

Tuning Azure SQL Performance Manually



Hugo Barona

AZURE SOLUTION ARCHITECT

@HmsBarona <https://www.linkedin.com/in/hugomiguelbarona/>



Introduction



Understanding when and why to use database performance manual tuning

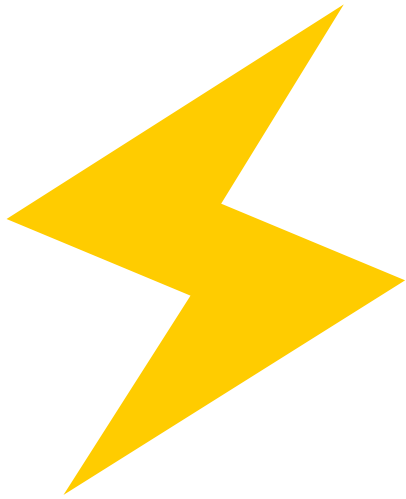
Understanding Performance Recommendations

Leveraging Performance Recommendations to fix database performance issues

Overview of database and application poor performance scenarios and techniques available to fix the performance issues



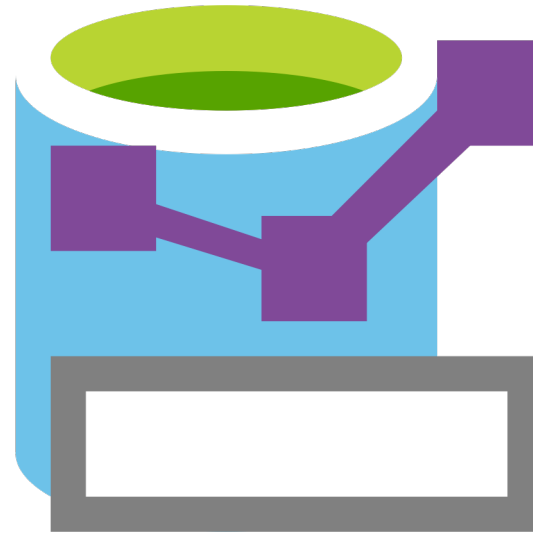
Before Starting to Manually Tune Your Database



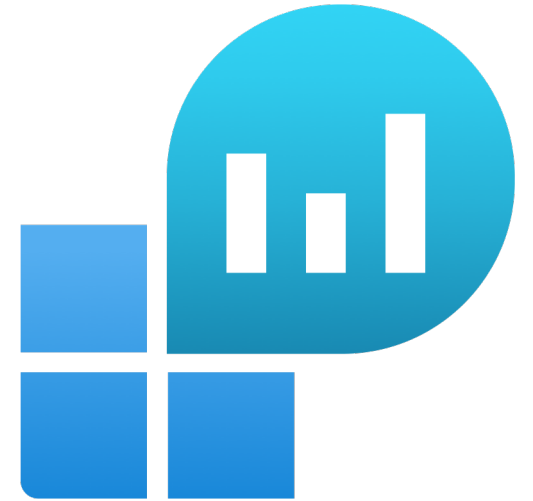
Automatic Tuning



**Performance
Recommendations**



**Query
Performance
Insight**



**Azure SQL
Analytics**

Features Available per Database Service

Azure SQL Database / Elastic Pool

Automatic Tuning
Performance Recommendations
Query Performance Insights
SQL Analytics

Managed Instance Database

Automatic Tuning (only detects *Force Last Good Plan*)
SQL Analytics

Manual or Auto-scale



Performance Recommendations



Based on SQL Database Advisor

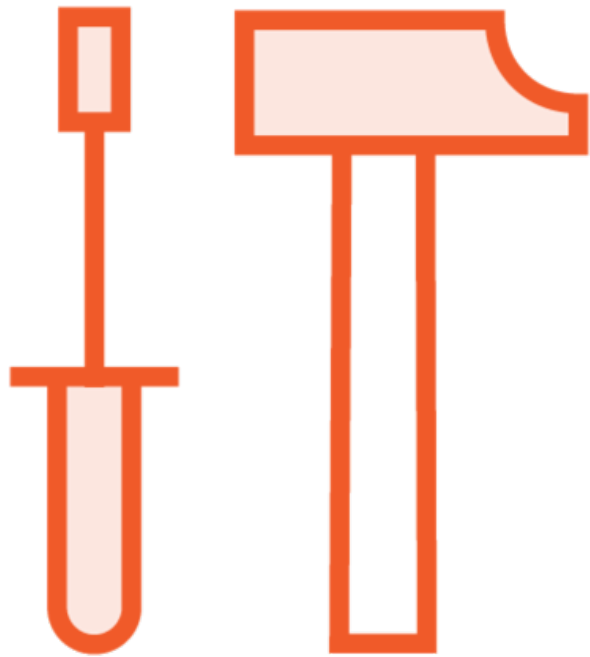
Available in Azure SQL Single or Pooled Database

Enabled by default

Provides recommendations to improve your database performance



Performance Recommendations Capabilities



Create index recommendations

Drop index recommendations

Parameterize queries recommendations

Fix schema issues recommendations
(*deprecated*)

Build custom applications using its API.



Demo



Performance Recommendations

- Explore features
- Apply a performance recommendation



Manual Tune Azure SQL Database

Tune your application

Chatty Applications

Applications executing intensive workload against your databases

Applications running sub-optimal queries

Applications with data access concurrency issues, such as deadlocking

Tune your database

Enhance database indexes

Query tuning and hinting

Cross-database sharding

Functional partitioning

Batch queries

More info: Course “Managing SQL Server Database Performance”



Summary



Understand the different options to manual tune your database performance while leveraging the Azure SQL Database features and tools

Understand and leverage Performance Recommendations feature to improve the performance of your database

Understand some of the most common scenarios of databases or applications with poor performance and discuss possible techniques to use to fix the performance issues

