

An aerial night view of a city with a complex network of glowing white lines connecting various points across the skyline, symbolizing data flow or network connectivity. A solid green square is positioned to the left of the text.

Database Modernization in Day Part 2: Migrate and Modernize your SQL Server Database

Agenda

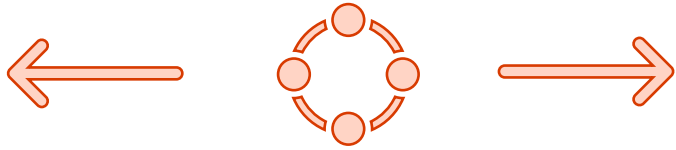
- Part 1: Introduction – Value of Migration to Azure
 - Data Migration Overview
 - Migration Triggers
 - SQL Server Migration Destinations and TCO Values in Azure
- Part 2: Migrate and Modernize your SQL Server Database
 - Data Migration Tools and Frameworks to assess database applications
 - Picking a pilot application and database to Migrate to Azure
 - Migrate to Azure using Azure Migrate, Data Migration Assistant and Azure Data Migration Service

Session objectives

Learn phases in migration journey

Familiar with Microsoft Data migration tools

DEMO - Deep dive into live database migrations



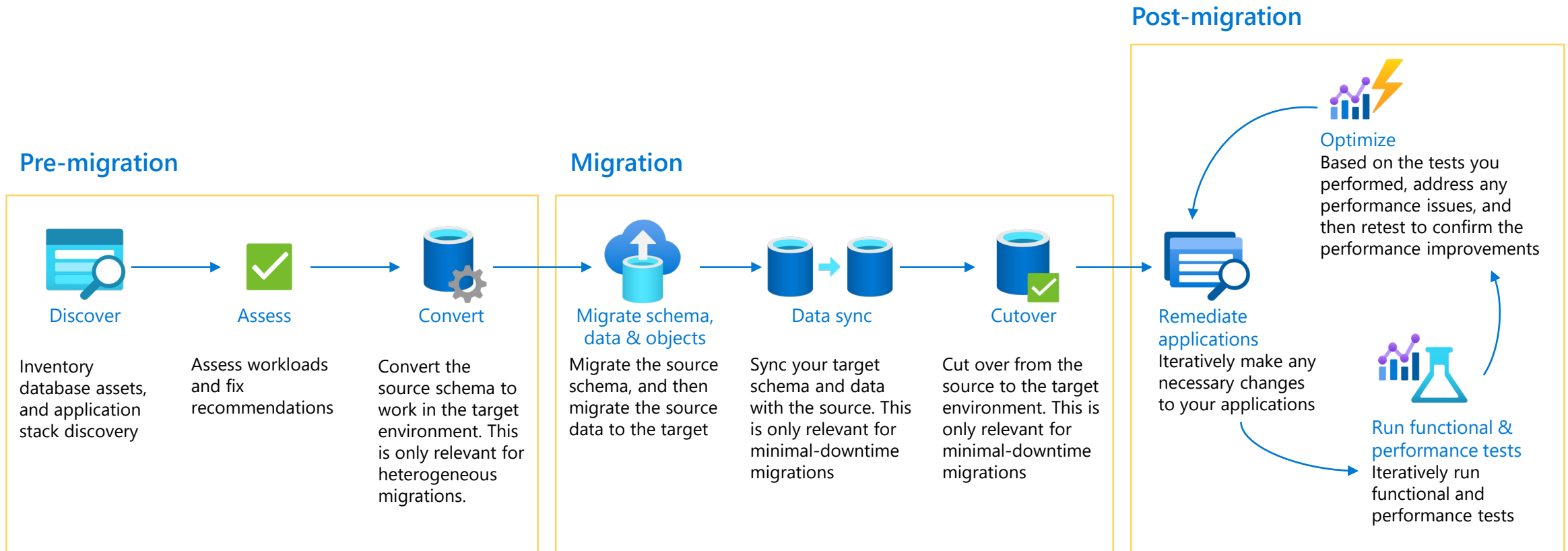
Part 1

Frameworks to Assess Migration Lifecycle Overview





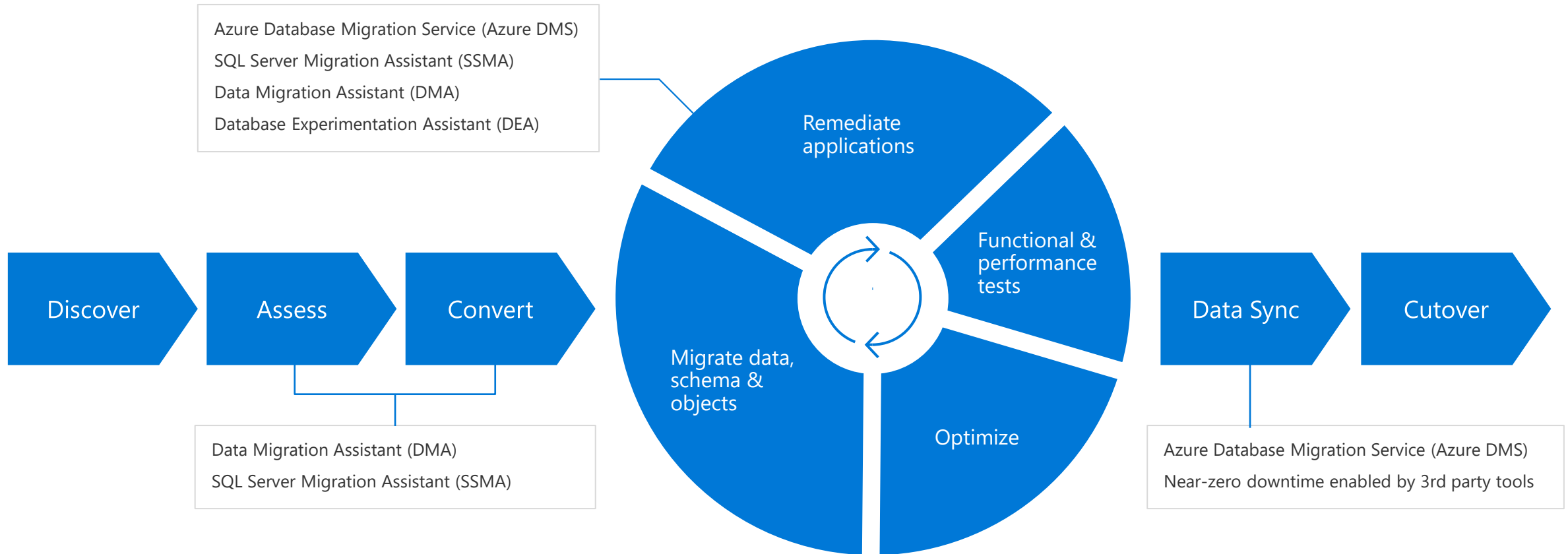
Database migration Use Case overview

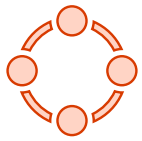




Migration lifecycle

Microsoft tools to accelerate your journey to the cloud during the migration lifecycle





Tools and services for your migration journey

On-premises

Microsoft®
SQL Server™

ORACLE®

MySQL®



PostgreSQL

mongoDB.

