IDERA® | SQL Security Solution Brief

ARE YOU READY FOR GDPR?

BY BOB FULLAM AND STEPHEN STOUT

Demonstrate Compliance with IDERA SQL Security Suite

OVERVIEW

The European Union's General Data Protection Regulation (GDPR) takes effect on May 25, 2018. In contrast to older directives and data protection acts, the GDPR will bring new accountability obligations, increased data protection rights for the EU citizens and restrictions on data flows across borders. Organizations that process EU citizens' personal data must comply with the regulations, and this applies to all data owners, who say why and how data is processed, and to data processors, who perform actions on the data.

Also, it introduces obligations to data breach notification, with stricter accountabilities that personal data information is sufficiently managed and protected. GDPR also requires evidence of compliance against these directives.

In this solution brief, we discuss the most important issues that Microsoft SQL Server database management teams need to consider to comply with the GDPR Articles and how to tackle these challenges with the IDERA SQL Security suite, which includes SQL Compliance Manager and SQL Secure.

ARTICLE 25 DATA PROTECTION BY DESIGN AND DEFAULT

Many Microsoft SQL Server environments lack control over the exposure of personal data. With SQL Compliance Manager, not only will companies be able to control accessibility but they can also see how and by whom the data is being accessed. There are several ways to specify which data is considered “sensitive” and to monitor what happens to that specific data.

Diagram 1 is the result of alerting on a Select that returns the NI Column. Please note, the NI column does not need to be explicitly selected.

