



TECHNOLOGY

Dynamic Proofs of Data Retrievability from Cloud Storage

OVERVIEW

Background

Data storage outsourcing has become one of the most popular applications of cloud computing, offering benefits such as economies of scale, flexible accessibility, efficiency, and allowing companies to focus on their primary business activities. Due to the increase in percentage of services conducted online and number of mobile internet connections, demand for data storage continues to grow. Customers in this industry are primarily concerned with authenticated storage and data retrievability. Although many efficient proof of retrievability technologies have been developed for static data, only two dynamic technologies exist. However, both are too expensive to implement in practice due to the fact that they require a high level of bandwidth.

Innovative Technology

Researchers at the University of Maryland developed a dynamic proof of reliability scheme that requires 300 times less bandwidth than currently available technologies. This innovative technology makes dynamic proof retrievability of data practical and efficient, and thus attractive for the industry implementation. This technology gives clients of cloud storage providers assurance that their data has not been modified and that no data loss has occurred.

Advantages

- Significant reduction in required bandwidth and thus costs
- Offers customers a significantly stronger guarantee of data security and authenticity
- Allows cloud data storage services to expand into industries requiring much higher security standards

Application

- Cloud computing
- Secure data storage

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Additional Information

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PATENT STATUS

Pending

LICENSE STATUS

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CATEGORIES

- Information Technology

EXTERNAL RESOURCES

- [US Patent 10,148,291](#)

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