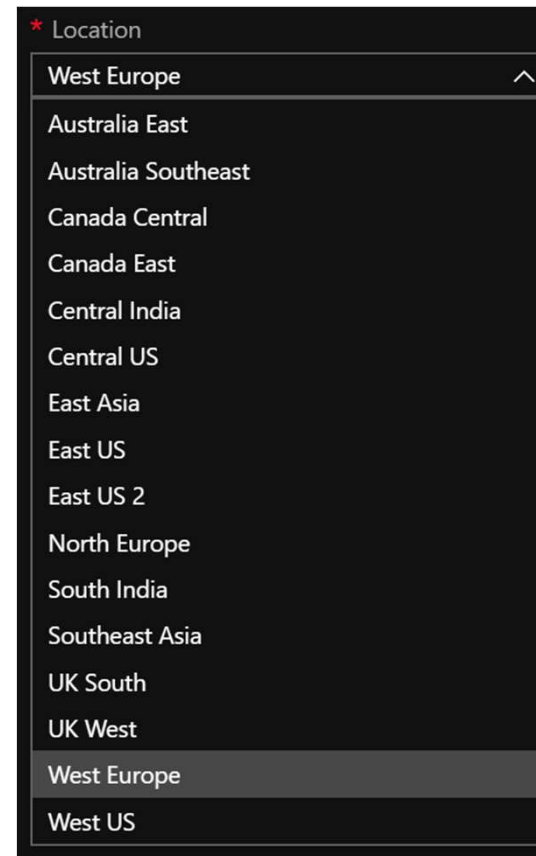
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AFS – Limitations

- Max. Size of Azure Fileshare 5TB (100TB coming Q3/19)
 - 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



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AFS – Preperation Steps

In a nutshell



CREATE
STORAGEACCOUNT
& FILESHARE



CREATING STORAGE
SYNC SERVICE
(AZURE FILE SYNC)



CREATING
SYNCGROUP



INSTALL-MODULE
AZURERM



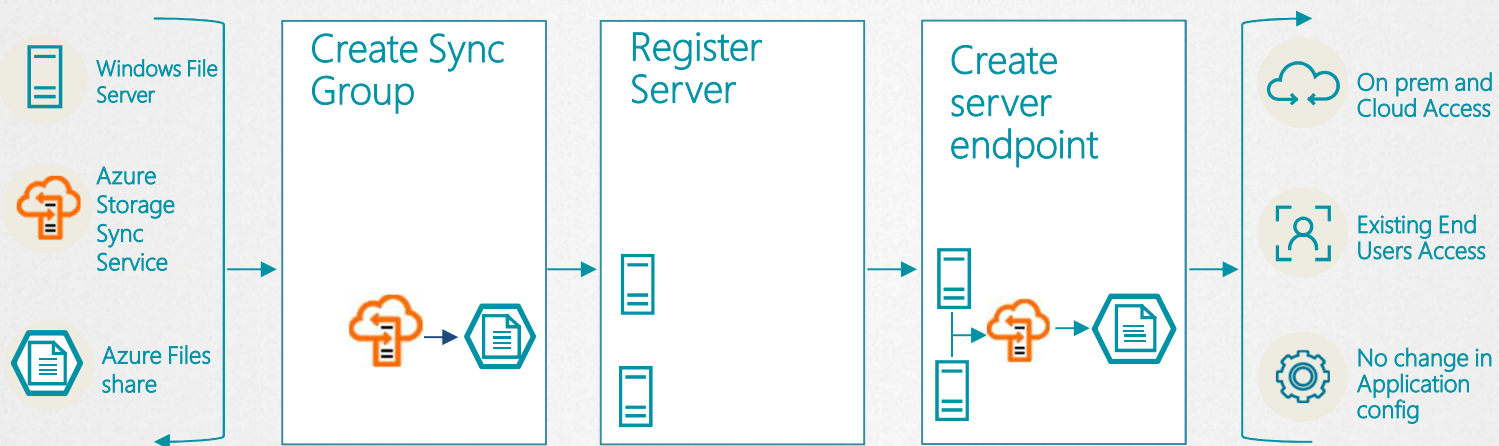
ON THE FILESERVER

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Get Started with AFS in a few simple steps

Azure File Sync

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





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Manage AFS



- Managing via Azure Portal
- Or use Windows Admin Center integration
- No managing options on the local Server




Extensions

We might have to restart the Windows Admin Center gateway after installing an extension,

