Sharemind®

Sharemind is a secure data analysis platform designed by Cybernetica. Sharemind allows data owners to use private data that may have previously been locked due to regulatory or proprietary restrictions. Sharemind can remove regulatory roadblocks using its sophisticated solution. Sharemind helps to protect data assets against threats, all while complying with current and incoming data protection regulations.

The Sharemind platform produces encrypted outputs for stakeholders that can be useful in making data-driven decisions. One key component of Sharemind's process is the computing is done between a distributed network of servers. No analysis can be performed on the data by one independent actor, all servers must agree on the pre-determined queries.

With Sharemind's cryptographic secure computing technology, data owners share data in an encrypted form so that nobody except for the owners themselves can access it. Sharemind can process the encrypted data without having to remove the encryption, thus preventing any single party from abusing private data by distributing control and responsibility for any operations.

The Basics

- Sharemind goes beyond data protection requirements.
- Data owners encrypt data on-site and upload to Sharemind.
- Data analysts build and run queries without accessing the data.
- Sharemind processes the queries without removing the protection.
- Authorised users receive query results in an encrypted format.
- There is no single party who can decrypt the information and break privacy.

Applications of Sharemind

- Companies: customer analytics, profiling, linking with external databases
- Cloud/Mobile Services: services hindered by regulation
- Finance: more data for banks and credit agencies
- Healthcare: access to data for clinical and medical research
- Policymakers: link and analyse information from state databases
- Governments: build anti-fraud systems for tax and welfare fraud

Questions & answers

Does Sharemind reveal my data with other stakeholders?

Sharemind is designed to keep each data set encrypted during the analysis phase. No one party can see the other's data, only the agreed upon query results.

What is needed to deploy Sharemind?

Sharemind needs a distributed system of three non-colluding servers to properly run the application.

Facts and figures

→ In 2016, Sharemind processed over 10.6 million records in a study for the Estonian Center of Applied Research.

→ Sharemind uses secure multiparty computation, a mature cryptographic solution formally introduced in 1982.

For more information: sharemind.cyber.ee