Data estate modernization

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Cloud | Security | Big Data | Mobility

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Agenda

1. How to identify the need for Data Estate Modernization?
2. Assessment main phases
3. Meaning and pillars of Data Platform Modernization
4. Azure Hybrid benefit for Windows Server and SQL Server
5. Windows Server and SQL Server end-of-support offer on Azure
6. Backup and archive with Azure Backup
7. Disaster Recovery with Azure Site Recovery
8. Benefits of SQL Hybrid Features
9. Conclusion

How to identify the need for Data Estate Modernization?

Common challenges

1. Data platforms can be vast and overcomplicated structures. Different layers for:
    A. database architecture
    B. Caching
    C. analytics and AI
2. Availability and speed challenge: real time data is required with a single click
3. Legacy applications and ISV solutions have different lifecycles
4. What should be moved to the cloud?

    Everything must go to cloud (trend of the past)

    VS

    Hybrid solutions (current trend)

Main phases of the assessment

Main phases of the assessment

1. Intro – how to identify a data platform modernization project?
2. Discovery – identify potential scenarios (upgrade, migration – hybrid or pure cloud)
3. Conclusion – based on the discovery, define the chosen scenario
4. Further discussions – involve specialist to define details, next steps, budget, etc.

Meaning and pillars of Data Estate Modernization

A unified approach to data estate modernization

- The described pillars will work with any size environment, from the small and agile to the very large and complex SQL database platform landscape.
- There IS a valid solution for all environments.
- All the pillars work in concert to complement each other across all feature sets and integration points.
- Any missing pillar identifies an opportunity to improve and modernize the Data Platform!

Pillars of the Data Estate Modernization

Accelerate

A revamped perspective on storage, leveraging RAM and other memory technologies, to maximum effect to not only accelerate and Future-Proof the environment but completely modernize the database platform infrastructure.

Protect

Protect your database with industry leading backups, replication, resiliency and self-service Deduplicated copies.

Reuse

Reuse snapshots.
Operational recovery.
Dev/Test repurposing.
CI/CD pipelines.

Azure Hybrid benefit for Windows Server and SQL Server

Windows Server + Azure: better together

Best hybrid cloud experience for Windows Server

Extend your datacenter to Azure for unique hybrid scenarios with Windows Admin Center, Active Directory, cloud storage, and more.

Run any app on Windows Server virtual machines or containers in Azure (SQL Server, .NET apps, etc.)

Hit the cloud running using your Microsoft expertise and familiar tools.

Get support from a single vendor.

Most cost-effective cloud for Windows Server

Use existing licenses to save up to 73%* compared to AWS with the Azure Hybrid Benefit and Azure Reserved Instances.

Only Azure offers free Extended Security Updates for Windows Server 2008 and 2008 R2.

Unique, powerful hybrid security

Combine the built-in security features of Windows Server 2016 with Azure, the most compliant cloud.

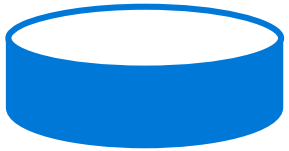
Use Azure Security Center for monitoring and threat protection across on-premises and cloud.