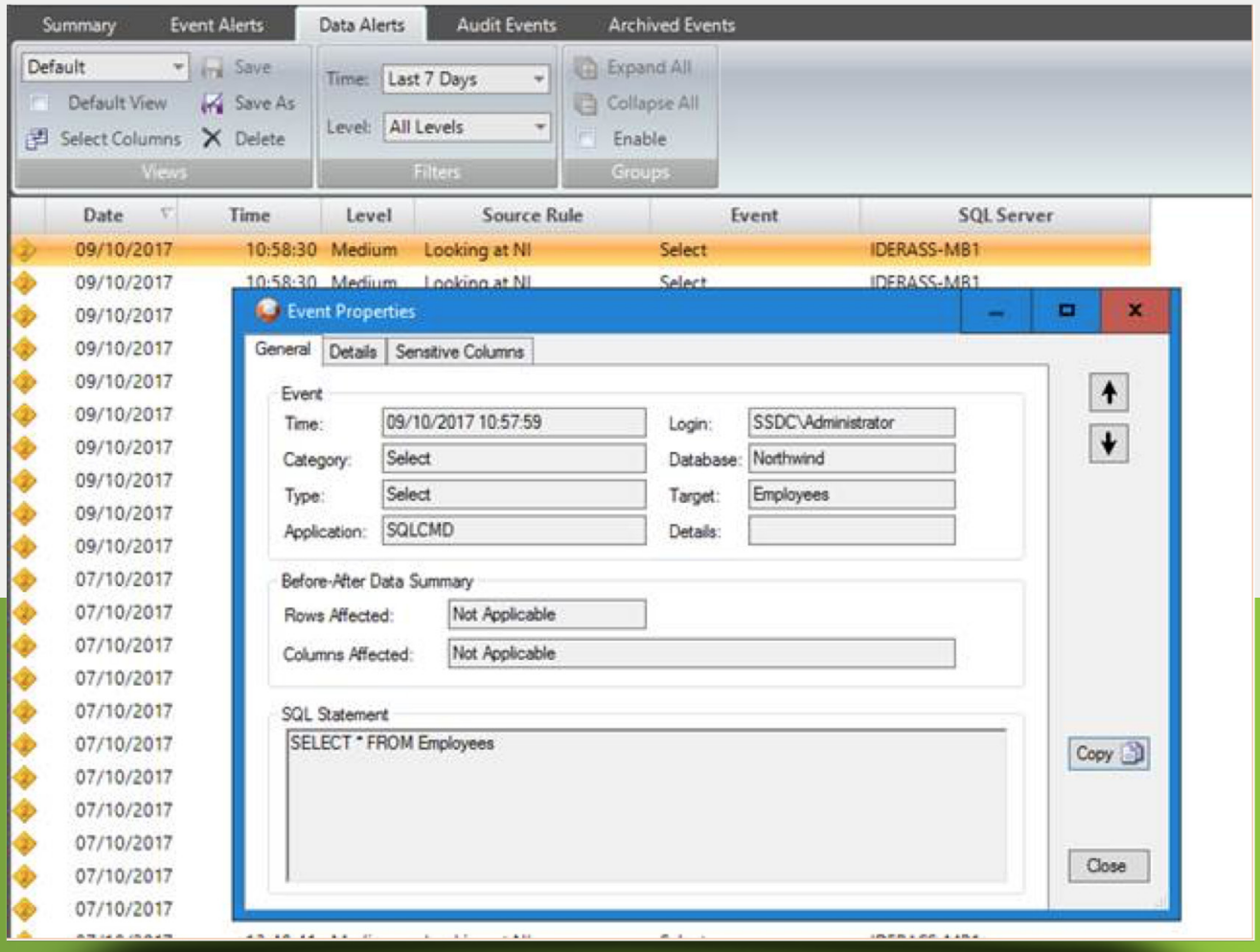


Diagram 1 Example of Event Properties for alerts in SQL Compliance Manager

ARTICLE 30 RECORDS OF PROCESSING ACTIVITIES

In order for organizations to log and monitor operations, it is imperative to keep an audit record of processing activities on personal data. With SQL Compliance Manager, database administrators can track specific changes throughout the environment, including to personal data while keeping a repository of those changes. Refer to the following diagrams for specific examples.

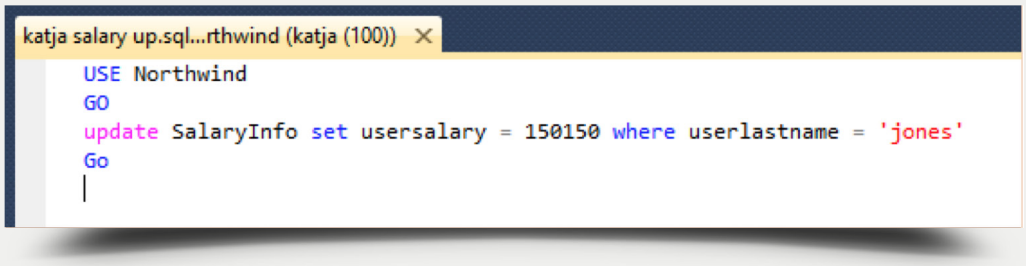


Diagram 2 An example of making a change to data in a database table

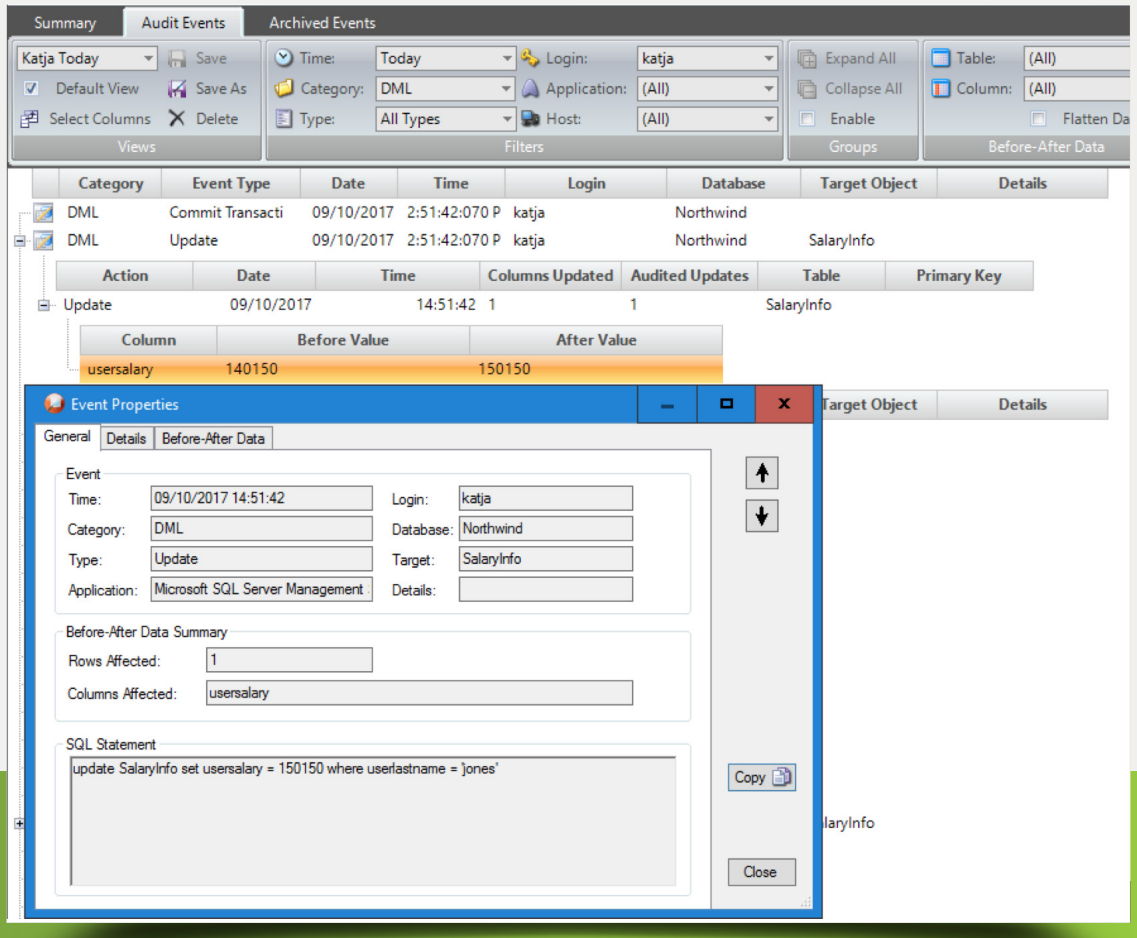


Diagram 3 Review the "Event" stored in SQL Compliance Manager that shows the DML change to the data

