Build Converged Infrastructures With True Systems Management

COSTA HASAPOPOULOS, CTO OF THE AMERICAS
GREG KNIERIEMEN, TECHNOLOGY EVANGELIST
October 23, 2013
Converged infrastructures, such as Hitachi Unified Compute Platform, can help drive down operational IT costs if implemented and used properly. In this WebTech, we'll explore how converged infrastructures can be deployed flexibly with fast provisioning of IT resources for a wide variety of applications.

This WebTech will help you

- Understand how IT departments are implementing converged infrastructures to accelerate application deployment and operational efficiency.
- Understand the options and benefits of system-wide health monitoring, management, and performance tuning.
- Understand how platform flexibility (VMware, Microsoft®, and OpenStack) can provide long-term strategic benefits for IT planning.
HITACHI DATA SYSTEMS VISION
KEY PLATFORM OF THE CLOUD INFRASTRUCTURE

- BUSINESS INTELLIGENCE
- BIG DATA TODAY
- ANALYTICS
- INTEGRATION

- SEARCH, DISCOVER, AND INTEGRATE INDEPENDENT OF APPLICATIONS
- ON-DEMAND CONTENT
- ARCHIVING AS A SERVICE

- VIRTUALIZATION AND MOBILITY
- INTEGRATED MANAGEMENT
- DATA CENTER CONVERGENCE
- INFRASTRUCTURE ON DEMAND

SINGLE VIRTUALIZATION PLATFORM FOR INFRASTRUCTURE, CONTENT, AND INFORMATION
Watch how Hitachi Unified Compute Platform (UCP) Fits Into the VMware vision of the Software-Defined Data Center

Click on Image Below to View Video

Unified computing
Hitachi Data Systems and VMware together can move your business FORWARD.

vmware  HITACHI

vmware  HITACHI DATA SYSTEMS
“We hear what you’re saying”

“An infrastructure cloud looks promising but there are many challenges for us”

Business

“I need IT to move at my speed with template/SLA-based resource and service procurement”

IT

“In IT, we need more flexible server and storage pools with automation and orchestration to deliver first-rate services”

DBA

“To maintain our databases, I must have access to on-demand infrastructure to meet today’s dynamic data needs”

Need for Fast Deployment

Application Complexity

Maintaining SLAs

Automating Operations

Utilizing Assets More Efficiently
“The use of converged systems as a faster and cheaper alternative to traditional procurement and delivery models will continue to be one of the most important developments in the evolution of IT infrastructure market”


Allocation of admin time in a week

- 22% in pre-deployment, change control, and supplier meetings
- 19% in troubleshooting and remediation
- 17% with user account admin
- 16% in configuration/provisioning and updating

IDC Survey of Converged Systems, July 2012

40% of larger enterprises are planning to deploy some manner of converged system in the short to medium term
UNIFIED COMPUTE PLATFORM IS ABOUT 2 THINGS

**While Driving Down Capital and Operating Expenses**

**Time to production**
How many meetings does it take with how many different organizations?

**Operational efficiencies**
How many handoffs does it take to get simple things done?

We enable the “easy button” via our management Infrastructure
Do it yourself or bring in Hitachi Data Systems Services

Transform into a service-defined IT organization

Increase business agility with on-demand consumption of infrastructure

More Cost Effective
More Efficient
More Responsive
More Flexible

CONSOLIDATE
VIRTUALIZE
AUTOMATE
SELF-SERVE
PRIVATE CLOUD
HYBRID
PUBLIC

TRANSFORM
Hitachi Services Framework
Enabling Evolution to Private Cloud
One Platform for All Workloads
Accelerated Time to Market
Excellent Operational Efficiencies
Compelling Economics
WE HAVE SOLUTIONS TODAY TO SHOW YOU THE WAY

Increase operational efficiency
Accelerate time to value
Increase business agility

Hitachi Services Framework
“IT organizations spend 23.3% of staff time and resources on this type of pre-system deployment”
<table>
<thead>
<tr>
<th><strong>Customer Integrates</strong></th>
<th><strong>Multi-Vendor</strong></th>
<th><strong>Prolonged Deployment</strong></th>
<th><strong>Multiple Points of Management</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>virtual machines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bare metal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>server management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>network management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>storage management</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Turnkey Solution with Single-Pane-of-Glass Management

- Complete Solution
- 100% Supported by Hitachi Data Systems
- Deploy in Days, Not Weeks
- Integrated Management
- Provision in Hours, Not Days

Full Parity Across GUI/CLI/RESTful API

Enhanced vCenter MGMT framework

Other System Management “applications”
LOADING DOCK TO PROVISIONING

Ready in HOURS, not DAYS!