Azure is the most cost-effective cloud for Windows Server 2008/2008R2

Windows Server 2008/2008 R2 in AWS costs 5 times more than in Azure

Get free Extended Security Updates in Azure for Windows Server 2008/2008 R2

Use existing Windows Server licenses to save with the Azure Hybrid Benefit



Azure

Windows Server 2008/2008 R2 in Azure with 3-year Azure reserved instances

+

Azure hybrid benefit

Extended security updates

AWS

Windows Server 2008/2008 R2 in AWS with 3-year reserved instances

+

Extended security updates

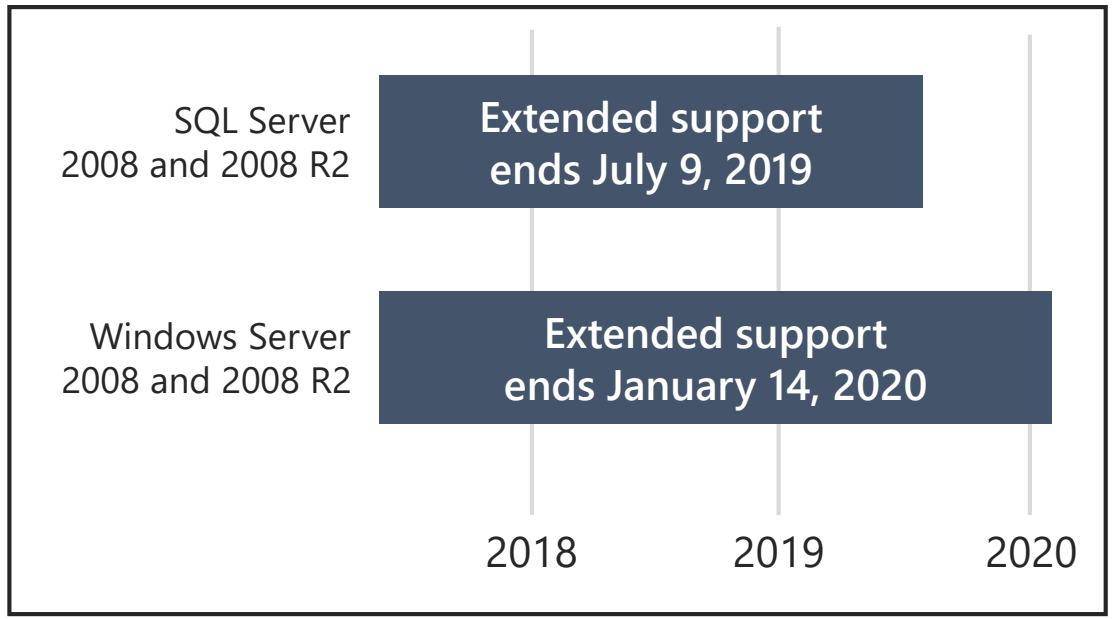
- The cost does not include Software Assurance cost
- Extended Security Updates cost is based on Windows Server Standard open NL ERP pricing in USD. Actual regional pricing and program discounts may apply.
- Sample annual cost comparison of two D2V3 Windows Server VMs. Savings based two D2V3 VMs in US West 2 region running 744 hours/month for 12 months; reduced compute rate at SUSE Linux Enterprise rate for US west 2. Azure pricing as of 04/24/2018. AWS pricing as of 04/24.2018. Price subject to change
- Actual savings may vary based on location, instance type, or usage
- Extended Security Updates typically costs 75% of the full license price annually

Windows Server and SQL Server end-of-support offer on Azure

Customer options for end of support

	Deadline	Recommended	Fallback	Last resort
Microsoft SQL Server 2008 2008 R2	Jul 2019	Migrate applications to fully-managed solution (PaaS - Azure SQL DB Managed Instance), or upgrade to SQL Server 2017/2019 on Azure VM or on-premises	Migrate to Azure Virtual Machines and get 3 more years of free Extended Security Updates	
Windows Server 2008 2008 R2	Jan 2020	Migrate applications to Azure 2008/R2 VMs and get 3 more years of free Extended Security Updates	Upgrade on-premises to Windows Server 2016 or 2019	Buy Extended Security Updates to protect on-premises servers and desktops
Windows 7	Jan 2020	Shift to a modern desktop (Windows 10)	Leverage Windows Virtual Desktop in Azure and get free Extended Security Updates for 3 more years	
Microsoft Office 2010	Oct 2020	Shift to a modern desktop (Office 365 ProPlus)	Upgrade to Office 2019	

Extended security updates for 2008 and 2008 R2 – free in Azure



Migrate to Azure

IaaS: Move to Azure VMs, get 3 more years of extended security updates at no additional charge

PaaS: Move SQL Server to Azure SQL Database Managed Instance (version free, fully managed, no patching needed)

