

PSPACE

PSPACE Technologies inc.THE Cloud Storage Company

PSPACE Co., Ltd Q1 2016

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- 2. Products & Technologies InfiniStor File System (Cluster File System) Cloud Storage Service Platform (Object Storage Services) Securage (DLP built-in File System)
- 3. Works with Samsung





1. Company Introduction



1-1. Company: General Information

- Established as a Scale-Out Storage company in 2004, 100% R&D Company
- Field proven technologies and products
- Guarantee the best Performance, Reliability, Secure Enterprise Storage

~2009

Scale-Out Storage "InfiniStor"

- IFSv3 Cluster File System
- Legacy compatible Scale-Out NAS
- Scale-Out support for MS-Windows (only)

Secure Storage System

2015~

- Data Leak Prevention Storage
- Digital Rights Management Storage
- Cross Platform DLP Storage (only)

DISTRIBUTED FILE SYSTEM COMPANY

~2013

Object Storage Service Platform

- Object Storage using REST-APIs
- Complete IAM Service
- Enterprise Cloud Service Platform

All-Flash Bock Storage

2017~

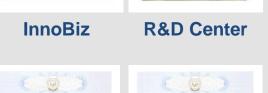
- · All Flash based Block Storage
- Ultra fast iSCSI Block Storage
- Over 10M IOPS Speed



1-2. Intellectual Properties, Certifications, and Customers









3 Korean Patents, 3PCT, 1 US Patent





2. Technologies & Products

Scale-Out NAS

Cluster File System for Scale-Out NAS

Cloud Storage Service Platform

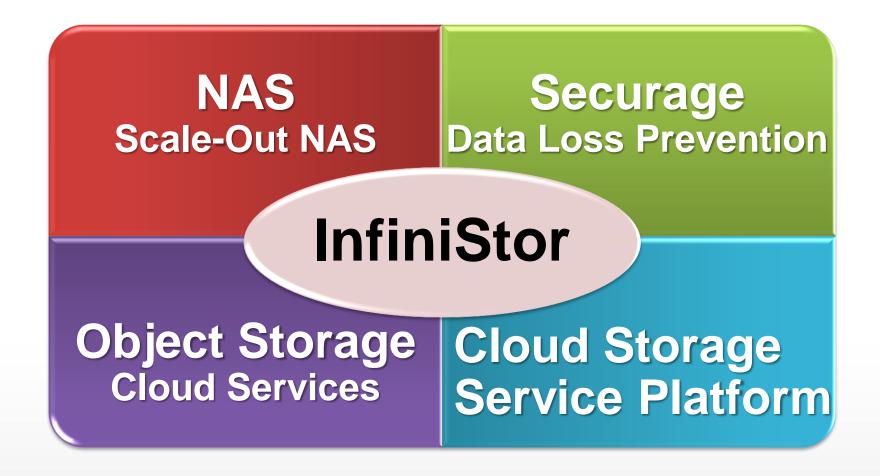
InfiniStor Extension for Object Services

Securage (DLP Storage)

Application Aware File Protection Technology based NAS



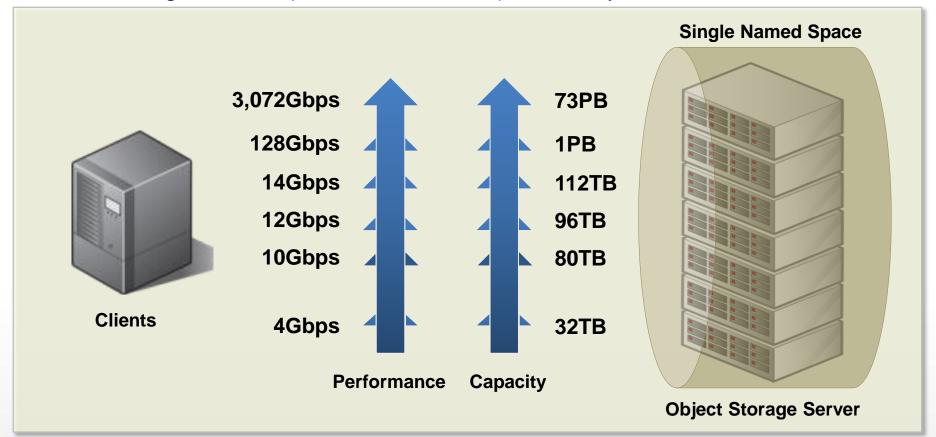
2. InfiniStor Storage System





2-1. InfiniStorTM NAS: Scale-Out NAS (Capacity & Performance)

- Performance& Capacity increase as Storage Server added to the System
- 512 Storage Servers (tested and certified) 144PB/System





2-2. InfiniStor™ NAS Characteristics

Scalability

- >144PB
- >512 Nodes
- Multi-Tenancy



Performance

- 10G/40G/Infiniband
- Scale-Out Perf.

