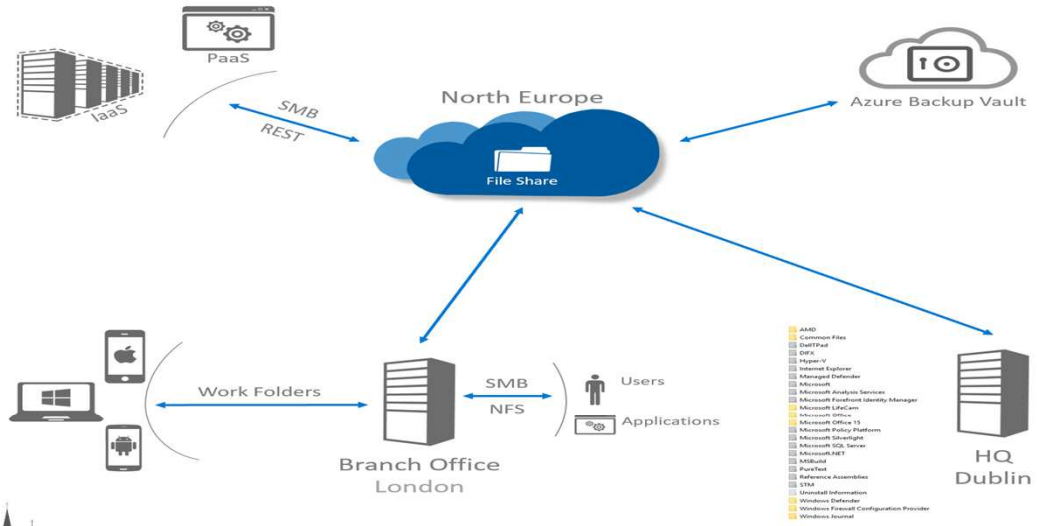
Azure File Sync



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Your Cloud Fileserver

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About me

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  - Blog: https://www.reimling.eu

Azure File Sync – Agenda

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

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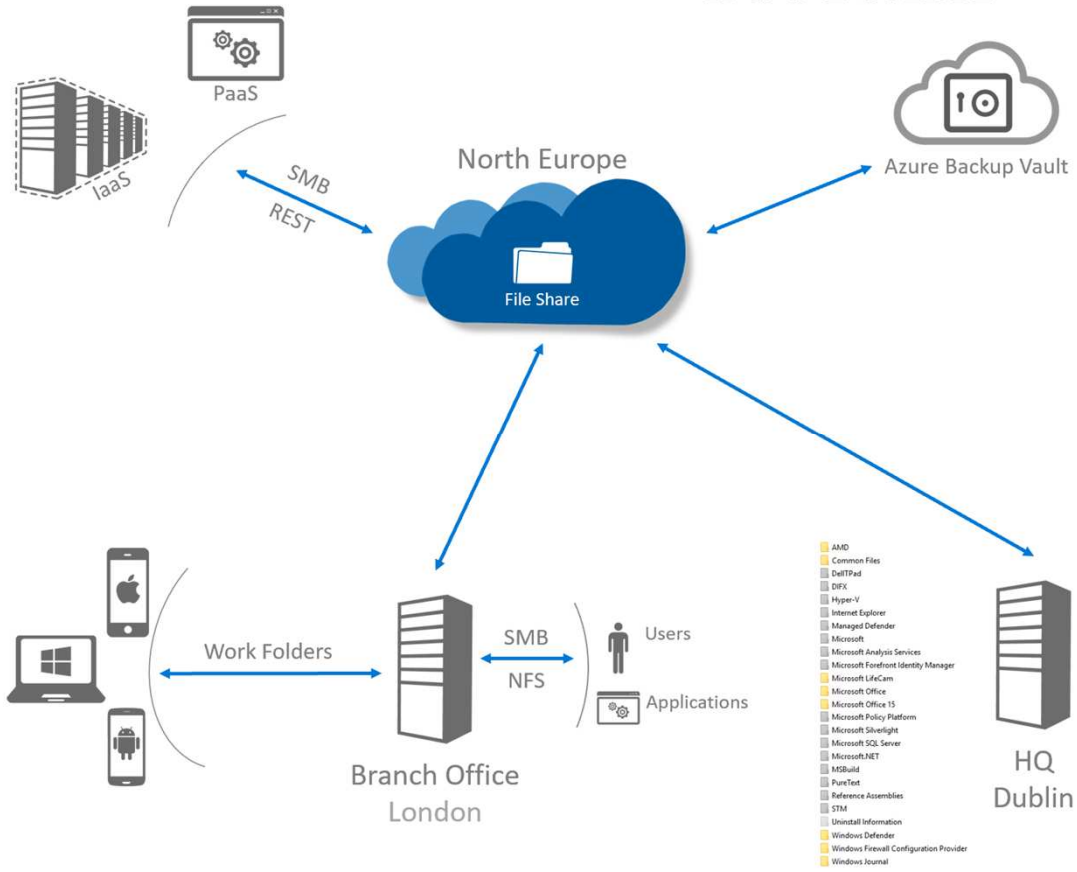

