

Manage Azure File Sync with Windows Admin Center

by Gregor Reimling

<https://www.menti.com/av8sug83x9>

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

Identity Summit 2020
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www.AzureBonn.de

Azure File Sync - Agenda

- General
- Functions about Azure Files & Azure File Sync
- Demo & Configuration via WAC
- Migration & Backup
- Conclusion
- Links

Why Windows Admin Center

- Next Generation Servermanager
- Central surface for all server
- Easy installation - (MSI Paket) On-Premise or Cloud VM
- Managing via Azure Portal
- Webbased on HTML 5
- Serveranalysis agentless – WMI and PS
- All Functions from the Servermanager + many more included
- Import of existing Server easy via Textfile or Domain search
- Use Windows Admin Center integration
- No managing options on the local Server

Windows Admin Center | All connections ▾

Windows Admin Center

All connections

ⓘ Modernize your virtualization hosts with an Azure Stack HCI hybrid solution, for industry-leading price-performance.

+ Add

Connect

Manage as

Remove

Edit Tags

<input type="checkbox"/> Name ↑	Type
<input type="checkbox"/> 192.168.21.5 (AzCMAFS1)	Servers (Azure VM)
afs.ad.cloudmechanic.de	Servers
azcmwac1.ad.cloudmechanic.de [Gateway]	Servers
azcmwdc1.ad.cloudmechanic.de	Servers

