

Huawei Symantec Storage Products & Solutions



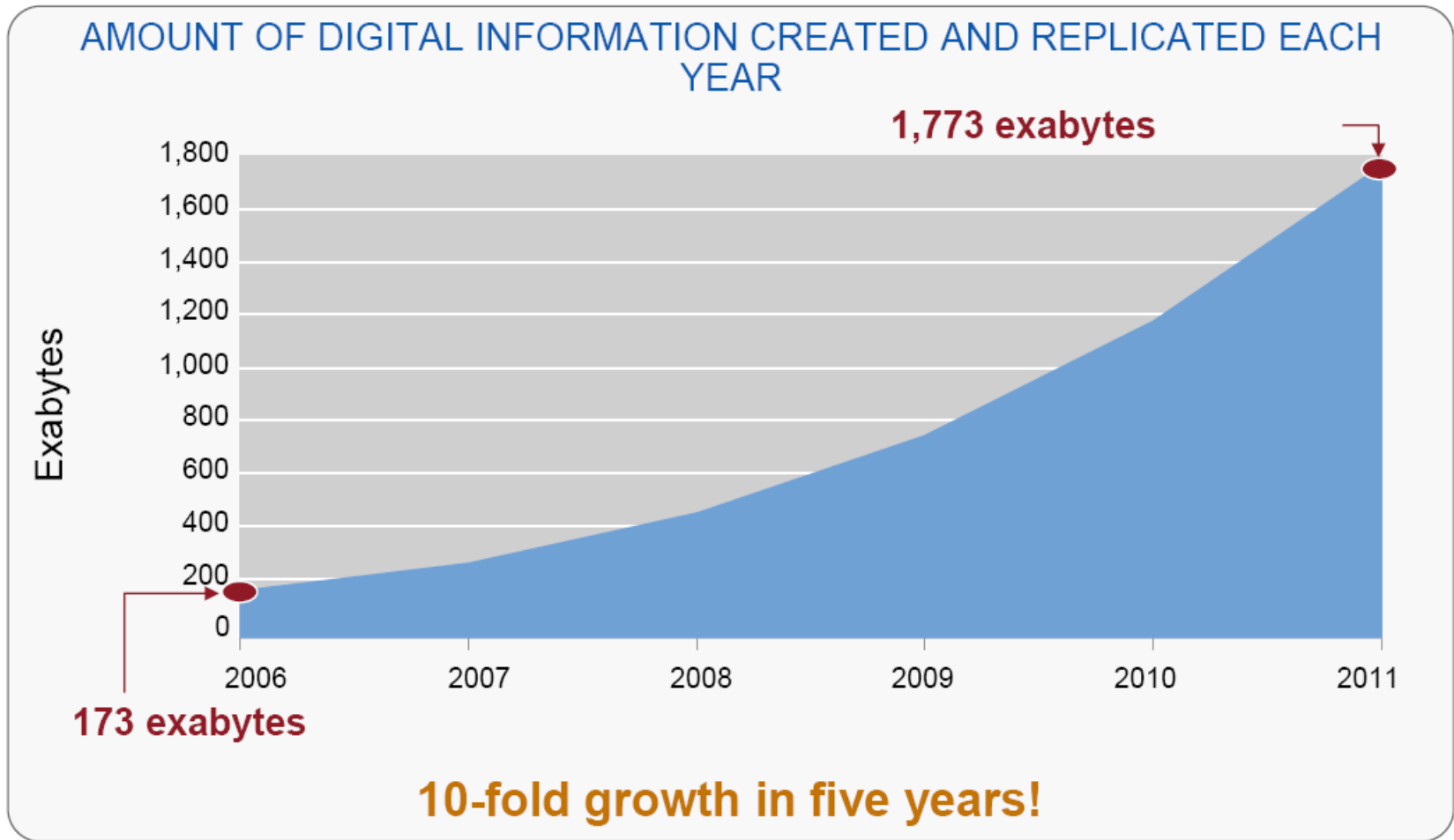
Huawei Symantec

Contents

- **Storage Overview**
- **HS Storage Solutions**
- **HS Storage Products**
- **Case Studies**

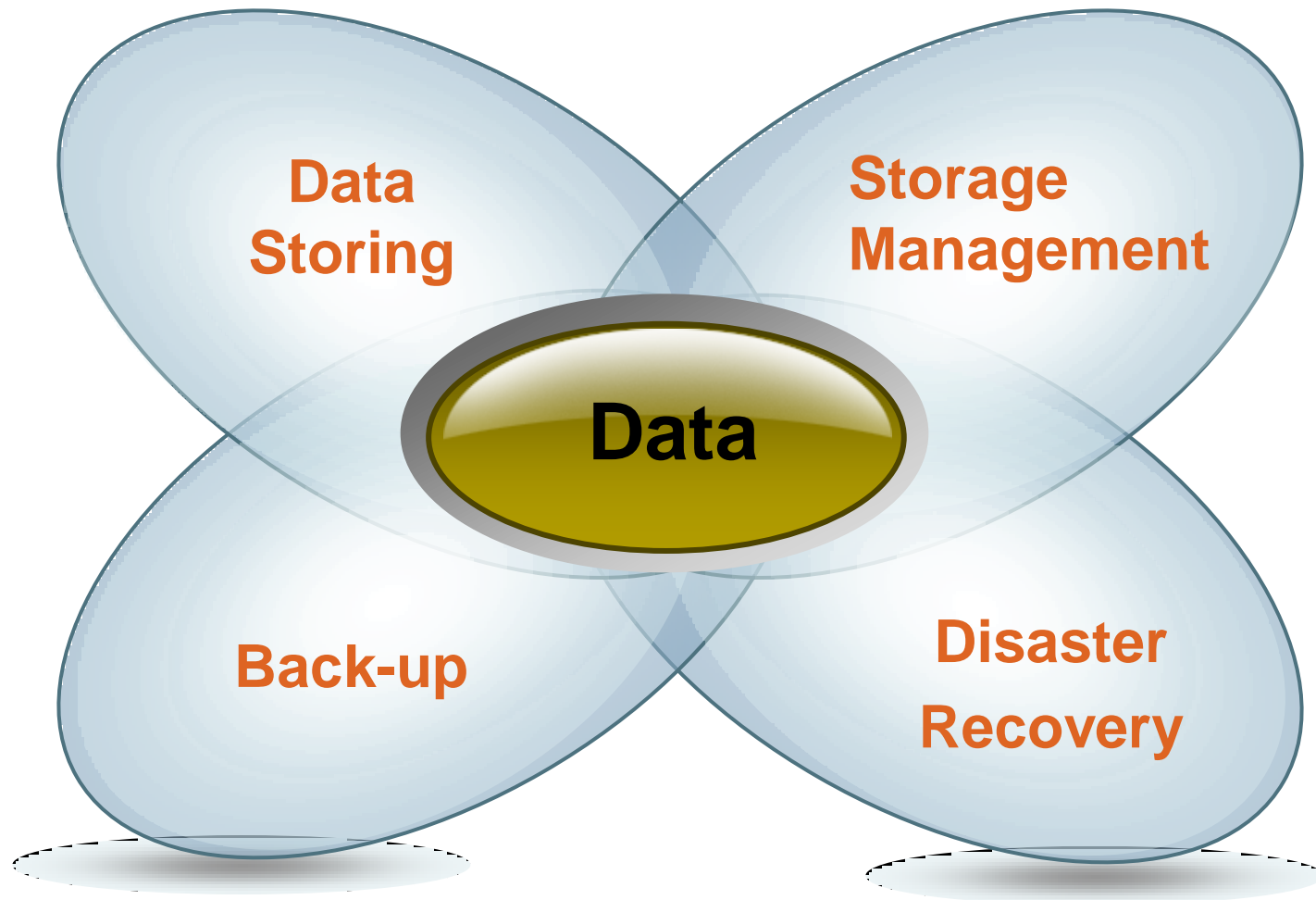


Why the Need for Storage?

