



# DMJ Engineering Program Tooling

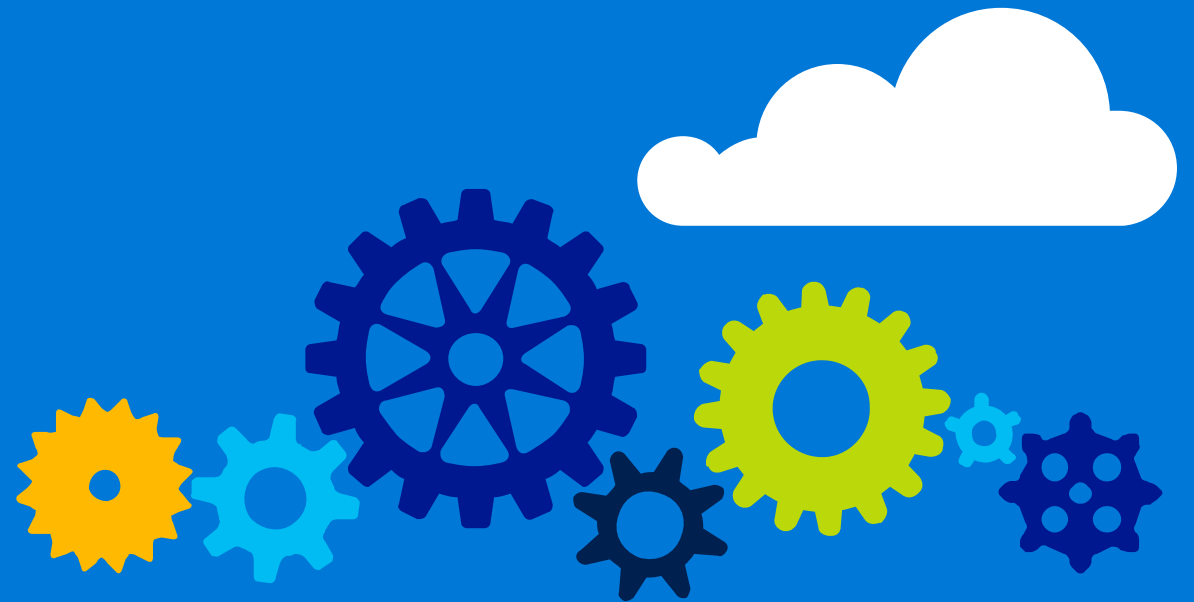
## Workload Assessment Tool Overview and Guidance

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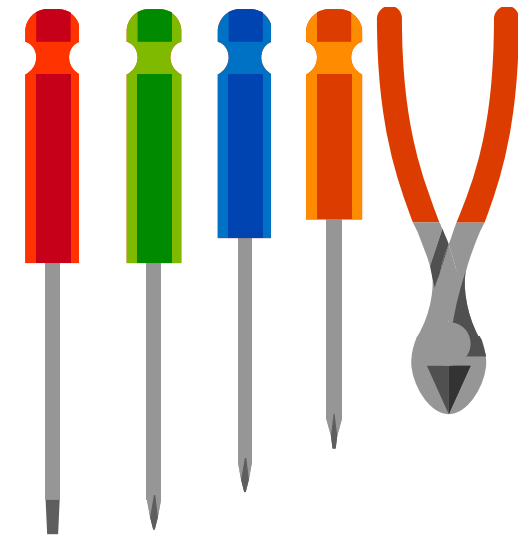
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# Overview of Tool

- Provides suggested “best fit” target platforms, cloud readiness and application/database remediation level for a given workload based
- Calculation is based on a set of 41 questions across 12 categories
- Each of the 41 questions has a prescribed set of possible answers based on drop-down controls
- Built using Excel and VBA. Provides a simple, one-click calculation and report generation
- Greatly helps to accelerate large estate assessments by providing automated and uniform target platform decision process
- Generated report can be placed into assessment findings decks for migration assessment engagements
- Can provided structured approach and process for customer migration workshops



# Report Considerations

Target platforms considered include:

## On-Premises

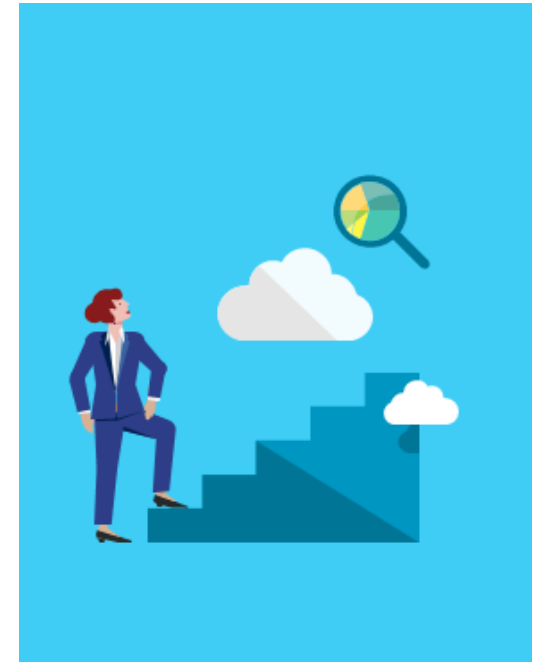
- SQL Server
- SQL Server On Linux

## Azure

- SQL Server IaaS
- SQL Server On Linux IaaS
- Azure SQL DB
- Azure SQL DB – Elastic Pools
- Azure SQL Managed Instance
- Azure SQL Data Warehouse

