**Description**

You can use Azure Database Migration Service to migrate the databases from a SQL Server instance to [Azure SQL Database](https://github.com/MicrosoftDocs/azure-docs/blob/main/azure/sql-database). In this tutorial, you migrate the [Sample](https://github.com/MicrosoftDocs/azure-docs/blob/main/sql/samples/adventureworks-install-configure#download-backup-files) database from SQL Server 2019 to Azure SQL Database by using Azure Database Migration Service.

In this Lab, you will learn how to:

* Use the Data Migration Service to migrate the database sample schema and Data.
* Create a migration project by using Azure Database Migration Service.
* Run the migration.
* Monitor the migration.

**Learning Objectives**

Upon completion of this Lab you will be able to:

* Migrate Azure SQL server to SQL database
* Connect to an Azure SQL database and SQL server through DMS

**Intended Audience**

This lab is intended for:

* Microsoft CSA Team members

**Steps to carry out migration activity**

In the Azure portal menu, select **All services**. Search for and select **Azure Database Migration Services**.

1. On the **Azure Database Migration Services** screen, select the Azure Database Migration Service instance that you created.

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1. Select **SqlToSqlDbMigrationProject**
2. **Then Select New Activity**

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1. **Select Schema only migration**

## Specify source details

1. On the **Select source** screen, specify the connection details for the source server instance.
2. Get Source VM IP Address – Go to the overview section of the “Source…” virtual machine and identify public IP address.

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1. Provide Source SQL Server Instace Name with the above “Public IP Address”
2. Provide **SQL Username**: sqladmin and **Password: Password@123**

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Select **Next: Select databases**.

## Select databases for migration

Select either all databases or specific databases that you want to migrate to Azure SQL Database. DMS provides you with the expected migration time for selected databases

1. Choose the database(s) you want to migrate from the list of available databases.
2. Review the expected downtime. If it's acceptable, select **Next: Select target**

## Specify target details

1. On the **Select target** screen, provide authentication settings to your Azure SQL Database.
2. Get **Target Server Name** like below

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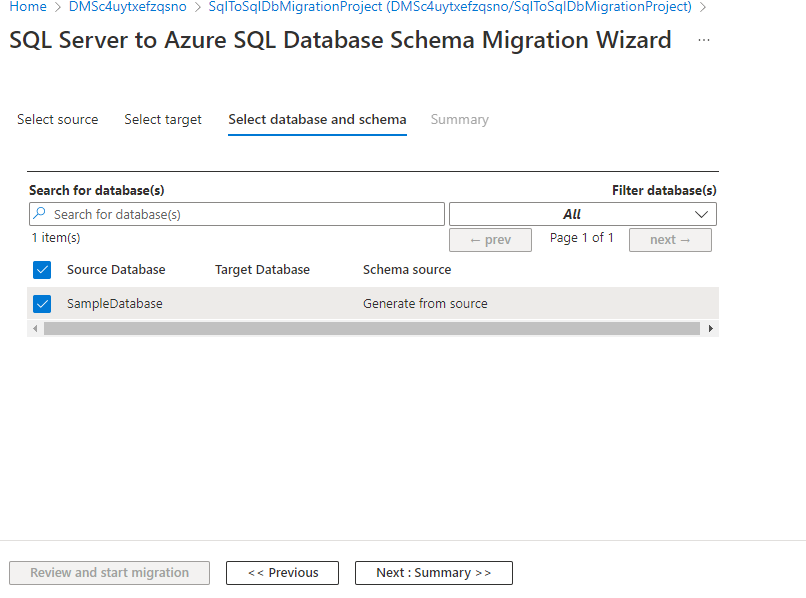
Provide Target Name like targetservernamexxxxxx.database.windows.net