Cloud Ready

- Multi-Protocol Storage
- Object Storage
- BSS/OSS Support

Reliable

- Distributed File System
- Clustered Everything

Advanced Features

- DR (Disaster Recovery)
- Quota
- LDAP/AD Support





2-3. Object Storage: Characteristics

Object Storage

- Based on InfiniStor
- **Multi-Tenancy**
- RESTful APIs



IAM

- Identification and Access Management
- LDAP / AD Support

Protocols

- Samsung Web **Storage Services**
- AMAZON S3
- Open Storage

OSS

- Monitoring
- Integrate into existing Management infrastructure
- System Logging

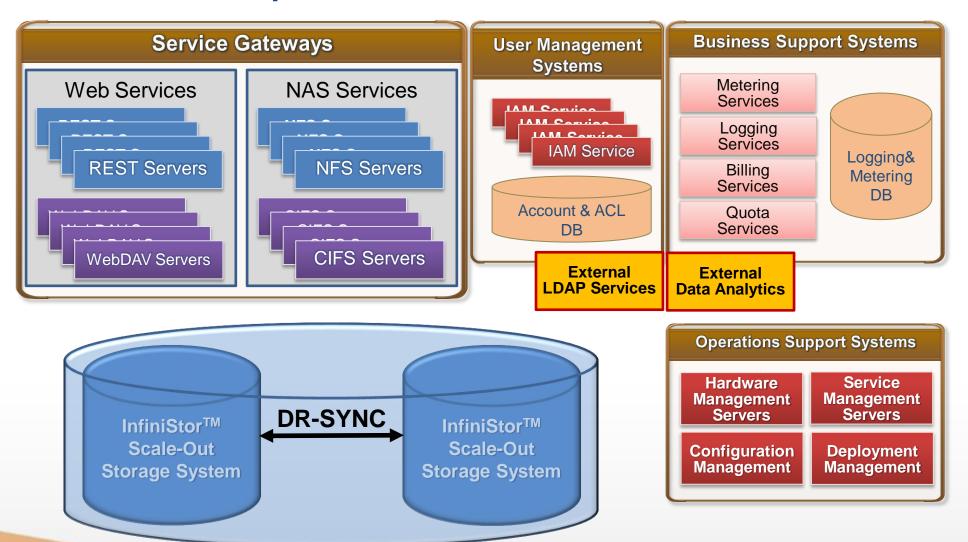
BSS

- User Usage Log
- Provide Raw info to Billing systems
- Quota Management



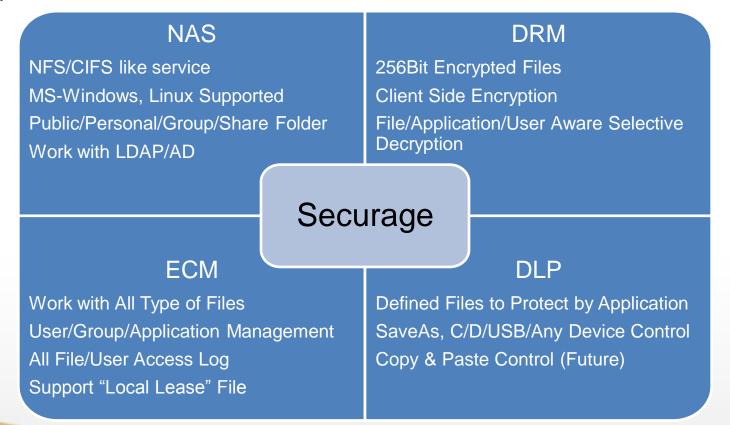


2-4. CSSPTM: Components



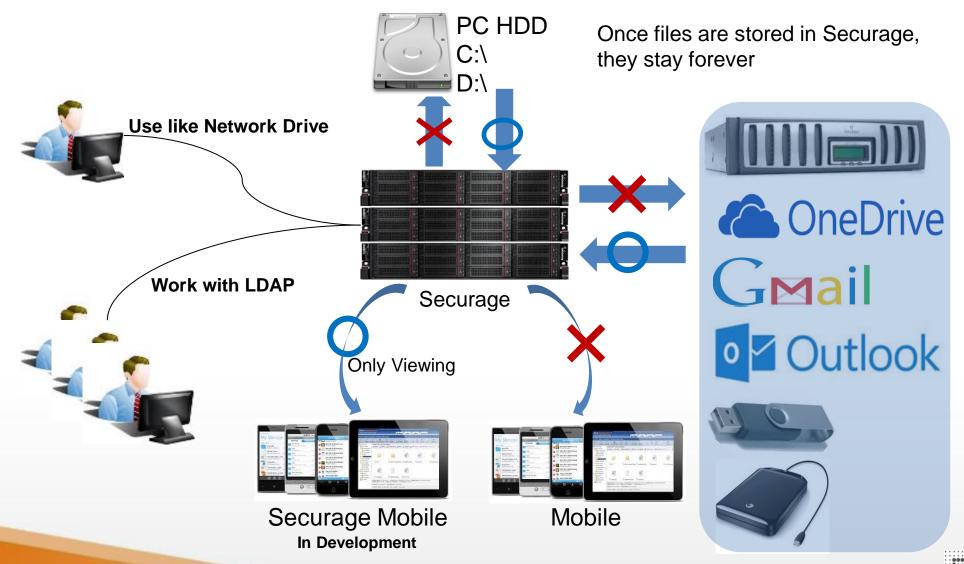
2-5. Securage is ...

- Securage is POSIX compliance Scale-Out NAS based on InfiniStor
- Securage files are Encryped and DLP Protected
- Support MS-Windows and Linux





2-6. Securage can do ...





2-7. Securage architecture

Securage composed of 4 technologies Store files in NAS Storage. NAS: **Network Shared Storage** Decide what/how to encrypt ECM: **Centralized Contents Mgmt** Store Files DRM: **Digital Rights MGMT** Encrypted **Data Loss Protection** DLP: Protect from SaveAS **Decide When** Securage **Decide Where** to Allow to allow "SAVE" Copy&Paste Protect from unallowed contents copy Decide Whom/When to LDAP/AD based ACL share files



2-8. Securage advantages

Securage protects files in Storage Level (single point)

NAS

DRM

DLP

ECM

- All user files are 1) encrypted, 2) shared by allowed users, 3) can not be leaked by ANYONE (even creators)
