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Using Azure Backup to Protect your On-Premises and Cloud Data

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Who is this guy?

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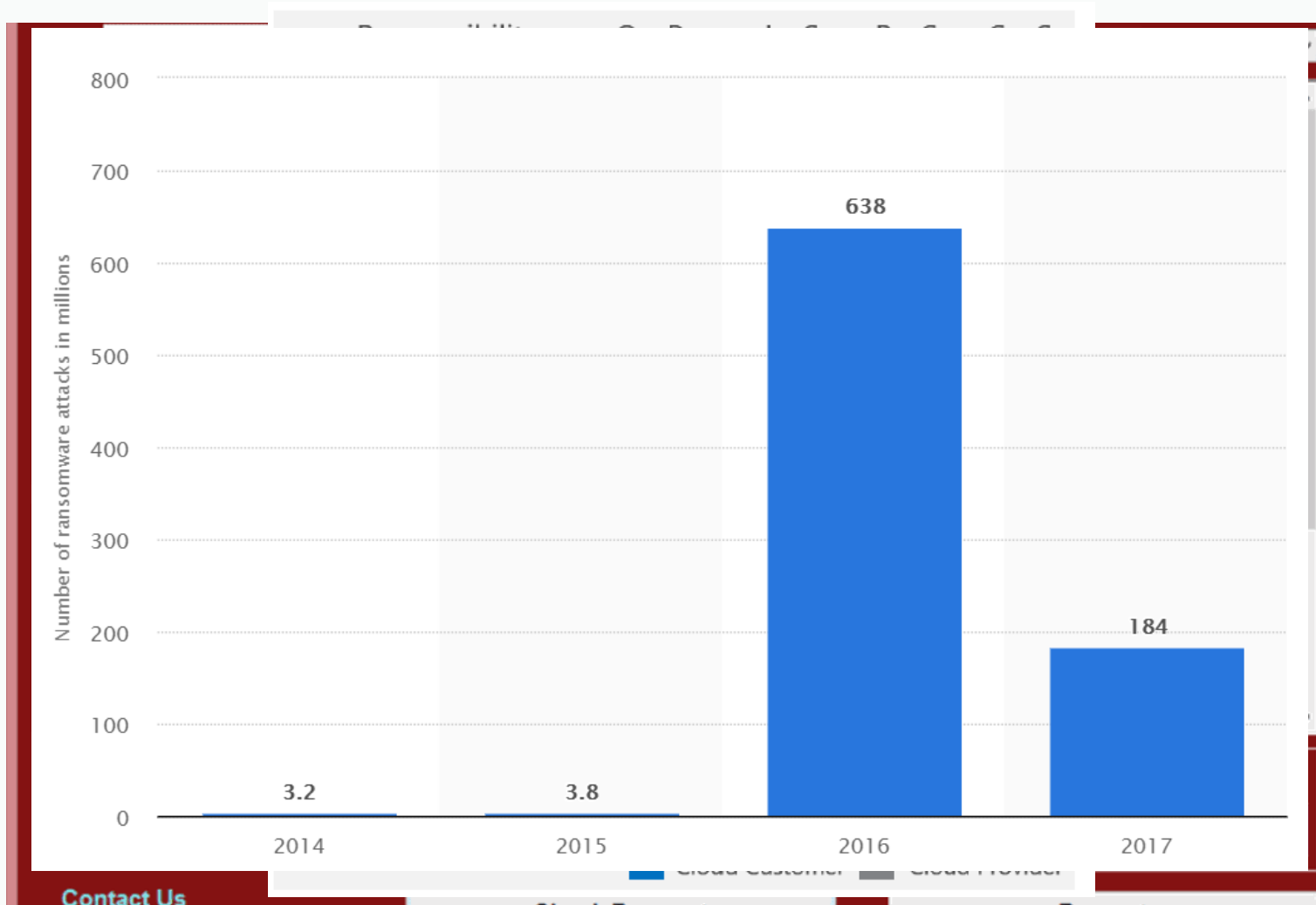


Agenda

- Why backup
- What is Azure Backup
- Azure Backup overview
- Configuring backup - *demo*
- Restores - *demo*
- Pricing
- Monitoring backups
- Staying up-to-date