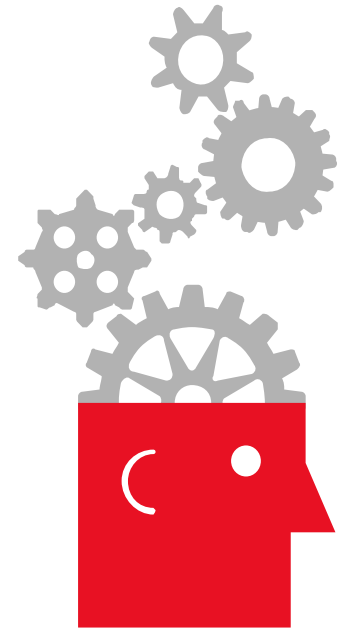
Application and Database Level of Remediation Levels include:

- **Very Simple:** App and database can be moved into target workload with minimal translation and re-write
- **Simple:** Some application code updates and database object conversion
- **Moderate:** Data Access Layer re-work on application, non-trivial database object conversion
- **Extensive:** Substantial application code re-writing and data access layer code updates. Plus substantial database object conversion and translation.



# Calculation Methodology

- For each workload, at the start of the calculation process, it is assumed any platform is possible
- Each question will impact the predicted feasibility of each target platform and update the overall feasibility of a given target platform for a given workload
- The same logic is used for remediation as well. The tool assumes at the start that the workload will be a lift and shift, then as it runs through the question analysis, the overall remediation will be increased based on the answers to certain questions.
- The lower the number, the more feasible that platform is
- Calculated numbers range from 0 (most feasible) to 3 (least feasible)



## Example Screen Shot

The screenshot shows an Excel spreadsheet titled "Workload Assessment Model Template - DMJ v1.4.xlsm". The interface includes the standard Excel ribbon (File, Home, Insert, Page Layout, Formulas, Data, Review, View, Developer, Add-ins, Help, Power Pivot, Team) and a search bar. The spreadsheet is divided into two main sections: "Application Architecture" and "Application - Data Access Layer".

**Application Architecture Section:**

| Application Name | Is system application focused or data warehouse focused? | What is the application type?   | Is moderate to extensive application refactoring (re-writing the application) acceptable? | Should the application need to be modified for a new cloud platform, are application experts, application documentation, and application source code readily available? |
|------------------|--|---|---|---|
| App1             | Data Warehouse Focus                                     | Script/Process Only   | Yes   | Yes   |
| App2             | Application Focus  | Web-App   | Yes   | Yes   |
| App3             | Data Warehouse Focus                                     | Desktop App Client Plus Server  | Unknown   | Unknown   |
| App4             | Application Focus  | Web-App<br>Thin Client Plus Server  | Applicable  | No  |
| App5             | Application Focus  | Desktop App Client Plus Server<br>Mobile Based App<br>Script/Process Only | Yes   | Yes   |

**Application - Data Access Layer Section:**

| What is the data access layer? ORM Framework (Entity, iBatis) | What are the data providers? | Are there any LOB data types present? | Is system having cursor based vs set based operations? |
|---|------------------------------|---------------------------------------|--|
| Entity  | JDBC                         | No                                    | Set Based  |
| Entity  | OleDb                        | Yes                                   | Set Based  |
| Interwoven into Business Logic Code                           | Mixed                        | No                                    | Cursor Based   |
| iBatis  | ODBC                         | No                                    | Set Based  |
| Other   | JDBC                         | No                                    | Set Based  |

# Automated Findings Report Dashboard

## Example Screen Shot

Workload Assessment Model Template - DMJ v1.4.xlsm - Excel

|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Sensitivity: General  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Target Platform & Remediation Report  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Note: Report data presented here is suggestion based on limited data point inputs from question sheet. This tool is simply an assistant, further manual investigation and decision making is needing to identify true best fit target platform. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Application Name  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Azure   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DB: Azure SQL Database (Singleton)  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DB - Elastic Pools: Azure SQL Database Elastic Pools  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL MI: Azure SQL Managed Instance  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DW: Azure SQL Data Warehouse  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL VM IaaS: SQL Server 2017 on a Virtual Machine in Azure  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL Linux VM IaaS: SQL Server 2017 on Linux on a Linux Virtual Machine in Azure   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| On-Premises   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Level of Remediation  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Very Simple: App and database can be moved into target workload with minimal translation and re-write   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Simple: Some application code updates and database object conversion  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Moderate: Data Access Layer re-work on application, non-trivial database object conversion  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensive: Substantial application code re-writing and data access layer code updates. Plus substantial database object conversion and translation.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cloud   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Estimated DWUs (If applicable for Azure SQL DW Workloads)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DB  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DB - Elastic Pools  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL MI  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL DW  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL VM IaaS   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL Linux VM IaaS   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL Server  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQL Server Linux  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Very Simple   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Simple  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Moderate  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensive   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cloud Possible  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Estimated DWUs  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App1  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App2  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App3  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App4  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| App5  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Project Plan Schedule

(Note: dates are estimates only)

