



Enhancing Security With SQL Server 2016

How to balance the risks and
rewards of using big data

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 Microsoft



Data's security demands and business opportunities

With big data comes both great reward and risk. Every company needs to secure and manage internal and customer data while also realizing its benefits and opportunities. No matter the size of the business, security professionals are challenged with striking a delicate balance between providing safe and intuitive access to users while reducing overall risk.

With built-in security features, Microsoft® SQL Server® 2016 provides the most advanced enterprise data protection to date. You can safeguard your organization's data with a security approach that leverages multiple layers of defense, including:

- Always Encrypted technology
- Row Level Security
- Dynamic data masking
- Transparent data encryption
- Robust auditing

Insight offers extensive end-to-end technical services around Microsoft solutions to help businesses protect sensitive information and run smarter.

Discover four ways SQL Server 2016 can safeguard your data, control user access, help you maintain compliance, and enhance trust and growth.



Defend your data.

Having been named the database with the least vulnerabilities of any major platform by the National Institute of Standards and Technology for six years in a row, SQL Server will secure your data for mission-critical workloads and protect stored and inactive data.¹ Here are just a few of the game-changing features in the 2016 release:

Automatic data encryption and governance

Offering new encryption technology, SQL Server 2016 automatically encrypts data — both at the time it's created and when it's used by approved applications. Whether it's in use or simply being stored, your data is always encrypted with increased security checkpoints.

Additionally, data will never appear within an application that doesn't hold the right encryption key.

Data encryption

Transparent Data Encryption safeguards data that isn't in use. This security capability ensures all of the user data in data files is encrypted and cannot be attached or restored to another server.

Data protection in transit

Another helpful feature is support for Transport Layer Security, which shields data that is being transferred and provides defense against tactics such as man-in-the-middle attacks.

Set users up for success.

Governing employee access is a critical tactic in helping your organization safeguard company data, and setting restrictions will help you keep sensitive information private and protected. SQL Server® 2016 offers several tools that allow you to do exactly that.

Control user access with extreme accuracy.

Sometimes employees need access to only a portion of the stored data. Going much further than ensuring only approved users can view data, SQL Server offers Row Level Security, allowing your organization to grant permissions to specific rows of data, regardless of the application the user is operating.



Mask data with a variety of controls.

Microsoft's dynamic data masking lets you mask confidential data from users who do not have permission to view it, through four masking functions:

1. Fully mask data.
2. Partially mask email addresses.
3. Partially mask all values.
4. Randomly mask values.

This feature does all of that without creating disruptions — users are still able to access approved databases and execute queries. However, your company can rest assured users only see what they need to see.

Maintain and streamline compliance.

By using dynamic data masking as a key strategy in your data security approach, you can ensure end users won't have access to sensitive data, such as Social Security numbers or health records. You can keep certain information confidential, allowing you to remain compliant with measures such as the Health Insurance Portability and Accountability Act (HIPPA), the Health Information Technology for Economic and Clinical Health Act (HITECH) and the Payment Card Industry (PCI).

Limit access without restricting service.

The more information customer service representatives have at their disposal, the better they can answer questions and offer assistance. However, when pulling up records, some of a customer's information needs to remain confidential.

With dynamic data masking, IT administrators can easily define rules within SQL Server 2016 to mask any information that may compromise privacy and is not necessary for customer interaction. Your organization can block sensitive data while still ensuring customer service representatives can answer questions based on the information they need and have access to within customer records.



Boost brand trust and growth.

It's hard for a brand not only to establish itself, but to continue to grow if it doesn't have consumer trust. Safeguarding customer data is essential to retaining and gaining clients, and this goal can be the foundation of your security strategy with SQL Server® 2016.

Keep trust intact.

Security also needs to go beyond internal information. Regardless of the risk or liability, customers expect companies to safeguard their data just as fiercely as the company protects its own. Businesses are tracking more customer data than ever before, and innovative security features can serve as a competitive advantage.

The new SQL Server delivers built-in security tools — and flexibility — to protect your data while enabling quick, seamless access.

Generate real business value.

Whether it speeds up customer service, protects shareholder value or has a positive effect on your bottom line, data security can impact your organization's growth and operations. A 2016 study found that 62% of end users reported having access to company data they should not have been able to see, and nearly half (47%) of those users characterized that access as frequent or very frequent.²



Why Insight for Microsoft SQL Server?

Insight is Microsoft's largest global partner and has been providing Microsoft® solutions for more than 25 years. We put Microsoft at the center of our end-to-end strategy to help businesses run smarter. We collaborate to deliver Intelligent Technology Solutions™ that meet your strategic business needs and optimize your technology investments.

- Microsoft Gold Partner — Gold competencies
- Microsoft Excellence in Operations Award
- 1,400+ consulting and service delivery professionals
- Top 1% of all Microsoft partners
- Flexible licensing options



About Insight

From business and government organizations to healthcare and educational institutions, Insight empowers clients with Intelligent Technology Solutions™ to realize their goals. We provide the guidance and expertise needed to select, implement and manage complex technology solutions to drive business outcomes.

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¹ National Institute of Standards and Technology. (2015, May 4). National Vulnerability Database.

² Ponemon Institute. (August 2016). Closing Security Gaps to Protect Corporate Data: A Study of U.S. and European Organizations. Info.varonis.com.