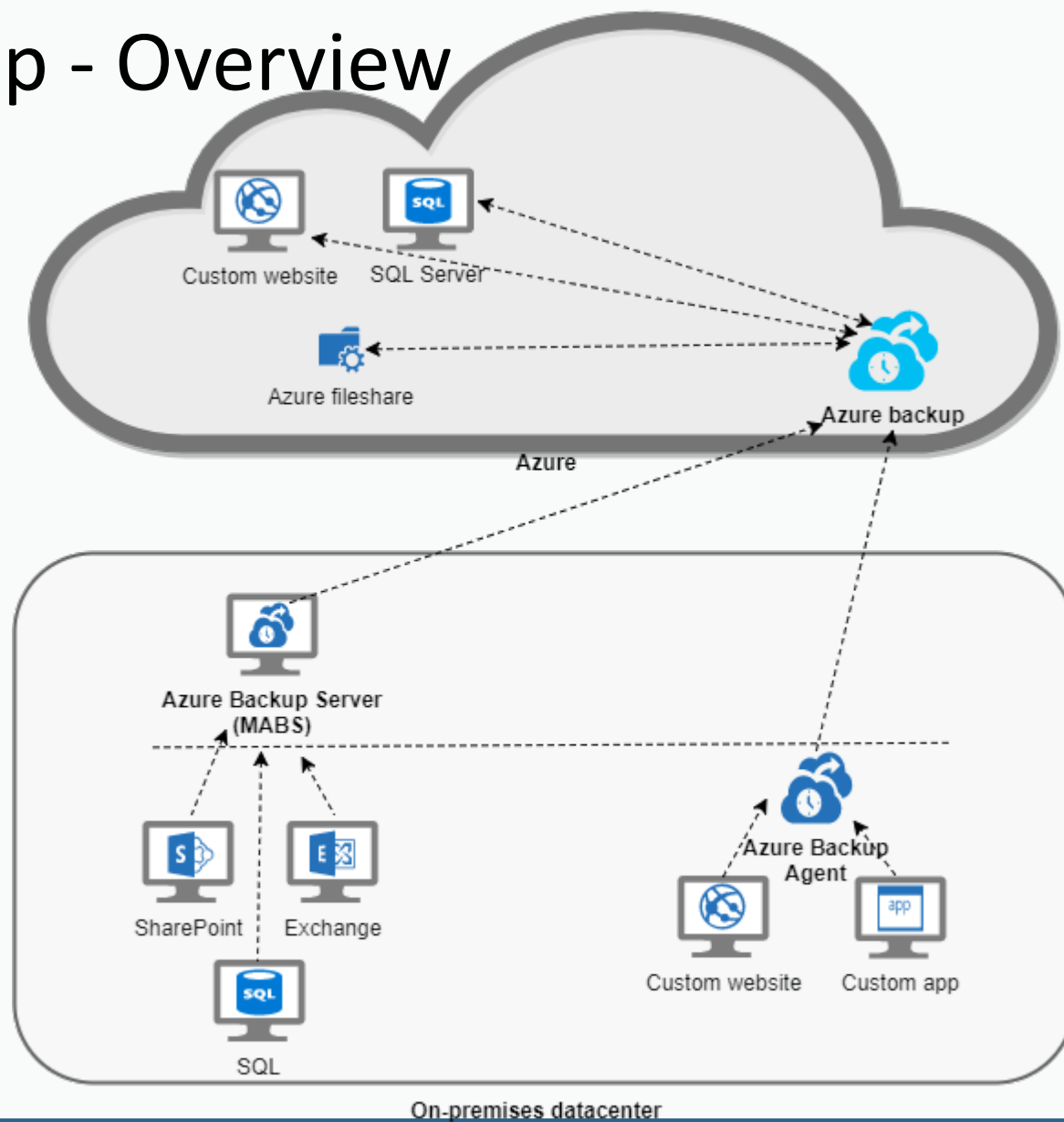
Why backup



Azure Backup

- **Securely** backup and restore data in Azure & on-premises
- All backup data is sent to a Recovery Services Vault (compressed and encrypted)
- NO on-premises storage needed
- Automatic scaling
- Option to store backup data using LRS or GRS
- No charges for traffic

