**Purpose of document: Handout for Exercises**

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**Version: 1.00**

**Date of documentation: 15.01.2025**

**Date of approval: 16.01.2025**

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# Purpose of this Document

This document is a guide for the Hands On Exercises for the Workshop “Accelerate your T-SQL Code”.

# Prerequisites

## SQL Alias

To avoid changes in the workshop scripts it is recommended to create a SQL Alias for your Instance of Microsoft SQL Server you want to run all exercises. The Alias used in all JSON templates for SQLQueryStress and OSTRESS is “SQLServer”.

Ein Bild, das Text, Screenshot, Software, Computersymbol enthält.

KI-generierte Inhalte können fehlerhaft sein.

Figure 1: Create a SQL Alias for your SQL Server Instance

# Exercise 1: Performance Tools – Examples

## Demo of Query Store

* Execute the script “01 – demo of Query Store – preparation.sql” from the folder “02 – performance tools” on the Instance “SQLServer".
* Open the tool SQLQueryStress and load the prepared configuration file “01 – demo of Query Store.json” from the folder “SQL Query Stress” and execute the workload.
* Open Query Store from ERP\_DEMO and have a look to the execution plan
* Open the script “02 – demo of Query Store – optimization.sql” from the folder “02 – performance tools” on the instance “SQLServer”
* Implement the indexes step by step with execution of the workload from SQLQueryStress in between each optimization phase
* After the workload look to the Query Store and the result of the optimization process.

## Demo of Windows Admin Center

* Execute the script “01 – demo of Windows Admin Center – preparation” from the folder “02 – performance tools” on the Instance “SQLServer”.
* Open the script “Windows Admin Server Demo.json” from the folder “Windows Admin Center” and replace the name of the SQL Server Instance to the ORIGINAL Instance name of your installed Microsoft SQL Server Instance.
* It might be necessary to translate the other counters into English Counter Names, too!
* Start Windows Admin Center
* Open Windows Admin Center and import the "Windows Admin Server Demo.json from the "Windows Admin Center" folder
* Open the tool SQLQueryStress and load the prepared configuration file “02 – demo of Windows Admin Center.json” from the folder “SQL Query Stress” and execute the workload.
* Watch the counters in Windows Admin Center.
* Open the script “02 – demo of Query Store – optimization.sql” from the folder “02 – performance tools” on the instance “SQLServer”
* Implement the indexes step by step with execution of the workload from SQLQueryStress in between each optimization phase
* After the workload look to the Query Store and the result of the optimization process.

# SQL Antipatterns

* Before you start with the demo, create an extended event to cover all SQL Antipatterns occurring in the executed SQL queries.
* Open the script “XEvent - SQL Antipatterns.sql” from the folder “SQL Extended Events” and execute the script.
* Open the extended event by selecting “Watch Live Data”.
* Execute the script “01 - SQL Antipatterns - Preparation.sql” from the folder “03 – SQL Antipatterns” and execute it to generate the exercise.
* Follow the instructions of the Trainer / Speaker