1. Provide **SQL Username**: sqladmin and **Password: Password@123**

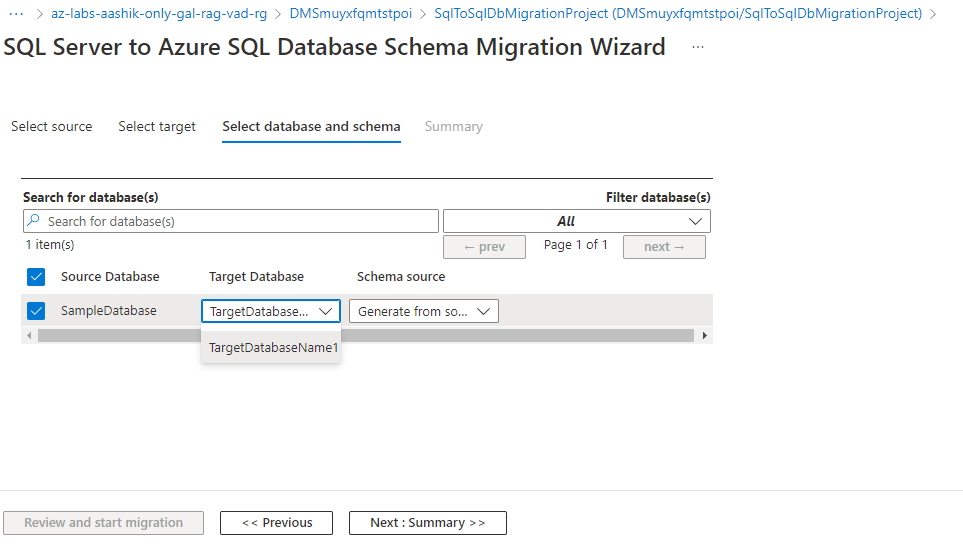
Graphical user interface, application

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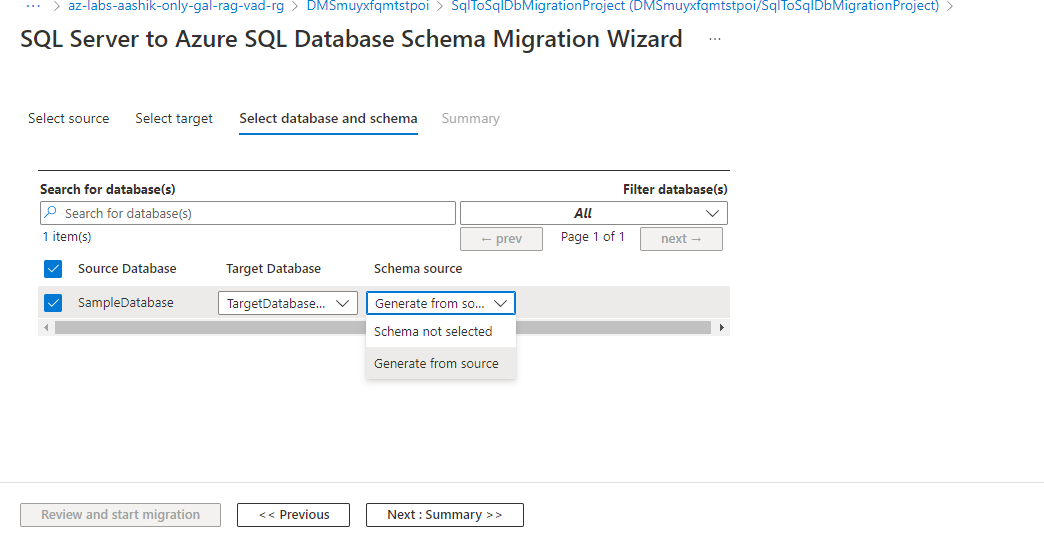
1. Select **Next: Select database and schema**