aws

Google Cloud



Assessment

Azure Migrate,
SSMA, DMA, DEA

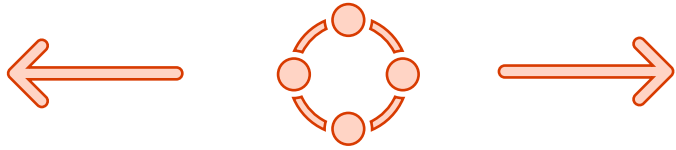


Migration

Azure Database Migration
Service

Microsoft Azure





Part 2

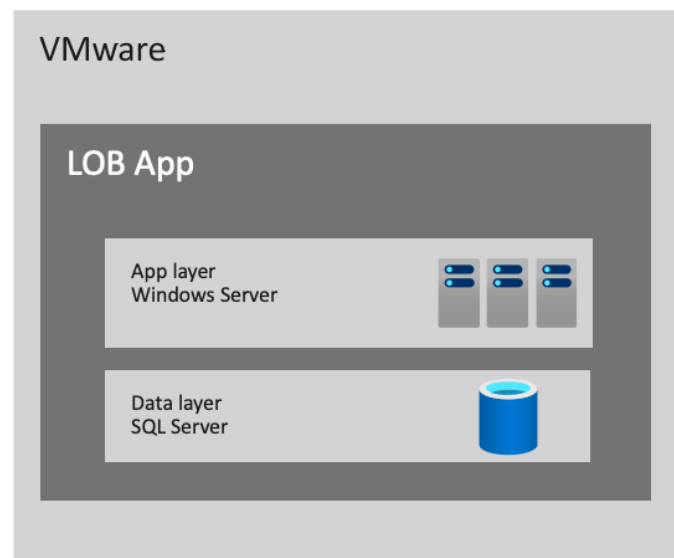
Picking a Pilot Application and database to migrate to Azure





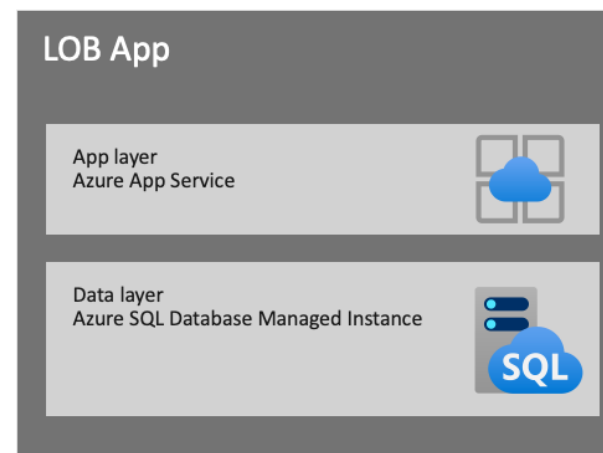
Tools and services for your migration journey

On-premises



Azure

App Service
Migration
Assistant

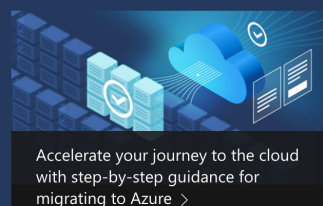


<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework>

Azure migration center

Start your cloud migration process

Move your data and infrastructure to Azure using a proven cloud migration plan. Plus, find cloud migration tools and guidance to make the most of your new environment.



<https://azure.microsoft.com/en-in/migration/migration-journey/>

Microsoft Cloud Adoption Framework for Azure

The Cloud Adoption Framework is a collection of documentation, implementation guidance, best practices, and tools that are proven guidance from Microsoft designed to accelerate your cloud adoption journey.



GET STARTED

[Start your cloud journey](#)



DOWNLOAD

[Find cloud adoption tools and templates](#)



OVERVIEW

[What is the Cloud Adoption Framework](#)