Available extensions Installed extensions Feeds

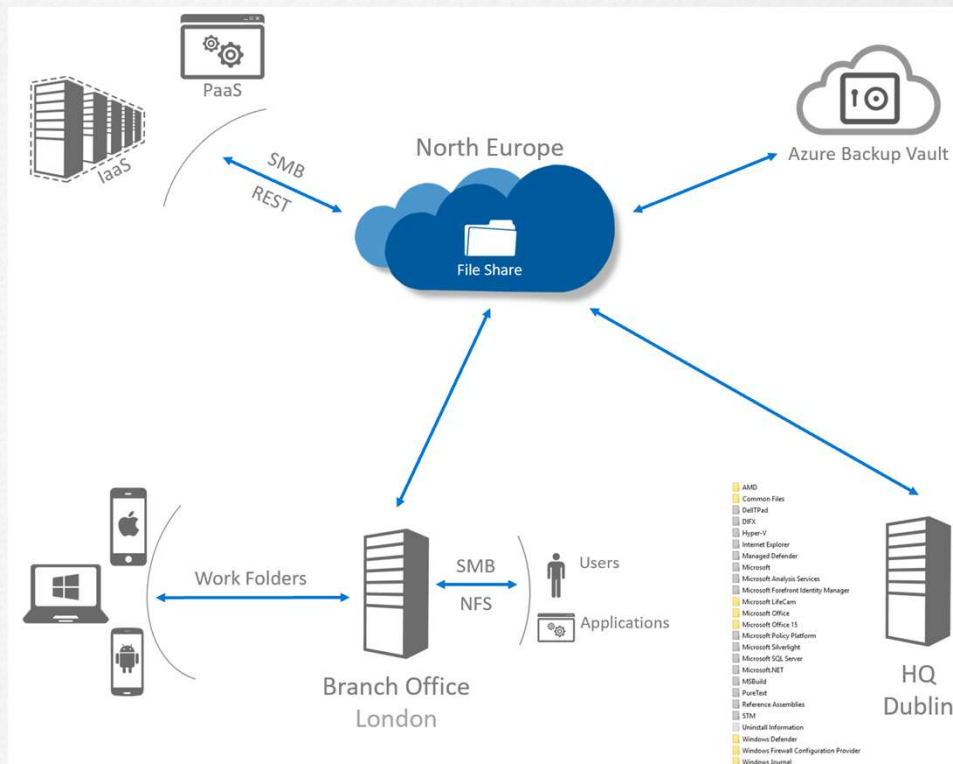
 Uninstall  Update

Name ↑	Status
msft.azure.azure-backup	Installed
msft.sdn.acls	Installed
msft.sdn.logical-network	Installed
msft.sdn.vgw-network-connection	Installed
msft.sme.apps-and-features	Installed
msft.sme.azure-center	Installed
msft.sme.azure-file-sync	Update available (1.40.1) 



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DEMO Time



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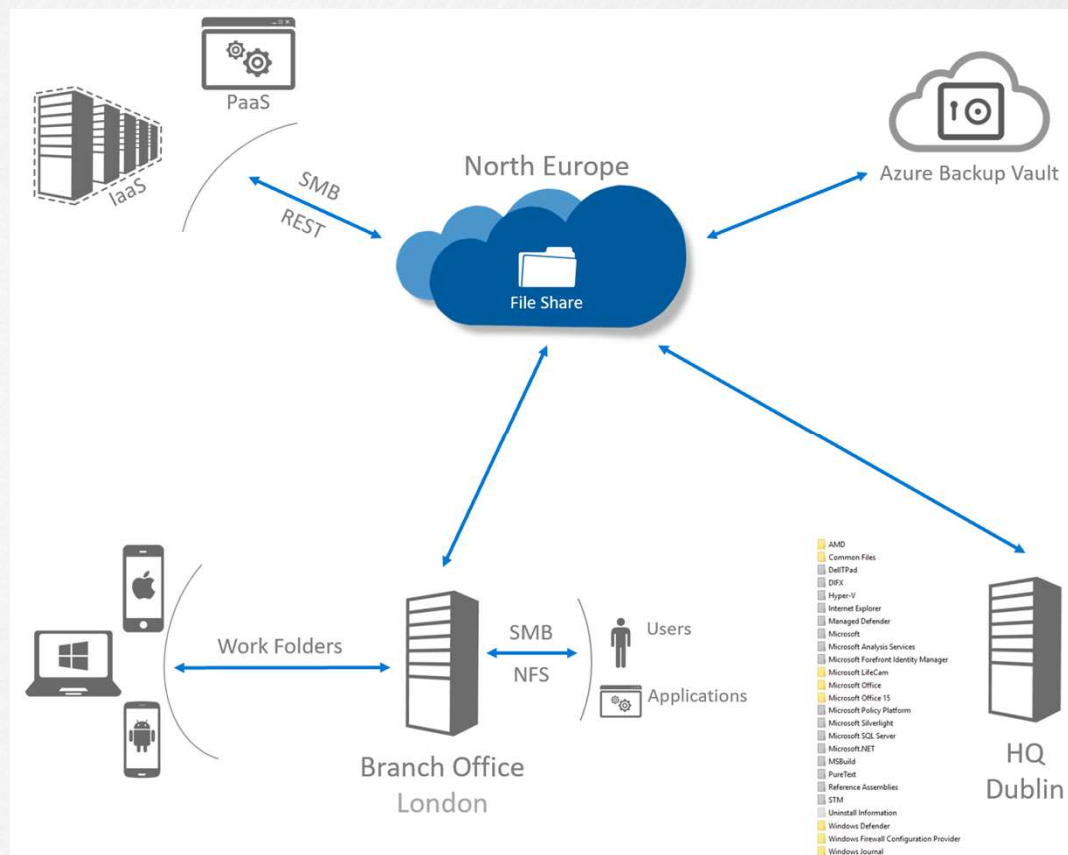
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Azure File Sync - Migrate