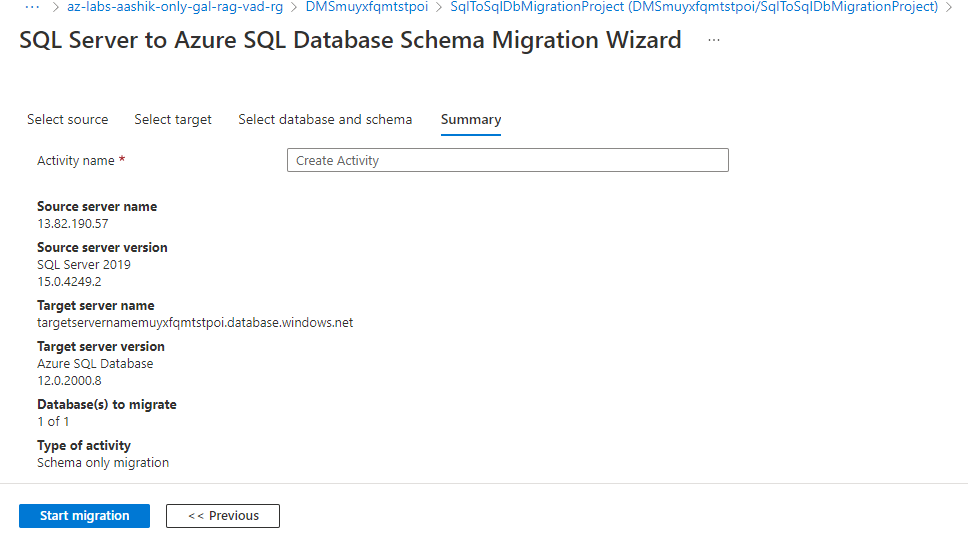
1. Select Target database as **TargetDatabaseName1**



1. Select Schema source as **Generate from Source**



1. Select **Next: Summary**, review the migration configuration and in the **Activity name** text box, specify a name **Schemaonlymigrationactivity** for the migration activity.



## Run the migration

Select **Start migration**.

The migration activity window appears, and the **Status** of the activity is **pending**

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## Monitor the migration

On the migration activity screen, select **Refresh** to update the display until the **Status** of the migration shows as **Completed**.

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**Data Migration Activity**:

1. In the Azure portal menu, select **All services**. Search for and select **Azure Database Migration Services**. OR Inside the Newly Resource Group, Search for and select **Azure Database Migration Services**
2. On the **Azure Database Migration Services** screen, select the Azure Database Migration Service instance that you created.

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1. Select **SqlToSqlDbMigrationProject**
2. Select New Activity

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1. Select Data Migration

## Specify source details

1. On the **Select source** screen, specify the connection details for the source SQL Server instance.
2. Provide **SQL Username**: sqladmin and **Password: Password@123**

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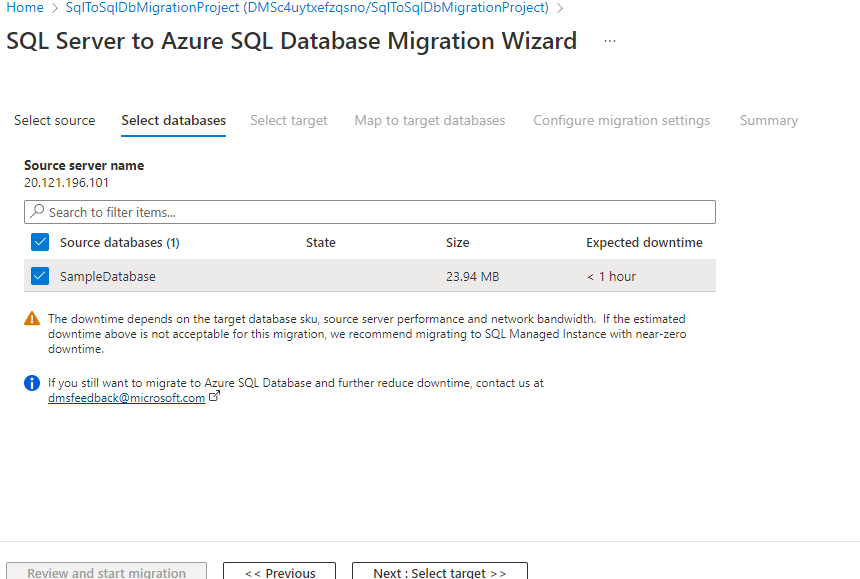
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1. Select **Next: Select databases**.