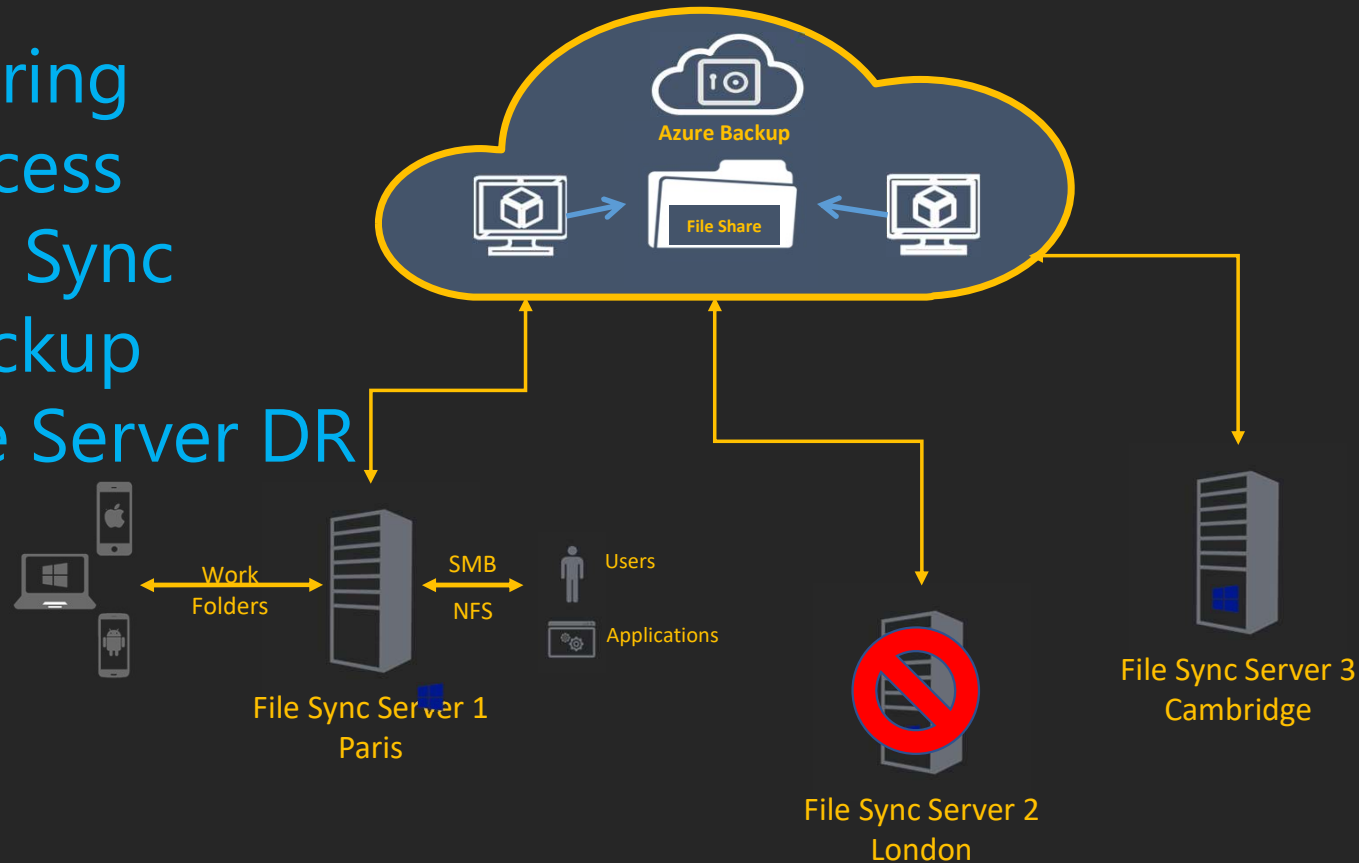
Demo Time

General

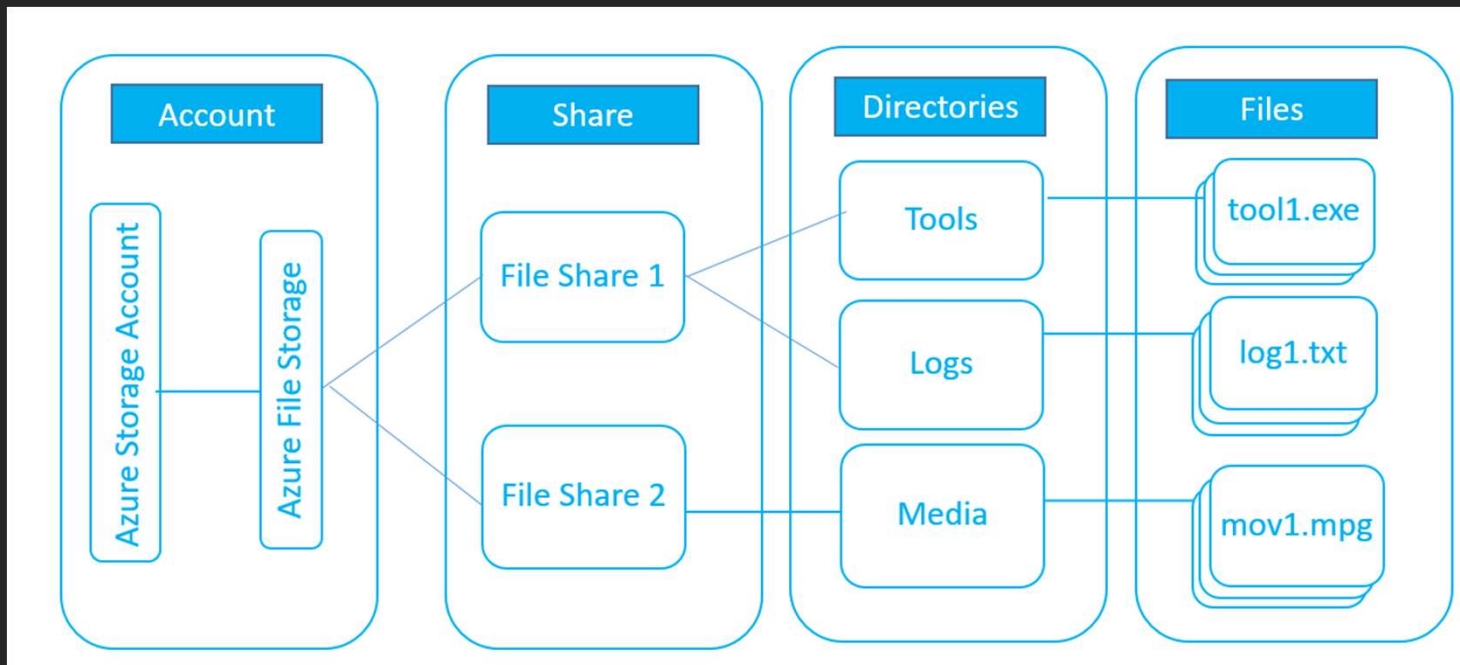
- AzureFileSync = AFS
- Synchronize Fileserver between Company Boundaries
- General Availability since July 2018
- Fileserver need Agent for syncing
 - Agent registered Fileserver in Azure
 - Monitoring and Syncing
 - Transparent for User
- Files will be synced to an Azure Fileshare

