Simplify Operation and Monitoring of Converged Infrastructure Elements

Managing a cloud infrastructure efficiently and cost-effectively, while providing deep visibility into the data center ecosystem is no simple task. You must monitor performance fluctuations, virtualization workloads and overall system health. You must also address provisioning, data protection and access control requirements. Meeting these challenges calls for a management solution uniquely designed and optimized for converged cloud environments.

Hitachi Unified Compute Platform Director: A More Efficient Way to Automate Cloud Infrastructure

Enterprises are reaping the enormous benefits of converged infrastructures through Hitachi Unified Compute Platform (UCP). These benefits include improvements in organizational agility, predictable reliability, and delivery of IT resources that match business requirements and subscription-based consumption. IT decision-makers are increasingly choosing Hitachi UCP to accelerate the value of their data center infrastructure. However, of the 4 primary data center components, which include servers, network, storage and management, it is management automation and orchestration that provides visibility and control over the other 3 components. Fulfilling the high demands of a highly converged infrastructure requires the addition of an intelligent, single-point-of-management and -orchestration tool designed for the task.
Achieving the most predictable, reliable and repeatable Hitachi UCP performance and fastest time to value takes more than just adding point-tool solutions and custom scripting. Visualizing infrastructure element status, providing efficient provisioning and protecting data demands an innovative, centralized management solution. It must tightly integrate with the virtualization hypervisor, address monitoring challenges of a complex infrastructure, improve IT efficiency, deliver availability, and scale as business needs change. Hitachi management solutions address the various challenges of cloud infrastructure environments by enabling IT to:

- Inventory virtual and physical components.
- Provision hosts, storage and networks, both bare-metal and virtualized.
- Operate on single or multiple Hitachi UCPs.
- Monitor the health of all elements and sub-elements, and compare historical trends.
- Protect data through automated error-free replication and disaster recovery automation.

Leveraging decades of expertise in creating high-performance infrastructure solutions, Hitachi delivers an end-to-end management tool. This tool is optimized to meet the needs of virtualized environments by providing a single software-defined view of the data center. The Hitachi management solution is the engine that accelerates your path to realizing the full value from your virtualization investment. You gain a centralized management resource that simplifies monitoring, provisioning and protection, while meeting critical IT efficiency and performance objectives.

Converged and Cloud Infrastructures Demand Unique Management Capabilities

The key to convergence is automation and orchestration. Managing a cloud ecosystem with point tools and improvised scripting results in inefficiencies and higher expenses, defeating a major converged data center value proposition. As data center workloads fluctuate and business needs change, IT must monitor the throughput of each infrastructure element and compare performance results more frequently, thus creating efficiency issues. IT must quickly provision hosts, storage and network resources. They must also have automated disaster recovery and fast replication in place to move secondary data copies to off-site recovery locations. And to help ensure data security, administrators must set user roles and privileges for managing access. Each of these features is critical for meeting stringent service level agreement (SLA) and availability goals.

Realizing the most value from a converged data center infrastructure calls for an integrated, high-performance management solution. The solution must provide full visibility of all elements and subelements, including server, storage and network.

Hitachi Data Systems Delivers the Optimal Management Solution for VMware

You need a way to realize the most value from your converged and cloud infrastructure investments. Hitachi presents Hitachi Unified Compute Platform Director, a powerful single point of management tool offering end-to-end visibility to the entire converged virtualization infrastructure. UCP Director enables management of UCP, providing a unified view of resources from a single pane of glass.

UCP Director delivers unmatched visibility and management capability so you can align IT with business processes using familiar tools. UCP Director monitors all the elements of UCP under a single view and provides an overall health status of all solution elements. It minimizes system downtime by directing proactive maintenance and provides an early indication of impending device failures. This innovative approach to monitoring further reduces the complexity and maintenance challenges associated with disjointed and inefficient management of underlying infrastructures, saving time and money.

Simplify Inventory and Provisioning

Gain a single, centralized point of administration and comprehensive management.

- All UCP hardware and software elements are exposed as objects.
- Gain end-to-end visibility to the entire converged infrastructure.
- Simplify provisioning of hosts, storage and networks through 1-step deployment.