Azure Backup - Overview

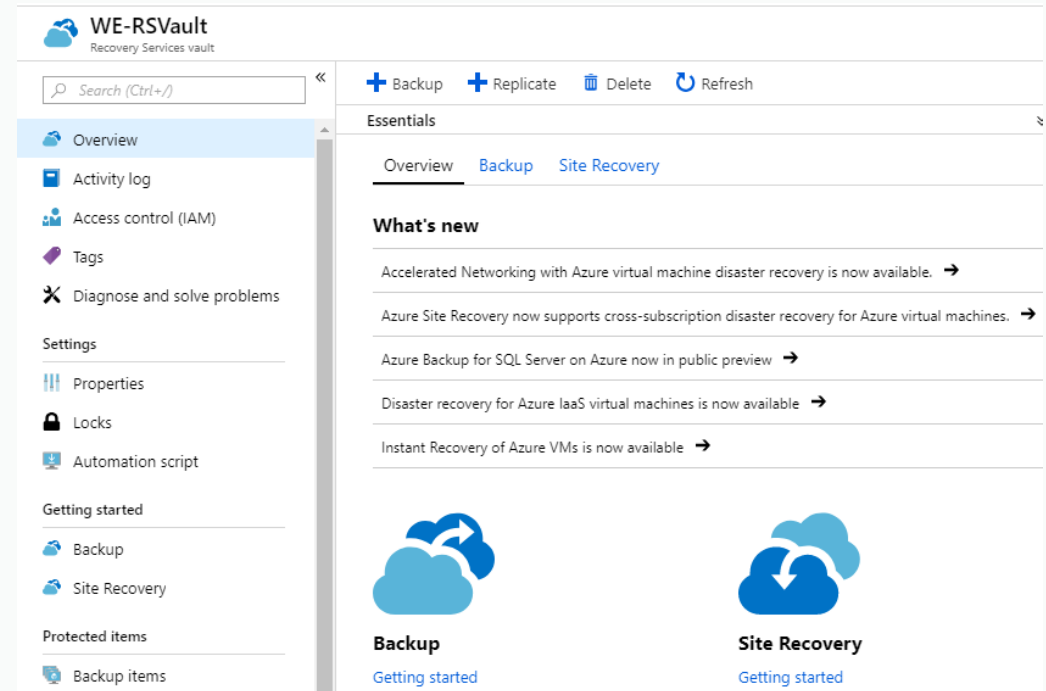


Configuring backup

- Azure Portal
- PowerShell*
- CLI*

**Only for VM backup*

- Region bound
- Before you start, check the storage replication type!



Policies

It defines:

- Backup schedule
- Backup data retention

Policy types

- Azure Virtual Machine
- Azure File Share
- SQL Server in Azure VM

WE-RSVault - Backup policies
Recovery Services vault

Search (Ctrl+/)

Getting started

- Backup
- Site Recovery

Protected items

- Backup items
- Replicated items

Manage

- Backup policies

+ Add

Filter items ... All policies

NAME	POLICY TYPE
HourlyLogBackup	SQL Server in Azure VM
DefaultPolicy	Azure Virtual Machine
azurefilesharedaily	Azure File Share

Configuring backup

DEMO

Cloud Native



**Azure
Virtual machines**



**Azure
FileShare (preview)**



**SQL Server in Azure
VM (preview)**

Cloud Native – Azure Virtual machines



**Azure
Virtual machines**

- Backup agent automatically installed unless migrated from your on-premises environment
- VM must be in same region as the Recovery Services Vault
- Scheduled backups happen once a day (You can set the retention)
- You can force a backup when needed

Limitation:

- Backup limited to 16 data disks

Cloud Native – Azure Fileshare



**Azure
FileShare (preview)**

- No need to configure anything on the Azure FileShare for this to work!
- Scheduled backups happen once a day (You can set the retention)
- You can force a backup when needed (max 4 times a day)

Limitations:

- You can't protect Azure file shares in storage accounts that have Virtual Networks or Firewall enabled.
- No automatic scan for new Azure FileShares

Cloud Native – SQL Server in Azure VM



SQL Server in Azure
VM (preview)

- Backup SQL Server databases hosted in an Azure VM
- Some work might be required to get this to work:
<https://docs.microsoft.com/en-us/azure/backup/backup-azure-sql-database>
- Daily full backup + log backup every 2 hours (can be changed to go as low as 15 minutes)
- Set compression settings

Limitations:

- No auto-protect YET!