AFS - General

- 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

Azure Files

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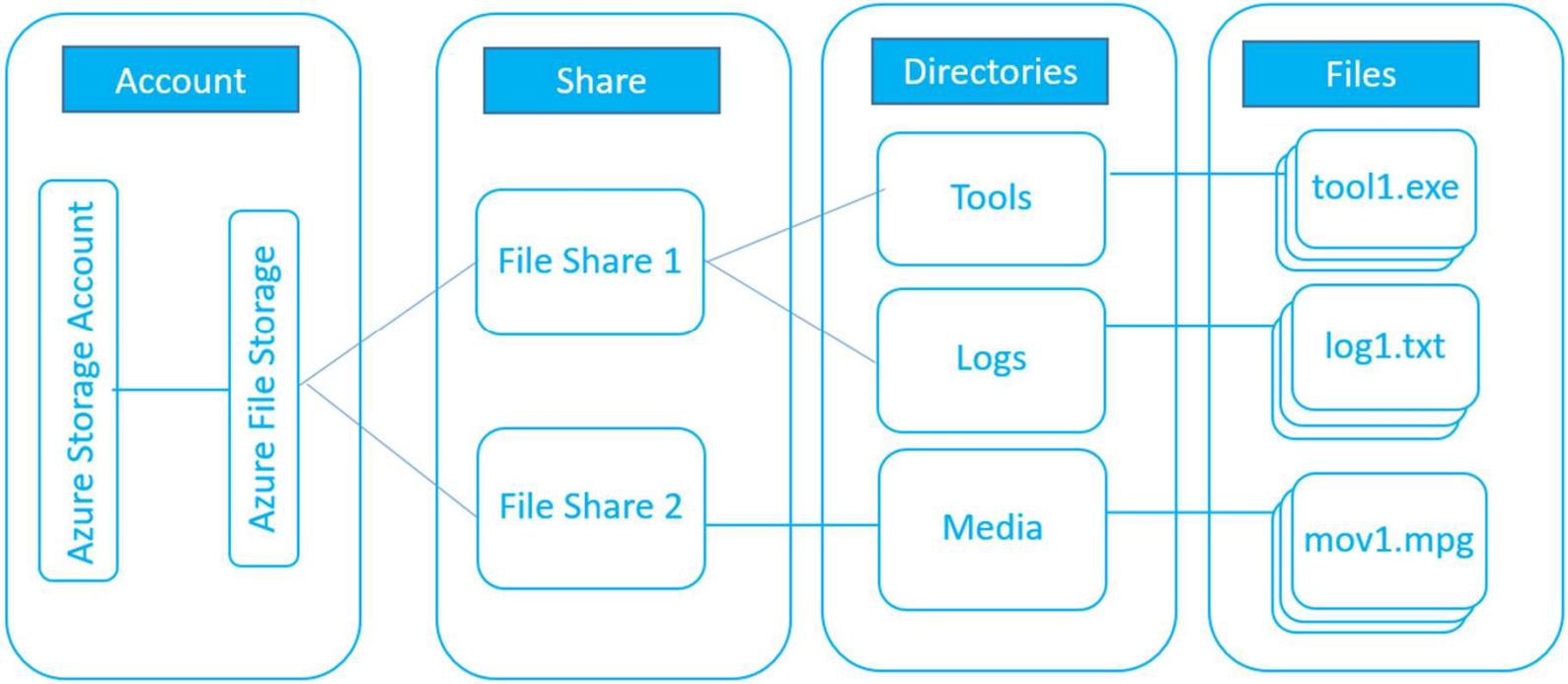

https://docs.microsoft.com/de-de/azure/storage/files/media/storage-files-introduction/files-concepts.png

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
  - azurecologne.blob.core.windows.net -> Storageaccount Name
  - azurecologne.file.core.windows.net -> Fileshare Name
  - https://azurecologne.file.core.windows.net/azurecologne/info/afs.pptx

