

Method and System for Querying and Searching Protected Cloud Data (NYP ID: 0393)

Technology

Dynamic cloud data searching and access

Type of IP and status

Know-how.

Overview

This technology provides a method to upload data to a cloud storage service provider. It enables data consumers who are authorized by data owner to perform search and query operations on the data without decrypting the data first.

Furthermore, queries are submitted to the data service provider without revealing any protected information. In the event that the cloud storage service provider is not a trusted party, data has to be encrypted by the client. This means that useful features like content search cannot be performed because the encryption key is not available on the server. This invention can specify how preprocessing of the data before encryption is performed to enable search operations. It also aims to ensure that subsequent search queries performed on the cloud servers will not disclose relationships among data in the query string and the set of encrypted data to the cloud service provider or another third party.

Potential Applications

- Organizations that require data privacy protection (e.g. clinics and hospitals) can use the technology to store their patient's data with a 3rd party data service provider securely
- Existing cloud provider who is looking into new growth areas such as providing big data analytics services

Advantages

- Enables storage service provider to allow customer to protect and search data in a secured manner
- Can be integrated with existing data analytics tool using a provided API library and/or a web service interface (The API library or web service provides an abstraction layer where the data analytics tool can search and query cloud data using the original unprotected keywords)

Technology & Licensing Enquiries

Ms Diana Sutanto

Tel: +65 6550 0344

Email: diana_sutanto@nyp.edu.sg

Mr Joel Tan

Tel: +65 6550 0146

Email: joel_tan@nyp.edu.sg

Mr Johnathan Lim

Tel: +65 6550 1972

Email: johnathan_lim@nyp.edu.sg