Use Azure Hybrid Benefit to maximize on-premises investments

Stay on-premises

Upgrade to current Windows Server/ SQL Server versions

OR

Buy 3 more years of extended security updates on 2008/2008 R2

Backup and archive with Azure Backup

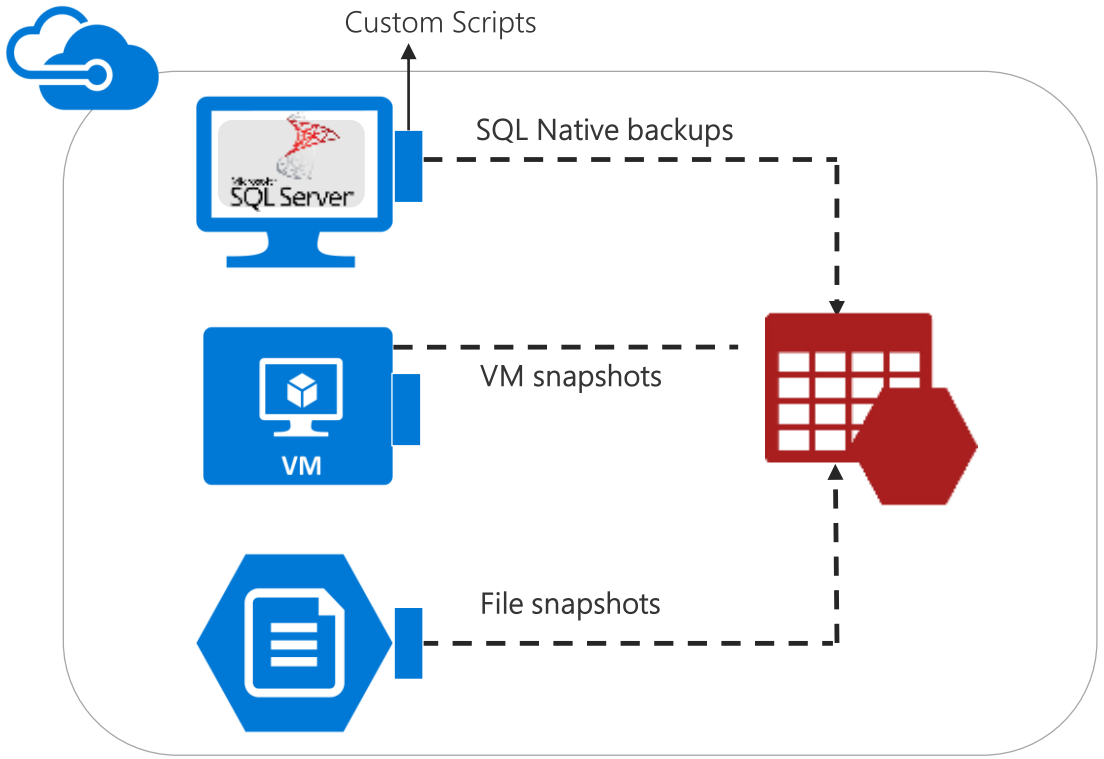
With Azure you have a choice

Microsoft Azure

Azure Backup | Azure Site Recovery

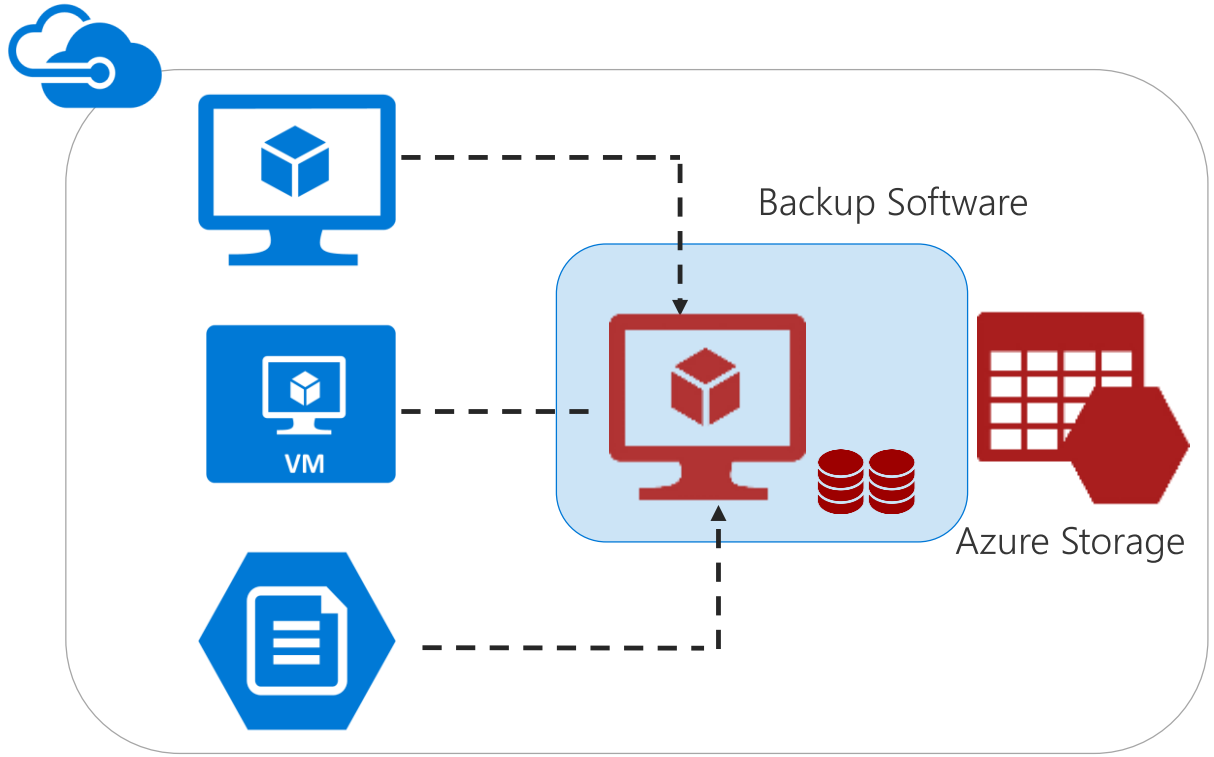
+ Partner solutions


Conventional Backup approaches



Need to manage Infrastructure