Why Azure File Sync

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



Azure Files Introduction



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

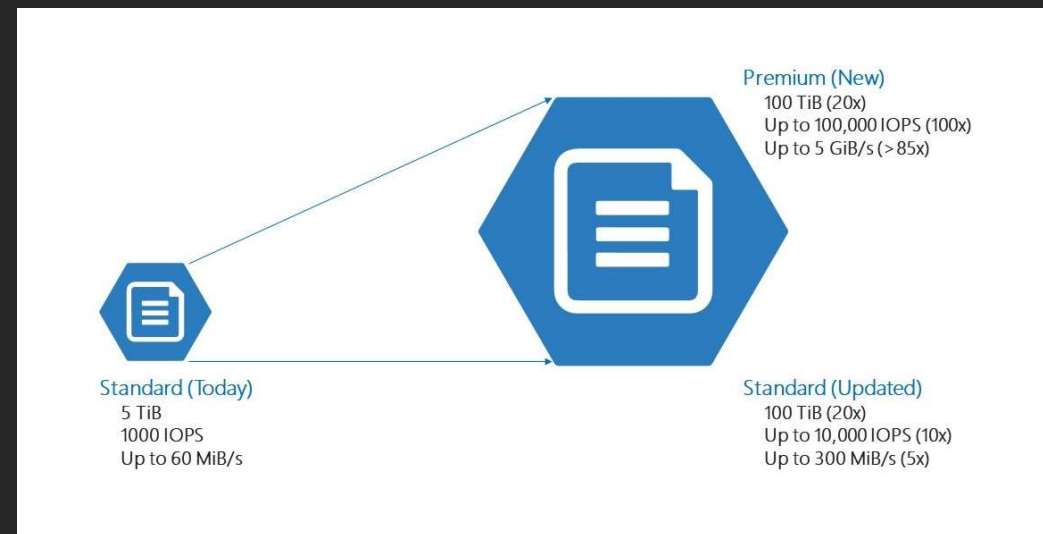
First some basically Introduction into Azure Files

Azure Files

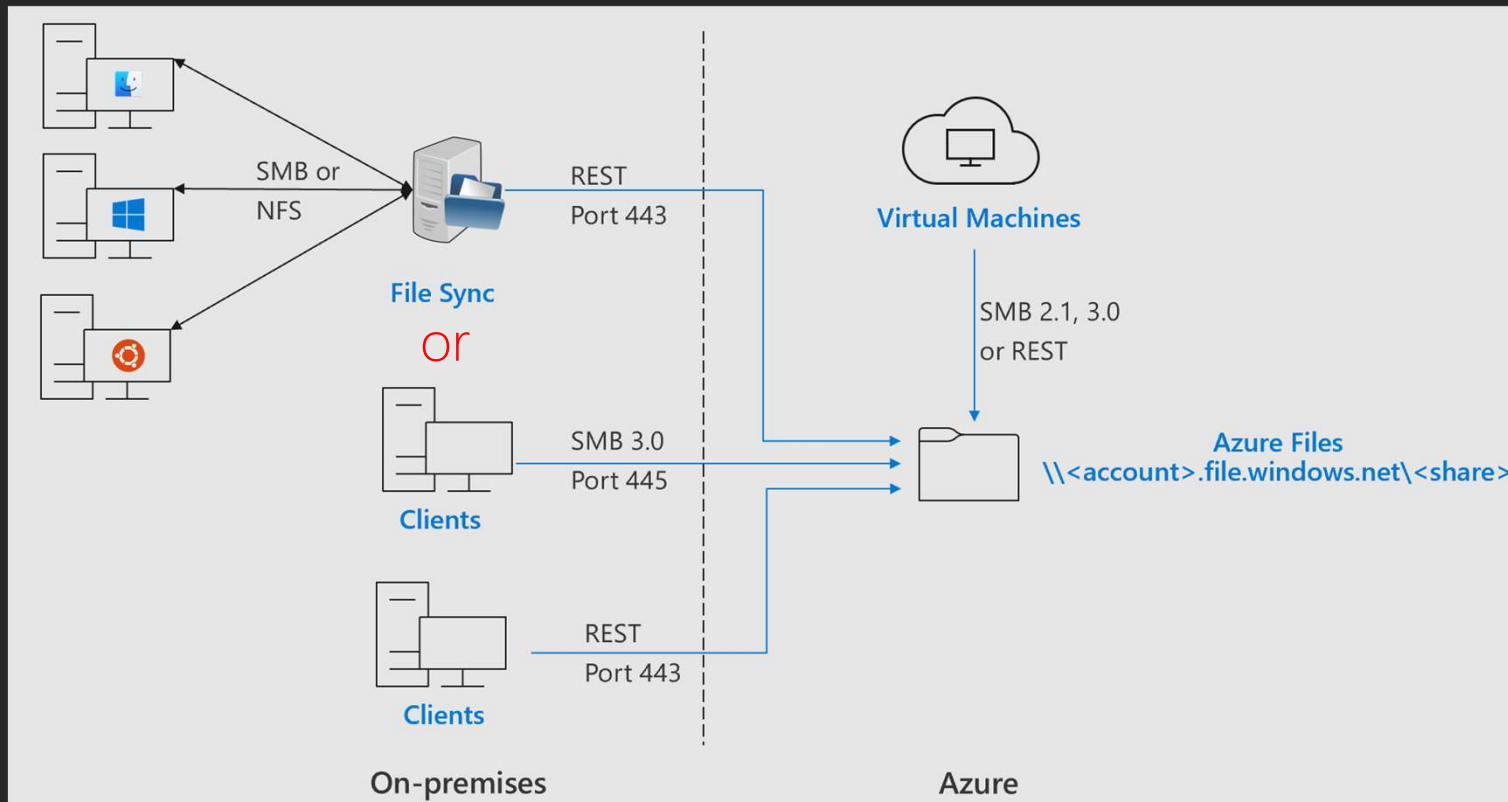
- Hosted SMB 3.1 Share for you on Azure
- PaaS solution
- You don't need to spin up and manage VM's
- No Volume layout
- Unique namespace, based on Azure Storage
- [msreactor.blob.core.windows.net](#) -> Unique SA Name
- [msreactor.file.core.windows.net](#) -> Unique Fileshare Name
- Active Directory File Integration for Azure Fileshares

