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Organic Storage System

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Abstract

The organic storage system is a highly scalable, easy-to-use permanent storage built up of commodity disks, servers and switches. Storage capacity can be unlimitedly expand by simply adding storage nodes and user data can be preserve permanently by migrating among storage nodes. Also continuously evolving commodity IT components contribute its performance improvement and cost reduction.

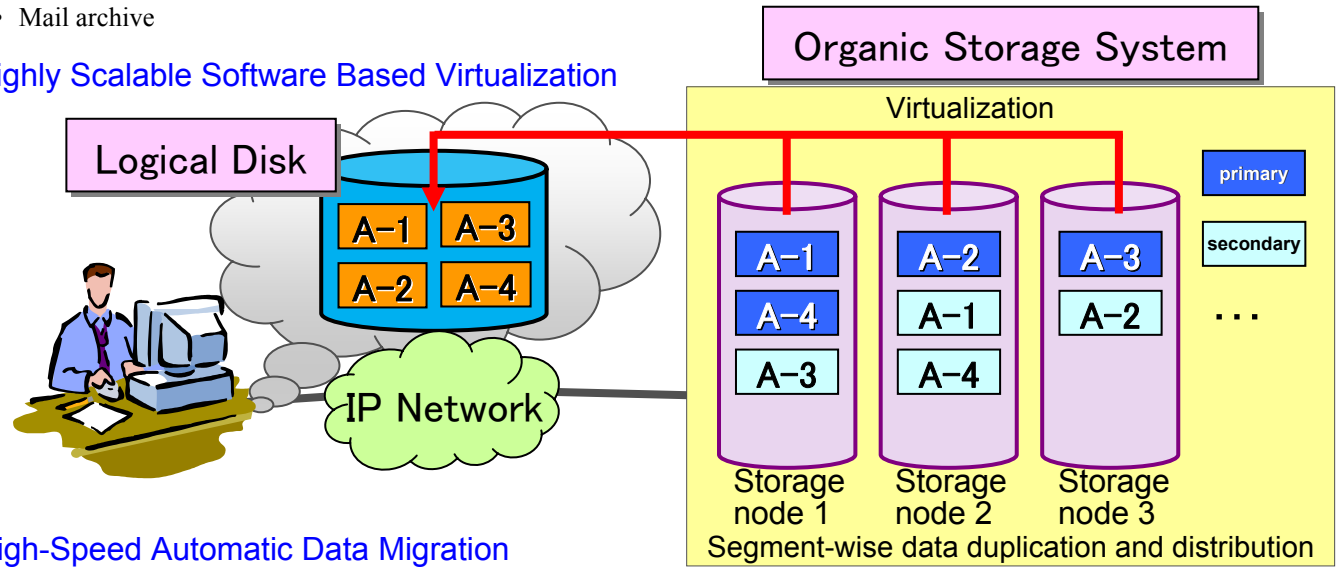
Technology

- **Highly scalable software based virtualization:** Software processes of the organic storage running in storage nodes communicate through IP-network and self-organize a highly scalable storage system. The organic storage system divides a logical disk into segments, duplicates them and stores them horizontally among storage nodes.
- **High-speed autonomic data migration:** Data migration mechanism of the organic storage can transfer data between storage nodes quickly owing to segment-wise data duplication and distribution. This mechanism can save data from hardware degradation and can balance storage usages of storage nodes.

Application Examples

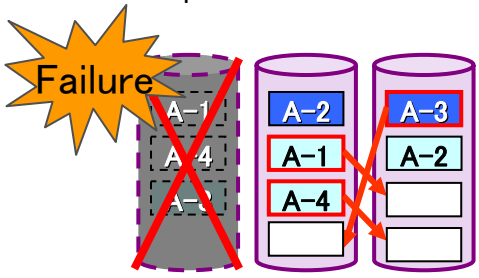
- Fileserver consolidation
- Remote data backup
- Mail archive

Highly Scalable Software Based Virtualization



High-Speed Automatic Data Migration

Data re-duplication in case of node failure



Data re-distribution in case of node addition