- Storage is only place security is processed (no need to install many SWs)
- All files are keyless to users/creators. Intentional file leak is protected
- Suitable in multi-shared work environment. Automobile, Semiconductor, Aero Space Design, large scale proposal team, ...
- · All Users use the storage as normal network storage

Traditional systems tries to protect from PC level: system conflict occurs

DRM

- Can not be shared among users
- •Can not be used in large scale works (Automobile,...)

DLP

- •File loss control only without encryption
- User level/Group level control is difficult
- Can not share files among users/groups

Must install/maintain to all PCs
No single point of management
Solution upgrade is difficult
ECM+DRM or ECM+DLP can not
Be applied together

ECM

- •Easy to manage, but difficult for users (can not use explore search)
- •CAN NOT work with DRM or DLP

3. Works with Samsung



3. Samsung Server Cloud Service

- Samsung Cloud Services (since 2013)
 - FAST MOUNT (NAS) Services
 - Web Storage (Object Storage) Services
 - Used by many Samsung Companies



- SoFS: Samsung Owned File System
 - InfiniStor OEM
 - To-be Samsung Standard Storage
 - Sold as Samsung Branded Storage
 - Scheduled for Q3, 2016

- Samsung EFSS (Enterprise File Share Service)
 - Samsung's Document Management System
 - InfiniStor as Backbone Storage
 - Using FASTMOUNT & WSS
 - Securage in progress

To be deployed in SAMSUNG Semiconductor in Jul.













벨드 7601 이 Windows는 정품이 아닙니다.

















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