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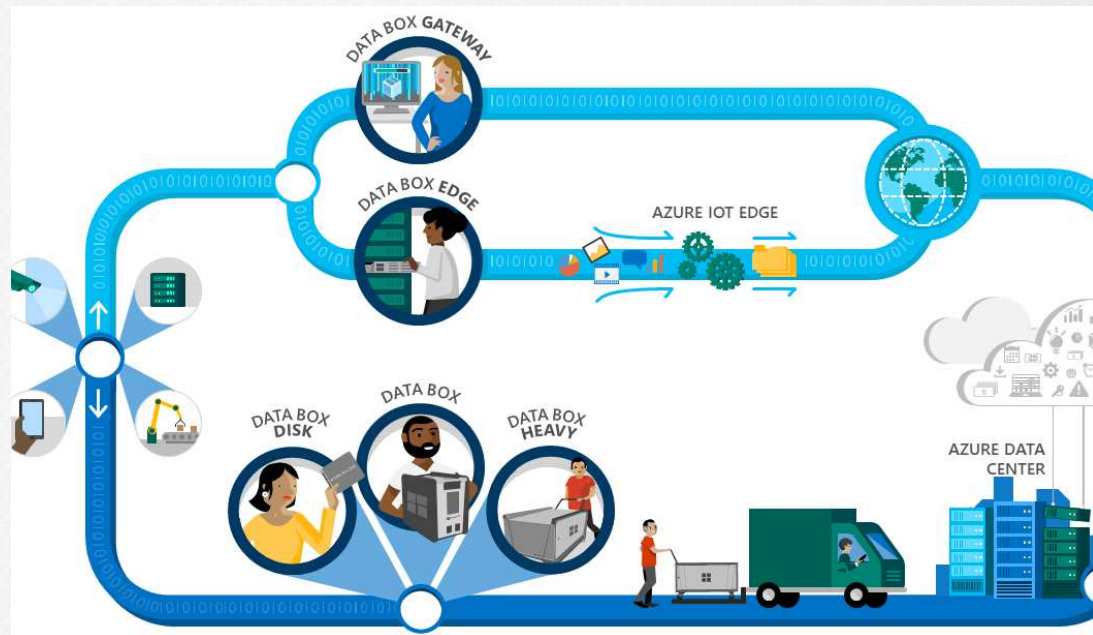
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Azure Data Box

- GA since October 2018
- For offline data transfer
- Different sizes available
 - 40TB, 100TB, 1PB



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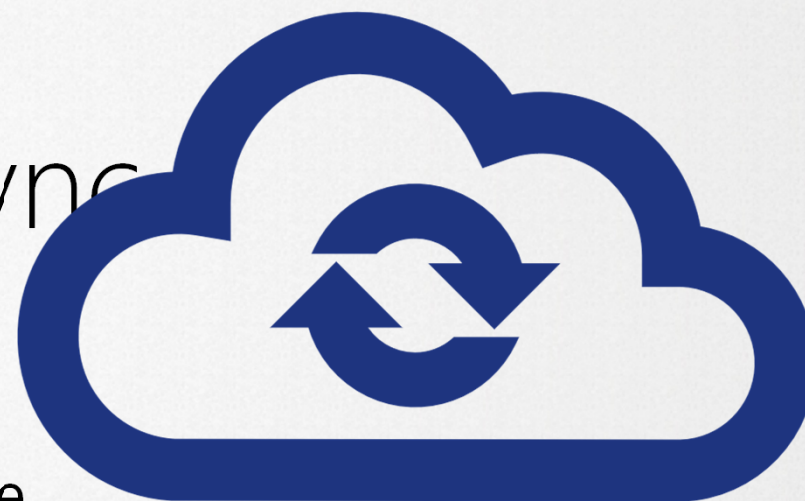