Cloud native - DEMO

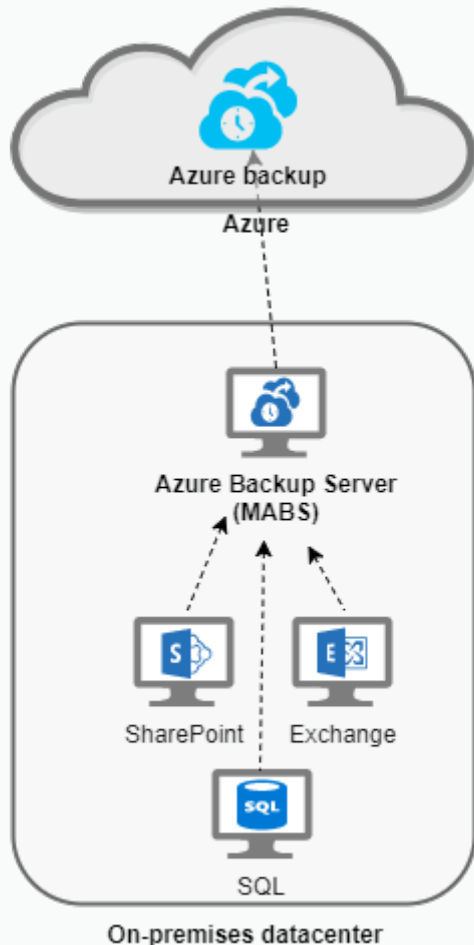


**Azure
FileShare (preview)**



**SQL Server in Azure
VM (preview)**

Microsoft Azure Backup Server (MABS)



- Basically DPM
- Must be domain-joined
- Requires SQL
- No option to store data locally

Microsoft Azure Backup Server

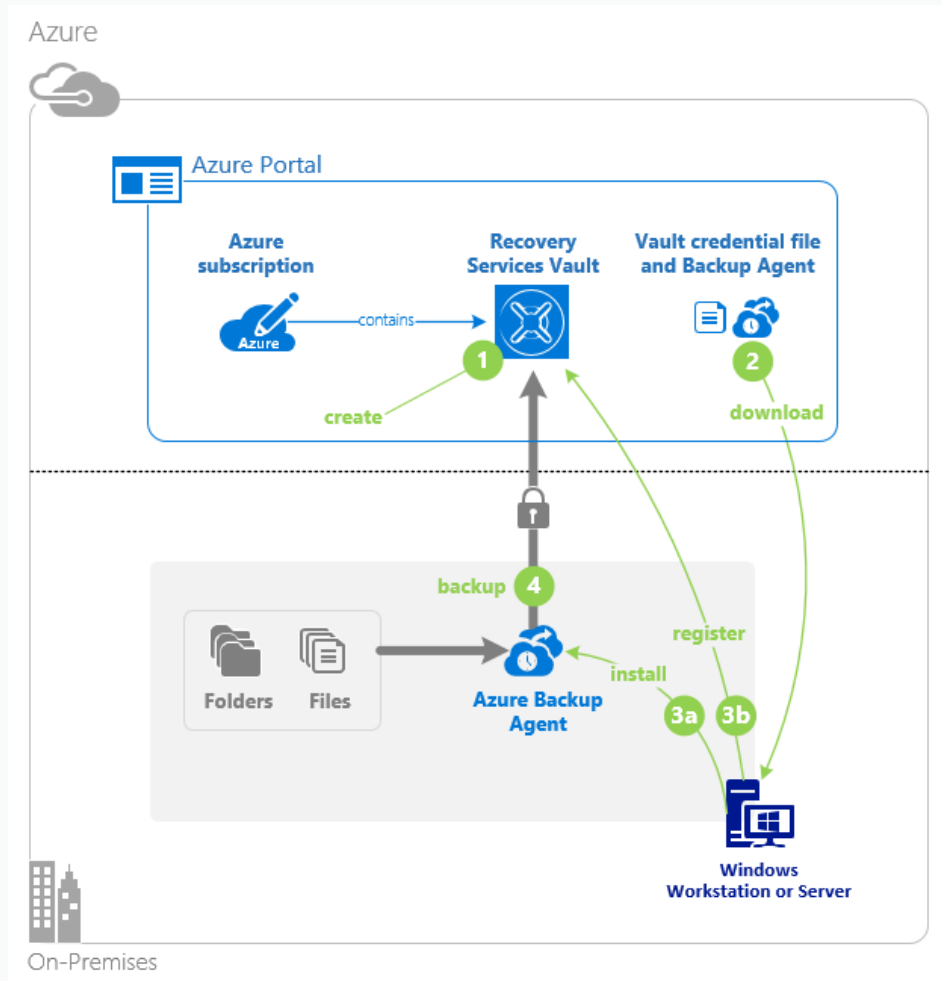
Can back up:

- Hyper-V VMs
- VMWare VMs
- Exchange
- SharePoint
- SQL Server

For a full list: <https://docs.microsoft.com/en-us/azure/backup/backup-mabs-protection-matrix>

