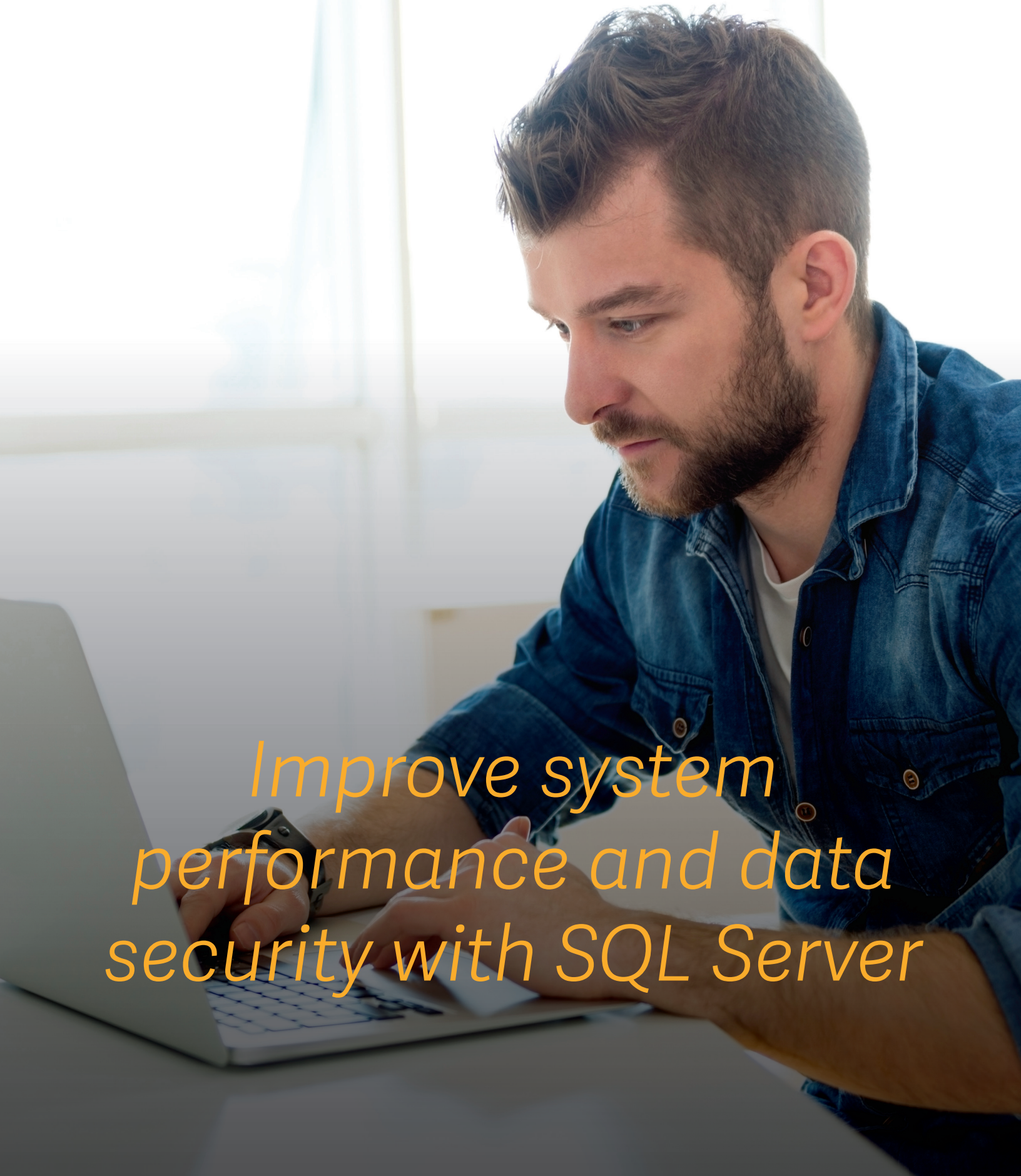
sage Construction and Real Estate



Improve system performance and data security with SQL Server

Contents

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Successful construction and real estate companies can usually get by in their early years with checking accounts and spreadsheets to track the numbers. After more growth, off-the-shelf software such as Sage 50 or QuickBooks can do a great job of managing finances for small companies. Eventually, however, every successful company faces a challenge as it grows—how to manage large amounts of company data. This typically requires companies to look at the technology behind the software running their business to ensure they have a database that is easy to use, straightforward to maintain, and scalable enough to accommodate future growth.