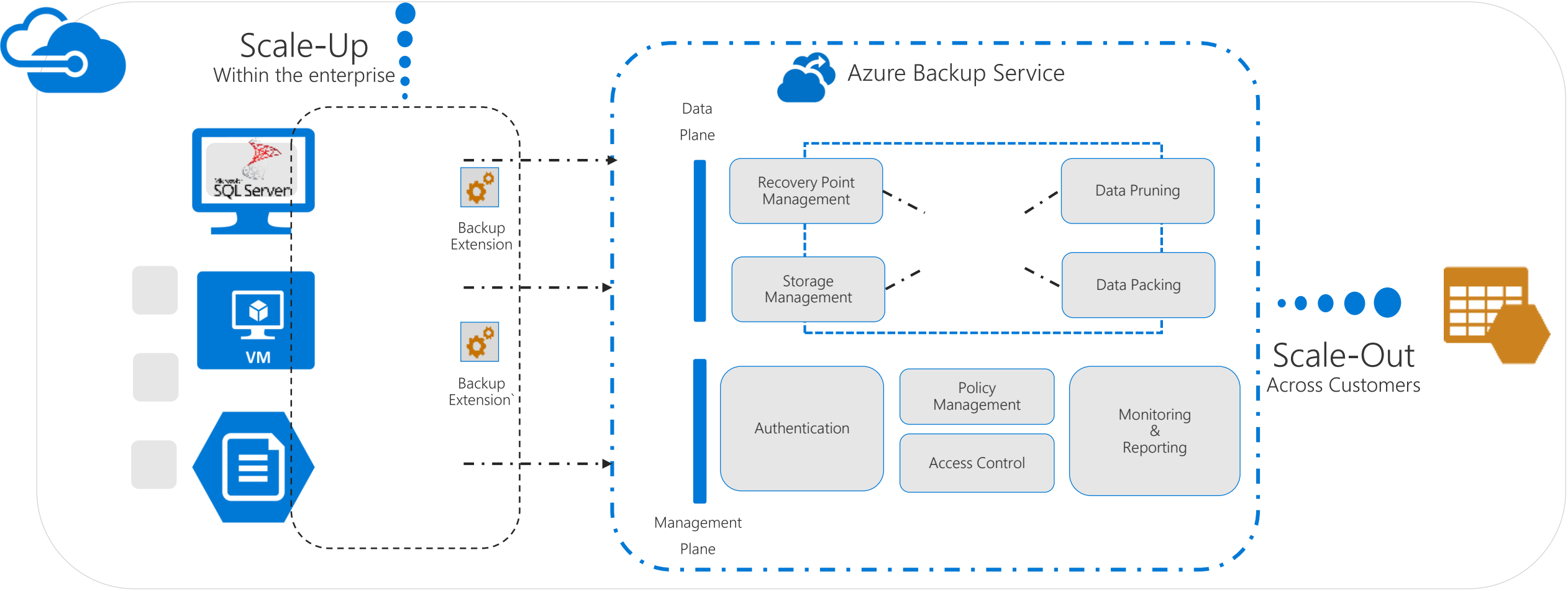
No Central Management



Infrastructure Management

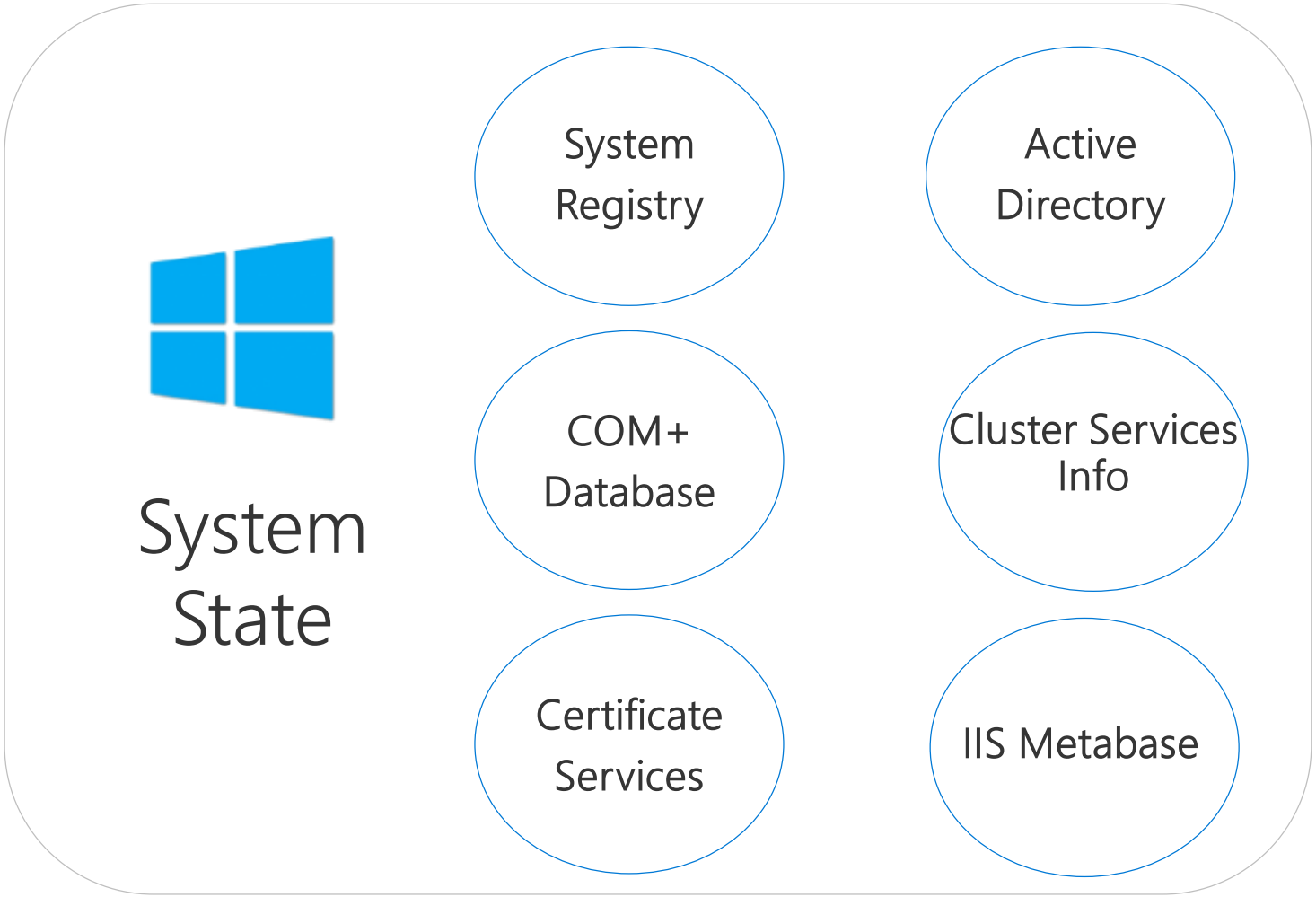
Some Central Management

Azure Backup – Architecture matters



No infrastructure | Enterprise scale | Extensible | Central management

