Introducing the New Hitachi Storage Virtualization Operating System and Hitachi Virtual Storage Platform G1000

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Learn about how Hitachi’s latest platform powers a Continuous Cloud Infrastructure built on new software that redefines the value IT can get from enterprise storage. In this discussion, we'll provide a high-level overview of how to use Hitachi Storage Virtualization Operating System to extend the value IT delivers to your business.

By attending this webcast, you’ll learn:
• How the Continuous Cloud Infrastructure aligns to the new challenges businesses and IT departments are facing today.
• How this platform enables information to be continuously available, with multiple locations actively using the same data at the same time.
• How Hitachi Storage Virtualization Operating System software can help IT move, seamlessly, from one generation of technology to the next.
The World Is Changing

Cloud

Mobility

Internet of Things

Explosion in the amount and complexity of data
Businesses are using Business-Defined IT for:

**Mobility**
Mobilize data and application to increase productivity

**Economics**
IT Economics reduces costs and optimizes business value

**Insight**
Access the right data at the right time to speed up insight
Which Requires A Better IT Experience

Continuous Cloud Infrastructure

ALWAYS

Available

Automated

Agile

Mobility

Economics

Insight
Answer Tomorrow’s Challenges Today

Eliminate Service Disruptions

Continuous Services

Available

Service Level Attainment

Policy and Template Driven

Automated

One Platform For All Workloads

Accelerated Deployment

Agile

ALWAYS
Continuous Cloud Infrastructure Foundation: Powered By Hitachi

Storage Virtualization Operating System

Flexibility Of Software-Defined, With Enterprise Proven Functionality

Common OS Across Hitachi Storage For The Future

Virtual Storage Platform G1000

Highest Performance And Most Available Unified Storage System In The Industry

>3X Performance Leap With Improved Efficiency
Continuous Cloud Infrastructure Foundation: Powered By Hitachi

Command Suite v8

Integrated Management Platform For Physical And Virtual Storage

Increased Application Awareness And Ease Of Use

Unified Compute Platform

One Platform For All Workloads

UCP Director Support for SVOS and VSP G1000, Server Profiles
Lay The Foundation For Software-Defined

Hitachi Storage Virtualization Operating System

Hitachi Virtual Storage Platform (VSP) G1000

Open Standards

Unified Management

Service Templates

UCP Director

Infrastructure Service Management

Data Protection

Future Storage Platforms
Hitachi Storage Virtualization Operating System

- An integrated software system that is the foundation for global storage virtualization
  - 6th gen of Hitachi’s enterprise storage operating system
    - Brings full enterprise feature set: tiering, replication, security, etc.
    - Includes Hitachi’s flash performance optimizations
  - Operating system for future core Hitachi storage solutions

- Ready for mission critical workloads
  - Global active device technology: active/active, clustered systems over 100KM
  - Delivers nondisruptive migrations and tech refresh
Hitachi Virtual Storage Platform G1000

- Industry leading performance:
  - >3M IOPS, >48GB/sec, >1.2M NFS Ops/sec

- Unmatched flexibility and scalability
  - Virtualization engine to 600TB of Flash or 2304 HDDs
  - Double the power
    - Block: from 2 to 16 Virtual Storage Directors (2X VSP)
    - File: Supports 2X Hitachi NAS clusters (8-Node)
  - Separate system controllers up to 100 meters

- More Efficient: >10% less power consumption than VSP

- Built-in encryption for all supported media types
One Platform for All Data

Starts small, grows with your needs, protects your investment

Add 2.5” Drive Tier
Add Hitachi Accelerated Flash
Add Processing
Add Connectivity
Virtualize External Storage

Cluster VSP G1000s*
Connect Hitachi Content Platform
Add 3.5” Drive Tier
Add Hitachi NAS
Add Second Controller

One Of Many Ways To Grow Virtual Storage Platform G1000

*Separately licensed feature available after initial release. Ask your HDS representative or partner for more information.
VSP G1000: Eases Data Center Planning

- Increase floor space efficiency
- Eliminate data center hotspots
- Flexibly scale performance and capacity

Traditional System Layout

Today: VSP G1000 Flexible Deployment

Separate Storage Controllers
5M, 30M, 100M Options

Coming Soon: Ultimate Deployment Flexibility
Separate Controller Racks And Disks Racks
Delivering A Better IT Experience Through Advanced Software

Virtual Storage Machine

Continuous Access

VM images

Virtualization Operating System

Data Abstraction

System Abstraction

Mobile Apps

Hitachi Content Platform Anywhere

Hitachi, Inspire the Next

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Achieve Continuous Operations

**AVAILBLE**

SVOS global active device functionality*

Customer requirements
- Nonstop data access without interruption
- Workload mobility across data centers

Hitachi advantages
- Simplification of high-availability operations
- Native architecture eliminates “appliance tax”
- No special server software required
- Simple management through consolidated view