Most software consultants and experts believe that a database using SQL and a built in client/server configuration offers the best solution for a company that has large amounts of business data and multiple systems from which they need to aggregate data to get a clear picture of business health. This white paper will discuss the advantages of using Microsoft SQL Server®, based on these key points:

• Scalability • Security • Reliability • Data analysis

What is Microsoft SQL Server?

First, some definitions. SQL, pronounced "sequel" stands for Structured Query Language, and is a programming language designed for managing data held in a database. The term is also often used to describe a database system that stores dynamic data. Many modern applications that process large amounts of complex data use SQL to sort, retrieve, and update information—including Microsoft SQL Server.

Scalability

One of the key strengths of SQL Server is support for databases up to one terabyte in size. SQL Server handles such large amounts of data because it efficiently harnesses the power of the latest multithreaded, multicore processors. Putting in place a powerful database system will aid companies as they continue growing, adding scalability seamlessly by absorbing increased transaction workloads and larger databases without a significant drop in performance.

SQL Server was designed from the beginning as a client/server database, meaning it was built to scale easily as users and applications multiply. Data and indexes reside in a single location, ready to be accessed over the network by many client computers. SQL Server reduces network traffic by processing database queries on the server before sending results to the client. Thus, client/server application can do processing where it's done best—on the server—because servers have more processing power than an individual computer.

Applications can also help centralize and share application logic, using business rules and policies, complex queries, and other methods. The logic behind this setup is easy enough to understand—the server configuration is powerful and robust, so the client population can run the range of less powerful desktops, laptops, netbooks, tablets, and hand-held devices. Concentrating the processing power at the server ensures system performance now and into the future, regardless of the capability of the next added client.

What this means for you: No matter how much data, history, jobs, or transactions your company manages, you'll be able to quickly get the information you need to manage your business. Plus you can easily store historical data to compare current versus past performance.

Sage products with SQL

Sage 100 Contractor | Sage 300 Construction and Real Estate SQL Gateway | Sage Estimating

Security

Microsoft SQL Server gives companies more extensive security options for protecting the integrity of data and preventing file corruption. Administrators can limit the amount of access certain users have to data, as well as determine whether they can add to, modify, or retrieve the data, which helps stop unauthorized access.

Administrators can also customize a database to give different users unique views of its content and structure, based on their department or depending on the purpose of their access. By enabling transaction logs, SQL Server offers an added level of security and a safeguard against accidental loss of information, letting companies keep track of all changes or deletions.

What this means for you: The right people will have access to the information they need and can remain confident that their data won't be lost. You'll have complete audit trail information so you know who changed what, and when.