Inventory
Provision
Operate
Monitor
Protect

Management and Orchestration
IP Network
FC Network
Compute
Storage

Power
Your Apps

IP Networking

Bare Metal

vmware

Windows Server 2012

redhat

ORACLE

Microsoft System Center

Microsoft SQL Server 2012

SharePoint

Exchange

CITRIX

XenDesktop
UNIFIED COMPUTE PLATFORM
THE FOUNDATION FOR THE PRIVATE INFRASTRUCTURE CLOUD

Managed as a SYSTEM

Inventory  Provision  Operate  Monitor  Protect
UCP – FLEXIBILITY IN HARDWARE CHOICES AND RIGHT-SIZED FOR YOUR ENVIRONMENT

COMPUTE

- CORES, MEMORY, AND SPEED

STORAGE

- FLASH
- SAS
- NL SAS
- VIRTUALIZED

- SCALE
- RESILIENCE
- PERFORMANCE
- FUNCTIONALITY
MORE AUTOMATION DRIVES LOWER OPERATIONAL COST

Vmware vCenter-integrated

End-to-end infrastructure view

Fast deployment of vSphere host images

Easy provisioning of storage and network from within vCenter

Restful API enables integration with existing management SW

Support for bare metal

New in v3.0
UCP IS A TURNKEY SOLUTION

Preconfigured

- CB 500 server building blocks
  - Each chassis supports ~1k VMs
  - Maximum configuration is 16 blocks ~8k VMs
- Storage virtualization
  - VSP* and HUS VM repurpose existing storage investments
  - HUS 150 is great entry storage
- Integrated Hitachi Command Suite
  - Hitachi Compute Systems Manager (HCSM)
  - Hitachi Device Manager (HDvM)
- UCP Director eliminates complexity
  - vCenter-integrated infrastructure management
  - Public REST API and PowerShell CLI for all UCP software features

*VSP = Hitachi Virtual Storage Platform
MANAGEMENT STRATEGY AND VISION
A LONGER-TERM LOOK

- Multitenancy
- Self-service
- Federation
- Multi-platform orchestration

Turnkey Solution

Element Management

HCS

HCSM

HDvM

Network Manager

Server

Storage

Network

UCP Director

Platform Manager

Bare Metal

Unified Service Orchestration

Multitenancy

Self-service

Federation

Multi-platform orchestration
Leverage HDS Pre-Validated Solutions

A Reference Architecture

VSP / HUS VM / HUS

Your Infrastructure – HDS Storage

A Preconfigured Appliance
UCP Platform

Unified Compute Platform

Compute Platform

VSP / HUS VM / HUS

UCP SW MGMT.

HDS Infrastructure – Configured Application Personality
APPLICATION-OPTIMIZED PROFILES

Leverage HDS Pre-Validated Solutions

- Pre-validated and tested architecture profiles
- Optimized for Hitachi hardware
- Profiles can be deployed in VMs and/or via native bare-metal servers
- Mixed-workload friendly!

Pre-validated and tested architecture profiles

Optimized for Hitachi hardware

Profiles can be deployed in VMs and/or via native bare-metal servers

Mixed-workload friendly!
SIMPLIFY TRANSITION TO PRIVATE CLOUD

- Scale server, network, and storage on demand
- Deploy in < 5 days; also bolt on to existing storage
- One source for all your support, including VMware vSphere
- Automate IT operations with best-in-class orchestration
- Run virtualized or non-virtualized (bare metal) applications on 1 platform
- Full data protection and DR
UCP – 1 Platform for All Workloads!

High resilience, scale, performance, and automation for higher ROI

Virtualized

Business Processing (Transactions)

Decision Support (Analytics)

End-User Computing

Non-Virtualized

Messaging and Collaboration
Single Contact for All Support

- Install Services
- Professional Services
- Support Calls
- “Phone Home”
- Repair Services

HITACHI END-TO-END SUPPORT

vmware

BROCADE

UCP

HITACHI

Inspire the Next

CISCO
Customer Reference – SAP Outsourcer

“Many of our customers will run their entire business operations on SAP. We’re here to ensure that these operations get up and running quickly and continue to run efficiently 24/7. UCP assures us superb reliability and rapid provisioning capabilities we’ve not seen before in a single solution”

Laurie du Boullay
VP Operations, oXya

Addressed challenges and provided fast time to value

- Preconfigured system for rapid deployment
- Unified management
- Rapid provisioning of virtual environments
- Ability to scale to meet customer needs
- Easily managed by C-level technician
- Monitoring of end-to-end infrastructure

Hitachi offered a turnkey solution instead of a collection of hardware and software
UCP – MAXIMIZE UTILIZATION WHILE MINIMIZING RISK AND EXPOSURE

AUTOMATION AND INSTRUMENTATION OF THE ENTIRE STACK FOR ON-DEMAND SCALE

UCP PRO Orchestration Software Enables Greater Efficiency

ON-DEMAND SERVERS
With Greater VM Density

ON DEMAND STORAGE
With Greater Pool Utilization

Utilization

RISK, EXPOSURE

CAPEX, OPEX

Get 20% - 30% Higher Utilization on Clusters and Storage Pools
It’s time to get more from your converged stacks.
UNIFIED COMPUTE PLATFORM (UCP) IS ABOUT 2 THINGS

While Driving Down Capital and Operating Expenses

Time to Production

Operational Efficiencies

We enable the “easy button” via our Management Infrastructure
QUESTIONS AND DISCUSSION
UPCOMING WEBTECHS

- **WebTechs**
  - Overview of Hitachi Dynamic Tiering (HDT), Part 1, November 6, 9 a.m. PT, noon ET
  - Hitachi Dynamic Tiering: An In-Depth Look at Managing HDT and Best Practices, Part 2, November 13, 9 a.m. PT, noon ET
  - Best Practices for Virtualizing Exchange for Microsoft Private Cloud, December 4, 9 a.m. PT, noon 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