

SIOS iQ and SQL Sentry Performance Advisor

Integration of Machine Learning Analytics with Database Performance Analytics

Optimizing SQL Server performance in complex VMware environments can be a costly, time-consuming process. These environments are dynamically changing and the objects within them (VMs, hosts, network, storage, etc.) are highly interdependent, making the root causes of performance issues difficult to discern without the collaboration of a cross-functional team of domain experts representing application, storage, network, and infrastructure.

Traditional, threshold-based tools provide data about individual objects, such as CPU, memory, network or storage devices. Performance issues often trigger hundreds of unnecessary alerts for each of the objects and leave the domain experts to assemble the data, interpret the behavior and make educated guesses about both the root cause and potential solution.

SIOS iQ Machine Learning-Based IT Operations Analytics

SIOS iQ applies an advanced machine learning analytics/big data approach to a broad range of operations data arising from the infrastructure and applications including data from SQL Sentry Performance Advisor. SIOS iQ learns the behavior of interrelated objects (application, storage, network, etc.) in VMware environments over time to automatically distinguish between normal and anomalous behavior and between expected fluctuations and true issues. Its advanced machine learning technology automatically detects subtle issues that would typically be missed or hidden amid hundreds of unnecessary alerts in traditional methods.

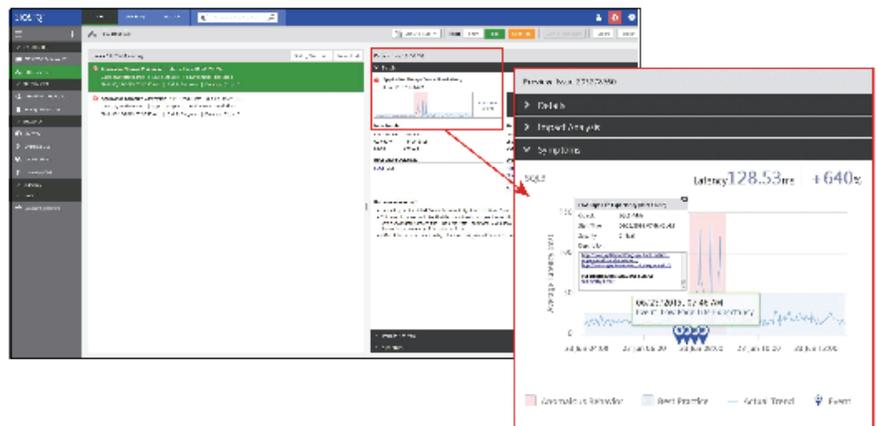
SQL Sentry Performance Advisor

SQL Sentry Performance Advisor is the unmatched solution for monitoring and managing all aspects of your SQL Server environment. It enables you to monitor SQL Server, its corresponding services, as well as Windows servers and VMware hosts. It collects and displays everything you need to fully understand how the SQL Server database engine is performing, and recommends what action to take to optimize performance.

A Powerful Combination

By drilling down in the context of a performance issue reported in SIOS iQ, IT staff can investigate an infrastructure issue associated with a SQL performance event reported by Performance Advisor for deep analysis and resolution of a database performance problem.

SQL Sentry Performance Advisor provides sophisticated SQL Server performance related event detection designed by industry leading experts including the creation of your own custom events that can be adapted to any use case. With SIOS iQ and Performance Advisor working together, SQL Server related events reported by SQL Sentry are analyzed in the context of the entire infrastructure and correlated to anomalous behavior to provide a complete understanding of the problem and recommendations to resolve it.



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Typical Scenarios

Database Latency Issue

In response to an email notification from SIOS iQ, an IT Administrator sees that a critical performance issue is reported on the SIOS iQ PERC Dashboard. He touches or clicks the issue and SIOS iQ presents a complete picture of all of the VMs, storage, and network objects involved in the event and a description of its root cause. SIOS iQ instantaneously identifies high IO latencies on a datastore caused by a backup running in one VM that is affecting the performance of another VM with a SQL Server instance hosted on it. SIOS iQ correlates it to an issue reported by SQL Sentry Performance Advisor which confirms that the detected latency negatively affects both the database and application that leverages this database.

The IT administrator is able to understand and fully resolve the problem using the recommendations provided. He is also able to communicate the issue and its resolution to the DBA.

High Average Wait Time per User Session

A SQL Server Database Administrator receives a complaint from a user about application performance. Using SQL Sentry Performance Advisor he notices a high average wait time per user session event. He and the IT administrator try to determine whether the root cause is in the application or in the VMware environment. SIOS iQ identifies one VM as a root cause of the problem and associates it with a Low Page Life Expectancy event reported by SQL Sentry Performance Advisor. It also shows that this VM was causing issues on another VM that the DBA had suspected as the cause. SIOS iQ also associates the issue with a High Average Wait Time per User Session event reported by SQL Sentry Performance Advisor.

With a single touch both IT Administrator and DBA now have a clear picture of the ongoing problem. With recommendation from SIOS iQ and SQL Sentry Performance Advisor presented in SIOS iQ they addressed the root cause of a problem that was initiated by another database.

About SIOS

SIOS Technology Corp. makes software products that optimize and protect business critical applications. SIOS iQ is a machine learning analytics software platform that helps IT managers optimize performance, efficiency, reliability, and capacity utilization in VMware environments. SIOS SAN and SANLess software is an essential part of any cluster solution that provides the flexibility to build Clusters Your Way™ to protect your choice of Windows or Linux environment in any configuration (or combination) of physical, virtual and cloud (public, private, and hybrid) without sacrificing performance or availability.

Founded in 1999, SIOS Technology Corp. (<http://us.sios.com>) is headquartered in San Mateo, CA, and has offices throughout the United States, and in Singapore, the United Kingdom, and Japan.

About SQL Sentry

SQL Sentry delivers software products that optimize the performance of Microsoft SQL Server environments around the globe. Headquartered in Huntersville, North Carolina, SQL Sentry products are sold and supported directly and through authorized resellers and partners. Contact us to find out more about our products and services or current career opportunities at SQL Sentry (www.sqlsentry.com).