ARTICLE 30 RECORDS OF PROCESSING ACTIVITIES CONTINUED

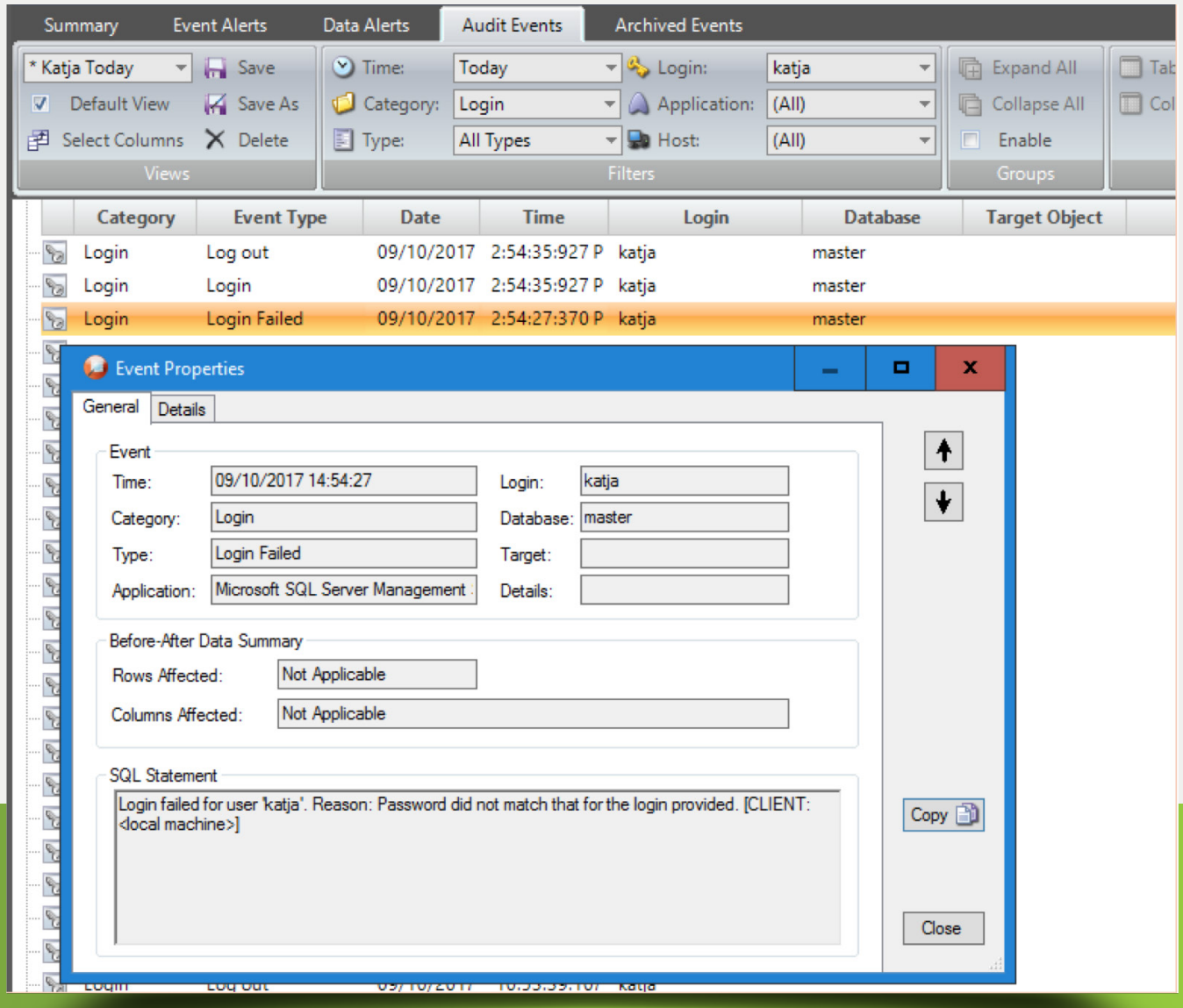


Diagram 4 SQL Compliance Manager can capture login activity, both failures and successes, as needed

ARTICLE 32 SECURITY OF PROCESSING

In order to achieve a secure environment for processing data, SQL database professionals are required to regularly test and assess the effectiveness of security measures. These security mechanisms will ensure personal data is safe throughout the system. With SQL Secure, you can schedule or “manually” take “snap shots” of the well-being of the security system, as shown in Diagram 5. From here, it is easy to compare the previous hardened “snap shot” to the current one, which will allow for quick assessment of any changes to the specific areas within your security system.

