**Migrate SQL Server to Azure SQL Database using DMS project solution**

**Instructions**: List the steps you will perform to complete each activity in the system. Ensure to provide screenshots for each step. As a sample, we have filled in the information for *Activity 1, Step 1*. You can add more rows as required.

**Activity:** This assignment aims to help you reflect upon the core concepts covered in the AZ 305course. You need to Migrate SQL Server to Azure SQL Database using DMS in the Azure portal, run it, and monitor the migration in the Azure SQL Database to create a project. This will involve assessing your DB, migrating a schema, and creating an Azure Database migration service instance.

|  |  |
| --- | --- |
| **Activity #** | **Steps** |
| Activity 1: Navigate to azure portal | <https://azure.microsoft.com/en-in/get-started/azure-portal> |
| Activity 2:  Signing in. | Sign in by using your official Microsoft account. If you don’t have a Microsoft account, then create one and then sign in.  To perform the next set of steps, read through this [*Prerequisites document*](https://skilluptech.sharepoint.com/:b:/s/Skill-UpIPCourses/EfDSTPuNt1JLmb1rVb4zaAYBwEc6OjT9rHFey7Fr2lRCJQ?e=bInvuF) to enable the Data Migration Assistant approach. |
| **Activity 3:**  Assessing your on-premises database | 1. In the Data Migration Assistant, select the New (+) icon, and then select the Assessment project type. 2. To create a database and server, please refer to the instructions in this document - [*Creating Database and Server in Azure*](https://skilluptech.sharepoint.com/:b:/s/Skill-UpIPCourses/EWzKrM_uhuRFhFfqdELtxuMB0eFvuCp6IeWH8dcteNZE3Q?e=PjSCAg). Specify a project name. From the Assessment type drop-down list, select **Database Engine**; in the Source server type text box, select **SQL Server**; in the Target server type text box, select **Azure SQL Database**, and then select **Create** to create the project. When you're assessing the source SQL Server database migrating to a single database or pooled database in Azure SQL Database, you can choose one or both of the following assessment report types:  * Check database compatibility * Check feature parity  1. In the Data Migration Assistant, on the Options screen, select Next. 2. On the Select sources screen, in the Connect to a server dialog box, provide the connection details to your SQL Server, and then select Connect. 3. In the Add sources dialog box, select AdventureWorks2016, select Add, and then select Start Assessment.   For databases in Azure SQL Database, the assessments identify feature parity issues and migration blocking issues for deploying to a single database or pooled database.  The SQL Server feature parity category provides a comprehensive set of recommendations, alternative approaches available in Azure, and mitigating steps to help you plan the effort into your migration projects.  The Compatibility issues category identifies partially supported or unsupported features that reflect compatibility issues that might block migrating SQL Server database(s) to Azure SQL Database. Recommendations are also provided to help you address those issues.     1. Review the assessment results for migration blocking issues and feature parity issues by selecting the specific options. |
| **Activity 4:**  Migrating the sample schema | 1. In the Data Migration Assistant, select the New (+) icon, and then under Project type, select **Migration**. 2. Specify a project name, in the Source server type text box, select **SQL Server**, and then in the Target server type text box, select **Azure SQL Database**. 3. Under Migration Scope, select **Schema only**.      1. After performing the previous steps, the Data Migration Assistant interface should appear. 2. Select **Create to create the project**. 3. In the Data Migration Assistant, specify the source connection details for your SQL Server, select Connect, and then select the AdventureWorks2016 database.      1. Select Next, under Connect to target server, specify the target connection details for the Azure SQL Database, select Connect, and then select the AdventureWorksAzure database you had pre-provisioned in Azure SQL Database.      1. Select Next to advance to the Select objects screen, on which you can specify the schema objects in the AdventureWorks2016 database that need to be deployed to Azure SQL Database. By default, all objects are selected.      1. Select Generate SQL script to create the SQL scripts, and then review the scripts for any errors.      1. Select Deploy schema to deploy the schema to Azure SQL Database, and then after the schema is deployed, check the target server for any anomalies. |
| **Activity 5:**  Registering the resource provider | 1. Sign in to the Azure portal. Search for and select Subscriptions.      1. Select the subscription in which you want to create the instance of Azure Database Migration Service, and then select Resource providers.      1. Search for migration, and then select Register for Microsoft.DataMigration. |
| **Activity 6:** Creating an Azure Database Migration Service instance | 1. In the Azure portal menu or on the Home page, select Create a resource. Search for and select Azure Database Migration Service.      1. On the Azure Database Migration Service screen, select Create.        1. Select the appropriate Source server type and Target server type and choose the Database Migration Service (Classic) option.      1. On the Create Migration Service Networking screen:      * Select the subscription.      * Create a new resource group or choose an existing one. * Specify a name for the instance of the Azure Database Migration Service. * Select the location in which you want to create the instance of Azure Database Migration Service. * Choose Azure as the service mode. * Select a pricing tier. . * Configure Azure Database Migration Service instance basics settings. * Select **Next: Networking**.  1. On the Create Migration Service networking screen:  * Select an existing virtual network or create a new one. The virtual network provides Azure Database Migration Service with access to the source server and the target instance. Configure Azure Database Migration Service instance networking settings * Select **Review + Create** to review the details and then select **Create** to create the service. * After a few moments, your instance of the Azure Database Migration service is created and ready to use. |
| **Activity 7:**  Creating a migration project | 1. 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. 2. Select New Migration Project.      1. Locate your instance of Azure Database Migration Service      1. On the New migration project screen, specify a name for the project, in the Source server type text box, select SQL Server, in the Target server type text box, select Azure SQL Database, and then for Choose Migration activity type, select Data migration.   After this step, if you are asked to configure runtime settings, please follow the steps given in this link to manually configure the runtime integration - [Create a self-hosted integration runtime - Azure Data Factory & Azure Synapse | Microsoft Learn](https://learn.microsoft.com/en-us/azure/data-factory/create-self-hosted-integration-runtime?WT.mc_id=Portal-Microsoft_Azure_DMS&tabs=data-factory).   1. Select **Create** and run activity to create the project and run the migration activity. |
| **Activity 8:**  Specifying source details | 1. On the Select source screen, specify the connection details for the source SQL Server instance.   Make sure to use a Fully Qualified Domain Name (FQDN) for the source SQL Server instance name. You can also use the IP Address for situations in which DNS name resolution isn't possible.   1. If you have not installed a trusted certificate on your source server, select the **Trust server certificate check box**.   When a trusted certificate is not installed, SQL Server generates a self-signed certificate when the instance is started. This certificate is used to encrypt the credentials for client connections.     1. Select **Next: Select databases** |
| **Activity 9:**  Selecting databases for migration | 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 >>** |
| **Activity 10:**  Specifying target details | 1. On the Select target screen, provide authentication settings to your Azure SQL Database.      1. Select **Next: Map to target databases** screen, map the source and the target database for migration. 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. The Azure Database Migration Service auto selects all the empty source tables that exist on the target Azure SQL Database instance. If you want to remigrate tables that already include data, you need to explicitly select the tables on this blade.      1. Select **Next: Summary**, review the migration configuration and in the Activity name text box, specify a name for the migration activity. |