Azure Files – Announcements

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

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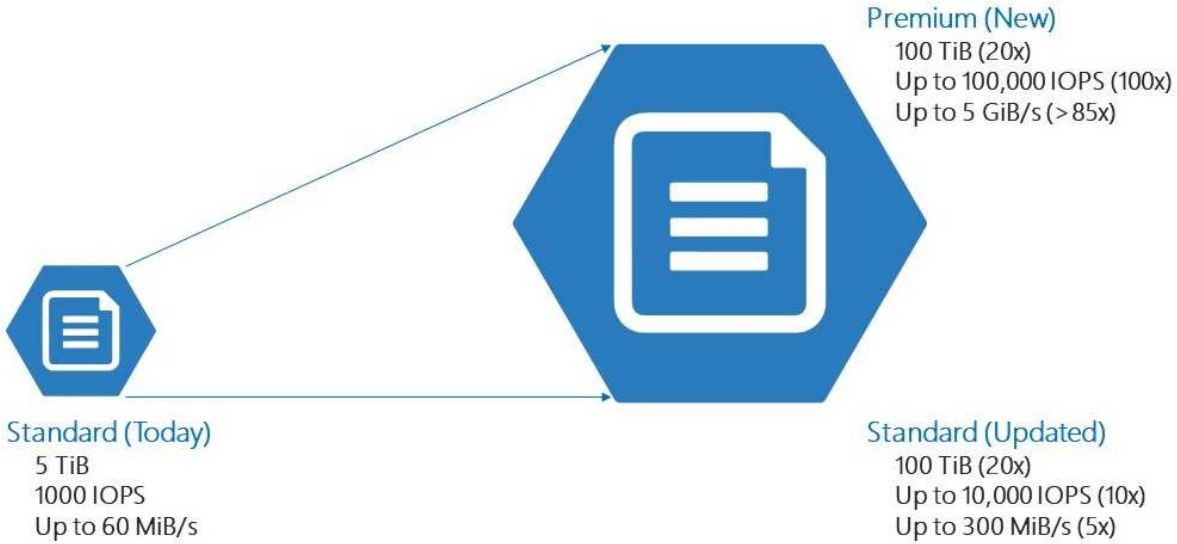
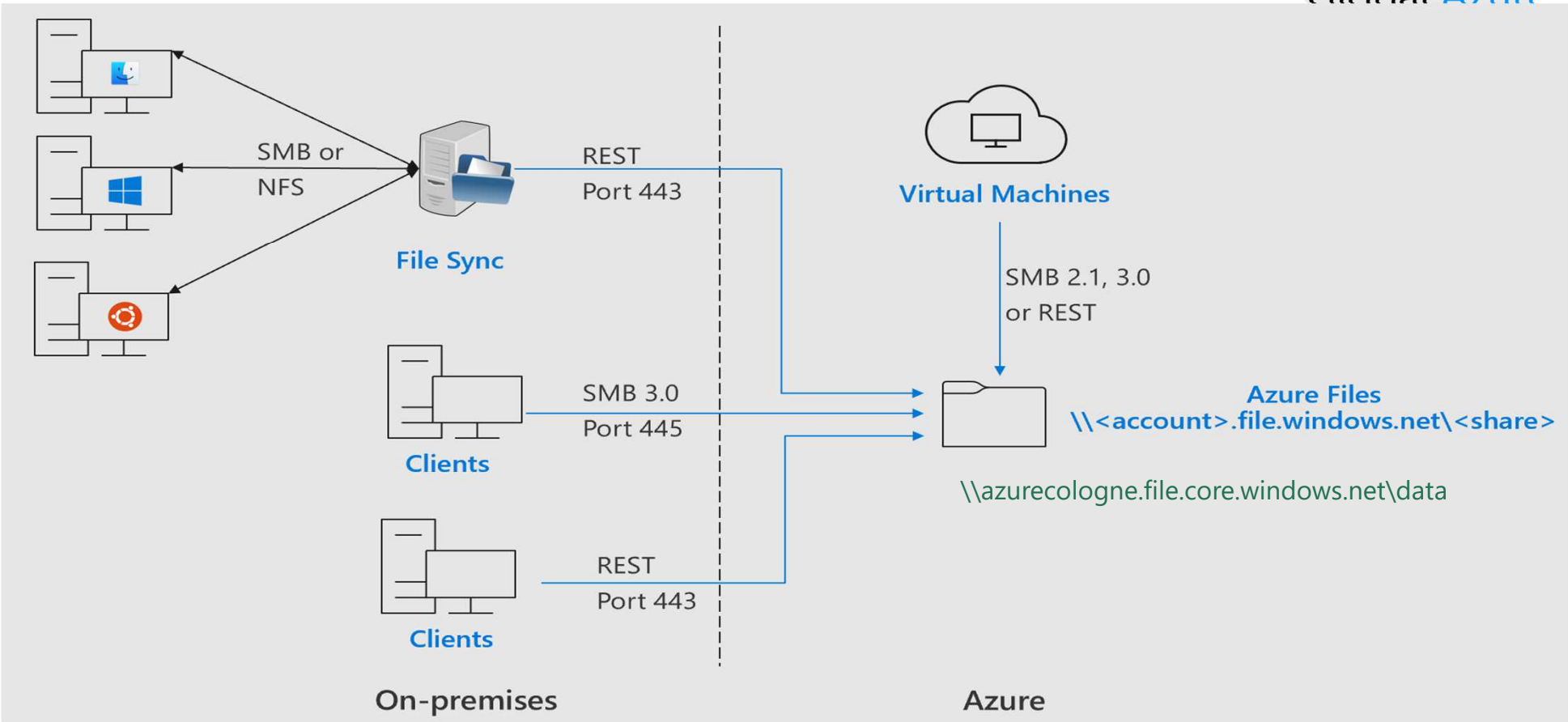
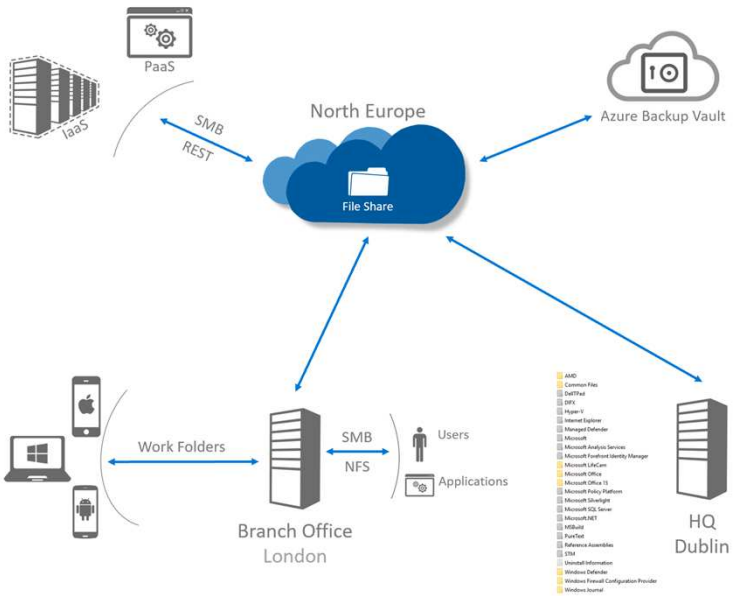


https://azure.microsoft.com/en-us/blog/a-new-era-for-azure-files-bigger-faster-better/