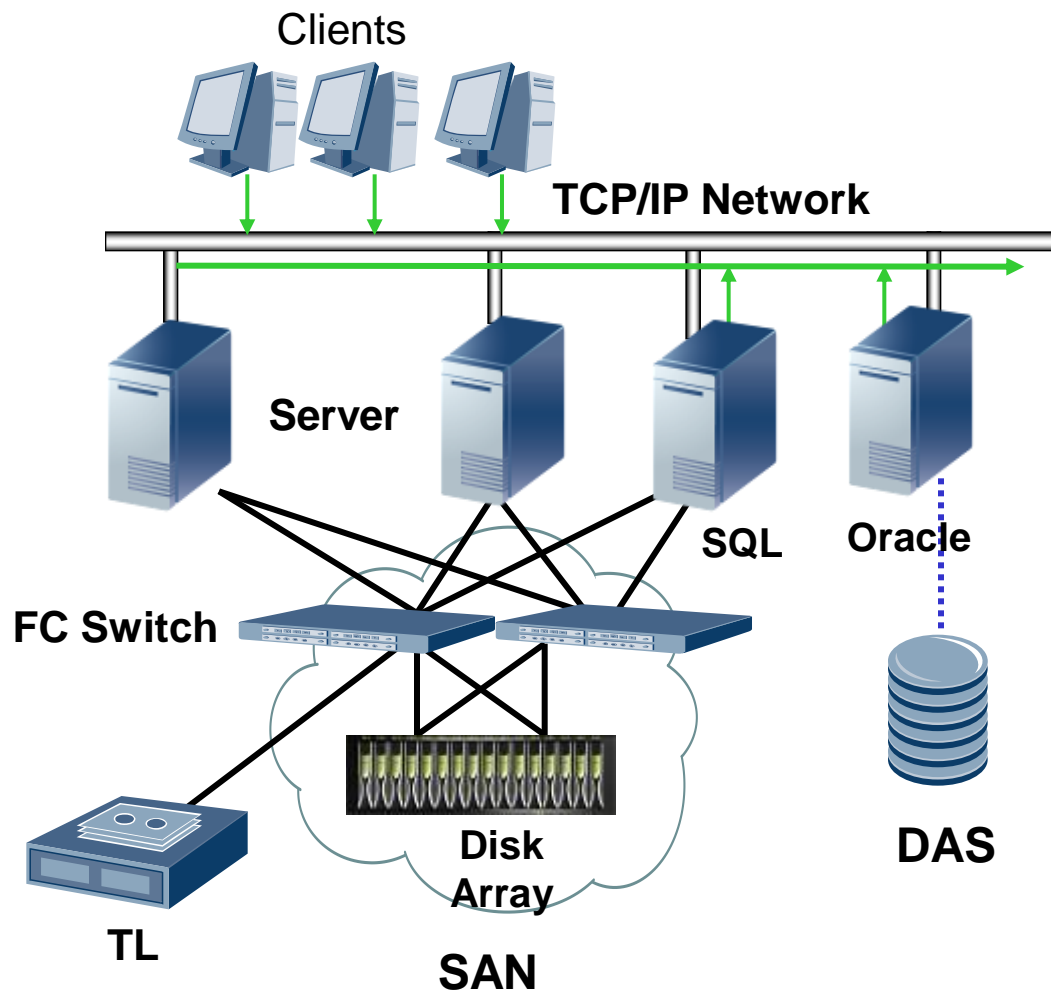


Source: IDC

What Can Storage Do?



Storage System



Storage system components:

•Disk Array

-DA for SAN/NAS/DAS

•Management Software or appliance

-Storage management
-Backup/archiving/DR

•Server

•Switch

-FC switch
-IP switch

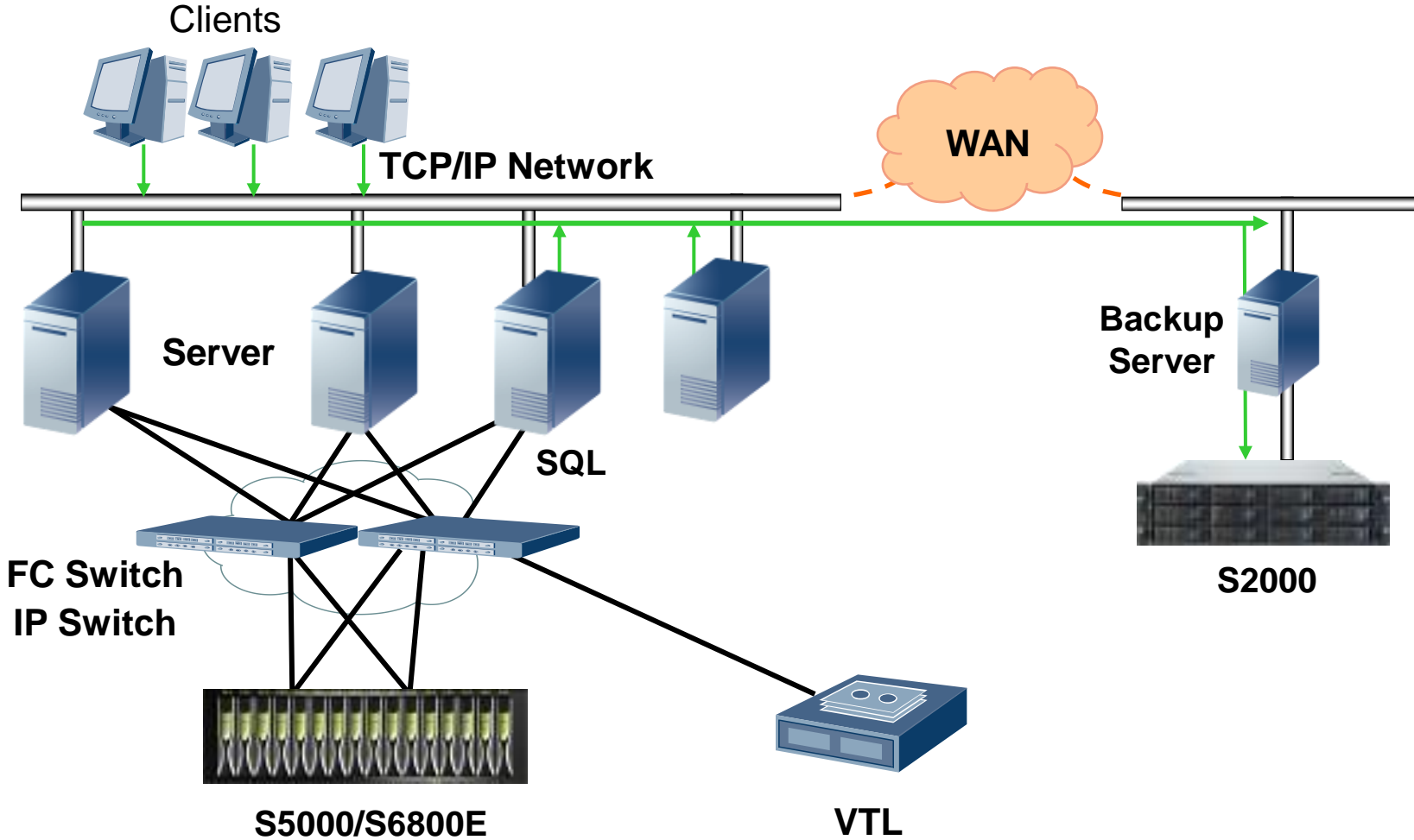
•Tape Library (TL) or VTL

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Data Storage Solution



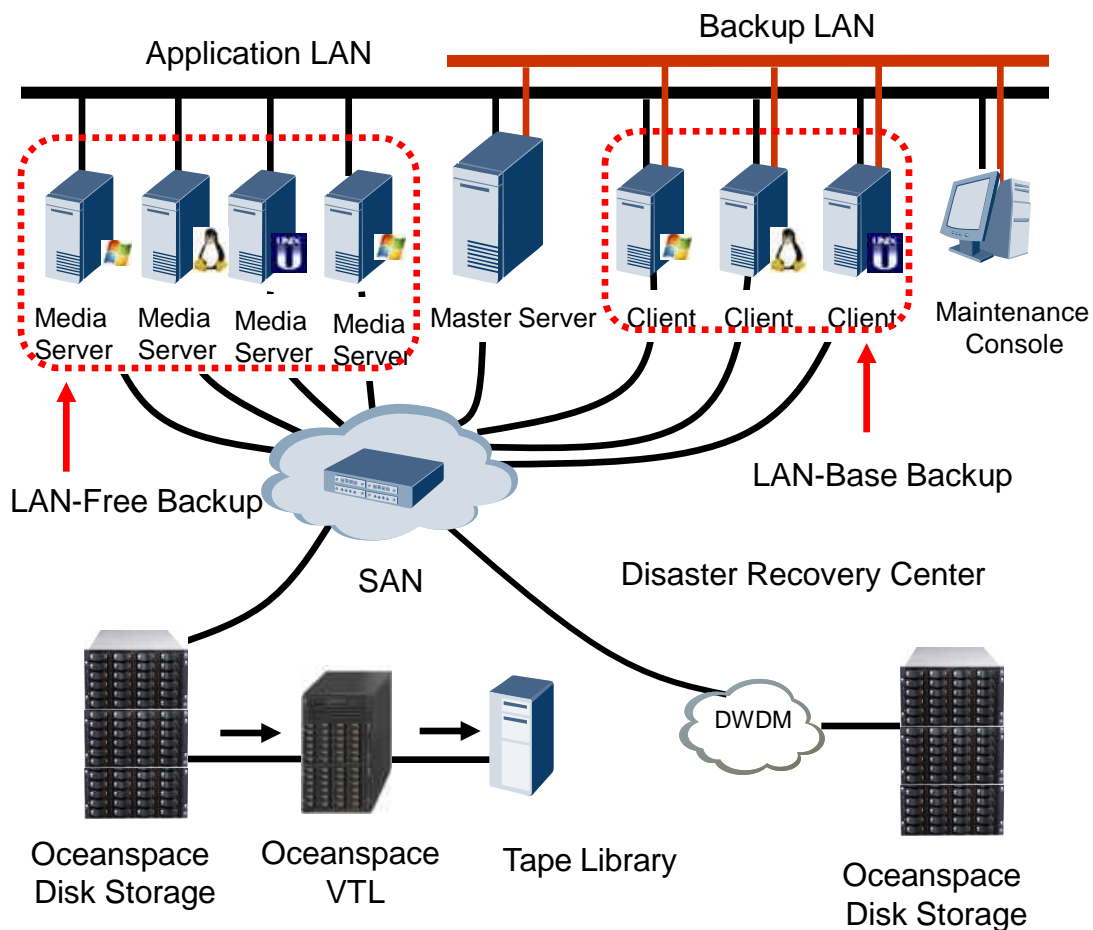
Data Backup & DR Solutions

Highlights

- Supports D2D2T or D2V2T data protection
- Offers both local and remote site backup solution

Benefits

- Centralized backup and recovery management requires fewer personnel and skilled resources
- Optimized data protection infrastructure helps increase efficiency and lower cost



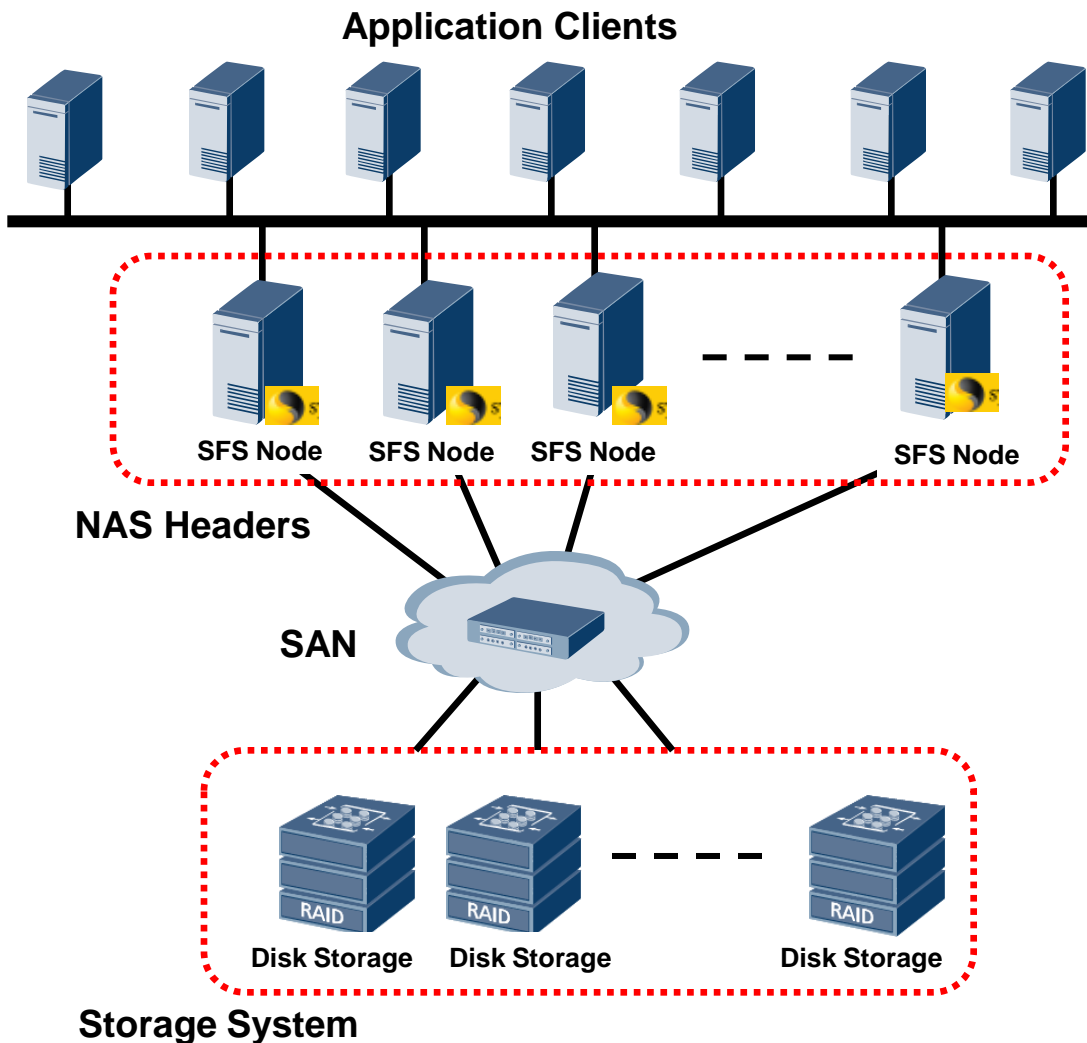
Clustered NAS Solution

Highlights

- Integrates Symantec SFS software and Oceanspace storage system
- Eliminates traditional NAS device bottleneck by adding the scalable NAS header on demand
- Breaks the limitation of storage capacity with the back-end SAN architecture