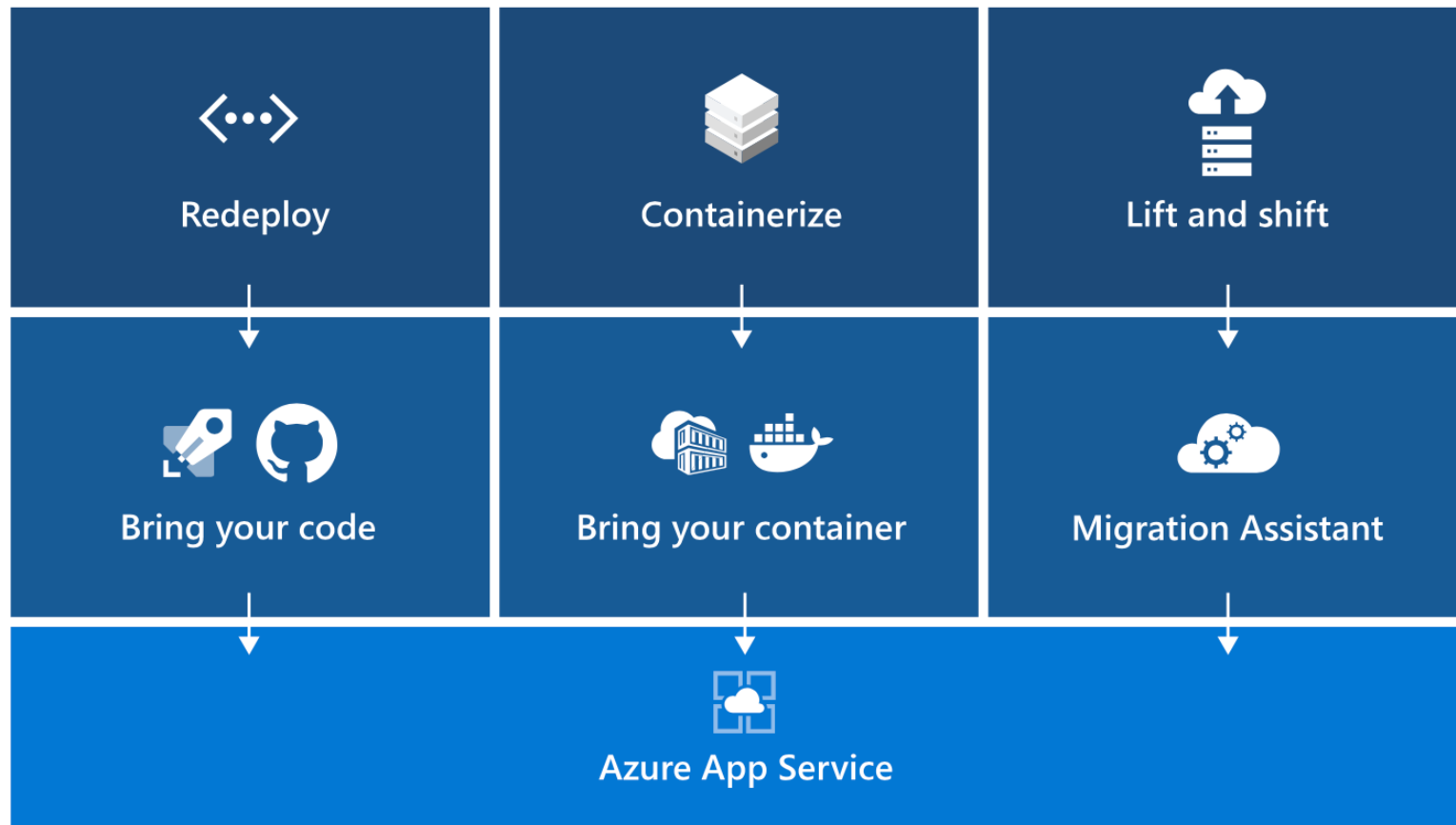


WHAT'S NEW

[What's new in the Cloud Adoption Framework](#)

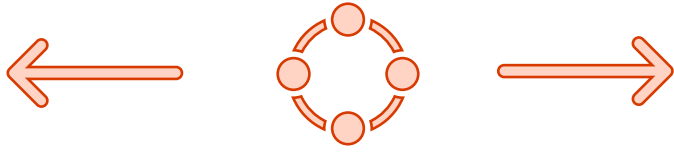


Application Migration Options



There are three simple ways to migrate your web applications to Azure App Service:

- ✓ **Bring your code**
Redeploy code using your existing CI/CD pipeline.
- ✓ **Bring your container**
Containerise your application and deploy using a Docker image.
- ✓ **Use the Migration Assistant tool**
Automate the migration of your .NET and PHP applications with the App Service Migration Assistant.