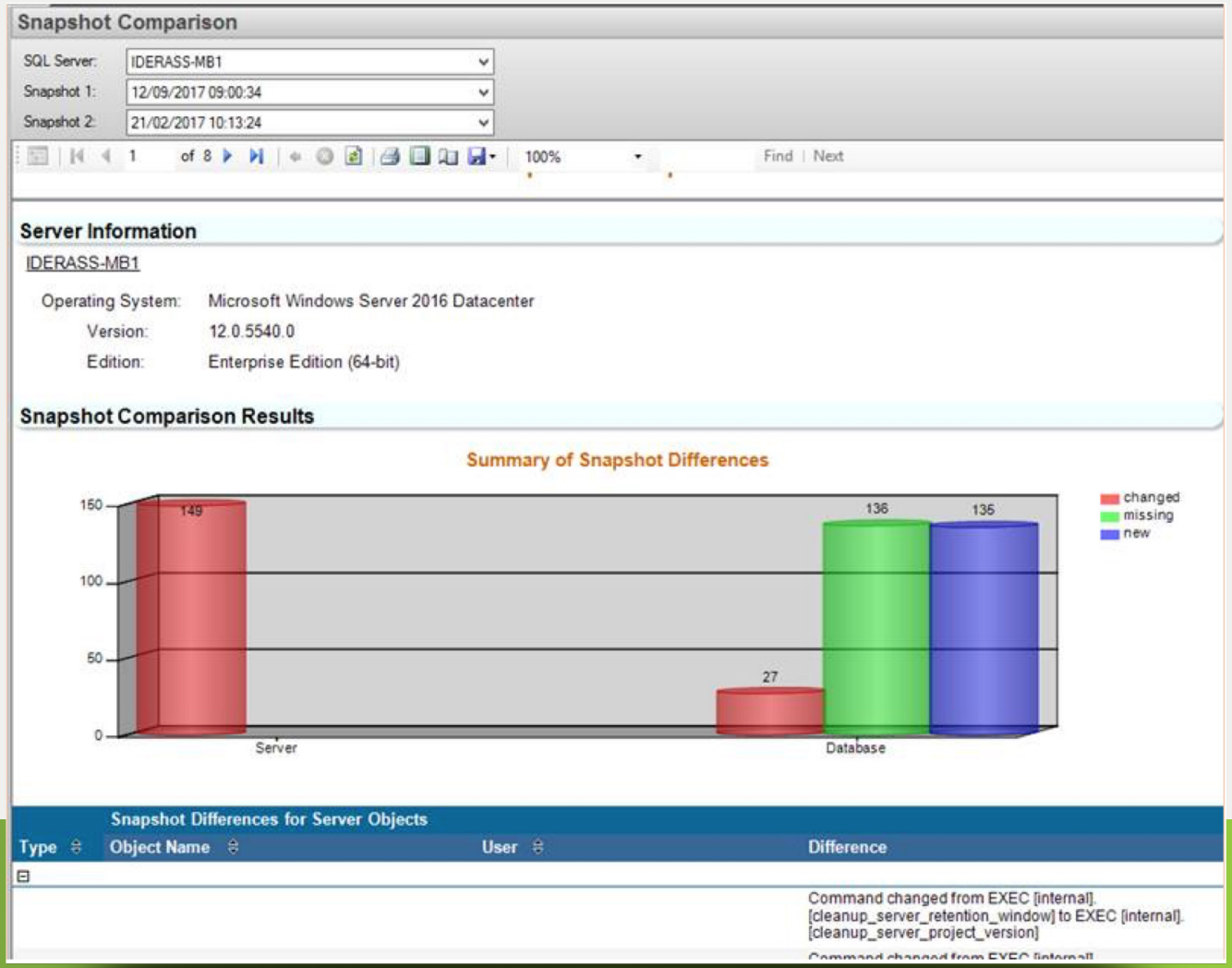


Diagram 5 A view of SQL Secure “snap shot” comparison

ARTICLE 33 NOTIFICATION OF PERSONAL DATA BREACH TO THE SUPERVISORY AUTHORITY

Should a breach occur, SQL Compliance Manager is configured to alert personnel when identified sensitive data is being accessed. This automatic notification can be defined based on specific properties, as shown in Diagram 6.