## Select databases for migration

Select Sample database that you want to migrate to Azure SQL Database. Review the expected downtime.

Select **Next: Select target**



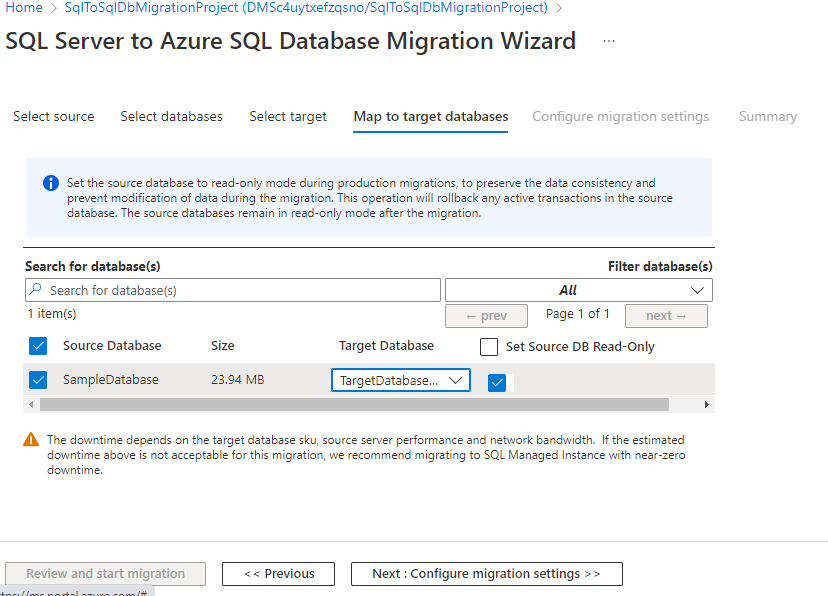
## Specify target details

1. On the **Select target** screen, provide authentication settings to your Azure SQL Database.
2. Provide **SQL Username**: sqladmin and **Password: Password@123**

Graphical user interface, text, application, email

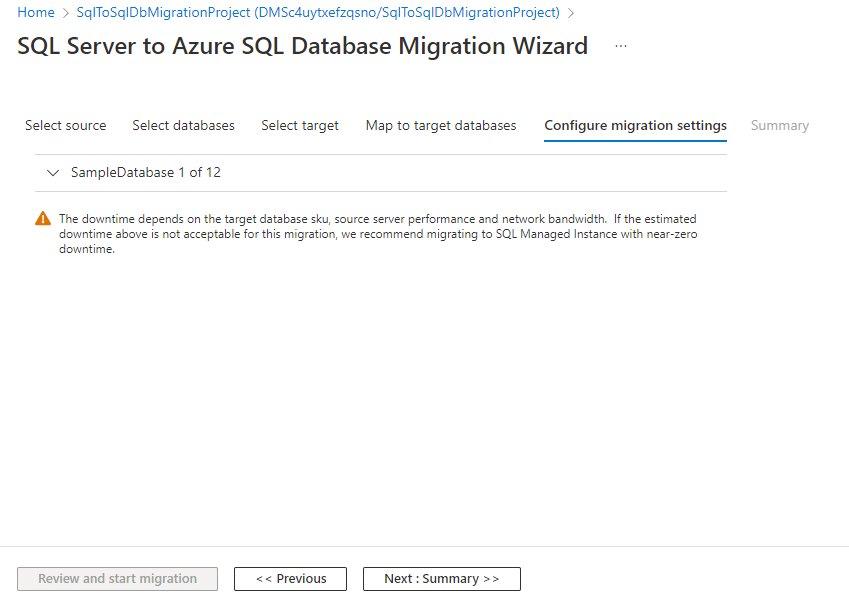
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1. Select **Next: Map to target databases** screen, map the source and the target database for migration.
2. If the target database contains the same database name as the source database, Azure Database Migration Service selects the target database by default.