Demo

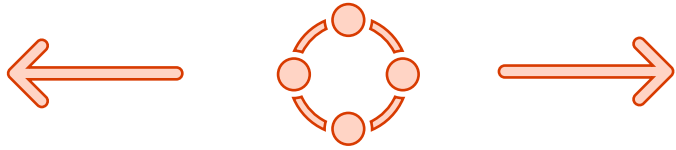
Migrate Your .NET Web Our New Step-By-Step

Look at the demo material

See step-by-step, hands-on guidance to assess and migrate .NET web applications to Azure using the App Service Migration Assistant tool.

Demo: <https://youtu.be/KYwPVok3-ql>





Part 3

Migrate to Azure using Azure Migrate, Data Migration Assistant, and Azure Data Migration Service



Online migration with backup and restore technology

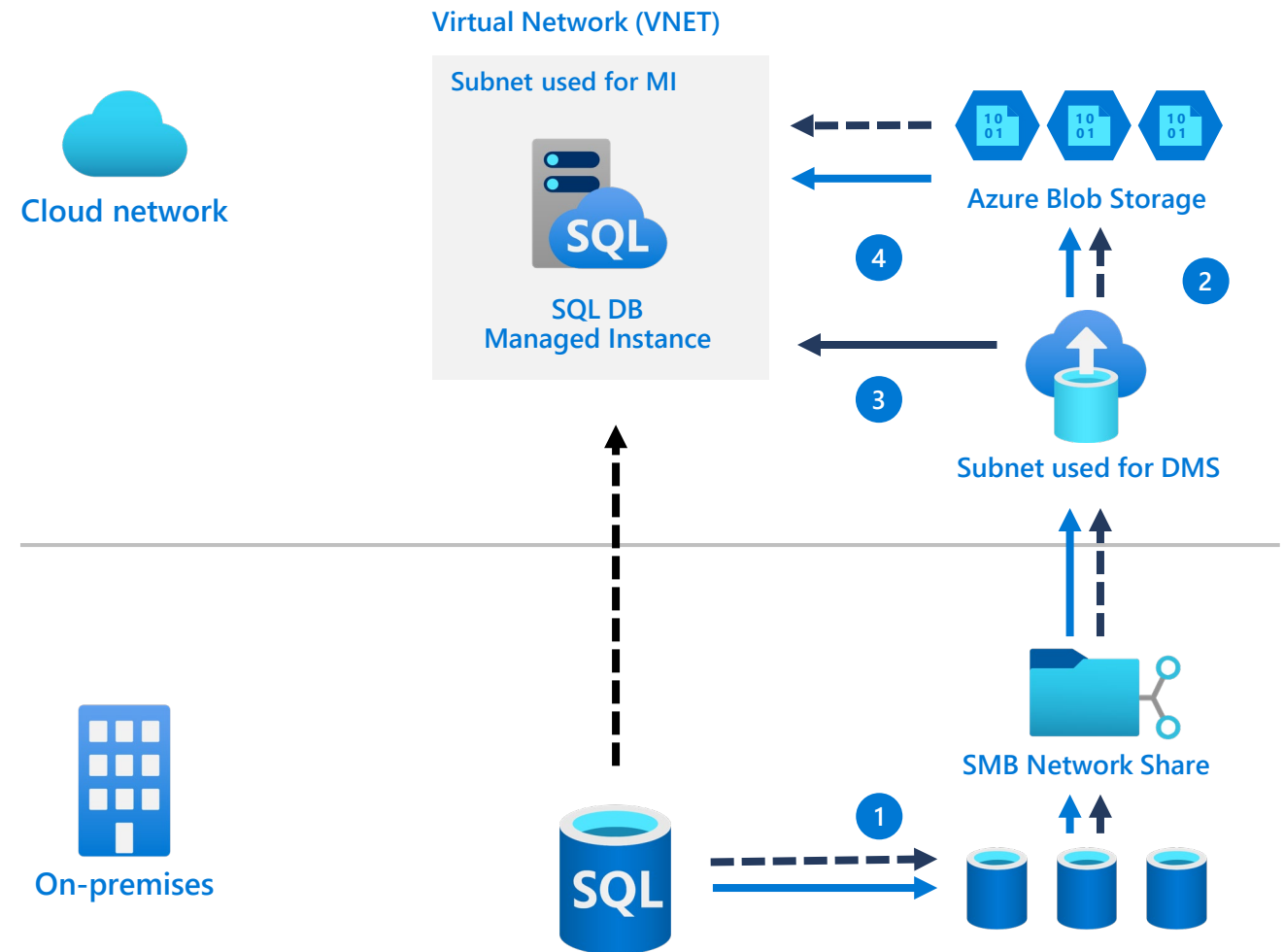
SQL Server to Azure SQL Database Managed Instance example

