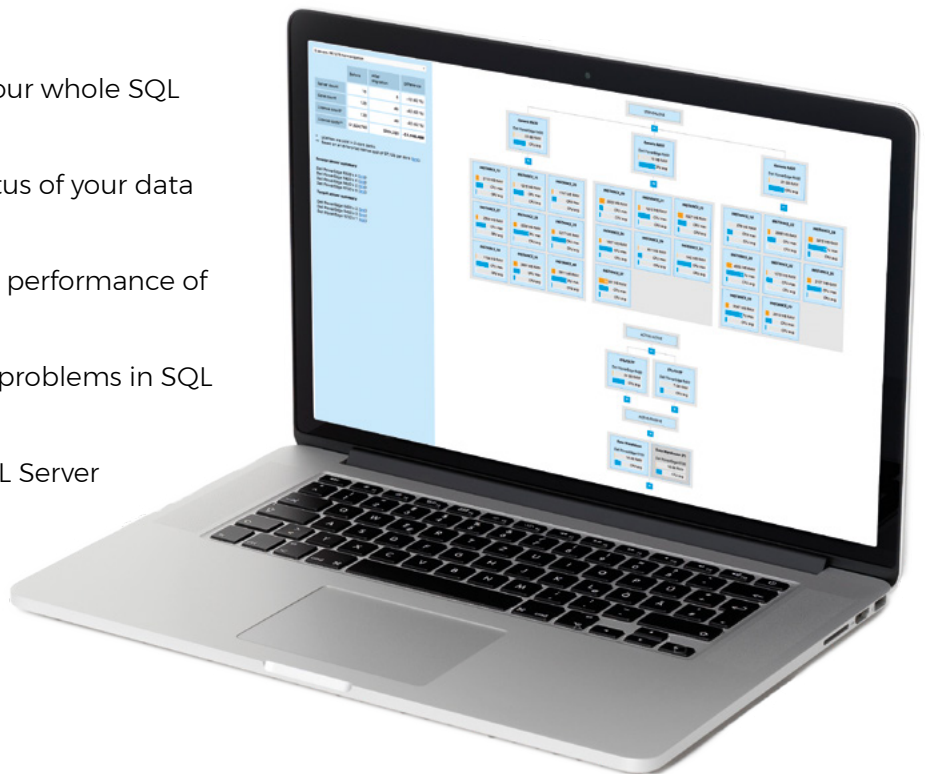# SQL Governor®—performance monitoring and capacity planning for Microsoft data platforms.

SQL Governor is the only software on the market to offer **both performance management and capacity planning features**. It is ideal for helping to proactively identify and alert about problems and risks in order to fix them. Instead of only focusing on the history and current state of the platform, it has also unique capabilities for planning the data platform renewal in an automated and fact-based way.

Proactive Microsoft SQL Server optimization powered by machine learning

With SQL Governor software, you can:

- ◆ achieve comprehensive visibility to your whole SQL estate.

- ◆ analyze and diagnoze the health status of your data platform.

- ◆ proactively monitor and manage the performance of the data platform.

- ◆ find, solve and prevent performance problems in SQL Servers.

- ◆ plan and manage the capacity of SQL Server platforms.

- ◆ plan the consolidation or right-sizing of SQL Servers.

SQL Governor's loosely coupled agent architecture makes its data platform very robust – from smaller installations to massive installations. SQL Governor server core components run under Windows Service host, making it easy to manage and monitor the SQL Governor server and services. REST-based integration architecture between SQL Governor and SQL Governor proxy service enables the data transfer operations across the domains. SQL Governor uses the standard Windows Diagnostics API and DMVs with a minimal performance footprint on client servers, scaling up to very large SQL Server platforms. SQL Governor supports capacity planning for physical and virtualized (VMWare or Hyper-V) SQL server platforms.

Key Features

Monitoring

SQL Governor software allows you to monitor the platform 24/7 from a rooftop view and drill down to server, instance, database, and SQL Query levels to effectively identify the root cause of performance problems. SQL Governor supports over 60 different performance counters to give you all the information you need. Wait statistics can be analysed continuously with the ability to drill down from total waits into individual query waits. Similarly, resource bottlenecks are easily identified by pinpointing the most resource-intensive TSQL queries in the plan cache.

You can follow key performance counters, alerts, and corresponding predictive alerts on server instance, and database level. You can identify bottlenecks by following the performance counters and a variety of different reactive and proactive alerts. Thanks to the predictive alerting features, you can prevent problems from happening even before they occur.

Warnings & Alerts

Set your own alert and warning levels and get alerts to your e-mail. Manually or automatically configure alert levels and actions for each performance counter – and even each individual server, instance and database. Prevent platform disasters and minimize downtime with different kind of proactive alerts – SQL Governor gives you the ability to foresee potential problems up to one day in advance, allowing you to eliminate unwanted surprises before things get out of hand.

- Every combination of server/instance/database and performance counter is configurable for both warnings and alerts
- Option to receive emails and dashboard notifications for actual and/or predicted alerts
- Manually adjustable basic alerting
- Auto-adjustable warning & alert levels based on historical data
- Continuous alerts
- Predictive alerts based on linear regression
- Pattern-oriented alerts based on machine learning
- Anomaly detection over time dimension

SQL Query Tracing

Get detailed profiling data by configuring, running and diagnosing lightweight traces from TSQL queries running on client SQL Servers. Trace data allows you to identify which queries are using the most resources and when.

With SQL Governor, you can launch light-weight TSQL query traces on desired databases. This way you can identify poorly performing TSQL queries.

Diagnostics & Health Check

It is not uncommon that SQL Server instance level configurations and database options are not in optimal level. The diagnostics functionality in SQL Governor helps to pinpoint the pain points in these configurations.

With SQL Governor, you can automate your diagnostics process regarding client SQL Server wait statistics, indexes, instances, databases, and more. Identify unused indexes and the most critical missing and fragmented indexes to focus on the essential. Run instance and database level health checks on your production environment to keep your fingers on the pulse at all times.

- Database options health check
- Instance configuration properties health check
- Missing indexes
- Unused indexes
- Fragmented indexes
- Wait statistics

Capacity Management

SQL Governor makes it possible to understand that for how long in the future the system will have sufficient resources.

The capacity management features allow you to monitor that the capacity limits of the platform are not exceeded at any time during the lifecycle. Set service-level agreements for performance counter you want to. Connect servers, instances and databases to services and customers to manage your whole SQL Server platform with minimal effort.

Capacity Planning

Typically, planning the future capacity for SQL Servers in migration or consolidation situations is a very hard and complicated process. SQL Governor automates and streamlines this process with international patent pending technology.

SQL Governor calculates the optimal server configuration for your target data platform, resulting in remarkable cost savings and a more robust target architecture. SQL Governor supports both server-level and instance-level capacity planning, in addition to server right-sizing. In server-level planning, existing physical servers are virtualized under a new physical server to increase performance and reduce licensing costs. In instance-level planning, existing SQL Server instances are automatically organized into an optimal architecture.

Dashboard & Reports

The dashboard feature in SQL Governor gives you an automatically updated, real-time overview of the health of the entire system at once, perfect for displaying on a large screen. The dashboard view covers most important alerts, predicted alerts, physical volume tracking, TSQL query plan cache situation and blocked queries.

SQL Governor's rich reporting capabilities complement all the above mentioned features. In addition, all of the performance data in SQL Governor is permanently stored into a data mart, which means that historical data is always available for querying. Use the versatile built-in reports to find the information you need and share it with others by exporting to PDF or Excel. SQL Governor comes with more than 30 built-in SSRS reports.