

Creating Database Assessment Report Using Data Migration Assistant



Michael J. Teske

AUTHOR EVANGELIST, PLURALSIGHT

@teskemj becausesecurity.com



Module Overview



Install Data Migration Assistant

Identify supported database platforms

**Create assessment report for MS SQL
targeting Azure SQL DB**



Exercise Files



What do you want to learn?

Timothy
timothywarner316@gmail.com

Troubleshooting with Microsoft Azure Network Watcher

by Tim Warner

Microsoft now gives you packet-level access to your Windows Server and Linux virtual machines (VMs) running in Azure. You'll learn how to use Network Watcher to troubleshoot network security groups (NSGs), perform packet captures, and much more.

[Resume Course](#) [Bookmark](#) [Add to Channel](#)

Table of contents

Description

Transcript

Exercise files

Discussion

Learning Check

Recommended

These exercise files are intended to provide you with the assets you need to create a video-based hands-on experience. With the exercise files, you can follow along with the author and re-create the same solution on your computer. We find this to be even more effective than written lab exercises.

[Download exercise files](#)

Course author

**Tim Warner**

Timothy Warner is a Microsoft Most Valuable Professional (MVP) in Cloud and Datacenter Management who is based in Nashville, TN.

Course info

Level	Intermediate
Rating	★★★★★
My rating	★★★★★
Duration	2h 12m
Released	31 Oct 2017

Share course

[f](#) [t](#) [g+](#) [in](#)



Data Migration Assistant (DMA)



Assess on-premises SQL instances



Discover issues that can affect upgrading on-premises SQL Servers



Discover new features in target SQL platform that can benefit after upgrade



Migrate on-premises SQL instance to a modern SQL instance either on-prem or in an Azure virtual machine



Supported SQL Versions

Sources	Target
SQL Server 2005	SQL Server 2012
SQL Server 2008	SQL Server 2014
SQL Server 2008 R2	SQL Server 2016
SQL Server 2012	SQL Server 2017 on Windows and Linux
SQL Server 2014	Azure SQL Database (not managed instance)
SQL Server 2016	
SQL Server 2017 on Windows	



DMA Best Practices-Assessment

Run assessments on
production DBs during
non-peak times

Run Compatibility issues and
New feature recommendations
assessments separately



Creating an Assessment

Data Migration Assistant

New

Project type

☒ Assessment

☐ Migration

Project name

Contoso-DB-Assessment

Source server type


SQL Server

Target server type

Azure SQL Database

Create

Welcome to Data Migration Assistant



Creating an Assessment

The screenshot shows the 'Data Migration Assistant' window with the 'New' dialog box open. The dialog box has a dark theme and a sidebar on the left with icons for 'New', 'Assessment', 'Migration', and 'Help'. The main area of the dialog box contains the following fields:

- Project type:** Radio buttons for 'Assessment' (selected) and 'Migration'.
- Project name:** Text input field containing 'Contoso-DB-Assessment'.
- Source server type:** Dropdown menu showing 'SQL Server'.
- Target server type:** Dropdown menu showing 'Azure SQL Database'.
- Create:** A blue button at the bottom left.

The 'Target server type' dropdown menu is open, showing a list of options:

- Azure SQL Database (selected)
- Azure SQL Database
- SQL Server
- SQL Server on Azure Virtual Machines



Creating an Assessment

Data Migration Assistant

← Contoso-Assessment


1 Options

2 Select sources

3 Review results

Select report type


☒



Check database compatibility

Discover migration blocking issues and deprecated features by analyzing databases you choose in your source server to be migrated to SQL Database.


☒



Check feature parity

Discover unsupported or partially-supported features and functions that your applications may rely on. Get guidance around these areas that may need some re-engineering.

☐





Benefit from new features (coming soon...)

Discover new SQL Database features that are applicable to the databases in your source once migrated to SQL database platform.



Creating an Assessment

 Add sources  Remove sources

Name

Connect to a server

×

Connect to a server and select sources

Server name

app2

Authentication type

Windows Authentication

Connection properties

☐ Encrypt connection

☐ Trust server certificate

SQL Server permissions

To run the selected advisor(s), credentials used to connect to a source SQL Server instance must be a member of the sysadmin server role.



Creating an Assessment

← Contoso-Assessment

1 Options

+ Add sources - Remove sources

Name

▼ **app2 (SQL Server 2017) (1)**

TestDB

Server

Select sources

▼

▼

(s), credentials used to connect to the server instance must be a server role.