Azure Files – How it works

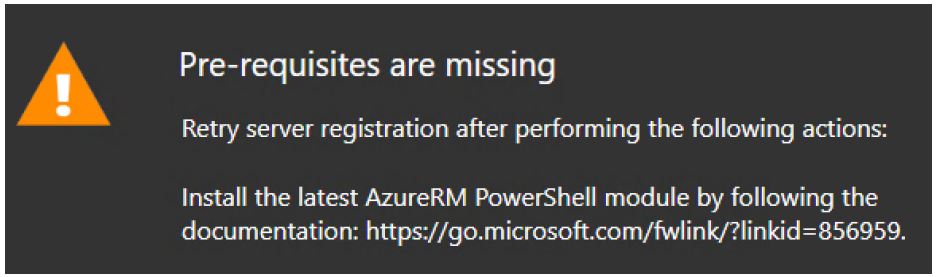


https://www.youtube.com/watch?v=GMzh2M66E9o



Azure File Sync

How it works



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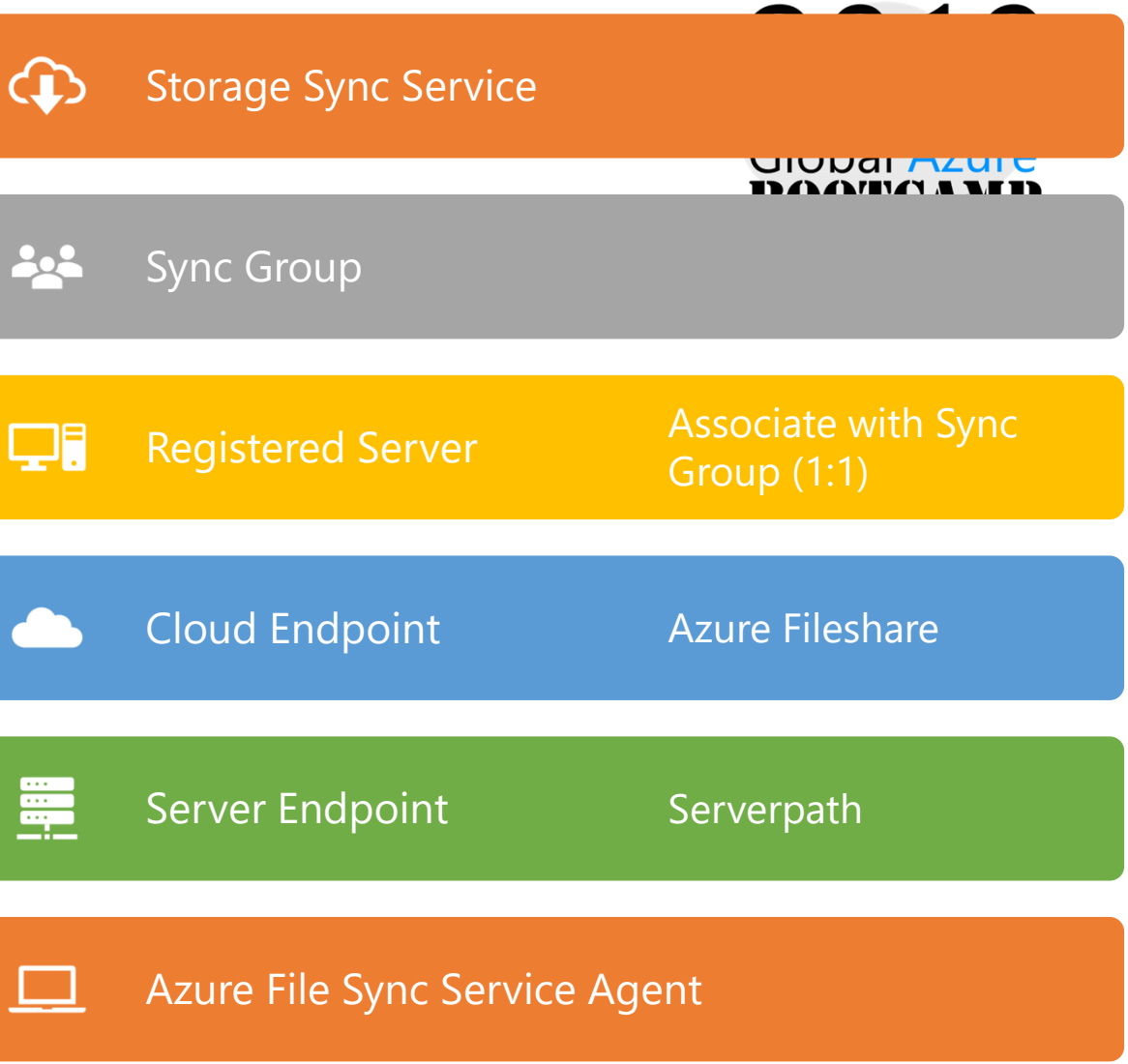
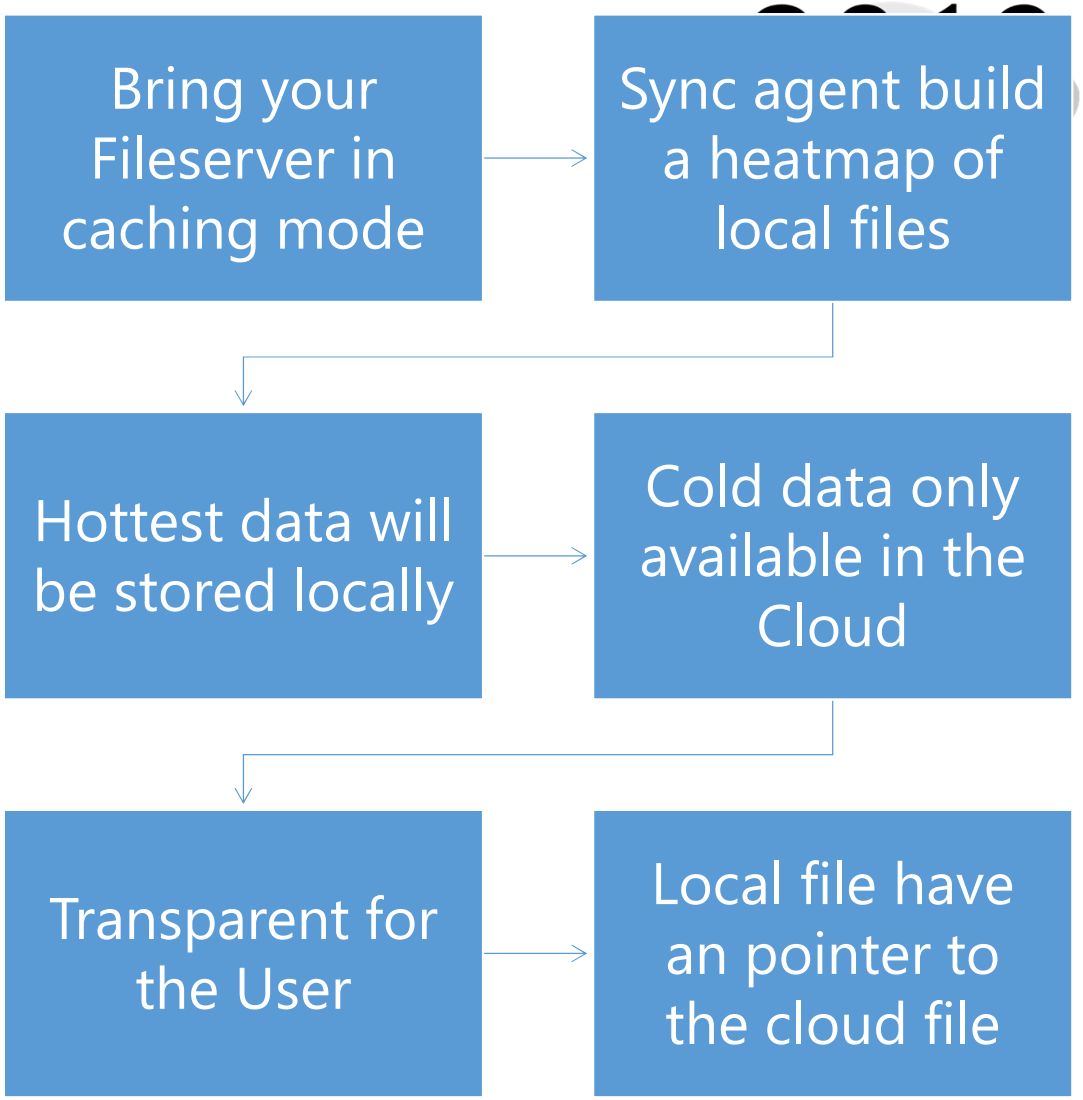
AFS - Requirements

