What is SQrazorLoc?

Many businesses and even individuals use online databases to store their information. Whether it's a customer database for a merchant or a music collection for an audiophile, a database is in use and typically today that database is of the SQL (Structured Query Language) type.

In order to make the database accessible both to many employees for a merchant as well as online and remotely accessible for the individual, those databases are at risk. In most cases the only protection is a simple password that is easily discovered by a hacker. In other cases, there is some encryption, but it requires additional services and can be very costly to implement and manage.

SQrazorLoc solves the problem and does so at a cost that is easily affordable to both the business and the individual. SQrazorLoc acts as both protection for the data as well as gatekeeper for what applications have access to that data. This prevents an illicit actor from gaining access through malware or other means while protecting the data in case access is gained in some other way such as copying the entire database.

SQrazorLoc verifies that only those cloud or local computer-based applications that you define as having access are allowed access while all other applications, programs, or malware are blocked. It also provides targeted protection where you define those components of the data that need protection. This can be from as small as a single column (field) of data to as large as the entire database, but it is up to you to define how much is protected.

How does SQrazorLoc work?

Unlike current products, SQrazorLoc works as active protection that is part of the normal data flow. SQrazorLoc provides a piece of software that replaces one piece of the middleware that facilitates application access to the database. When a cloud or computer-based application seeks access to the database it establishes a connection to the local middleware component that handles the protocol and communications to the database software. This middleware component is called a "driver".

SQrazorLoc has a component that replaces the specific driver in use and handles the protocol and communications from the application to the database software, but also provides the access control and protection for the data in the database. By replacing this middleware component, SQrazorLoc is able to be installed without the need for changes to the existing applications or the database software. No costly implementation or software development is needed and this makes SQrazorLoc easy and cost effective to install and use.

In addition to the ease of installation, SQrazorLoc also utilizes an automated approach to activating and deactivating protection for data in the database. The configuration of what is protected can be changed as needed to protection data that is not currently protected at any time and to unprotect data that no longer needs protection. Because of this capability SQrazorLoc is able to be installed and implemented with ease, but also, if so desired, unimplemented and uninstalled just as easily.

What databases does SQrazorLoc work with and what does it require?

SQrazorLoc currently supports any SQL Server software that utilize either the ODBC (Open Database Connectivity) protocol or Microsoft ADO.NET or OLE.DB protocols. This includes most of the popular SQL database software products in the market. Below are some example setups that this would include;

- MS SQL Server using the standard ADO or OLE protocols.
- MySQL Server using the standard ODBC protocol.
- PostgreSQL Server also using a standard ODBC protocol.

Just about any SQL database software using any of these three protocols is supported with additional protocols to be support by SQrazorLoc is the near future including JDBC and others.

So, I have an SQL database, is SQrazorLoc something I could use?

Many businesses, government agencies, municipalities, and even individuals utilize SQL databases for storing of important data where that data needs to be organized, easily accessible, searchable, and able to be massaged in many different ways in providing usefulness to this data. While SQrazorLoc is suitable in any circumstance for the protection of that data, where it truly shines in protecting data in SQL databases that are accessible from the internet. SQrazorLoc controls the application access, insuring that only certain specific applications the user has previously defined in the configuration are able to access the data and no other applications are allowed. It also insures that if the data is somehow extricated from the database that the protected data remains protected and is never able to be breached. Adding to this the ease of implementation, the fault tolerance built-in to the configuration to ensure the protected data is never lost to it owner, and the reporting and audit capabilities and it makes putting a database on the internet a secure and less taxing experience.

What are some of the best features of SQrazorLoc?

Application Connection Security

If the security in use to protect data can also be used to access the data illicitly then the security is not very effective. This is why SQrazorLoc enforces a secure method by which applications can connect and access the database through it. The Application Connection security consists of two parts, first the connection information used by applications to connect to the database is encrypted and protected, second the connection attempt itself is verified by the product to ensure that only authenticated and authorized applications can access the database. With these two measures, SQrazorLoc eliminates the possibility of illicit access to the database through malware and further eliminates the opportunity to locate and use the necessary connection information to directly access the database as the application would do and thus camouflage the illicit access.