Benefits

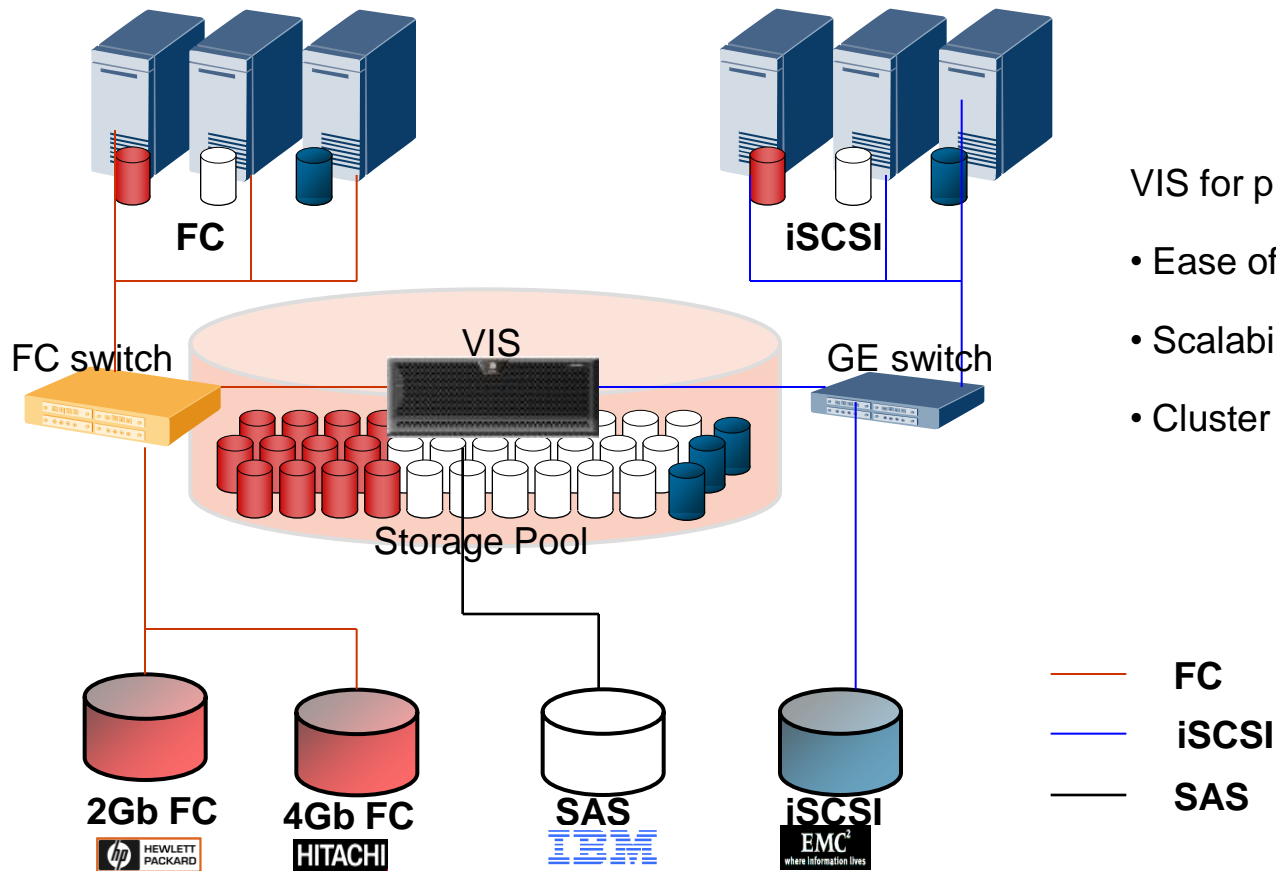
- Clustered NAS, Symantec SFS inside, supporting up to 16 nodes
- High performance: rated as first-class and best performance according to recent SPEC' test report



<http://www.spec.org/sfs2008/results/res2009q4/sfs2008-20090921-00135.html>

Storage Consolidation & Virtualization

- **VIS 6000** storage consolidation solution allows **use of different disk arrays from different vendors** resulting in simple and flexible extension of disk arrays.
- Supports **both FC SAN and IP SAN** environments.

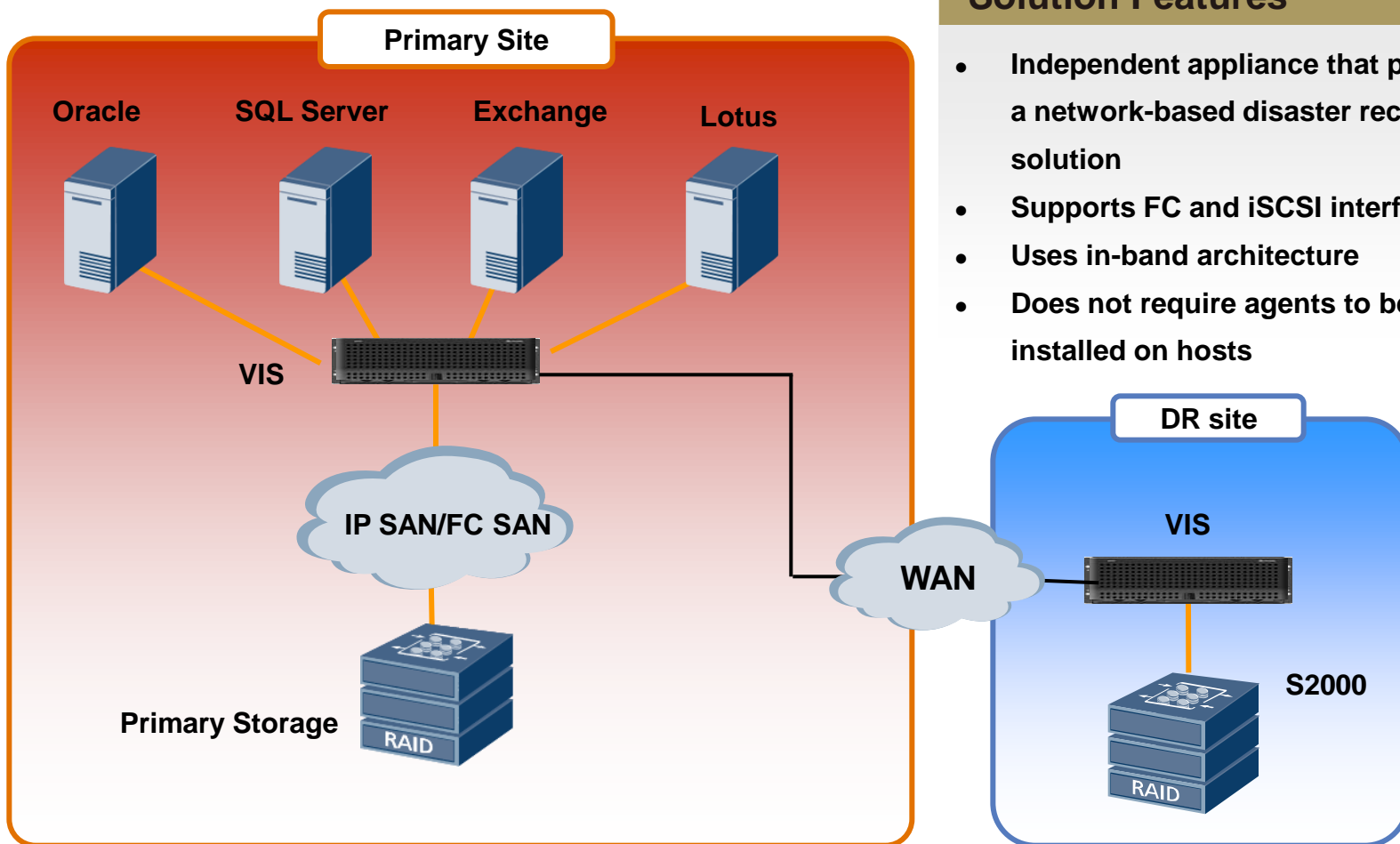


VIS for protocols translation offers:

- Ease of deployment
- Scalability
- Cluster support

Network-based DR Solution


VIS6000: Virtual Intelligent System



Solution Features

- Independent appliance that provides a network-based disaster recovery solution
- Supports FC and iSCSI interfaces
- Uses in-band architecture
- Does not require agents to be installed on hosts


iPACS Solution



Market positioning


PACS application in

- Department level
- Hospital level



System structure

- Integrates servers, switches, storage, management software
- PACS software can be pre-installed as required



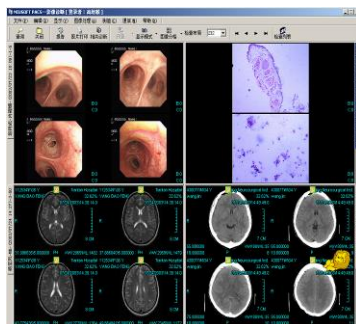
Product feature

- Unified planning and service-based storage optimization
- High cost efficiency
- Universal architecture
- High reliability

