

Modernize the SQL Infrastructure using Azure 8 Weeks Implementation

As organizations now more than ever look for cost efficiencies, business stability, and consistency, choosing the most efficient migration path for SQL is imperative. This means, considering several different workload scenarios and destinations, such as migrating or modernizing your on-premises SQL servers to latest SQL version or to the same version or moving completely to the Azure with options of IaaS and PaaS.

1. Want to move from CapEx to OpEx model by leveraging the power of Azure?
2. Want to benefit from Azure's High Availability, reliability, and resiliency while migrating your workloads?
3. Want take benefit from Azure's Hybrid Benefits and lower costs?
4. Take advantage of additional years of security update support for legacy operating systems like Windows Server and SQL Server 2008 & 2012.
5. Take advantage of flexible SQL options like SQL on VM, and Azure SQL PaaS solution.
6. Migrate SQL servers to Azure but want to upgrade/replace aging hardware?
7. Take advantage of the automated backups on the SQL PaaS solution
8. Take advantage of the Zero infrastructure backup service for the Azure SQL VM using the recovery services vault
9. Improve the performance of the SQL by leveraging the disk pools.

Our 4-step approach will cover assuming the landing zone setup is completed:

- ❖ SQL Server Modernization Discovery & Assessment
- ❖ SQL Server Modernization Design and Planning
- ❖ Modernize SQL server to Latest SQL VM or PaaS and Testing
- ❖ Documentation, Knowledge Transfer, and Day-2 support

Step 1: SQL Server Modernization Discovery & Assessment

SNP will work with Stakeholders & SME's from the customer team to understand below.

- Understand the configuration of SQL servers
- Identify the SQL server Version and Edition
- Identify the Recovery model of the databases.
- Identify the Database objects and SQL server level objects.
- Understand the existing backup options used currently(Full, Differential or Transactional) and schedules for backup.
- Understand the existing RPO of the SQL Server Databases.
- Identify and understand if there is any HADR solution is configured on the Databases and SQL server.
- Perform the Assessment on the SQL server choosing target as SQL VM or Azure SQL PaaS using Azure migrate or Azure Data Studio for object, compute and storage options in Azure.
- Perform the Assessment of the SQL servers using Microsoft Data Migration Assistant(DMA) for modernizing to the latest SQL versions.
- Provide recommendations using the data from Azure Migrate tool to provide details on feature blockers and mitigations
- Data from DMA assessment report to provide the recommendations on Breaking changes, Behavior changes, deprecated features.

Step 2: SQL Server Modernization Design and Planning

By understanding the above requirement, SNP will work on building an architecture to include the following aspects in the design that suffice the existing environment:

- Design the architecture depending on the target of Azure PaaS or Azure SQL VM.
- Plan for compute and storage design for hosting SQL services on Azure.
- Plan the remediations on all the recommendations that Azure Migrate or Microsoft DMA suggests.
- Plan for the Azure data studio appliances depending on the number of databases.
- Plan the schedules for the backup frequency for modernization.
- Plan the shared location(SMB/NFS) to store the backup files for Azure Data Studio to pick and restore to the selected Azure target.

Step 3: Deployment, Modernization and Testing

- Configure the appliances and install the Azure Data Studio, Check connectivity to all the SQL servers from all the data studio appliances.
- Start performing the backup on the SQL servers and place the database backup files in their respective database folders on the appropriate staging location(Azure storage account / Network File Share)for the backup files.
- Deploy Azure Database Migration Service on Azure for the Modernization
- In case, backup files are placed in the network share folder, download and Install the Microsoft Integration Run time on Data studio appliances.
- In case the target is SQL server on Azure VM, deploy SQL server on Azure VM using the profiling of compute and storage selected during planning session.
- In case the target is Azure PaaS, deploy the recommended SQL service provided by the assessment reports.
- Configure the Azure Data Studio and Connect to the SQL servers from the appliances.
- To Modernize, configure Azure Data Studio to pickup the initial backup from the staging location and restore on the target and Continuously place the transactional log backup files in the staging location.
- Once all the transactional log backup files are restored, perform the cutover of the databases
- Test the applications with the connectivity and check all the linked server connections, jobs etc.

Step 4: Documentation, Knowledge Transfer and Day-2 support

- Discovery and Planning documentation.
- Architecture design and planning document for SQL Server Modernization.
- Implementation/as-built document of SQL Server Modernization.
- Knowledge Transfer and Day-2 Support
 - Hand over the documentation for review
 - Leverage SNP's Managed Operations Services for Day-2 support

About SNP

SNP's consulting services help businesses of all sizes transform with innovative, cloud-based solutions that harness the power of Microsoft Azure.

We combine elements from our [ISO certifications and Microsoft specializations](#) as well as the most efficient and innovative technology tools and platforms to help our clients become more agile, more customer focused and more operationally efficient.


Digital & App Innovation Azure

Specialist
 Kubernetes on Microsoft Azure
 Modernization of Web Applications


Security

Specialist
 Cloud Security
 Threat Protection


Data & AI Azure

Specialist
 Analytics
 Data Warehouse Migration


Infrastructure Azure

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 Windows Server & SQL Server Migration
 Azure Virtual Desktop
 Networking Services

Member of
Microsoft Intelligent Security Association




**ISO 20000-1:2018:
 Service Management System**


**ISO 22301:2019:
 Business Continuity Management System**


**ISO 27001:2013:
 Information Security Management System**