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

AFS – Components

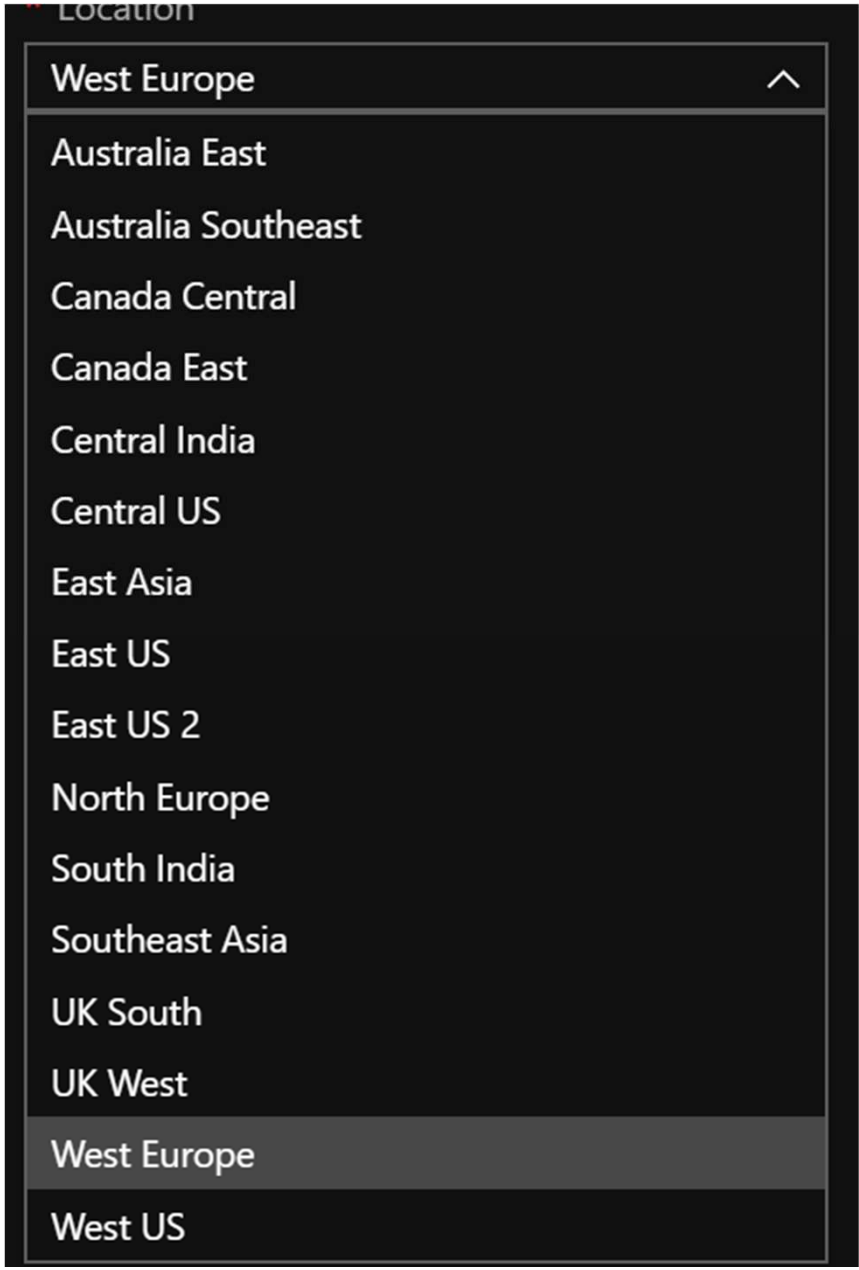


AFS – Cloud Tiering



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



AFS – Preparation steps

Create Storageaccount & Fileshare

Creating Storage Sync Service (Azure File Sync)

Creating Syncgroup

(will also create an Cloud Endpoint)