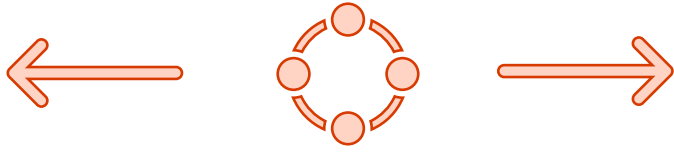
- 1 Provide existing backups in network share
- 2 DMS upload backup files to Azure storage
- 3 DMS initiate the migration to Managed Instance
- 4 Full backup restored and Transaction log backups continuously applied until cutover

Stop incoming traffic to source databases, provide Tail-Log backup, initiate cutover in DMS and change the application connection strings

Legend

- ➡ Full Database backup files
- ➡ Transaction log backup files
- ➡ Site to site connectivity (VPN or ExpressRoute)





Demo

Data Migration

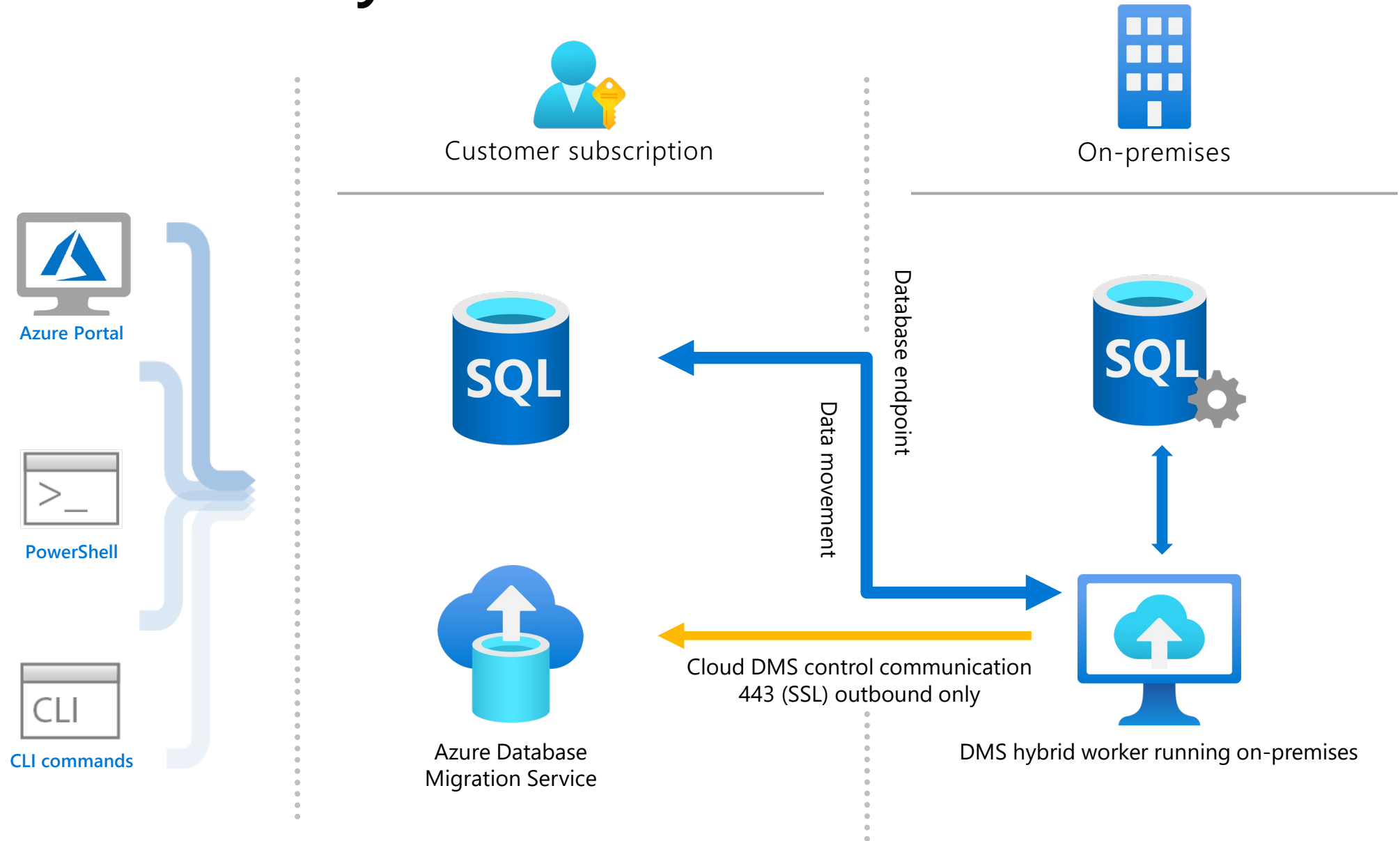
Migrate databases near zero downtime –Hybrid DMS