Hitachi Unified Compute Platform Director enables application users to inventory, provision, operate and monitor all converged infrastructure elements and subelements with ease and simplicity.
Innovation is the engine of change, and information is its fuel. Innovate intelligently to lead your market, grow your company, and change the world. Manage your information with Hitachi Data Systems.

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Operate More Efficiently
Deliver seamless integration with virtualization tools, which appear as an integrated application.

- Proactively manage the data center and intelligently anticipate fluctuating workloads.
- Grow a converged data center environment while freeing up IT resources.

Monitor With Full Visibility
Monitor element performance, compare current trends to historical data, and set thresholds and alerts.

- Monitor performance and trends using graphs and other tools to show trends.
- Set alerts and critical thresholds to trigger alarms based on their data center usage.
- Automatically remediate actions based on alerts or other conditions.

Protect Data
Consolidate the task of monitoring multiple UCP installations into a single user interface.

- Set user roles and privileges for managing access to storage, servers and networks.

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Figure 1. UCP Director seamlessly integrates with VMware vCenter to simplify data center management.

Integrated into vCenter, UCP Director software provides a unified and comprehensive thick and thin Web-based management interface. It offers process orchestration for a collective group of assets as business resource pools. UCP Director simplifies the integration and ongoing management of large dynamic environments. It greatly reduces the barrier to deployment, speeds time to value and streamlines operational management (see Table 1). These capabilities enable UCP Director to help reduce capital and operational expenditure (capex and opex), even while the scope and scale of converged data center ecosystems continue to grow.

Virtual and Physical End-to-End Orchestration
Manual inventory and provisioning inefficient and error-prone tasks often require negotiation between infrastructure element teams (server, storage and network). UCP Director frees up IT resources by providing 1-step provisioning and deployment (see Figure 1).

- Predefined server provisioning for quick and error-free deployment of new services.
- Provision both ESXi UCP and Microsoft® Windows® or Linux images.
- Orchestrate multiple UCPs running different platforms, including Windows hypervisor, VMware and LPAR.

| TABLE 1. UCP DIRECTOR: DEEP INTEGRATION WITH VMWARE VSPHERE |
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Inspect and Monitor Elements

Inspecting an element with UCP Director is easy, enabling you to perform root cause analysis with just a few clicks.

- Web client integration is available through both VMware vCenter Web Client and thick Client, as well as Hitachi Command Suite.
- Inventory any element and inspect its health; drill-down on elements for topology, performance and other information.
- Generate graphs for each performance counter to show trends over the past day, week, month or year to allow application users to identify any spikes or irregularities in the element.

Achieve Deep Data Protection

UCP Director is an error-free solution for user roles and data federation. With UCP Director Operations Center, administrators are able to manage multiple UCP servers from a single pane of glass; it serves as the foundation for disaster recovery planning.

- Providing user privileges is simple. From within vCenter, you can quickly set user roles and privileges for managing access to the data center ecosystem.
- Consolidate the task of monitoring multiple UCP installations into a single user interface.
- Easily configure Hitachi Universal Replicator or Hitachi TrueCopy remote replication between 2 or more UCP instances.
- The optional data center disaster recovery add-on works with VMware Site Recovery Manager to provide a best-in-class disaster recovery solution.

Summary

To help organizations overcome the challenges of managing converged data centers and cloud infrastructures, Hitachi delivers an end-to-end management tool optimized to meet the needs of VMware environments. By providing a single software-defined view of the data center, Hitachi management solutions help you gain the full value of your virtualization investment.

These benefits include improvements in organizational agility, predictable reliability, delivery of IT resources that match business requirements and subscription-based consumption.

Hitachi Unified Compute Platform Director v3.5 automates and orchestrates the administration and task workflows required to support the full suite of Hitachi Unified Compute Platform for VMware vSphere features. Simplifying inventory and provisioning tasks, operations, monitoring and data protection are all reasons why UCP Director is the optimal solution for your VMware deployment. Gain peace of mind that you can deploy and support a converged data center from 1 centralized management tool, while lowering both capex and opex.