Integrated Picture Archiving and Communication System

iPACS-S

Applies to building of a PACS for hospital departments



iPACS-M/H

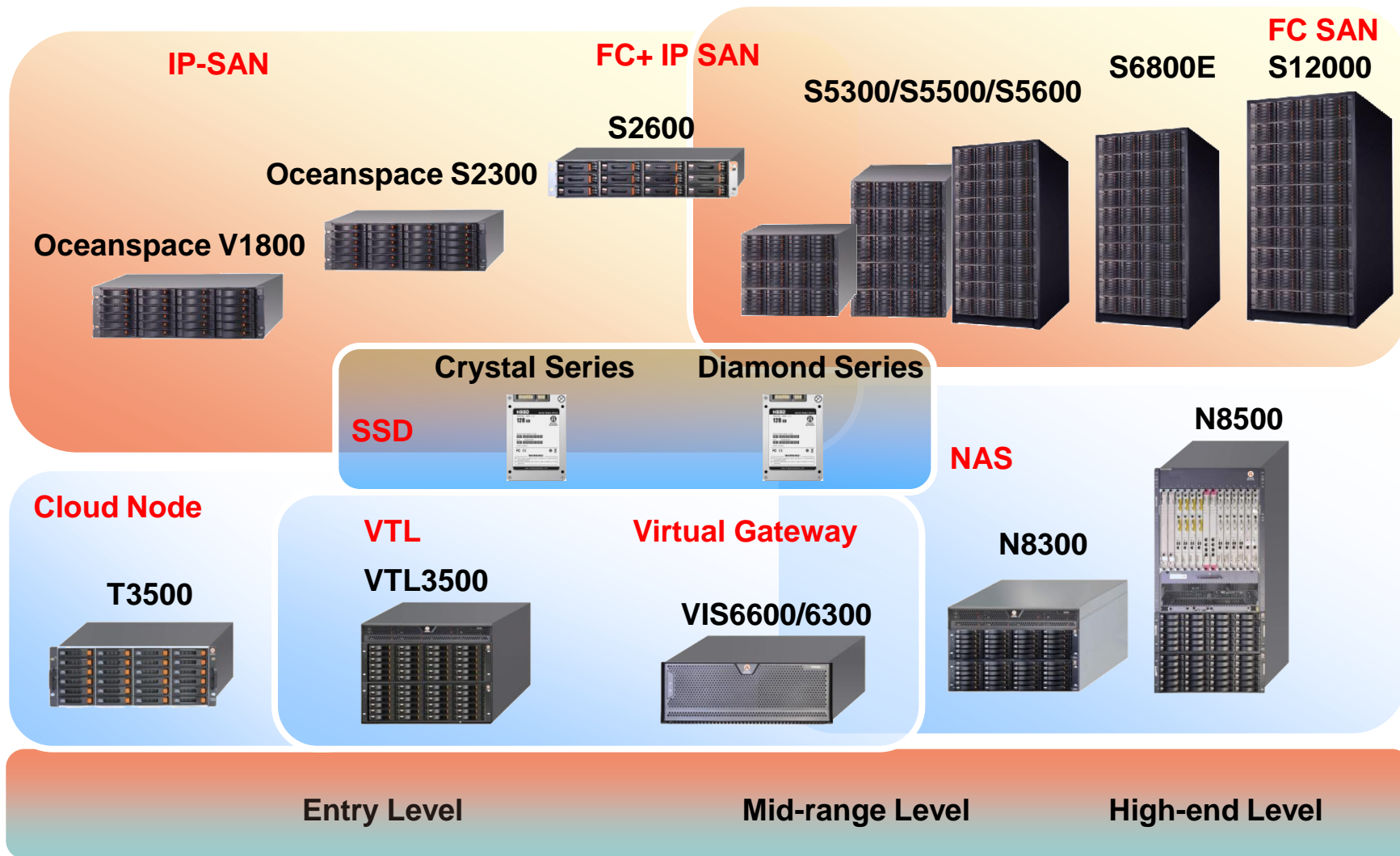
Applies to building of a PACS for hospitals

Contents

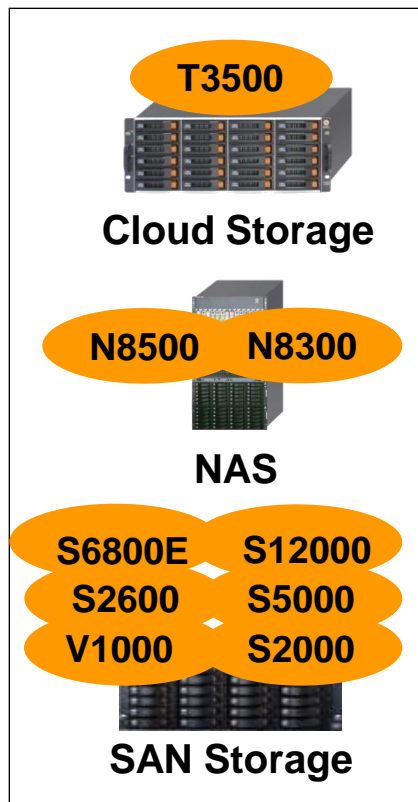
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Storage Products Portfolio