Link to demo

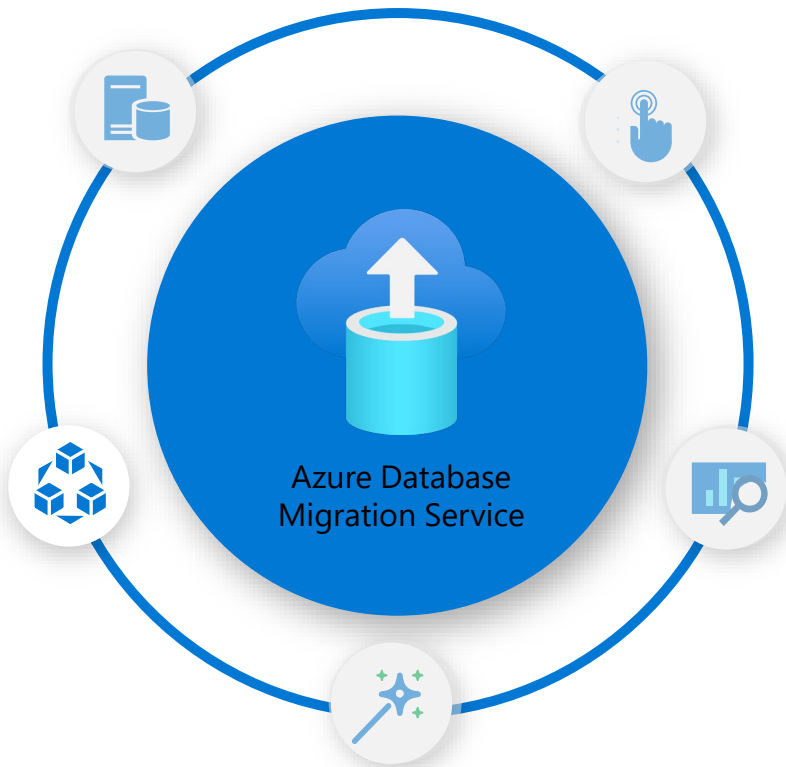
<https://partner.microsoft.com/en-us/asset/detail/dmiad-morning-session-two-recording-one-mp4>



What is DMS hybrid mode?