Azure Files News since Ignite

- Active Directory File Integration for Azure Fileshares
- Standard
 - 5TB, 100TB (manual enabling)
 - 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
- Azure Files SMB Multichannel support



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 Az
- 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>.

Setting up Azure File Sync

- ✓ Registering Microsoft.StorageSync with your subscription
- ✓ Prepping the resource group
Name: globalazure_rg
- ✓ Prepping the Storage Sync Service
Creating new...
- ✓ Downloading the agent
- ✓ Installing the agent
- ✓ Registering the server with Azure

You're all set!

Next, click "Sync a folder" to finish setting up Azure File Sync.

AFS - Components

Storage Sync Service

Sync Group

Registered Server

- Associate with Sync Group (1:1)

Cloud Endpoint

- Azure Fileshare

Server Endpoint

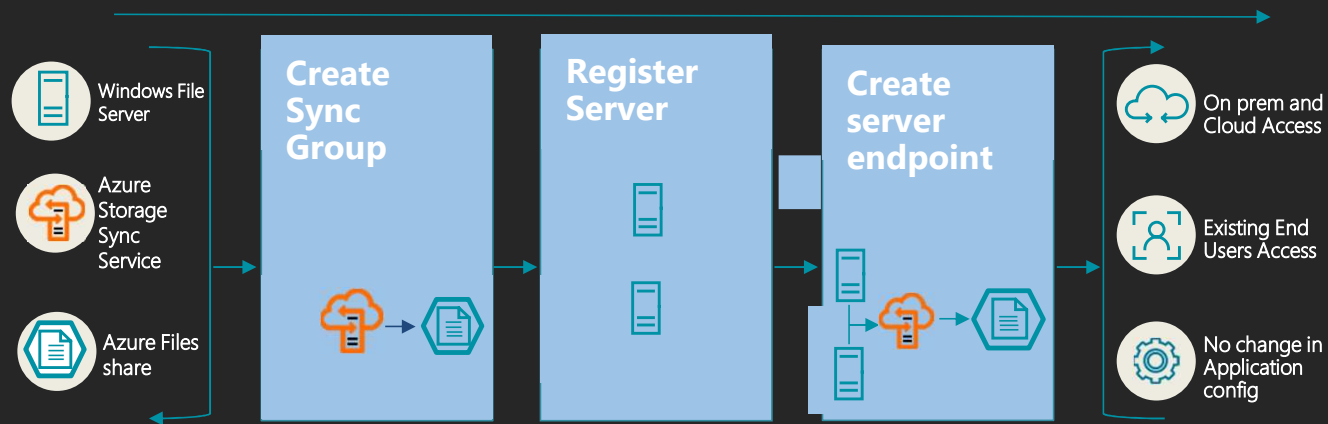
- Serverpath

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

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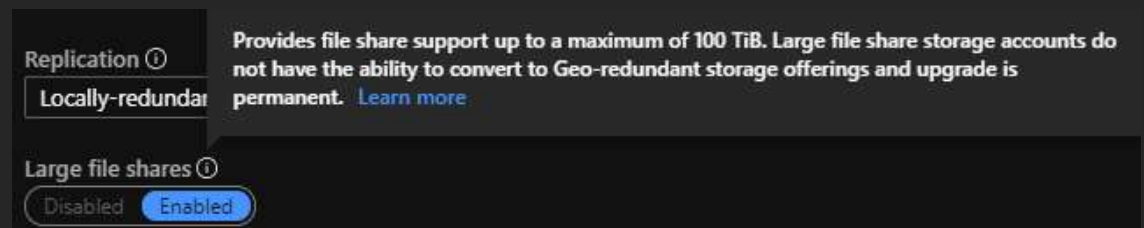
Demo Time