3 Steps of Storage

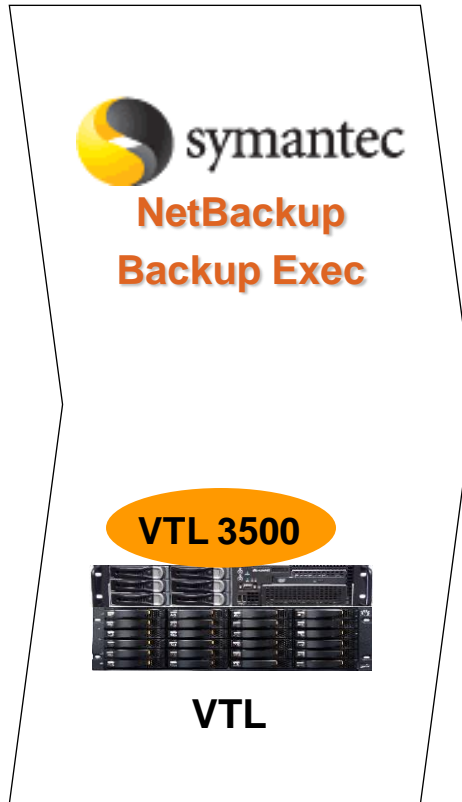


T3500
Cloud Storage

N8500 N8300
NAS

S6800E S12000
S2600 S5000
V1000 S2000
SAN Storage

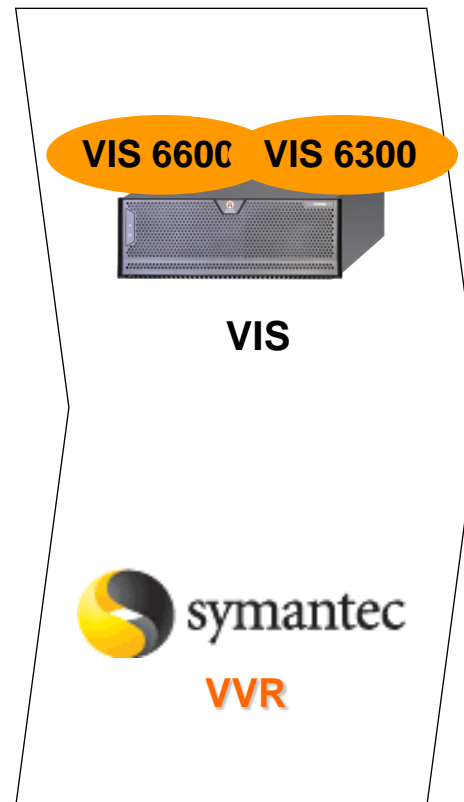
Storage



symantec
NetBackup
Backup Exec

VTL 3500
VTL

Backup



VIS 660C VIS 6300
VIS

symantec
VVR

Disaster Recovery

Oceanspace Series Disk Arrays

S5000 Series



S5500

- 8 FC + 4 iSCSI
- Up to 120 drives



S5600

- 8 FC + 4 iSCSI
- Up to 240 drives



S5300

- 4 FC + 4 iSCSI
- Up to 72 drives

S2000 Series



S2600 i/F/S/C

- 8 iSCSI / 4 SAS / 8 FC / 4 FC + 4 iSCSI
- Up to 96 drives



S2300

- 4 × 4Gbps FC / 8 × 1Gbps iSCSI
- Up to 96 drives

V1000 Series



V1800

- 8 × 1Gbps iSCSI
- Up to 96 drives

S6800E



S6800E

- 12 FC or 4 FC + 4 iSCSI
- Up to 480 drives

S12000



S12000

- 128 FC or 64 iSCSI
- Up to 2760 drives



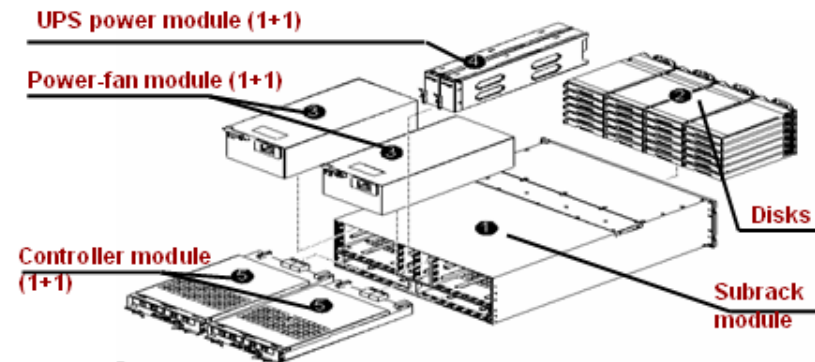
HSSD Series

Advantages of HS Disk Array

- High availability
 - Complete redundancy
 - Integrated UPS and data coffer
 - Intelligent cache pre-fetching
 - Intelligent speed adjustment of cooling system
 - Thermal cycling based on hydrodynamics
- Flexible interfaces
 - FC/IP/SAS
- Symantec SF inside
 - Storage management
 - Dynamic multi-pathing (DMP)
 - Dynamic storage tiering



Huawei Symantec



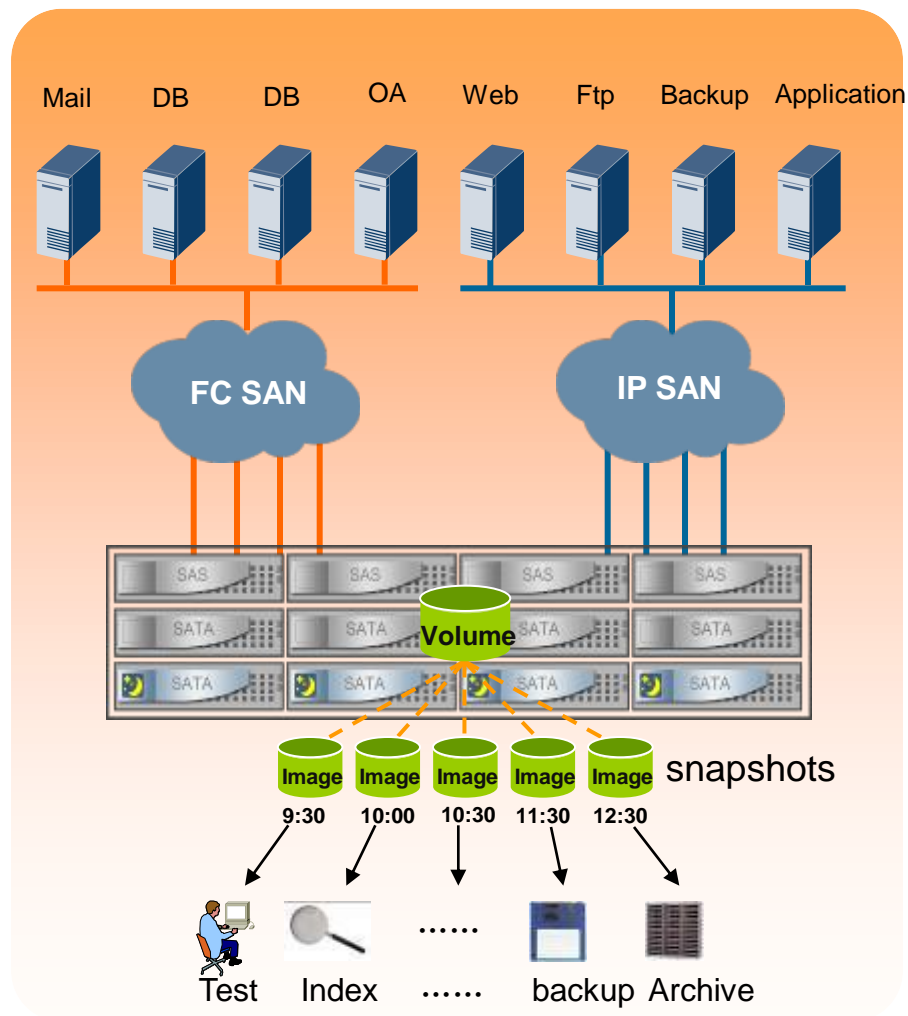
Oceanspace S2600 i/F/S/C

- Architecture

- 12 disk drives in a 2U chassis
- **8 host interfaces**
- Mixed SAS and SATA disk drive
- Up to 96 drives

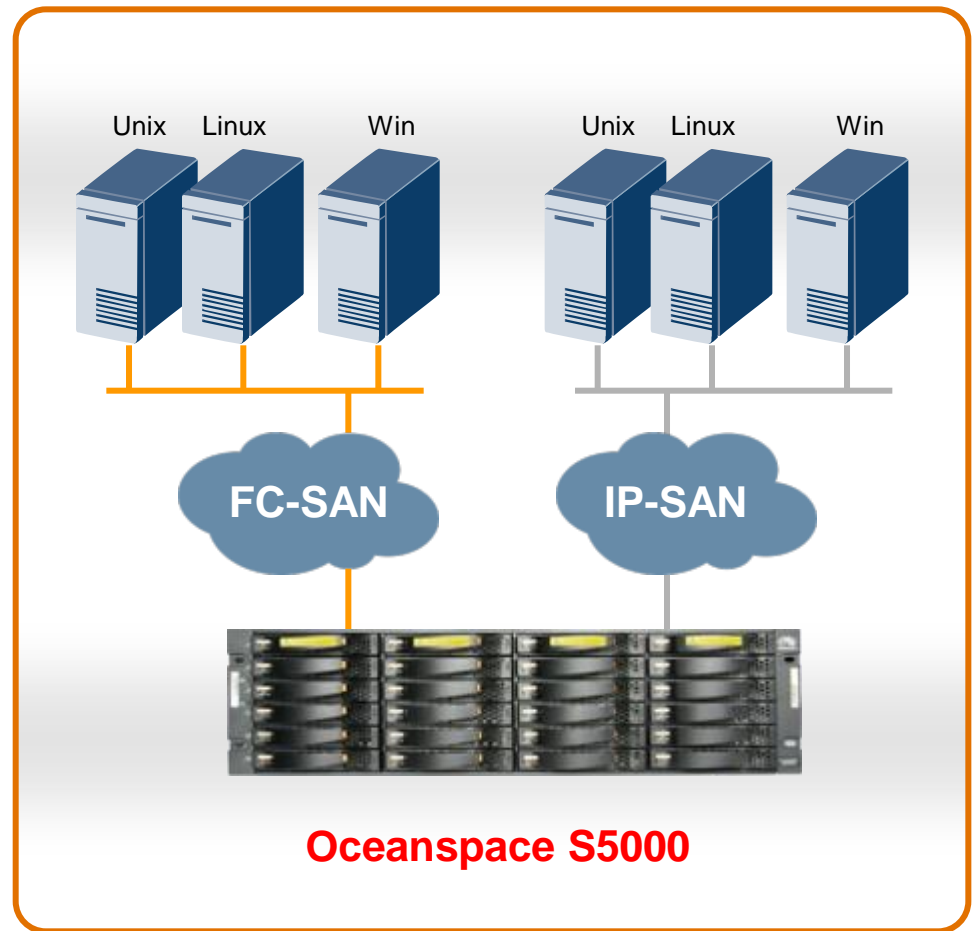
- Features

- Target entry-level to mid-range storage market
- Support FC and IP SAN using the same enclosure
- Five-minute deployment
- Design for lower power consumption
- Value added software features



Oceanspace S5300/5500/5600

- Flexible tiered storage
 - Support both FC and iSCSI host interface
- Abundant features
 - RAID 0,1,5,6,10,50
 - Dynamic LUN extension
 - Dynamic RAID change
 - Snapshot
 - Mirroring
- Scalability
 - Support up to 240 disk drives
 - Support SSD disk drives
 - Mixed FC and SATA solution



