

Siodb

**THE PLUG-AND-PLAY
SQL DATABASE THAT
SECURES YOUR DATA
AND PROTECTS
YOUR DATA
PRIVACY**

2019



DATA ISSUES

Most of our data are online and under-protected. Since 2013, more than 14 billion data records have been lost or stolen, and only 4% of them were encrypted¹.

Shocking, isn't it?

Today, organizations are struggling with complex technologies. As a result, less than half of them are ready for a cybersecurity attack³ and 27%³ of data breaches are due to human error.

New regulations, such as GDPR, put even more pressure on companies. For example, individuals made 95,180 GDPR complaints about data privacy issues⁴ and the record fine reached €212 million⁵.

Wouldn't it be great if your technologies could manage regulation compliance from themselves? Of course! You would

definitely save a lot of time... and money.

As you may know, the average cost of a data breach is of €3 million². That cost lasts up to three years after the breach. Can you afford it? Probably not. So, why not use a technology that protects your data by design and by default?

This kind of technology reduces manual configuration and facilitates automation. It decreases the average total cost of a data breach. That cost is of €2.50 million for organizations using security automation but can reach €4 million for those that don't use it².

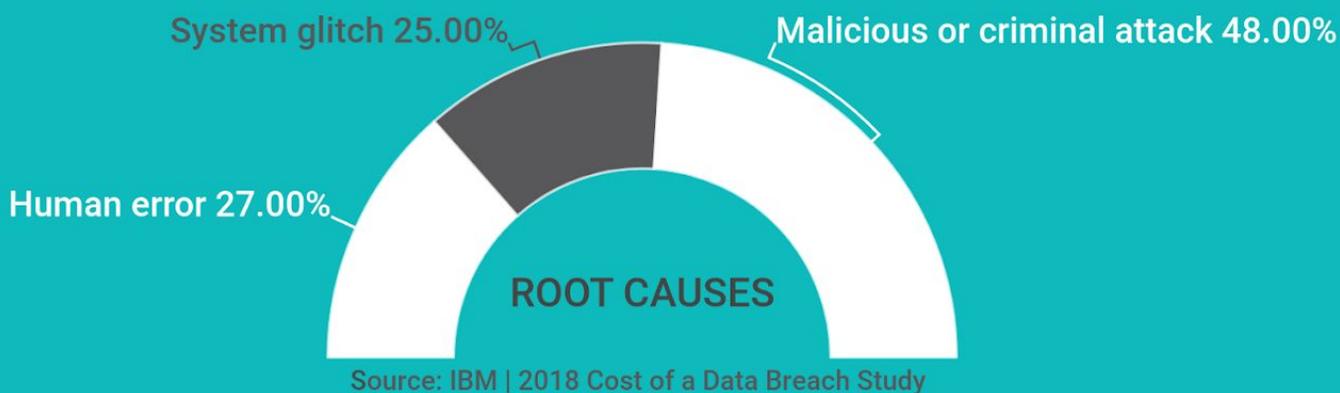
An investment in such a technology could definitely be the right move.



€ 212 mio

HIGHEST GDPR FINE

Source: Forbes | british-airways-hit-with-record-fine-following-2018-cyberattack



€ 3.49 mio

AVERAGE COST OF A DATA BREACH FOR A COMPANY

Source: IBM | 2018 Cost of a Data Breach Study

4%

ONLY OF STOLEN DATA
RENDERED USELESS
BECAUSE ENCRYPTION
WAS USED

Source: <https://breachlevelindex.com/>



What does Siodb give you?