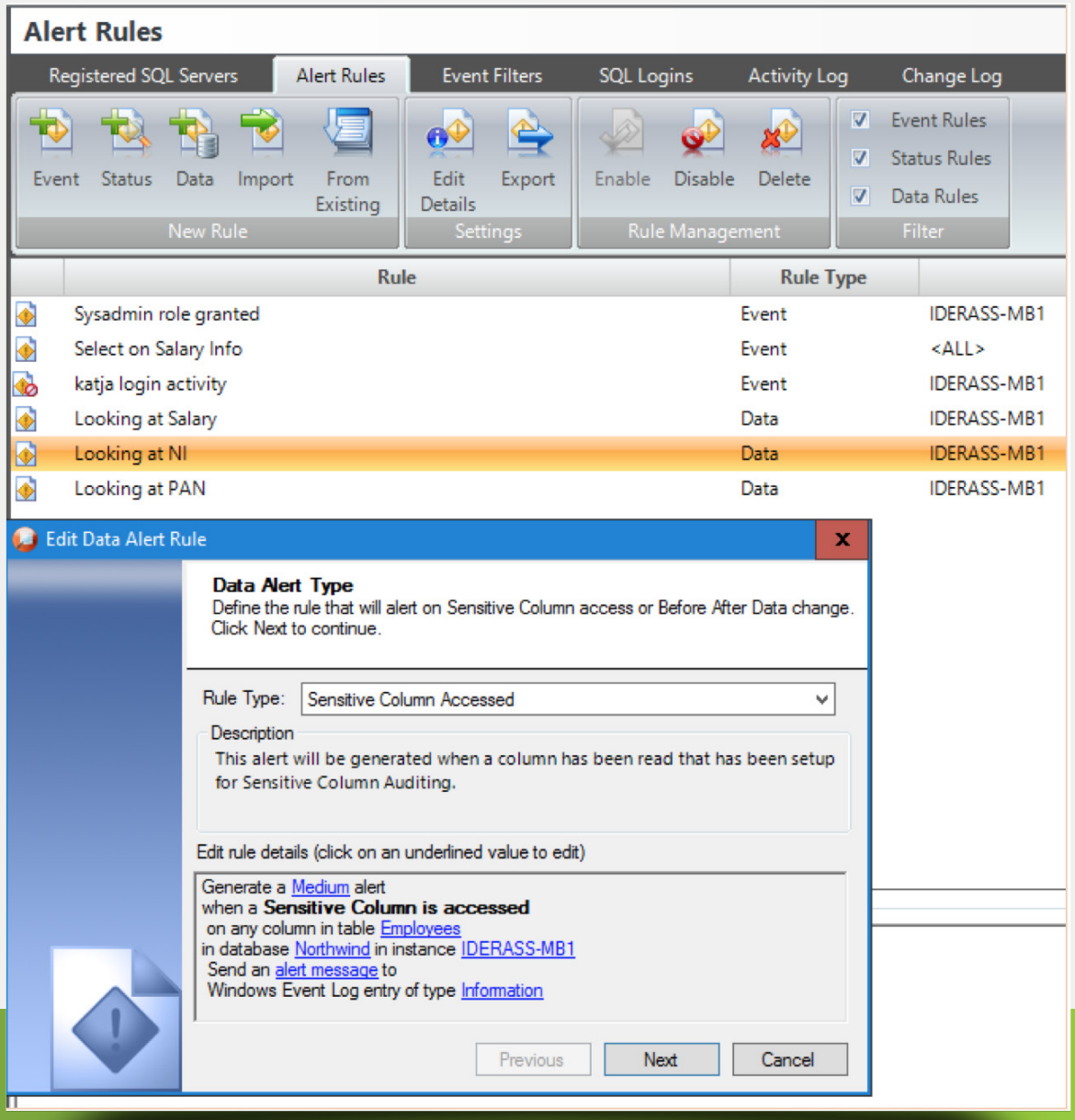


Diagram 6 Set up alert rules in SQL Compliance Manager

ARTICLE 35 DATA PROTECTION IMPACT ASSESSMENT

Throughout your environment, it is vital to manage, monitor, and document security risks and measures. With the IDERA SQL Security suite, you can apply measures to address risks and protect personal data while assisting with GDPR compliance. SQL Compliance Manager and SQL Secure both offer reporting capabilities that can provide a compliance summary for audits.