Manage AFS with WAC 😊

- Central web based replacement for Server Manager
- Including many features and services
- Integrates in Azure for Hybrid Cloud scenarios
- Easy deployment of Azure File Sync on the servers
- Do not need logon on the Server
- Central view blade for Azure File Sync
- Easy to go 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



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 Policy for Fileshares
- Integrate the Azure File Sync Fileshare into the Backup Vault
- That`s it – Now you have a full backup for your Server in the Cloud

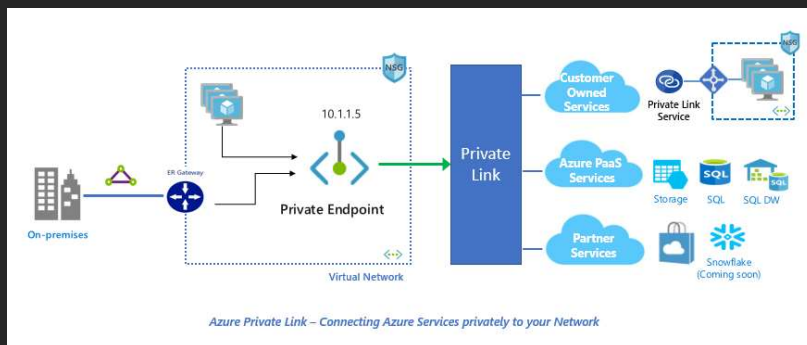
AFS – Need to know

- 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
- Bandwidth - 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`

What comes next?

Azure File (Sync)

- New tiers available
- NFS 4.1 preview
- SMB Multichannel Preview
- Global file locking planned
- AFS Agent 10.1
 - Now supports Private Endpoint for AFS traffic



Windows Admin Center (v 2009)

- Inside the Azure Portal (Private Preview)
- Supports AKS on Azure Stack
- New Features for VM Management
- Improved Fileshare Tools
- New look
- <https://techcommunity.microsoft.com/t5/windows-admin-center-blog/windows-admin-center-version-2009-is-now-generally-available/ba-p/1696665>

AFS - Conclusion

- Fast installing and stable synchronizing 😊
- Costs: 1 Server Free, 5\$ each additional server + storage 😊
- Easy and scalable DRaaS for Fileservers 😊
- Supporting for DFS-R and SOFS 😊
- Easily migrate Backup to the Cloud 😊
- Fileshare Limit 100TB since March 2020 😊
- Support for ACLs in Azure Files directly with AD Auth 😊
- Can not change sync frequency 😐
- Troubleshooting difficult 😐
- 1:1 binding between Server and Sync Group 😐

AFS - Links

- Planning for an Azure File Sync deployment
 - <https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-planning>
- Manage registered servers with Azure File Sync
 - <https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-server-registration>
- Release notes for the Azure File Sync agent
 - <https://docs.microsoft.com/en-us/azure/storage/files/storage-files-release-notes>
- Introducing backup for Azure file shares
 - <https://azure.microsoft.com/en-us/blog/introducing-backup-for-azure-file-shares/>
- Feedback for AzureFiles Product Group - <https://social.msdn.microsoft.com/Forums/en-US/home?forum=windowsazuredata>
- MS Ignite 2019 – Migrate SMB and NFS to Azure File Sync BRK3241
 - <https://myignite.techcommunity.microsoft.com/sessions/82847?source=sessions>
- MS Ignite 2019 – Windows Admin Center – Unlock Azure Hybrid value - BRK2379 –
 - <https://myignite.techcommunity.microsoft.com/sessions/81952?source=sessions>
- Azure File Sync DSC from Jan Egil Ring - <https://github.com/janegilring/AzureFileSyncDsc>
- Azure File Sync Blog entries on Reimling.eu - <https://www.reimling.eu/?s=azure+file+sync>
- Azure Files AD DS SMB Authentication
 - <https://www.reimling.eu/2020/06/configure-azure-files-on-premises-active-directory-ad-ds-authentication-for-fileserver-or-wvd/>
- Connect and secure Azure PaaS to Virtual Networks with Private Link
 - <https://www.reimling.eu/2020/06/connect-and-secure-azure-paas-services-to-virtual-networks-with-private-link/>

Q&A



Thank you



@GregorReimling | @AzureBonn
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