Secured Virtualized Diffused Storage (NYP ID: 0189)

Technology
A secured virtual file system for enterprise users of public cloud

Type of IP and status
Know-how.

Overview
More and more organizations are now looking to Cloud Computing as practical way for them to reduce their IT total cost of ownership. However, as with any third party hosting solution, data security is a major concern.

Our solution allows enterprises to create a virtual file system which can be overlaid on cloud storage nodes from one or more cloud providers. The solution supports Amazon S3 and Windows Azure and cab be extended to support others. It can also be deployed in a private cloud environment.

The solution ensures data are secured and highly available through the use of information dispersal algorithm. The files are split into multiple slices and stored on multiple storage nodes. The meta-information such as locations of slices and the component slices are stored and retained within the enterprises in a registry server. This provides clear separation of control between data owner (enterprise) and storage provider (cloud provider). Furthermore the slices are encoded with redundancy to ensure data is available without the need for full replication.

The solution provides a Java client library implementation which can be easily integrated with Java applications that require the use of a virtual file system. A Callback File System (CBFS) implementation is also provided.
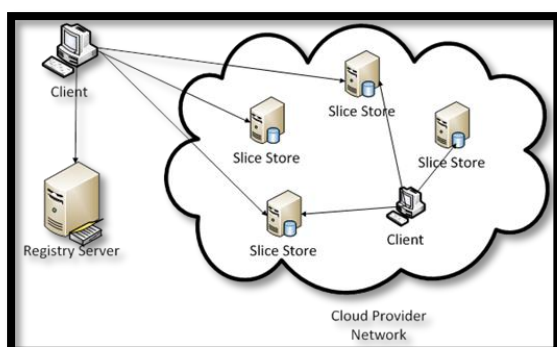
Potential Applications
• Cloud Providers can offer the solutions as a value-added service to allow their customers to have full control of their data
• Enterprises can deploy the solution on one or more public clouds as well as private cloud

Advantages
User can create a secured file system over existing cloud infrastructure that addresses the security concern of storing data in the public cloud

Technology & Licensing Enquiries

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