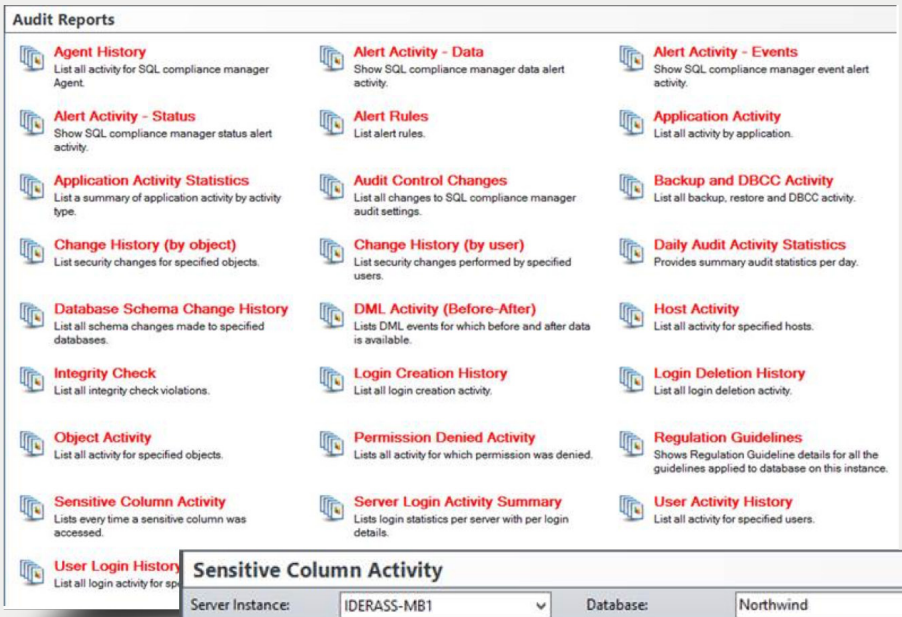


Diagram 7
The available SQL Compliance Manager reports

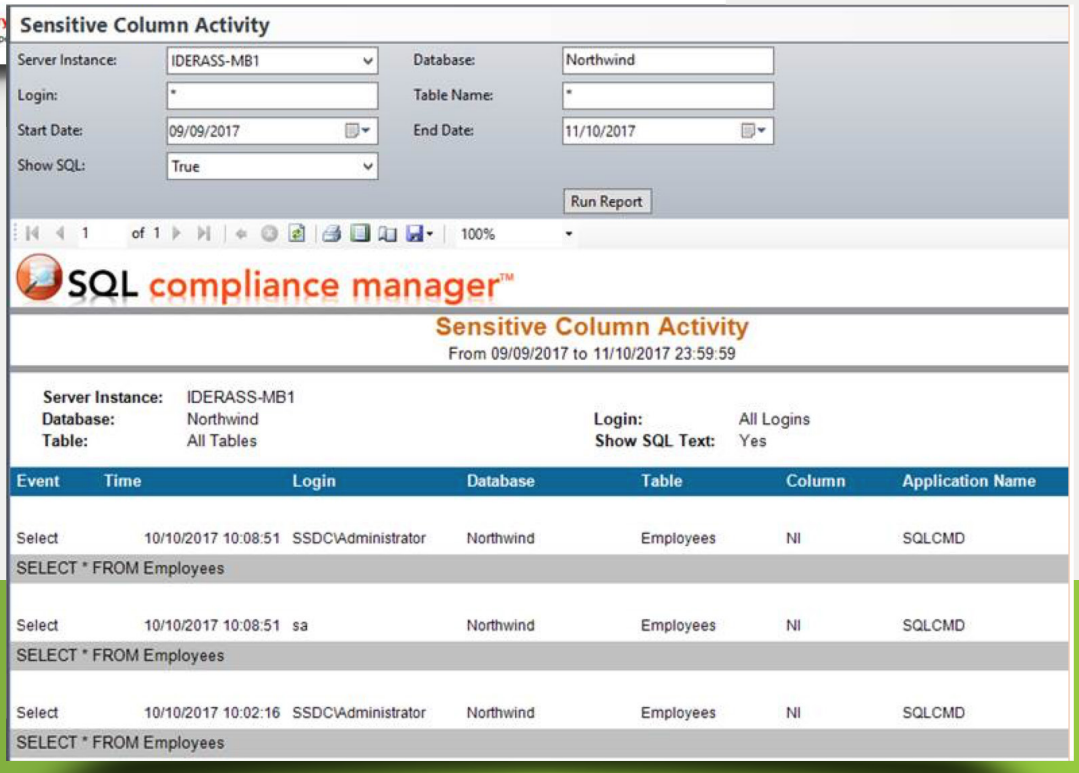


Diagram 8 Sample SQL Compliance Manager report, showing “Sensitive Column Activity”