*Separately licensed feature available after initial release. Ask your HDS representative or partner for more information.*
The Challenge Of Technology Refresh

Most Storage Platforms

Upgrade / Migration

Host Remediation

Migration Planning
Array Design and Build

Migration Cleanup

Change and Effort

Years
A Paradigm Shift In Mobility and Migration

Hitachi Virtual Storage Platform G1000
and
Hitachi Storage Virtualization Operating System

Years

Change and Effort

Normal Life
In-Place Upgrade
Nondisruptive Mobility
2X Normal Life

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Hitachi Innovation: Nondisruptive Migrations

Always Maintain the Relationships Between Your Applications and Their Data

Migrates Virtualized Storage Capacity and Identity

Maintains Data Protection During Migration (Hitachi Source and Target)

Reduces Migration Exposure

AVAILABLE
Move Data and Refresh Systems as Needed
Hitachi Command Suite v8

- Management of physical and virtual storage
  - Hitachi and 3rd party virtualized storage
  - Report on structured or unstructured data

- **New:** Supports new Storage Virtualization Operating System functions and G1000 HW

- **New:** Common REST API interface across Command Suite applications

- **New:** Application service level management for performance and capacity
UCP for VMware vSphere and Director 3.5

- **UCP Director 3.5**
  - Support for VSP G1000 and SVOS
  - Entry level UCP for VMware vSphere
  - Server profiles automate server provisioning, leverage resource pool abstraction and have user assigned names
  - Enhanced disaster recovery management: integration of snapshots on the replica disk with Hitachi Thin Image

- **New UCP validated solutions with VSP G1000 and SVOS**
  - UCP for Oracle Database 11gR2 RAC
  - UCP for VMware vSphere with Cisco UCS
Drive More Efficient IT

Reduce Costs Through Virtualization and Consolidation

- Up to 25% lower hardware CAPEX
- Up to 30% lower environmental expenses
- Up to 40% lower operating expenses

Reduce Application Infrastructure Costs With Converged Solutions

- Up to 60% lower infrastructure costs for UCP over Do-It-Yourself environments
Accelerate Your Private Cloud Progress

With Continuous Cloud Infrastructure

VIRTUALIZE
- 3 x IOPs

CONSOLIDATE
- Global Virtualization

AUTOMATE
- Template-Based Management

SELF-SERVE
- UCP Integrated Chargeback

TRANSFORM
- Hitachi Services Framework

PRIVATE CLOUD

HYBRID

PUBLIC
Continuous Cloud Infrastructure Foundation: Powered By Hitachi

Storage Virtualization Operating System

Virtual Storage Platform G1000

Command Suite v8

Unified Compute Platform and UCP Director 3.5

- Common Hitachi Storage OS
- Global Storage Virtualization
- Native Active/Active (2014)
- Leadership NDM Capability
- Full Enterprise Feature Set:
  - Replication
  - Automated Tiering
  - Virtualize HDS and 3rd Party Storage

- Leadership Performance
  - >3M IOPS, ~48GB/sec
  - 1.2M SPEC.org NFS Result
  - System Separation (100M)
  - 10% More Efficient (power)
  - ~600TB of Hitachi Flash
  - Unified: 8-node HNAS Cluster Support
  - Encryption Support

- Manage New SVOS Capabilities
  - Virtual Storage Machines
  - Global Active Devices
  - NDM Workflow (2014)
  - Improved Application Awareness And Provisioning Templates
  - Simplified and Streamlined GUI
  - Common REST API interface

- UCP Director 3.5
  - Server Profile Support
  - Enhanced DR Support
  - Support for SVOS/G1000
  - Entry-level UCP for VMware vSphere
  - New UCP with VSP G1000
  - VMware with Cisco UCS
  - Oracle 11gR2 RAC
Questions and Discussion
### Upcoming WebTechs

- **WebTechs**
  - *Virtualizing Critical Applications with VMware vSphere and Hitachi Virtual Storage Platform G1000*, May 7, 9am PT, 12pm ET
  - *Enhancing Continuous Operations and Data Integrity for Critical Microsoft Applications*, May 28, 9am PT, 12pm ET
  - *Integrated User Interface for Hitachi Command Suite, Hitachi Device Manager, and Hitachi Storage Navigator*, June 4, 9am PT, 12pm ET
  - *What’s New in Hitachi Command Suite v8*, June 4, 9am PT, 12pm ET

- **Check** [www.hds.com/webtech](http://www.hds.com/webtech) **for**
  - Links to the recording, the presentation, and Q&A (available next week).
  - Schedule and registration for upcoming WebTech sessions.
  - Questions will be posted in the HDS Community: [http://community.hds.com/groups/webtech](http://community.hds.com/groups/webtech).
Thank You

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