Install-Module AzureRM

On the Fileserver

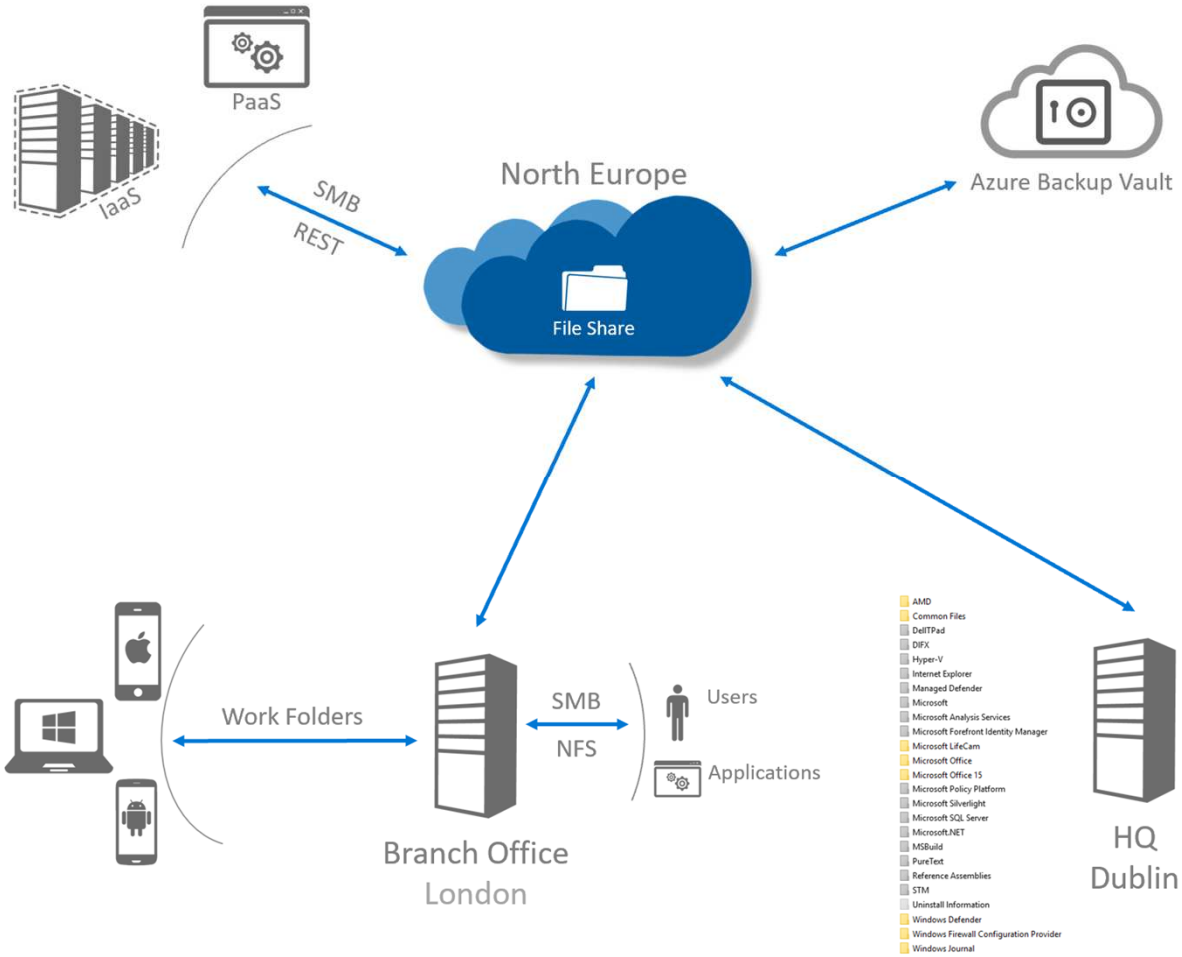
Installing Azure File Sync Agent

Registering Server on Cloudendpoint

Create Serverendpoint (Select Path for syncing)

After finishing register additional servers

Done! ☺



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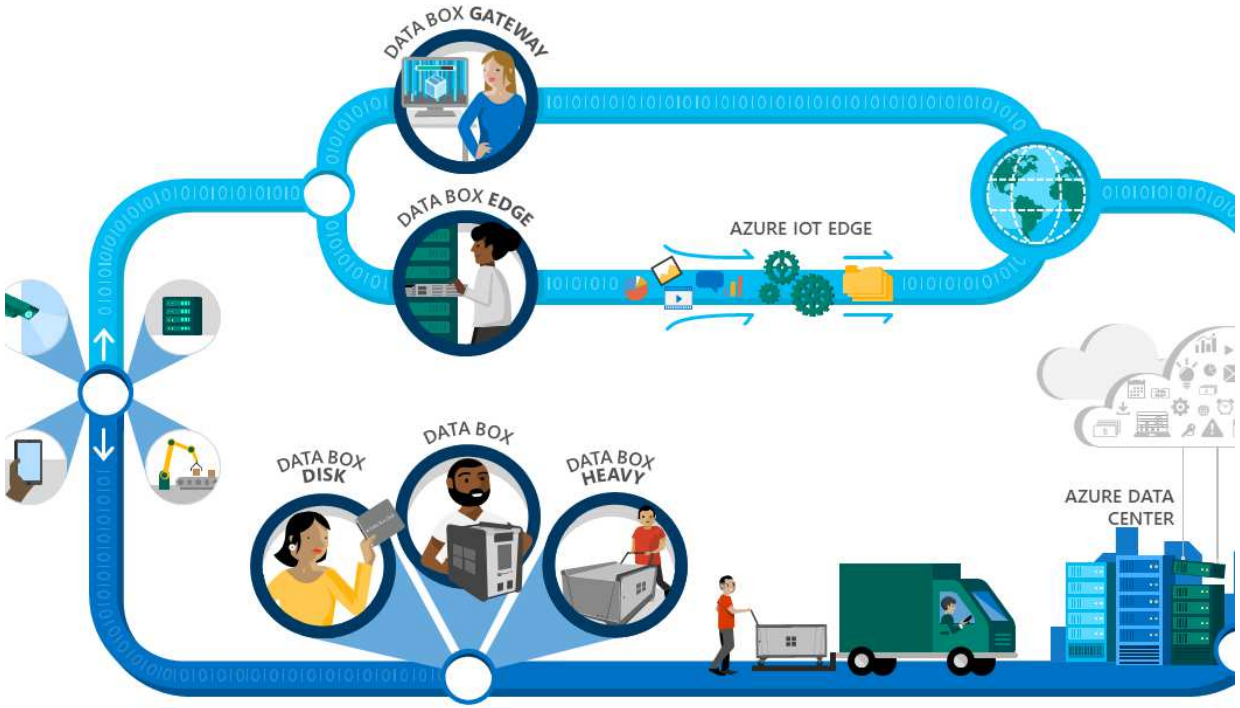
DEMO Time

Azure File Sync

Azure File Sync - Migrate

- Migrate big Content to Azure



https://azure.microsoft.com/en-us/blog/expanding-the-azure-data-box-family/

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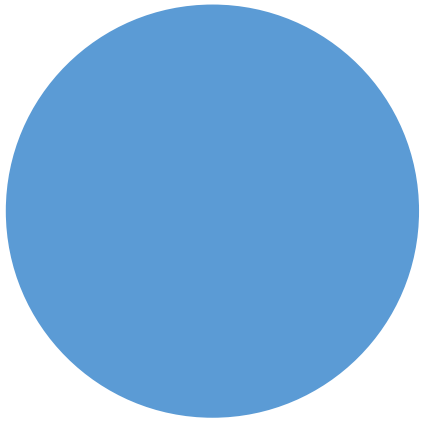
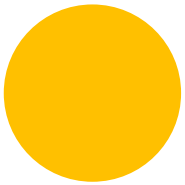
- GA since October 2018
- For offline data transfer
- Different sizes available
  - 40TB, 100TB, 1PB