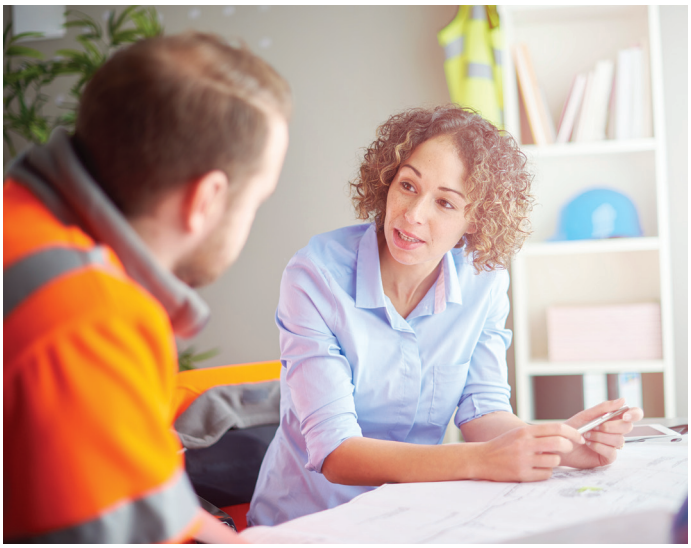
Reliability

Depending on the hardware investment, Microsoft SQL Server can deliver up to six nines (99.9999%) uptime availability, according to a recent white paper. This ensures that mission-critical software is available 24/7. SQL Server databases can be backed up, either incrementally or completely, while the database is in use. Users do not have to exit the database before the system administrator performs routine maintenance. In case of system failure, such as an operating system crash or power outage, SQL Server has an automatic recovery mechanism that recovers a database to the last state of consistency in a matter of minutes, with no database administrator intervention. Critical applications can be up and running again right away.

Transaction processing is a vital requirement for a system that is designed to support critical applications, such as banking and online order entry. SQL Server supports detailed transaction logging, which guarantees that all changes performed within a transaction are managed properly.

Consistency and recoverability of a database transaction is guaranteed, even in the case of system failure and in the middle of complex updates by more than one user. SQL Server treats all database changes inside a transaction as a single unit of work. By definition, either an entire transaction is completed safely and all resulting changes are reflected in the database, or the transaction is rolled back—and all changes to the database are undone.

What this means for you: Business data will be available to you 24 hours a day, 7 days a week. Your employees won't have to stop what they are doing when you need create a backup, and if there's a power outage or other issues, then your system will be back up and running quickly.



Data analysis

When a company has multiple employees accessing data from a variety of location—in offices or off site—being able to easily transport the information from the SQL-based server to report writers, software programs, spreadsheets, and other applications can harness that data in a more expedient, useful way.

Using a SQL platform can help businesses get more out of their data, find the most useful bits of information, and allow users to present that data in a way that is more meaningful and compelling. A reporting tool on servers with Microsoft's SQL platform can enable the creation of sophisticated charts and other visual supplements. In addition, businesses can pull data from their SQL databases and other sources and compile it all in an Excel spreadsheet for analysis with PowerPivot.

SQL Server also provides an interactive data exploration, visualization, and presentation experience with Power View. Data analysts, business decision makers, and information workers can use Power View to get intuitive ad-hoc reporting. Users can easily create and interact with data from models based on PowerPivot workbooks and present and share insights through interactive presentations across the organization.

What this means for you: These and other powerful features in Microsoft's SQL Server enable your company to consolidate and report on all your data in countless ways. You can be confident you're seeing the whole picture and making timely, informed decisions.

Key technology definitions

Structured Query Language (SQL):
SQL is a programming language commonly used to set up and manage large, complex databases.

Database:
A database is any organized collection of information, available for retrieval, sorting, reporting, and updating.

Database Management System, or DBMS:
A tool or software application that captures, catalogs, and queries data.

NoSQL, or Nonrelational Database:
Used for unstructured information like tweets, email, documents, and web pages, where relationships aren't easily managed by a schema.

Schema:
The schema defines the database structure, such as tables, fields, relationships, indexes, and more.

Conclusion

Utilizing a high-performance SQL Server database can vastly improve scalability, security, reliability, and data analysis. Sage Construction and Real Estate offers several robust business management solutions built specifically for the construction industry to help contractors run their business smoothly and efficiently. Growing contractors can take advantage of Sage 100 Contractor, now built on the powerful SQL platform. The solution, which is easy to use yet built specifically for contractors, will grow and scale along their business needs and is the perfect long-term choice.

Companies with more complex financial and business tracking needs can use Sage 300 Construction and Real Estate. Built on the Pervasive database, the data can be converted to SQL using the Sage 300 Construction and Real Estate SQL Gateway for increased reporting and data consolidation options. Combined with Sage Estimating, also built on the SQL platform, it's a powerful and robust solution that meets the requirements of large, intricate organizations. Whatever your challenges and needs, Sage Construction and Real Estate has a solution that will work for you.

Visit Sage now to learn how you can improve performance, data security, and reporting with Sage Construction and Real Estate solutions. **Or call us at 800-628-6583.**

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