

SQL SERVER 2022

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SQL Server 2022 is the most Azure-enabled release yet, with improvements across performance, security, and availability. It is part of the Microsoft Intelligent Data Platform, unifying databases, analytics, and governance.

FOUNDATIONS

- [Pages and Extents](#)
- [Index Architecture](#)
- [Memory Management](#)
- [Query Processing](#)
- [Thread Architecture](#)
- [Transaction Log](#)
- [Transaction Locking](#)
- [Execution Plans](#)
- [Statistics](#)
- [Query Profile](#)
- [System DB](#), [Contained DB](#), [Files & FGs](#)
- [Collation](#), [Remote Storage](#) (Stream, Table, BLOB), [Full Text Search](#), [Service Broker](#)
- [MDS](#), [DQS](#), [Spatial](#), [Graph](#), [XML](#), [JSON](#), [CLR](#), [Language Extension](#)
- [Tables](#), [Views](#), [Indexes](#), [Sequence](#), [Triggers](#), [Procedures](#), [Functions](#), [Track Changes](#)
- [SQL Server on Linux](#), [Container \(Linux\)](#)
- [Big Data Cluster](#)
- [Migration Tools: DB Experiment Assistant](#), [DB Migration Assistant](#), [SQL Migration Assistant](#), [Azure Migrate](#)
- [What's New](#)
 - [Synapse Link](#)
 - [S3 Integration](#)
 - [Data Virtualization](#)
 - [SQL MI Link](#)
 - [Contained AG](#), [Distributed AG](#)
 - [Defender](#), [Purview](#), [AAD](#), [Arc Integration](#)
 - [Encrypt with TDS 8.0](#)
 - [Intelligent Query Processing](#)
 - [Query Store: Hints](#), [Forced Plans](#), [Secondary Replica](#)
 - [ML Service for Python, R](#)
 - [Database Ledger](#)

REFERENCES

- [SQL Server 2022 Preview Download](#)
- [Microsoft Intelligent Data Platform](#)
- [Early Adoption Program for SQL 2022](#)
- [Mechanics Channel for SQL 2022](#)
- [SQL Server Sessions on Data Exposed](#)
- [Microsoft SQL Server Blog](#)
- [Microsoft Tech Community Channel](#)
- [Labs: SQL for App Dev, ML on SQL Server](#)
- [SQL Server End of Support \(2012 or less\)](#)
- [SQL Server Migration Enablement](#)
- [MSFT Partner Resources for SQL Server](#)

SECURITY

- [Authentication Modes](#). Roles: [Server](#), [Database](#), [App](#)
- [Principal](#), [Credentials](#), [Securables](#), [Permission](#), [Permission Hierarchy](#)
- [Encryption](#), [Encryption Hierarchy](#). [Transparent Data Encryption \(TDE\)](#)
- [Always Encrypted](#), [Secure Enclaves](#). [Encrypt Connection with TDS 8.0](#)
- [Extensible Key Management \(EKM\)](#). [EKM with Azure Key Vault \(AKV\)](#)
- [Row Level Security](#), [Dynamic Data Masking](#), [SQL Server Audit](#)



COST OPTIMIZATION

- [Software Assurance to save on SQL Licenses](#)
- Review Features by Edition to reduce costs ([SQL 2019](#))
- (Azure) SQL VM on [Windows](#), [Linux](#), [Dedicated Host](#), [SQL IaaS VM Extension](#)
- [Shift Capex to Opex](#) (Azure Migration):
 - [Right Sizing](#), [Azure Hybrid](#)
 - [Reserved Instance](#), [HADR on Azure](#)
 - [SQL Server Standard VM Scale Sets](#)
 - [Azure SQL Serverless](#)
- [Azure Advisor \(Cost Pillar\)](#), [Azure Cost Management](#)



OPS EXCELLENCE

- [Database Lifecycle Management](#)
- [Policy Based Server Management](#)
- [Data Compression: Row, Page, Unicode](#). [Resource Governor](#)
- [Maintenance Plans](#), [SQL Assessment API](#), [SQL Server PowerShell](#)
- [CD with Azure DevOps](#) (lab). [DACPAC](#) (lab). [ARM Templates](#). [SSDT](#). [Retry Logic](#).



RESILIENT

- Know your [Target SLA](#) and [Achieved SLA](#)
- [Always on Availability Group](#) [setup] [reference]
- [Always on Failover Cluster](#) [setup] [reference]
- [Database Mirroring](#). [Log Shipping](#). [Replication: Transactional](#), [Merge](#)
- [Stretch Database](#), [Backup Restore](#), [Accelerated Recovery](#)



PERFORMANCE EFFICIENCY

- [Configure Server for Performance](#)
 - Data & Log Files, Temp DB, Server / DB Config
- [Options for Query Performance](#)
 - Index, Partition, Parallelization, Statistics
- Tune SQL Server for [IO](#), [Memory](#), [CPU](#)
- [Database Tuning Advisor](#), [Query Tuning Assistant](#). [Automatic Tuning](#), [Query Store](#)