+ Add sources

Name



Assessment Results

The screenshot shows the 'Data Migration Assistant' window at the 'Review results' stage. The left sidebar contains a menu with icons for home, add, document, and search. The main area is titled 'Contoso-SQL-Assessment' and shows a progress bar with three steps: '1 Options' (checked), '2 Select sources' (checked), and '3 Review results' (active). Below the progress bar, there are two radio buttons: 'SQL Server feature parity' (selected) and 'Compatibility issues'. A search bar is present, and a list shows 'app2' with a green checkmark. The main content area is divided into two columns. The left column, titled 'Feature parity (2)', lists 'Unsupported features (2)' and 'Partially-supported features (0)'. The right column, titled 'Service Broker feature is not supported in Azure SQL Database', provides details about the unsupported feature, including its impact and a recommendation to disable the Service Broker. A table on the right lists the database 'TestDB' with type 'Database'. At the bottom right, there is an 'Export report' button.

Data Migration Assistant

Contoso-SQL-Assessment

Restart Assessment Delete Assessment

1 Options 2 Select sources 3 Review results

☒ SQL Server feature parity
☐ Compatibility issues

app2

app2

Target Platform
Azure SQL Database

app2 / SQL Server 2017

Feature parity (2)

Recommendation	Databases
▼ Unsupported features (2)	
Service Broker feature is not supported in Azure SQL Database. You need to disable Service Broker using the following command before migrating this database to Azure:	1
Windows authentication not supported in Azure SQL Database.	N/A
► Partially-supported features (0)	

Service Broker feature is not supported in Azure SQL Database

Details

Impact

SQL Server Service Broker provides native support for messaging and queuing applications in the SQL Server Database Engine.

Recommendation

Service Broker feature is not supported in Azure SQL Database. You need to disable Service Broker using the following command before migrating this database to Azure:

```
ALTER DATABASE [database_name] SET DISABLE_BROKER;
```

In addition, you may also need to remove or stop the Service Broker endpoint in order to prevent messages from arriving in the SQL instance.

Once the database has been migrated to

Databases

Type	Name
Database	TestDB

Database details

Type: Database
Name: TestDB

This database has Service Broker enabled.

Export report



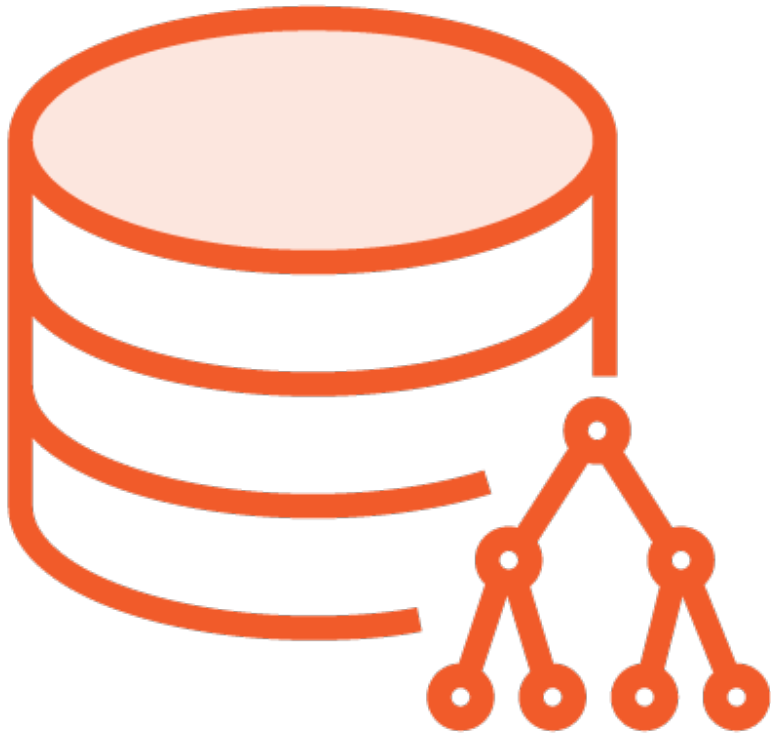
Demo



Install Data Migration Assistant

Create an assessment





Use Azure Database Migration Services for large migrations

- Leverages DMA for assessments
- Creates an instance in the Azure portal
- Supports for Azure SQL DB as well as Azure SQL Managed Instance

Summary



Installed Data Migration Assistant

- Lightweight tool to perform on-premises database assessments
- Can migrate on-premises instances to other on-premises or to Azure SQL database/SQL Server on Azure VM

Use Azure Data Migration Services for larger migrations

- Supports migration to Azure SQL DB as well as Azure SQL Managed Instance