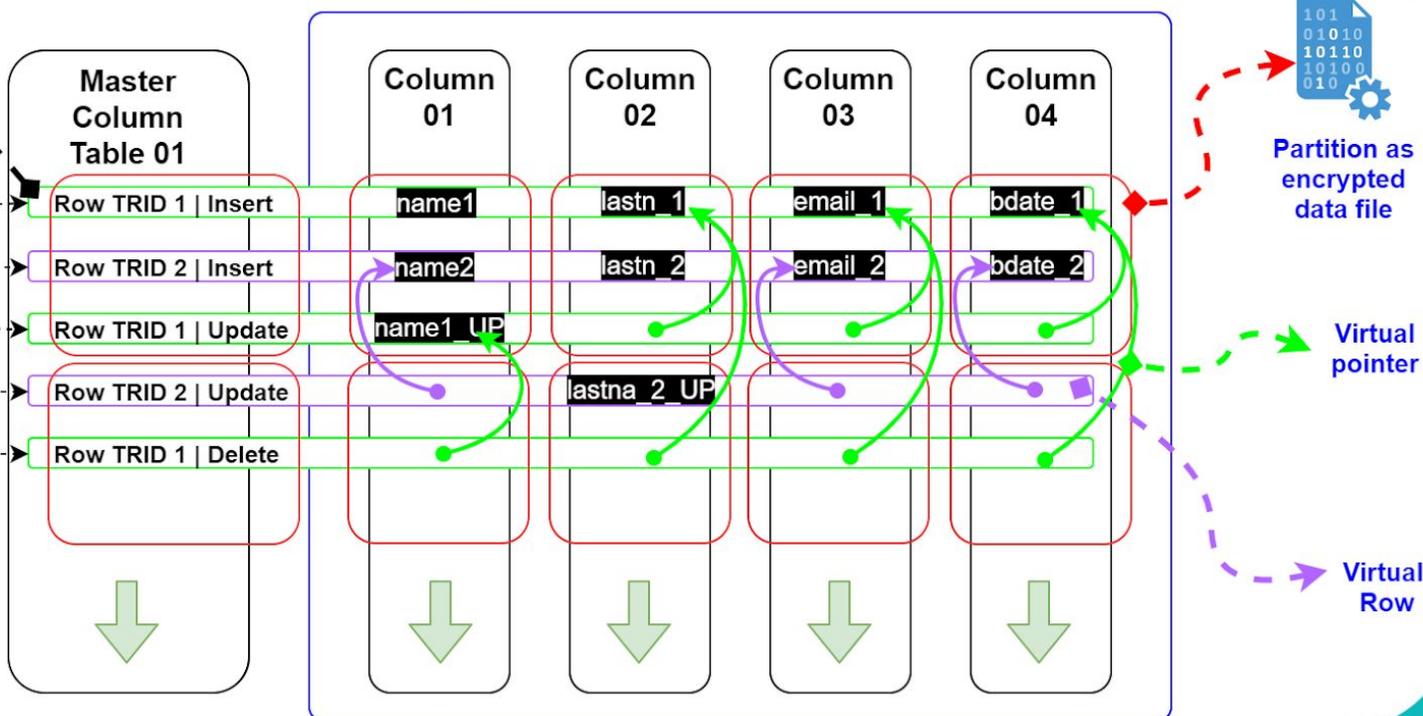
RELATIONAL RDBMS SQL ACID PRIVACY BY DESIGN
ENCRYPTION



How Does Siodb Protect Your Data?

Master Column Record { TRID = Table Row Id, Operation [INSERT | UPDATE | DELETE], ExpirationDate }

Table 01



```
siocli> insert into table_01
(column_01, column_02, column_03, column_04 )
values ( 'name1', 'lastna_1', 'email_1', 'bdate_1' ) ;
```

```
siocli> insert into table_01
(column_01, column_02, column_03, column_04 )
values ( 'name2', 'lastna_2', 'email_2', 'bdate_2' ) ;
```

```
siocli> update table_01 set column_01 = 'name1_UP'
where trid = 1 ;
```

```
siocli> update table_01 set column_02 = 'lastna_2_UP'
where trid = 2 ;
```

```
siocli> delete from table_01 where trid = 1 ;
```

Table Row Id

Siodb automatically adds and increments the unique id for each new row (second principle from Edgar F. Codd). Siodb calls that unique id the Table Row Id (TRID). Siodb stores that Table Row Id into the Master Column.

Master Column

Each table has a master column that stores the rows' metadata, such as the row's unique id, its expiration date, who created it, etc. It thus gives you optimal control over your data.