Recap: Azure Migrate – Integrated Experience



Available today

Database assessments

- SQL Server database assessments
- Target readiness and size assessments
- SSIS package assessments
- Application data layer assessments
- Oracle/ Sybase/ DB2 assessments and schema conversion
- Assessment for SQL databases using DMA in Azure Migrate

Migrations

- Windows and SQL logins migrations
- SSIS package migrations

Assessments^{NEW}

- .NET application assessments
- SQL Server 2019 support in DMA
- Load and save assessments in DMA

Migrations^{NEW}

- Azure DMS Hybrid mode
- PostgreSQL hyper-scale migration

Recent updates



Full Tutorial

Tutorial: Migrate SQL Server to a single database or pooled database in Azure SQL Database online using DMS

01/21/2020 • 14 minutes to read •  +5

Note

Using the Azure Database Migration Service to perform an online migration requires creating an instance based on the Premium pricing tier. For more information, see the Azure Database Migration Service [pricing](#) page.

Important

For an optimal migration experience, Microsoft recommends creating an instance of the Azure Database Migration Service in the same Azure region as the target database. Moving data across regions or geographies can slow down the migration process and introduce errors.

Tip

When you migrate databases to Azure by using Azure Database Migration Service, you can do an *offline* or an *online* migration. With an offline migration, application downtime starts when the migration starts. With an online migration, downtime is limited to the time to cut over at the end of migration. We suggest that you test an offline migration to determine whether the downtime is acceptable; if not, do an online migration.

You can use the Azure Database Migration Service to migrate the databases from an on-premises SQL Server instance to [Azure SQL Database](#) with minimal downtime. In this tutorial, you migrate the **Adventureworks2012** database restored to an on-premises instance of SQL Server 2016 (or later) to a single database or pooled database in Azure SQL Database by using the Azure Database Migration Service.

In this tutorial, you learn how to:

- ✓ Assess your on-premises database by using the Data Migration Assistant.
- ✓ Migrate the sample schema by using the Data Migration Assistant.
- ✓ Create an instance of the Azure Database Migration Service.
- ✓ Create a migration project by using the Azure Database Migration Service.
- ✓ Run the migration.
- ✓ Monitor the migration.
- ✓ Download a migration report.

<https://docs.microsoft.com/en-us/azure/dms/tutorial-sql-server-azure-sql-online>

Thank you for attending our training

Fill out our survey and get a **FREE Data Modernization Assessment**

Data Modernization Assessment

DSI will perform a free one-week assessment of your database and applications to develop a plan for migrating on-premises VMs and SQL Server databases into a combination of IaaS and PaaS services in Azure. This assessment will reveal any feature parity and compatibility issues between your SQL Server 2008 R2 databases and the managed database offerings in Azure.

Take the Survey

dstrat.com/datamod





Resources

Azure Database Migration Service: <https://azure.microsoft.com/en-us/campaigns/database-migration/>

Preview signup: <https://sqldatabase-migrationpreview.azurewebsites.net>

Feedback alias: dmsfeedback@microsoft.com

Channel 9 Video: [Oracle migrations](#); [Azure SQL Database migrations](#)

Migration Guide: datamigration.microsoft.com

SQL Server Migration Assistant

- Blog: [Released: SQL Server Migration Assistant \(SSMA\) v7.6](#)
- Feedback alias: ssmahelp@microsoft.com

Database Experimentation Assistant: [Download](#)

Find a partner: <http://migration/Pages/SearchPartners.aspx>

Data Migration Team: DMPMs@microsoft.com

Data Migration Team Blog: blogs.msdn.microsoft.com/datamigration/

Attunity: aka.ms/attunity-replicate

Tutorials: <https://docs.microsoft.com/en-us/azure/dms/tutorial-sql-server-azure-sql-online>

What is DMS hybrid mode?