Searchable Tokenization

Data that is protected by SQrazorLoc uses our patented technology DARE. This results in protected data where the same unprotected value results in different encrypted values each time it is protected since the encryption parameters are constantly changing and random in nature. Because of this random nature the protected version of the data cannot be used for searches. This is where SQrazorLoc implements the DARE based method for tokenization where the same value results in the same non-reversible value each time it is tokenized. This provides the means to recreate a token for a value on which a search is desired, find the associated data and then unprotect the protected version of the data for the user to view.

Fault-Tolerant Configuration and Data Protection

One concern with any product intended to protect data is what happens if the product were to become corrupted, what happens to the data that was protected, is it lost. With SQrazorLoc this concern is not a problem since the configuration is backed up offsite. This does not create a security weakness since it still takes both data onsite as well as the offsite data to unprotect sensitive data. The offsite data is always available to the customer and provides the means to recover protection if a database were corrupted and had to be restored from backup. Under no circumstances is protected data ever moved from the customer's hardware, so the customer still needs to ensure their own backups are done to provide for recovery if a catastrophe occurs. SQrazorLoc does protection in place for the sensitive data, so the location where it was originally unprotected is the location where it will exist when protected and nowhere else.

Transparent to the Applications using the database

When it comes to protecting data one problem with current products is the need to change applications to utilize the protection. This can mean contacting an application vendor to determine what protection products they can support and then being limited by that selection. It can also mean costs associated with modifications to in-house applications in order to support a new protection product. With SQrazorLoc this problem does not exist. SQrazorLoc, by virtue of existing as middleware, is transparent to the application. The application thinks it is connecting to the SQL database just as it normally would connect, while actually connecting to SQrazorLoc which then handles all of the protection and authentication tasks. This allows SQrazorLoc to have minimal impact to applications being used and makes it an ease to change protection without the need to change the application to support the change in protection. SQrazorLoc can be turned on or off with little to no impact to applications. In fact, the only effect is to change the content of the connection data used for connecting to the database and this is always a configurable parameter for applications.

Centralized Client Management

Another problem when dealing with databases and the client platforms which access them is management of the configuration, monitoring, and performance. Remote Client PCs, Webservers, and Cloud based Application platforms all need to be managed in order to access the same database, but also to know that each of these platforms is functioning properly and performing well with the database. SQrazorLoc takes care of this through the use of the CYPHYX Customer Portal. The portal is first accessed when you make an initial purchase from CYPHYX for one of our products. Through this

portal you manage all of the products in use and have access to their configurations as well as their logs, reports, and performance data. You also have the ability to give full or limited access to other users through their own accounts and can withdraw that access just as easily. Since each client that accesses the protected database must have an installed copy of the SQrazorLoc driver, the portal manages driver updates, processing logs, and performance data for each installed copy of the driver. All driver data is specific to the CYPHYX product and does not include any protected customer data. With the portal performing driver management the customer has one less concern to worry about in contrast with other products currently on the market. Customer Portal access is fully protected and even if an illicit user were to gain access it would not weaken the existing protection on your data. Even deactivation of protection would not be affected since that requires two factor verification before taking effect. The logs and statistics can be downloaded and used in reports as you desire while also being available in online reports through the customer portal. Lastly, access to the customer portal is via the internet, so anywhere you have access to the internet you have access to your product configuration and monitoring.

What makes SQrazorLoc different?

SQrazorLoc is different from other products currently on the market in several ways. It is simple and quick to implement only requiring a few minutes of configuration and a single download that automates the activation of protection based on the configuration you define. It has excellent performance since it requires no outside access to obtain security data such as keys for encryption. It is automated and can be turned on or off in real-time and is just as easy to uninstall as it was to install. Your data is safe and if something happens to the database due to hardware or software catastrophes the protection is still secure and can be easily reactivated once the back up of the database is restored. Unlike other products you can configure and monitor protection from any machine with an internet connection versus having to go to the specific hardware on which the database resides.

Licensing and subscriptions

SQrazorLoc is subscription based and provides a complete database protection product. Subscriptions include multiple client licenses (beginning at 50 for the lowest level), basic support, access to the latest updates, backed up configuration data, online monitoring reports, and access to the customer portal with the ability to apportion access to multiple users. Each subscription is configured and priced on the number of protected columns within a given database. Each SQrazorLoc subscription is per database. Additional client licenses, levels of support, access to monitoring data, and electronic interfacing to customer monitoring systems are available for an additional charge.

If you have any questions, please contact us

With SQrazorLoc we realize that much of what we are doing will change the how database protection is sold and used, so if anything contained here has raised questions, please let us know and we will gladly work to answer them.

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