For instance, the master table records any transaction type (insert/update/delete). Rows are not directly updated or deleted. Instead, an update is a new row with the same primary key (TRID).

And a deletion is a new logical row, flagged as deleted and that points to its mother row.

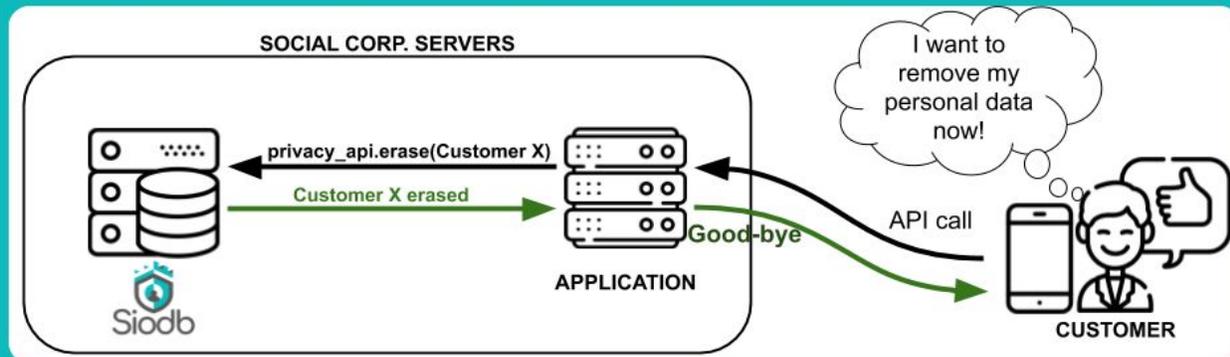
Security by design

The term “Security by Design” means “the software has been designed from the foundation to be secure.”

Siodb has a special design for data format. It stores an expiration date per row. When a row reaches this date, Siodb destroys every personal data automatically. Hence, this feature provides you with a seamless solution to protect your database data privacy by design.



How Does Siodb Protect Your Data Privacy?

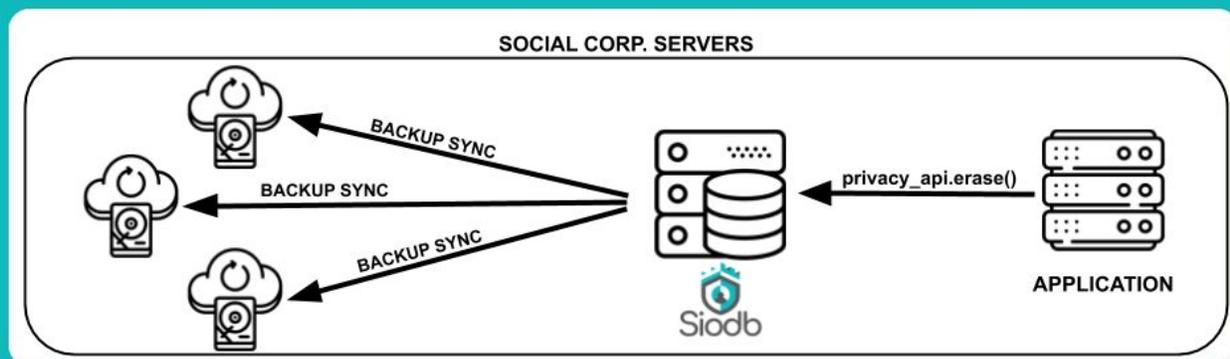


The figure above shows how you can use the Siodb privacy API.

Your end-users define an expiration date for their personal data and you decide which columns contain personal data. Siodb destroys it permanently, either when the data reaches the expiration date or when the application deletes it (through SQL).

Siodb guarantees destruction by its code.

Also, you don't need to clean up all parts of your infrastructure to remove copies of personal data. Siodb propagates the destruction across all copies of the database, i.e. backup files, standbys, and clones (see figure below).





Siodb

The way to protect
people's data
privacy

- Start in 8 minutes for free with the [quick start page](#).
- Get immediately your copy of Siodb [here](#).
- We are happy to hear from you now [here](#).

