Unlock the Value of Your Data

Accelerating the delivery of IT resources and services is difficult to do as the frequency and complexity of requests skyrocket. Combined with the changing role that data plays in the enterprise, your IT staff must adapt to the new ways that data is stored and used by applications, where it resides, and how it is managed and governed.

Staying a step ahead requires moving from managing complex IT requirements to finding new ways to process, store, protect, and analyze more data than ever before. As the operational simplicity of converged infrastructure gains popularity, finding an intelligent, enterprise-scale, adaptive solution is essential to meet today’s need for IT agility and application awareness.

Not all solutions include similar components or deliver equivalent capabilities, efficiencies, and performance characteristics. That’s why Cisco and Hitachi Vantara are working together to deliver solutions that unlock the value of your data (Figure 1). With Cisco and Hitachi Adaptive Solutions for Converged Infrastructure, you can store, enrich, activate, and monetize your data to better support your business and plan for what lies ahead.

Benefits

- Unleash your business with an agile and reliable platform
- Support enterprise applications such as Oracle and virtualization initiatives
- Accelerate your virtual infrastructure with more processing power and faster access to data
- Maintain workload performance at scale with an innovative foundation based on high-performance Cisco® and Hitachi Vantara technologies
- Detect anomalies, monitor service levels, plan for growth, and consolidate reporting across heterogeneous infrastructure resources at cloud scale
- Reduce risk with a verified, lab-tested architecture

Figure 1. Cisco and Hitachi Adaptive Solutions for Converged Infrastructure make it easy to unlock the value of your data.
The power of Cisco and Hitachi Vantara

Expanding a decades-long strategic alliance, Cisco and Hitachi Vantara continue to develop state-of-the-art technologies that accelerate innovation. Our partnership extends beyond a single solution so that you benefit from an ambitious roadmap of evolving technologies, including computing, networking, storage, analytics, the Internet of Things (IoT), cloud, and edge capabilities.

Our vision focuses on data-driven digital transformation and data center modernization solutions. Cisco and Hitachi engineers work together to combine the best of both companies into validated solutions: industry-leading Cisco Unified Computing System™ (Cisco UCS®) platforms and data services built on Hitachi Virtual Storage Platform (VSP) infrastructure that supports new levels of data security, governance, mobility, and analytics.

With a cooperative support model, decades of integration of Cisco networking into Hitachi Unified Compute Platform (UCP) and Hitachi Content Platform (HCP), and thousands of mutual customers worldwide, you can have confidence that our proven experience can help you transform your organization. Our solutions can help you:

- Reduce complexity and easily onboard new applications
- Consolidate data holdings and protect and make data available for analytics
- Deploy on premises or in a private or hybrid cloud

Cisco and Hitachi Adaptive Solutions for Converged Infrastructure

The solution provides an enterprise-class virtual server infrastructure (VSI) architecture with fast data access and unified management to accelerate your digital transformation. Designed to help you achieve faster and better insight, the solution combines innovative technologies—Cisco UCS blade servers, Cisco switches, and an all-flash or hybrid-flash Hitachi Virtual Storage Platform with intelligent management and automation software from Cisco and Hitachi Vantara—into a shared pool of high-performance resources that is easy to deploy, operate, scale, and manage.

Within the solution, all components are connected through a unified fabric that delivers high-performance computing and storage access to simplify deployment (Figure 2). The Hitachi Virtual Storage Platform systems connect to the fabric through two Cisco MDS 9000 Series Multilayer Switches. This approach increases aggregate bandwidth through multiple data paths, supports load balancing across links, and delivers high levels of availability and reliability while maintaining performance.

Optimize for applications

The solution’s unified management approach lets you tie infrastructure to your applications across virtual and physical elements. Automation, orchestration, and lifecycle management capabilities simplify deployment and make it easy for your IT staff to operationally integrate your bare-metal and virtual infrastructure resources to address complex, time-consuming, manual, and compartmentalized processes.