HSSD Products for HS DAs

- Specifications

- Consumer level (Crystal) and enterprise level (Diamond)
- MLC & SLC NAND flash technology
- Up to 1TB capacity
- 2.5"/3.5"
- SATA interface

- Features

- High performance
 - 10-30 fold faster (read speed)
 - Faster start-up
- Green
 - Lower power consumption
 - Lower heat production
 - Lower weight & size
 - No noise
- Endure extreme shock, high altitude, vibration
- Larger range of operating temperatures



Clustered NAS: Oceanspace N8000

- Specification

- Up to 7680/15360TB capacity
- Up to 16 cluster nodes
- FC/SAS/SATA drives support
- Multi-protocol support, CIFS,NFS,FCP and iSCSI
- RAID 0,1,5,6,10,50

- Features

- High performance
 - Up to 1.5 fold comparing with other high-end NAS
- High capacity: Up to 15360TB
- Powerful NAS features
 - Active-active cluster
 - Online storage capacity expansion
 - Dynamic Storage Tiering (DST)
 - Snapshot, mirroring, remote replication
 - Server-free backup support
 - Failure alert



Oceanspace N8500



Oceanspace N8300

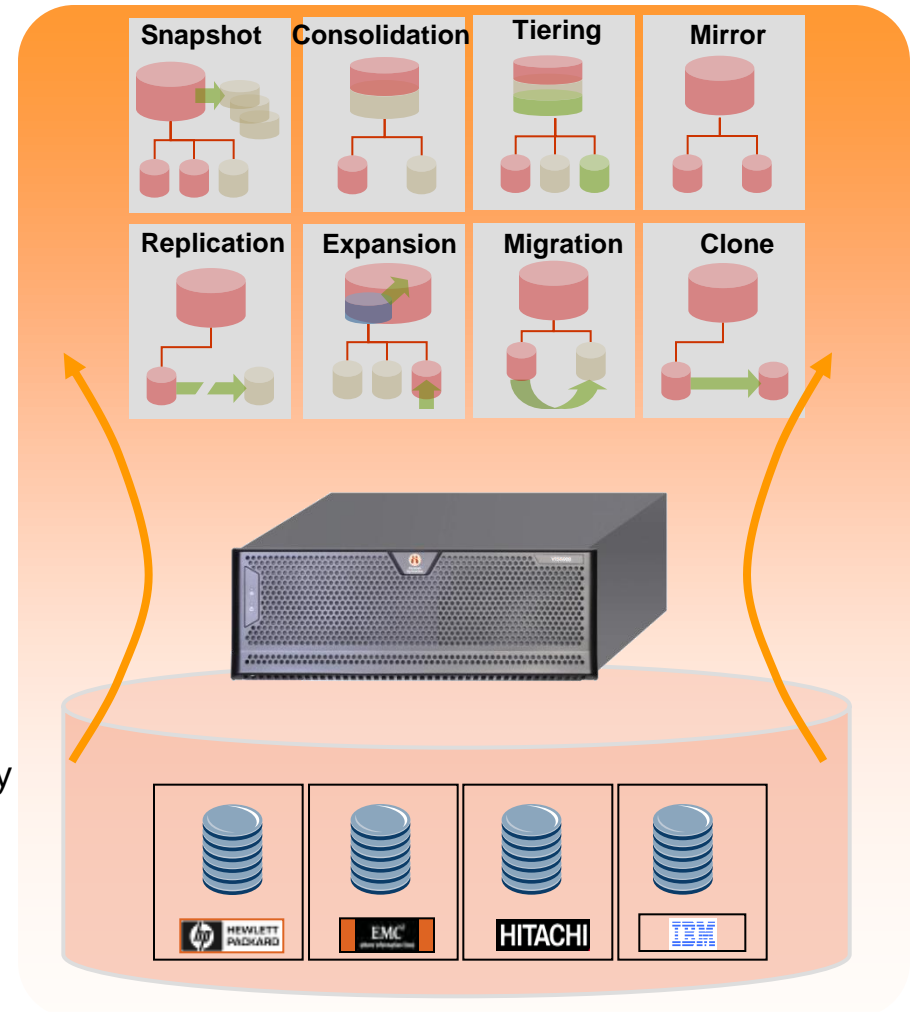
Virtualization: Oceanspace VIS6000

- Specifications

- Up to 8 cluster node
- Up to 32GB cache
- Up to 2048 LUNs support
- FC and IP environment supported

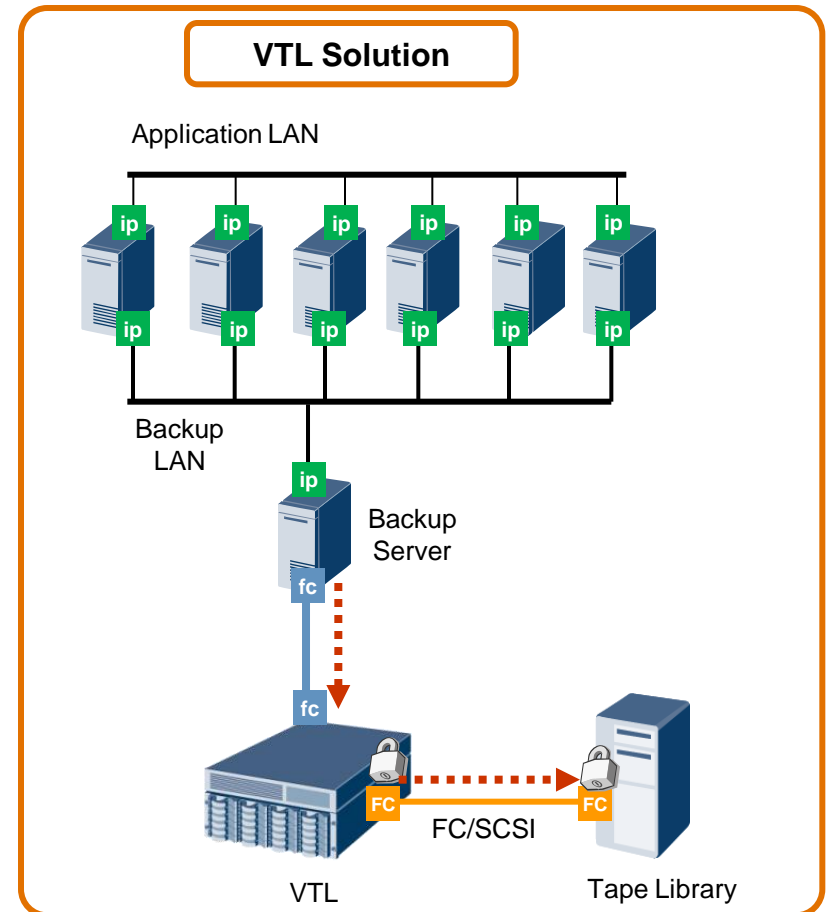
- Features & Applications

- **Storage consolidation**
 - Consolidate different storage systems from different vendors
- **Remote DR**
 - **Heterogeneous DR**
 - DR for Data center
- **Data migration**
 - Data migration service without any interruptions



VTL: Oceanspace VTL3500

- Specifications
 - Medium level VTL solution
 - Up to 24 drives
 - Support up to 1024 virtual tapes
 - Encryption supported
- Features
 - Various types of TL virtualization
 - HP/IBM/Quantum/StorageTek
 - Support data encryption and compression
 - Compatible with all types of mainstream tape autoloader/library
 - Compatible with mainstream Backup software