Windows Server System State Backup



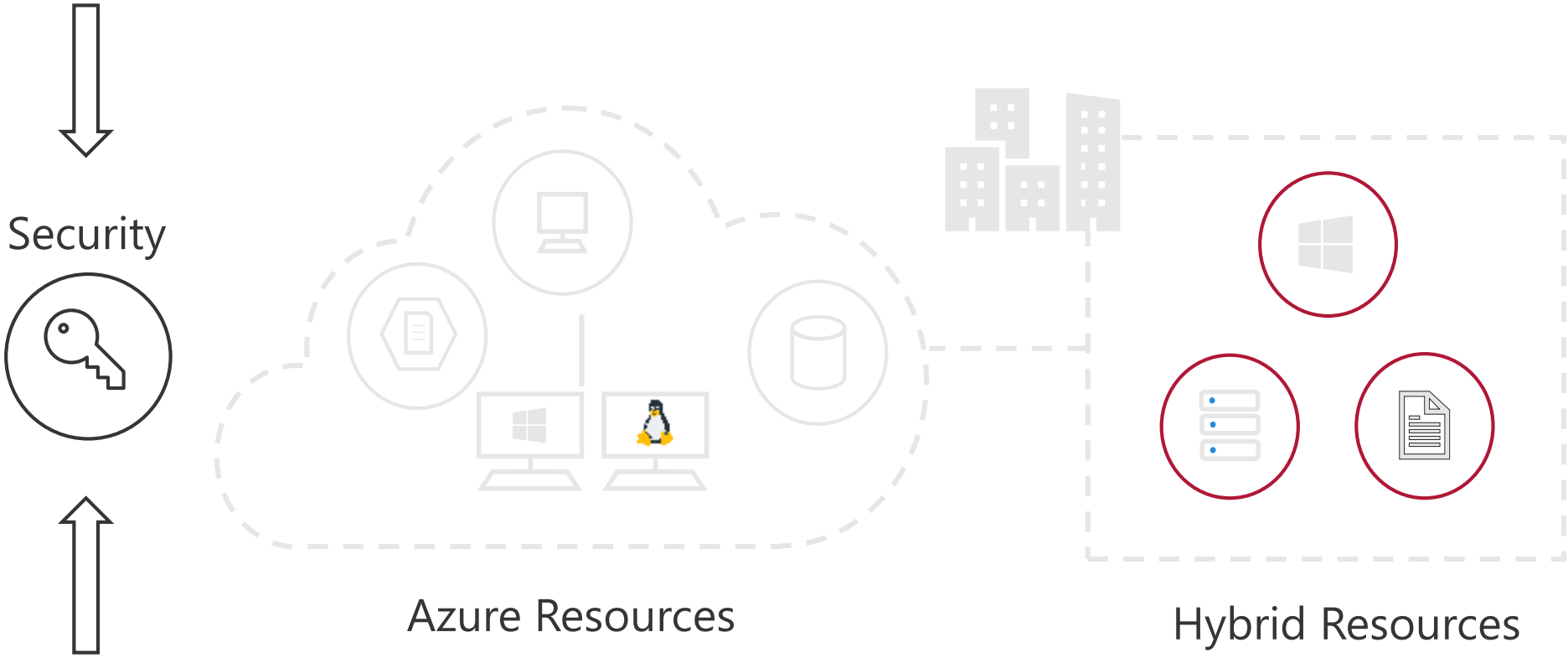
Microsoft
Active Directory

Microsoft
File Server

Microsoft
IIS

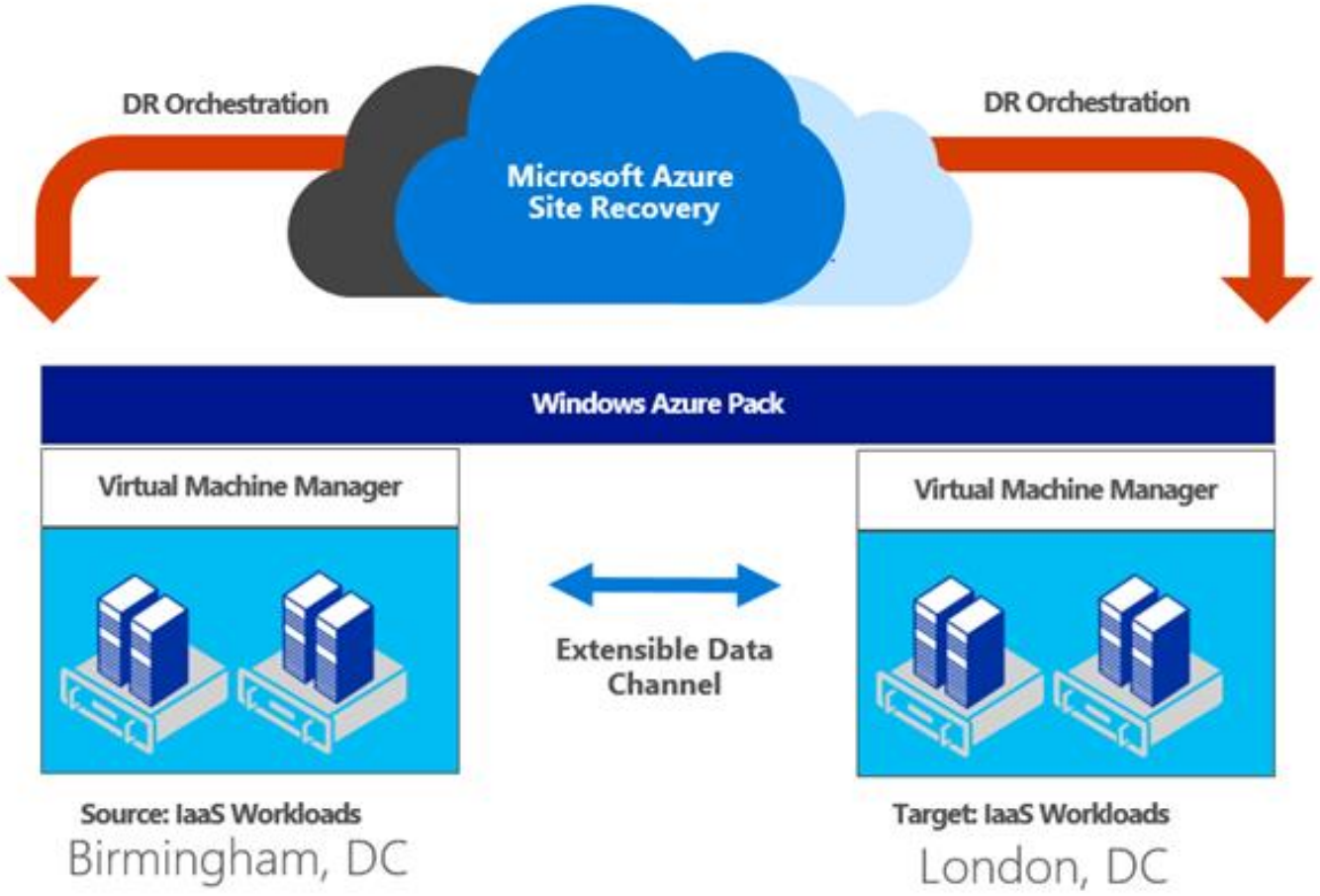
Disaster recovery with Azure Site Recovery