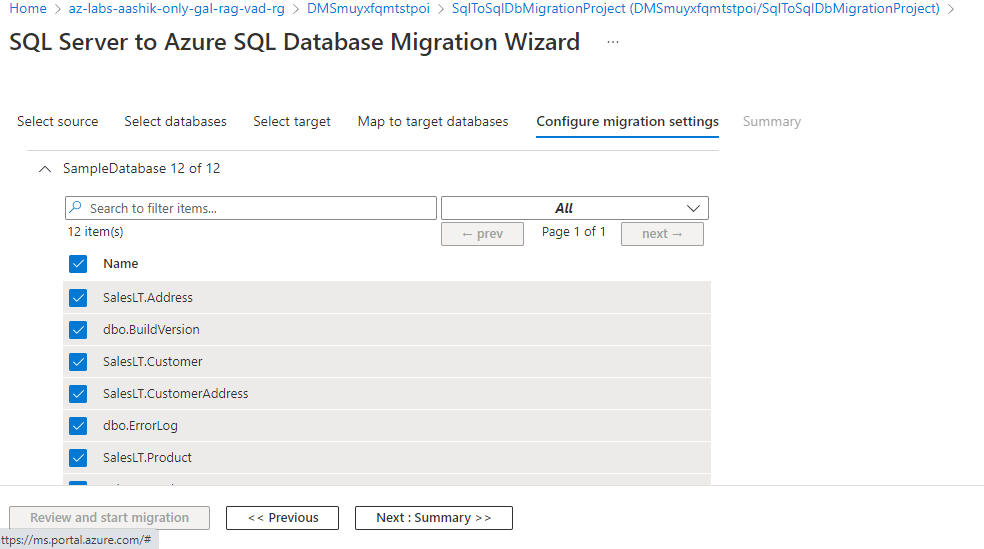


1. Select **Next: Configuration migration settings**, expand the table listing, and then review the list of affected fields.

Azure Database Migration Service auto selects all the empty source tables that exist on the target Azure SQL Database instance. If you want to re migrate tables that already include data, you need to explicitly select the tables on this blade.



1. Expand **SampleDatabase** to see all Tables in this Database.



1. Select **Next: Summary**, review the migration configuration and in the **Activity name** text box, specify a name for the migration activity.

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**Give Activity name**: Datamigrationactivity

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## Run the migration

Select **Start migration**.

The migration activity window appears, and the **Status** of the activity is **pending**.

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## Monitor the migration

On the migration activity screen, select **Refresh** to update the display until the **Status** of the migration shows as **Completed**.

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Verify the target database(s) on the target **Azure SQL Database**.

**Post Migration Validations**:

1. Check Target SQL Server Networking Firewall rules and add your client IP address like below.

Open the target SQL Server Overview.

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1. Navigate to the **Networking** on the left side blade.

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1. Select **Add a virtual network rule**

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1. Give Name, Subscription and other details and click OK

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1. Then Select **Query editor** and provide SQL Credentials to run SQL commands

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1. **Execute below SQL Query:**

Query:

select schema\_name(tab.schema\_id) + '.' + tab.name as [table],

sum(part.rows) as [rows] from sys.tables tab

inner join sys.partitions part on tab.object\_id = part.object\_id

where part.index\_id IN (1, 0)

group by schema\_name(tab.schema\_id) + '.' + tab.name

order by sum(part.rows) desc

Please validate output with below parameters.

**Output:**

table, rows

SalesLT.Customer, 847

SalesLT.ProductDescription, 762

SalesLT.ProductModelProductDescription, 762

SalesLT.SalesOrderDetail, 542

SalesLT.Address, 450

SalesLT.CustomerAddress, 417

SalesLT.Product, 295

SalesLT.ProductModel, 128

SalesLT.ProductCategory, 41

SalesLT.SalesOrderHeader, 32

dbo.BuildVersion, 1

dbo.ErrorLog, 0