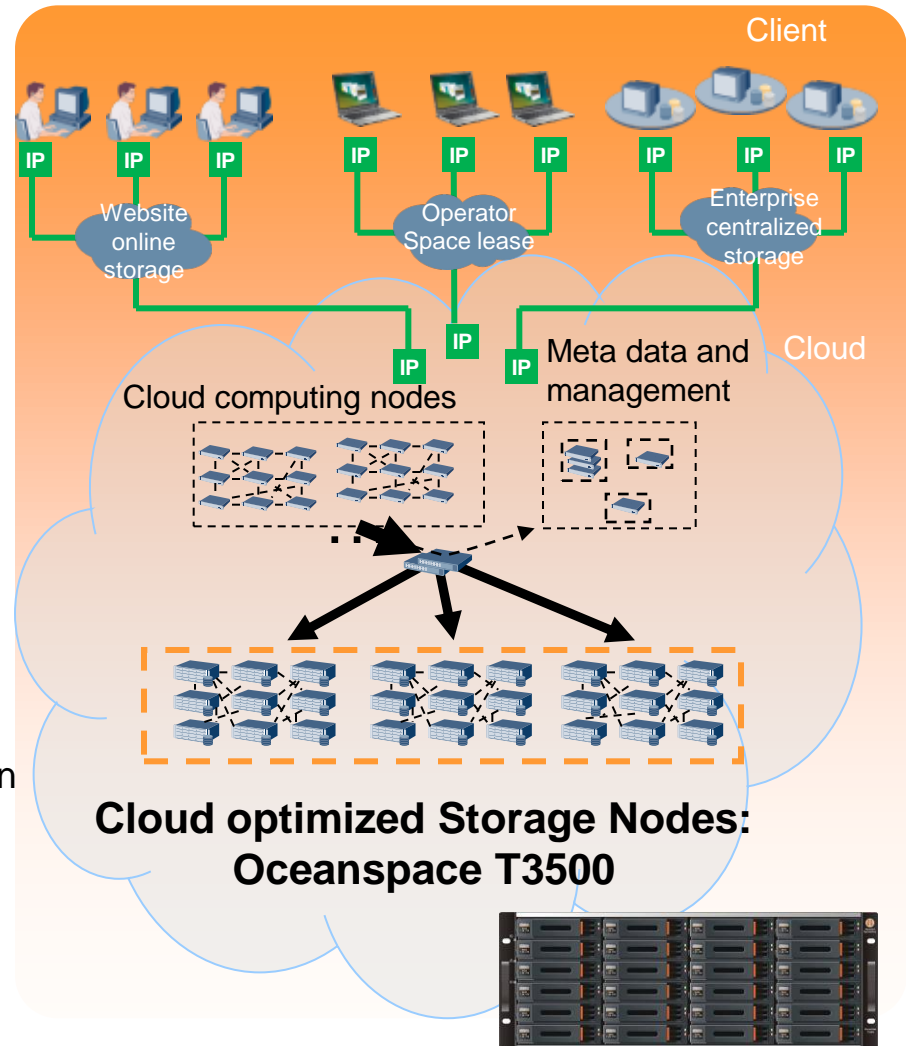
Cloud Storage Node: Oceanspace T3500

- Specifications

- Intel 5200/5400 series processors
- 24 drives in 4U chassis
- Up to 8 memory slots
- Raid 0,1,5,6,10
- Redundant fans, powers
- Support hot swapping

- Features

- High density
- Green
 - S3 standby mode
 - Hard drive hibernation
- Open
 - IPMI 2.0 supported for customization
- Cloud Storage
 - Huawei Symantec DFS
 - Third party DFS compatible



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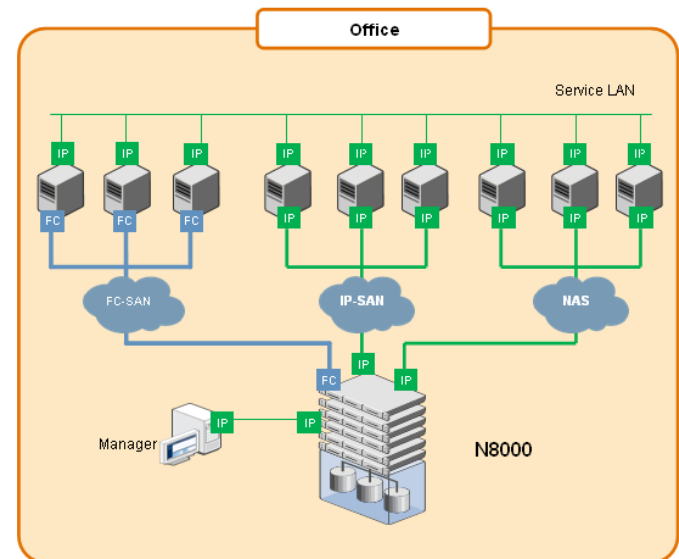
Main Operator Users



Customer Case Study

UK N8000 Clustered NAS Solution

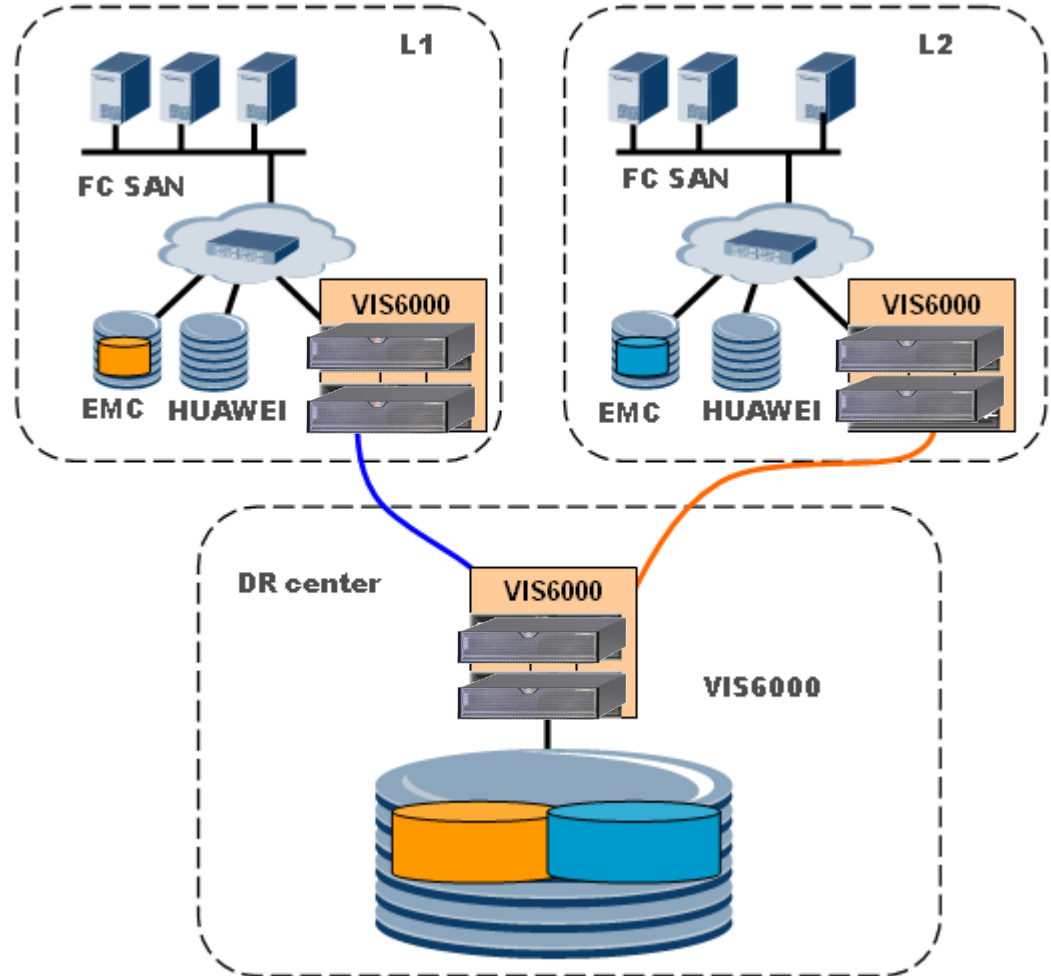
- Challenges & Requirements
 - Customer's IT system not caught up with application's fast development
 - Data explosion; existing storage resources insufficient to support customer's requirements
- Solution & Results
 - Huawei Symantec central mass data storage solution
 - Oceanspace N8000 provides high performance of mass data storage
 - Customer demand for data storage capacity satisfied
 - Superior performance, high availability data storage environment set up
 - Unified management tool, reduced complexity and cost savings



Customer Case Study

Bengal TMIB Storage Expanding & DR

- Challenges & Requirements
 - Using EMC CX3-80
 - Need to expand storage capacity
 - Need to consider DR
 - Both support IP & FC
- Solution & Results
 - Use Huawei DA to expand capacity
 - Use VIS 6000 for data backup & DR
 - Make use of the former EMC DA capacity



Thank you!



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