ARTICLE 35 DATA PROTECTION IMPACT ASSESSMENT CONTINUED

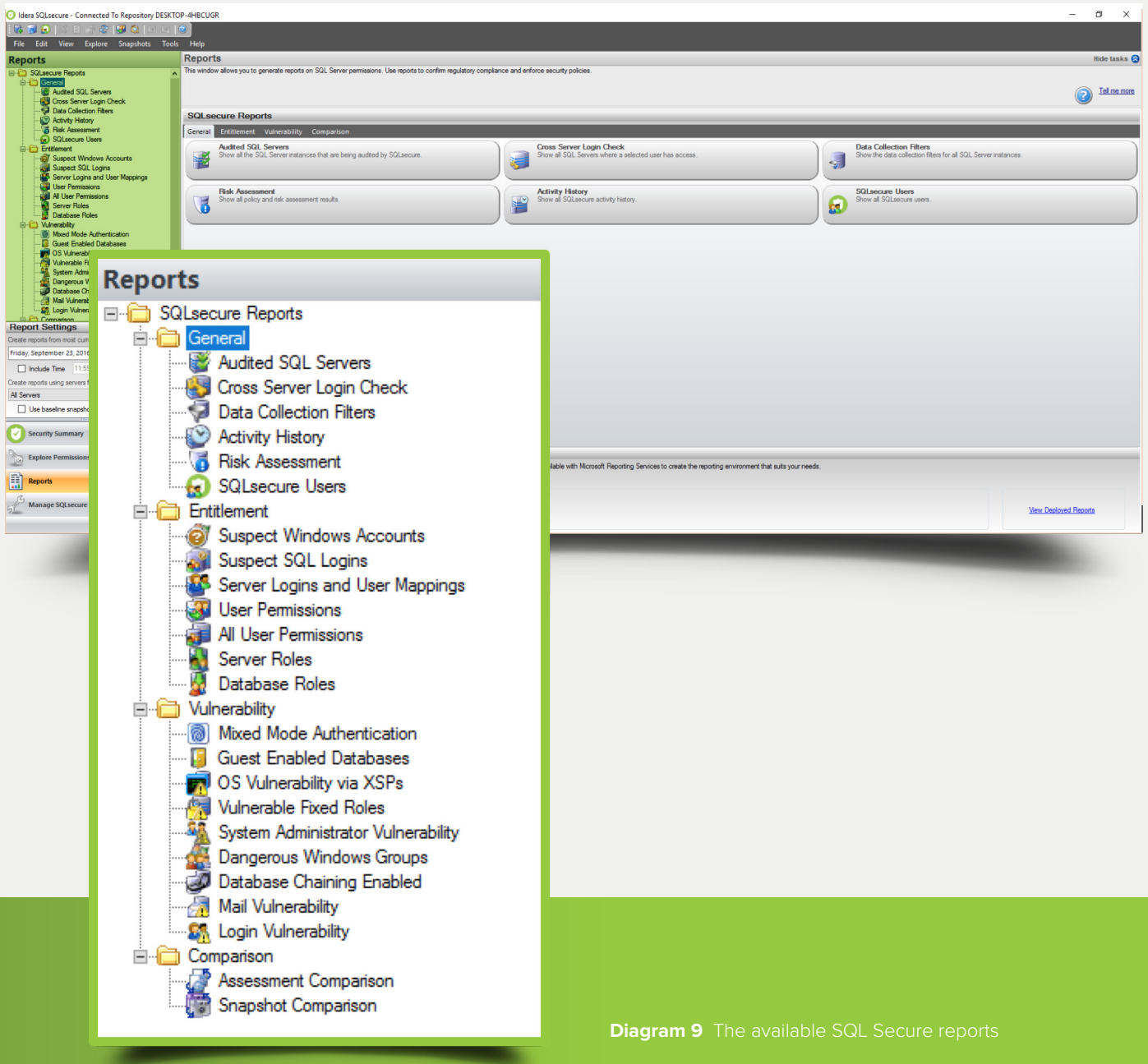
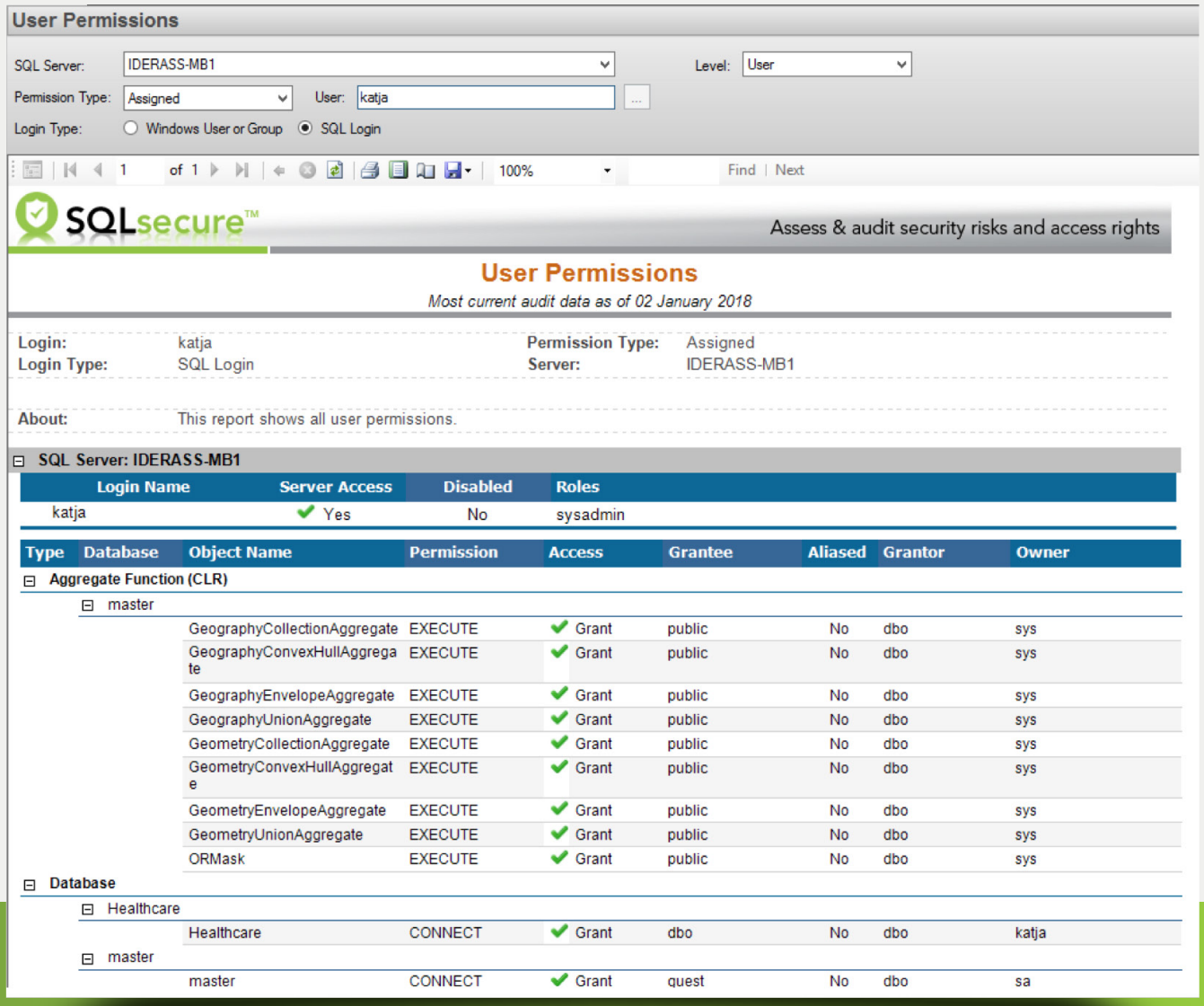