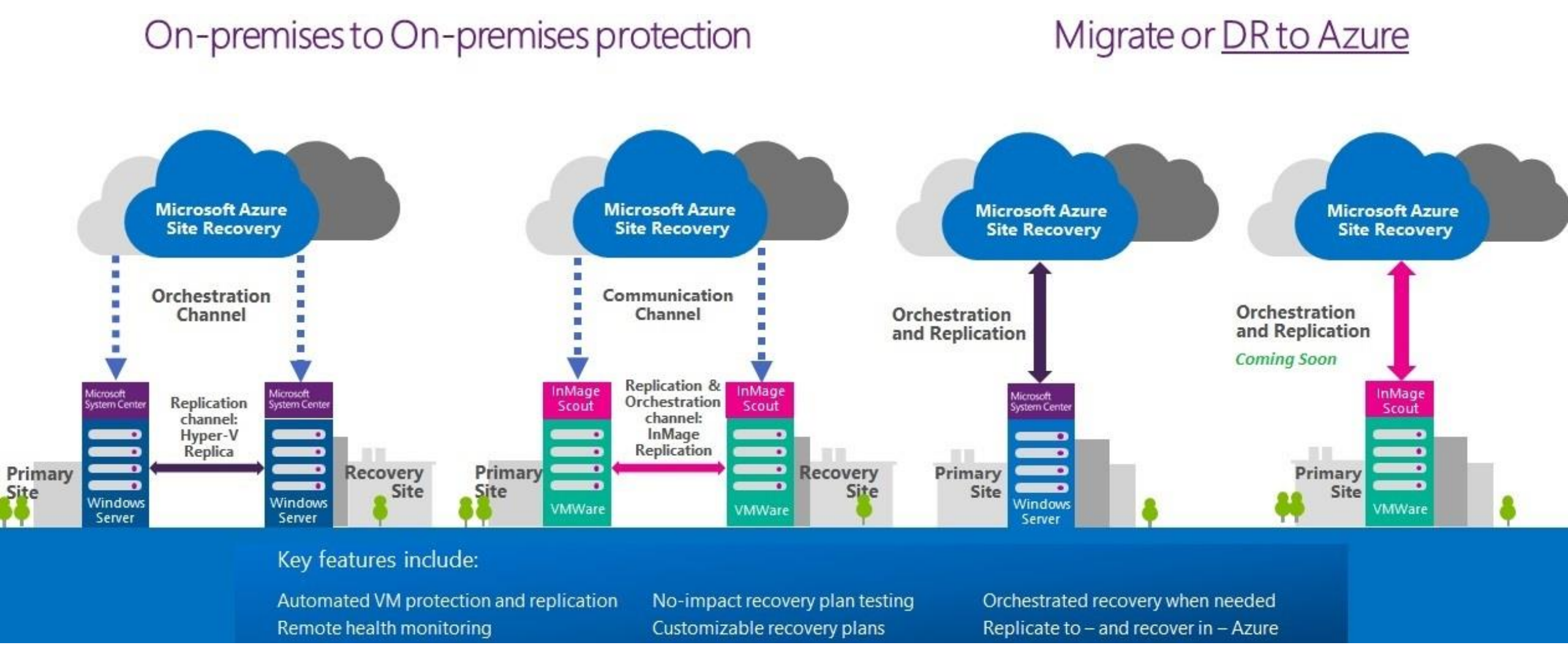
Single solution across the entire deployment



What does Site Recovery provide?

- ✓ Simple BCDR solution
- ✓ On-premises VM replication
- ✓ Data resilience
- ✓ Keep apps consistent over failover
- ✓ Testing without disruption
- ✓ Flexible failovers
- ✓ Customized recovery plans
- ✓ BCDR integration
- ✓ Azure automation integration
- ✓ Network integration





What can I replicate? Replicate Azure VMs from one Azure region to another.
Replicate on-premises VMware VMs, Hyper-V VMs, physical servers (Windows and Linux), Azure Stack VMs to Azure.
Replicate on-premises VMware VMs, Hyper-V VMs managed by System Center VMM, and physical servers to a secondary site.

Benefits of SQL Hybrid Features

Common database related challenges and the solution to them

Challenges:

1. Storage and query increasing amounts of data
2. Safeguard data and your databases
3. Data availability
4. Processing data

Solution:

SQL Server hybrid features combine On-Premises with Azure:

1. SQL Stretch database
2. Backup to Azure Blob
3. Replication & Data Sync

Benefits of Stretch Database

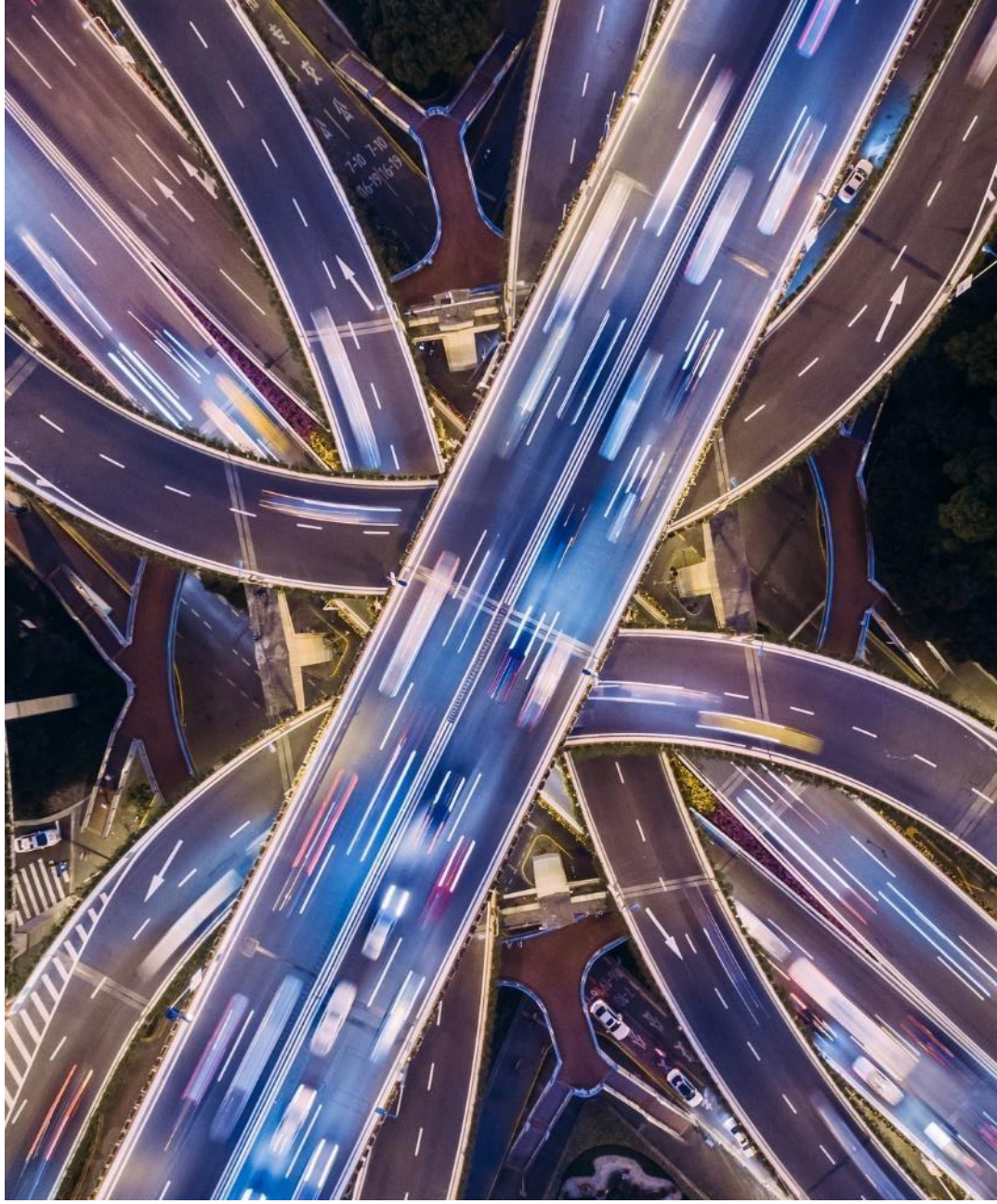
- ✓ Provides **cost-effective** availability for cold data
- ✓ **Doesn't require changes** to queries or applications
- ✓ Streamlines **on-premises** data maintenance
- ✓ Keeps your data **secure** even during migration

Benefits of Backup to URL

- ✓ Ease of use
- ✓ Backup archive
- ✓ Managed hardware
- ✓ Unlimited storage
- ✓ Backup availability
- ✓ Storage snapshots

Benefits of SQL Data Sync

- ✓ Active-active support
- ✓ Bi-directional between on-premises and Azure SQL Database
- ✓ Cost effective approach of data distribution across regions/countries



Main consideration to leverage SQL Hybrid Features usage

Customer options for End of Support

	Deadline	Recommended	Fallback
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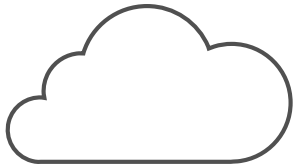
Windows Server 2008 2008 R2	Jan 2020	Migrate applications to Azure 2008/R2 VMs and get 3 more years of free Extended Security Updates	Upgrade on-premises to Windows Server 2016 or 2019

Weighing your options - is it time to move to the cloud?



Rehost

Migrate
Windows Server 2008 and 2008 R2
workloads to Azure VM

Refactor, Rearchitect or Rebuild

Innovate
with Windows Server containers
and Azure services

Conclusion

Conclusion

The presented information should provide details on the direction, which can be one of the following:

Upgrade: usually in case the customer is using obsolete Hardware/Software and/or is at EOL of Windows Server 2008/2008R2 and/or SQL Server 2008/2008R2.

Migration: could be a path if EOL is true but also a case when customer would like to use IaaS in the Cloud.

Hybrid: is a scenario of splitted component hosting or splitted data hosting (e.g. Cluster consisting of On-Premises and Cloud IaaS VM's or a DR (Disaster Recovery) solution using Azure Site Recovery, in terms of data by using one or all of the SQL Server Hybrid Features.

Cloud: migrating the entire infrastructure to the cloud or redesigning components for Cloud services only.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