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Azure File Sync – Backup

How can we Backup the
Content



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Simple, central backup



Shift On-Prem Backup to Cloud



Backup via Azure Fileshare (Preview)



Don't use VSS when Cloudtiering is enabled



AFS – Backup

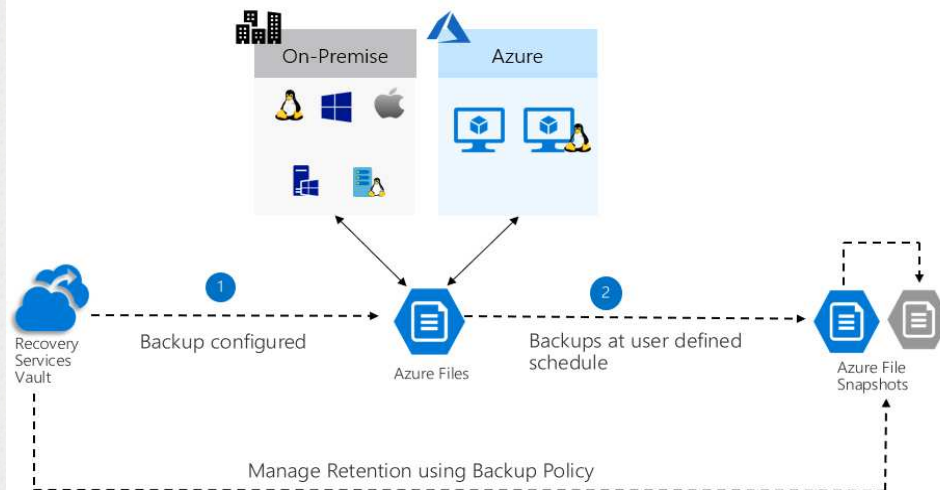
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AFS – Backup

Backup for Azure File Shares



- Simple Configuration
- User-Defined Retention
- Zero Infrastructure
- File-Level Restore
- Cost-Effective

Connect Upload Add directory Refresh Delete share Properties Quota Snapshot

Backup (Preview) is not enabled for this file share. Click here to enable backup.

Backup Goal

Where is your workload running?

Azure

What do you want to backup?

Azure FileShare

Virtual machine

Azure FileShare

Backup

Backup > Select File Shares

Select File Shares

Filter items...

NAME	AZURE FILE SHARE TYPE
sepagoforum	Sync Enabled

Storage Account: sepagoforum

File Share to backup: Select

Backup Policy: Select



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AFS – AzureAD Integration (Preview)



Today only for AzureAD Domain Services (AAD DS)



Enables SMB access to Azure Fileshare using AAD credentials



Support share level permission using RBAC



Enforce NTFS folder and file permission



[Get started](#)



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AFS – Need to know

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

Don't remove Server Endpoint and add them a 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.M  
anagement.ServerCmdlets.dll"
```

```
New-StorageSyncNetworkLimit -Day Monday,  
Wednesday, Friday -StartHour 9 -EndHour 17 -  
LimitKbps 10000
```

6/6/2019





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AFS – On-Prem Hardware Config

- DataOn Kepler 47
- 2 Node Storage Spaces
Direct Cluster
- Built for Branch-offices
- Will be pre-configured
with Azure File Sync
- More coming soon



* Image by DataOn

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AFS – Conclusion

Fast installing and
stable synchronizing
😊

Costs: 1 Server
Free, 5\$ each
additional server 😊

DRaaS for
Fileservers 😊

Supporting for
DFS-R and SOFS 😊

Easily migrate
Backup 😊

Fileshare Limit
100TB 5TB 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 😊



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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 2018 – A new era for Azure Files: Bigger, faster, better!](#)

[MS Ignite 2018 – Azure Files in 2018: Bigger faster better! - 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](#)



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Q&A

Thank you!



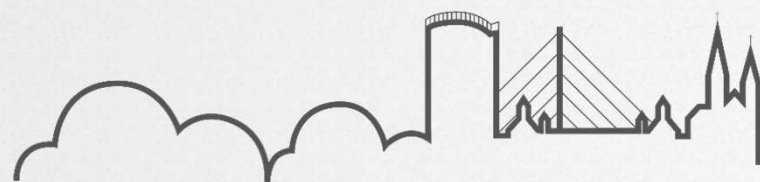
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Azure Meetup

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Thank you
<https://www.reimling.eu>



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Please rate the Session in the Yellenge App





Experts  Live Netherlands