In the event that you need more capacity, you can configure compute, storage, and network resources independently without...
Built on innovative Cisco and Hitachi Vantara technologies

**Cisco UCS B-Series Blade Servers**
- Provide massive computing power in a small footprint
- Offer half-width and full-width form factors with two or four Intel® Xeon® Scalable processors
- Support bare-metal, virtual desktop, memory-intensive, and virtualized workloads

**Cisco Nexus 9000 Series Switches**
- Deliver performance, density, and power efficiency in a range of form factors
- Operate in Cisco NX-OS Software or Cisco Application Centric Infrastructure (Cisco ACI™) modes with ground-breaking Cisco Cloud Scale ASIC technology

**Hitachi Virtual Storage Platform**
- Combines all-flash and hybrid-flash storage with innovative storage virtualization software
- Delivers petabytes of capacity
- Optimizes data placement for performance and efficiency
- Uses a proven, multigeneration, symmetric active/active controller design and Hi-Star crossbar switch architecture
- Includes a 100% data availability guarantee, system redundancy, hot-swappable components, nondisruptive updates, and outstanding data protection

**Cisco MDS 9000 Series Multilayer Switches**
- Offer state-of-the-art multiprotocol and multiservice convergence
- Provide redundant components and a fault-tolerant design
- Adapt to accommodate physical, virtual, and cloud environments

having to adjust your software or your networking capabilities or interrupt operations. You can purchase the systems you need today and scale up your integrated infrastructure for greater performance and capacity (by adding or upgrading computing, network, or storage resources) or scale out if you need multiple consistent deployments (by adding integrated systems).

**Unify management**
A programmable infrastructure approach uses a consistent way to refer to, define, configure, and manage your IT resources. Each component is placed into an object model that maintains a single source of truth regarding system inventory and configuration. The object model is available to Cisco and third-party management tools through a unified API and set of plug-ins.

You can manage your Adaptive Solutions for Converged Infrastructure using familiar Cisco or VMware management tools. Plug-ins are available for VMware vCenter for Cisco UCS Manager (compute), Cisco ACI (network), Hitachi Unified Compute Platform Advisor or UCP Advisor (storage), and Hitachi Data Instance Director or HDID (data protection).

**Automate more**
Hitachi Automation Director (HAD) orchestrates a wide range of tasks and resources to deliver operations success. With this powerful software, your IT teams can configure storage and data protection services, define network zoning and paths, and perform application-specific configuration checks. Predefined workflows and AI-assisted decision making help ensure you implement optimal zoning configurations and avoid storage bottlenecks.

Figure 3. Unified management simplifies operation and provides visibility and control.
Solution overview

Analyze for greater insight

Efficiency is impossible when you don’t have visibility into data center operations. Hitachi Infrastructure Analytics Advisor software provides intelligence that you can use to make AI operations decisions and investments. With this software, you can detect anomalies, monitor service levels, plan for growth, and consolidate reporting across heterogeneous infrastructure resources at cloud scale.

Safeguard your data

The solution makes it easy to maintain data security and control. Built-in data-at-rest encryption protects sensitive data against breaches, including loss and theft, and integrates with third-party key management solutions.

Take advantage of cooperative support

Cisco and Hitachi Vantara are ready to support your IT teams through a collaborative and coordinated support model. Our simplified process gives you access to the combined experience, resources, and technical support expertise of both companies so that your problem is identified and resolved with efficiency.

Reduce risk with Cisco and Hitachi Vantara

We tested our configuration through the Cisco Validated Design program to help you make the most of your IT resources. Our verified, lab-tested architecture provides detailed design and implementation guidance that reduces guesswork by giving your IT architects and administrators a guidebook for implementation. By following the guidelines in this Cisco Validated Design, you can quickly and reliably create a data-driven IT foundation and tap into your data for greater insight.

“This jointly developed solution from Cisco and Hitachi Vantara enables organizations to embrace a data-driven culture through an infrastructure foundation built for today and able to support the future needs of the business. With their combined storage, server, and networking experience, organizations gain technology that can meet the scalability, resiliency, security, and extensibility required to support the dynamic needs of a digitally transformed, data-driven business.”

Mike Leone
Senior Analyst,
Enterprise Strategy Group

Get started

If you need to modernize your data center and better prepare for the future, consider Cisco and Hitachi Adaptive Solutions for Converged Infrastructure. With decades of industry expertise and superior technology, we can help you create a resilient, agile, and flexible IT foundation for your business.

Read the Cisco and Hitachi Adaptive Solutions for Converged Infrastructure Design Guide and visit hitachivantara.com or cisco.com to start this transformational journey.