- No option to store data on tape

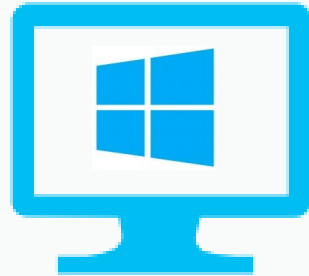
Microsoft Azure Recovery Service (MARS)



Backs up files and folders for Windows (on-premises)

- Requires MARS agent
- Register the agent
- All configuration done from the server

Microsoft Azure Recovery Service - DEMO



**Windows Server on-
premises**

Pricing - Azure VMs and on-premises servers

SIZE OF EACH INSTANCE	AZURE BACKUP PRICE PER MONTH
Instance < or = 50 GB	\$5 + storage consumed
Instance is > 50 but < or = 500 GB	\$10 + storage consumed
Instance > 500 GB	\$10 for each 500 GB increment + storage consumed

<https://azure.microsoft.com/en-us/pricing/details/backup/>

Pricing - storage

STORAGE CAPACITY	LRS	GRS
First 1 terabyte (TB) / month	\$0.024 per GB	\$0.048 per GB
Next 49 TB (1 to 50 TB) / month	\$0.0236 per GB	\$0.0472 per GB
Next 450 TB (50 to 500 TB) / month	\$0.0232 per GB	\$0.0464 per GB
Next 500 TB (500 to 1,000 TB) / month	\$0.0228 per GB	\$0.0456 per GB
Next 4,000 TB (1,000 to 5,000 TB) / month	\$0.0224 per GB	\$0.0448 per GB
Over 5,000 TB / Month	Contact us	Contact us

Pricing example

2 Virtual machines with LRS backup:

- VM 1: **40GB** data
- VM 2: **800GB** data

Total costs	VM 1	VM 2
Price per instance	\$5	\$20
Price per GB	\$0.024	\$0.024
Amount of data	40GB	800GB
Total storage costs	\$0.96	\$19.2
Total	\$5.96	\$39.2

Monitoring

- <https://azure.microsoft.com/en-gb/resources/templates/101-backup-oms-monitoring/>

OMS Monitoring solution for Azure Backup



by [Kartik P V R](#)

Last updated: 30/08/2018

Deploying to Azure



Browse on GitHub

Azure Backup Monitoring Solution

Dashboard | Settings | Reports | Alerts

11/06/2018 10:00 - 11/07/2018 10:00

Backup Job: BackupJob1 (10/06/2018)

Backup Job: BackupJob1 (10/06/2018)



Source	Target	Status	Size
SQL	Backup	Success	2 GB

Active BackupJob1 (10/06/2018)

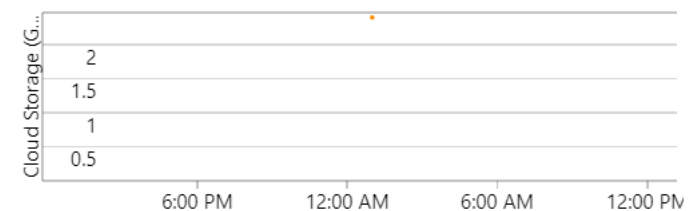
Active BackupJob1 (10/06/2018)



Source	Target	Status	Size
SQL	Backup	Success	2 GB

CLOUD STORAGE IN GB

Cloud storage in GB



TOP 5 DATA SOURCES

CLOUD DATA IN GB

C:\	2.3
msdb	0
model	0
master	0
products	0

Stay up-to-date

- <https://azure.microsoft.com/en-us/updates/?product=backup>

Products

Browse ▾

Search for a product

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Azure Backup ✕

Update type

All ▾

RSS feed

October 2018

Oct 6

[Azure Backup available in Australia Central regions](#)
Target availability: September, 2018
Azure Backup has expanded its operations to Australia Central and Australia Central 2.

Azure Backup Regions & Datacenters

Oct 3

[Azure Backup now supports Standard SSD Managed Disks](#)
Target availability: October, 2018
Azure Backup supports Standard SSD Managed Disks, a new type of durable storage for Microsoft Azure Virtual Machines.

Azure Backup Features

September 2018

Explore

Read the Azure blog for the latest news.
[Blog >](#)

Tell us what you think of Azure and what you want to see in the future.
[Provide feedback >](#)

Azure is available in more regions than any other cloud provider.
[Check product availability in your region >](#)

Recap

- Make sure to set the storage option beforehand
- Get familiar with Cloud Native backup, MABS & MARS
- Test Azure Files
- Get insight in costs by using Azure Log Analytics Dashboard

Questions?

Rate this session: T3

Connect:



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