Diagram 9 The available SQL Secure reports

ARTICLE 35 DATA PROTECTION IMPACT ASSESSMENT CONTINUED



User Permissions

SQL Server: IDERASS-MB1 Level: User

Permission Type: Assigned User: katja

Login Type: Windows User or Group SQL Login

1 of 1 100% Find | Next

SQLsecure™ Assess & audit security risks and access rights

User Permissions

Most current audit data as of 02 January 2018

Login: katja **Permission Type:** Assigned
Login Type: SQL Login **Server:** IDERASS-MB1

About: This report shows all user permissions.

SQL Server: IDERASS-MB1

Login Name	Server Access	Disabled	Roles
katja	✔ Yes	No	sysadmin

Type	Database	Object Name	Permission	Access	Grantee	Aliased	Grantor	Owner
Aggregate Function (CLR)								
	master							
		GeographyCollectionAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeographyConvexHullAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeographyEnvelopeAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeographyUnionAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeometryCollectionAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeometryConvexHullAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeometryEnvelopeAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		GeometryUnionAggregate	EXECUTE	✔ Grant	public	No	dbo	sys
		ORMask	EXECUTE	✔ Grant	public	No	dbo	sys
Database								
	Healthcare							
		Healthcare	CONNECT	✔ Grant	dbo	No	dbo	katja
	master							
		master	CONNECT	✔ Grant	guest	No	dbo	sa

Diagram 10 Sample SQL Secure report, showing [named] “User Permissions”

SUMMARY

GDPR expects customer data privacy and industry compliance by design and default.

The first step to support data protection requirements would be to establish a robust data governance program and create awareness about the rules and impact of not being GDPR compliant, leveraging integrated process and data modeling tools.

Discovery is the second step to look into existing systems and processes. Whether we are working on new systems or looking into existing legacy systems, we need to store and maintain our data fields in line with the GDPR rules. The IDERA SQL Security suite helps you to focus on data breaches, personal information revisions and overall environment changes, specific to your SQL Server databases. Both products help to document and encourage discussions on how organizations are complying with GDPR legislation within the organization and external regulators in case of an audit.

IDERA understands that IT doesn't run on the network – it runs on the data and databases that power your business. That's why we design our products with the database as the nucleus of your IT universe.

Our database lifecycle management solutions allow database and IT professionals to design, monitor and manage data systems with complete confidence, whether in the cloud or on-premises.

We offer a diverse portfolio of free tools and educational resources to help you do more with less while giving you the knowledge to deliver even more than you did yesterday.

Whatever your need, IDERA has a solution.

IDERA