Azure Data Box

Azure File Sync – Backup

How can we Backup the Content

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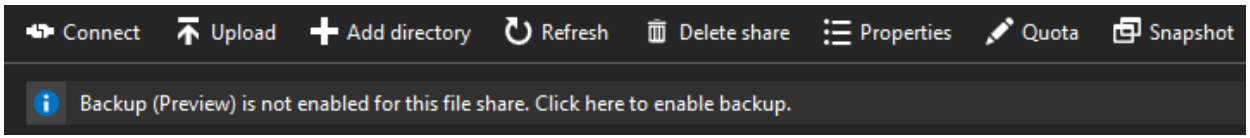
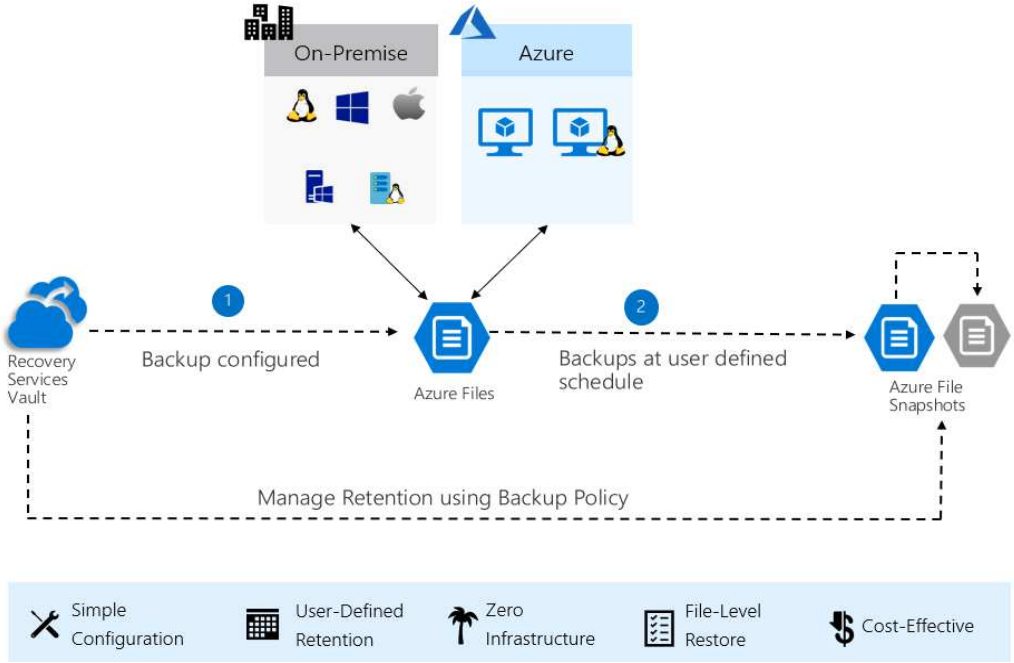
- Simple, central backup
- Shift On-Prem Backup to Cloud
- Backup via Azure Fileshare (Preview)
- Don´t use VSS when Cloudtiering is enabled

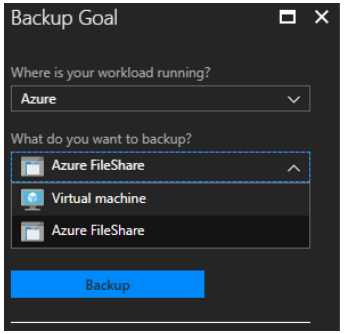
AFS – Backup

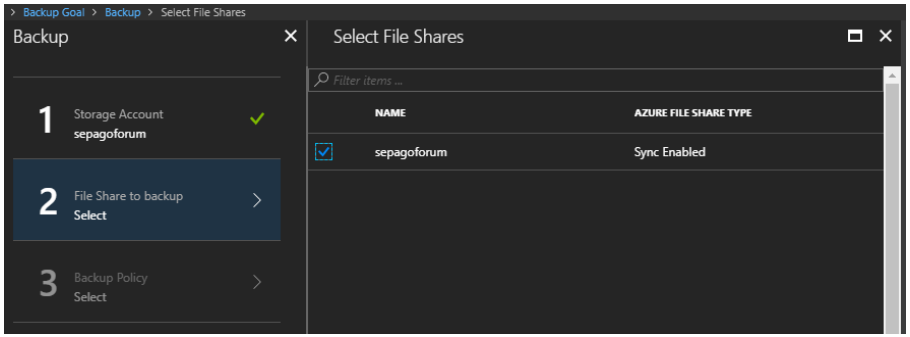
AFS – Backup



Backup for Azure File Shares







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

AFS – AzureAD Integration (Preview)

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- 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

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.Management.ServerCmdlets.dll"
- New-StorageSyncNetworkLimit -Day Monday, Wednesday, Friday -StartHour 9 -EndHour 17 -LimitKbps 10000

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

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 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 ☹

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

Q&A

Thank you!

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Thank you

Don´t forget the next Azure Meetups ☺