

# Elevate Your SAP Deployments with Cisco and Hitachi Vantara

## Cisco and Hitachi Adaptive Solutions for Converged Infrastructure help you support your business and plan for what lies ahead.

Traditional data center solutions create silos of SAP applications and SAP HANA databases, impede the flow of information, get in the way of innovation, and break budgets. Staying a step ahead requires a change in IT strategy. With the right approach, you can shift from managing complex IT requirements to finding new and better ways to process, store, protect, and analyze more data than ever before.

The SAP Tailored Datacenter Integration (TDI) model lets you tap into your existing computing, network, and storage resources to get the most out of your investments and create a more flexible data center. Cisco and Hitachi elevate this strategy with agile and reliable converged infrastructure solutions that support SAP HANA and SAP enterprise applications so that your users can get more work done on a platform you can trust.

### Highlights

- Maintain SAP workload performance at scale with high-performance Cisco® and Hitachi Vantara technologies
- Unleash SAP HANA and SAP enterprise applications with a fast, agile, and reliable platform
- Use your resources efficiently with solutions that work with the SAP TDI model
- Accelerate your SAP landscapes with more processing power and faster access to data
- Detect anomalies, monitor service levels, plan for growth, and consolidate multiple SAP workloads and reporting
- Reduce risk with verified, lab-tested architectures

## Cisco and Hitachi Adaptive Solutions for Converged Infrastructure

Cisco and Hitachi Adaptive Solutions for Converged Infrastructure (CI) make it easy to store, enrich, activate, and monetize data to better support your business and plan for what lies ahead. With an enterprise-class converged infrastructure architecture, fast access to data, and unified management, you can accelerate your SAP HANA deployments and SAP enterprise applications and help ensure they stay up and running.

Designed to help you achieve faster and better insight, Cisco and Hitachi Adaptive Solutions for CI combine innovative and highly reliable technologies—Cisco UCS® blade servers, Cisco switches, and an all-flash or hybrid-flash Hitachi Virtual Storage Platform with intelligent Cisco unified management solutions—into a high-performance, highly available converged infrastructure solution that is easy to deploy, operate, scale, and manage.

### Cisco and Hitachi Adaptive Solutions for SAP HANA TDI

As a consolidation platform, the Cisco and Hitachi Adaptive Solution for SAP HANA TDI supports SAP HANA running on bare-metal servers and other SAP applications running in virtualized environments. The result is an agile, efficient, and cost-effective platform for SAP deployments.

- **Cisco Validated Designs:** Configurations are based on the latest technology to help ensure the highest performing SAP landscape. The latest validated design, the Cisco and Hitachi Adaptive Solutions for SAP HANA TDI, defines the SAP HANA, computing, storage, network, security, and infrastructure management resources you need to ensure your database deployments and the applications that use them continue to perform (Figure 1).
- **Data center integration:** You can use your shared enterprise networking and storage resources when deploying your SAP HANA computing nodes on the Cisco and Hitachi Adaptive Solutions for SAP HANA TDI. This integration increases resource utilization and reduces the capital costs required for implementation. You simply add our platform to your existing data center infrastructure.
- **Scalable memory:** The Cisco and Hitachi Adaptive Solution for SAP HANA TDI uses the latest Intel® Xeon® Scalable processors, giving you the option to use Intel Optane™ DC persistent memory. This memory is more dense, less expensive, and persists after poweroff. As a result, you can achieve up to 4x memory scale and 17 times faster restart of the SAP HANA database. You gain flexibility with a choice of validated and certified designs with Cisco UCS servers (with or without Intel Optane DC persistent memory).

## The power of Cisco and Hitachi Vantara

Expanding a decades-long strategic alliance, Cisco and Hitachi Vantara continue to develop state-of-the-art converged infrastructure solutions that accelerate SAP workloads. With Adaptive Solutions for CI you get access to an ambitious roadmap of evolving technologies, including computing, networking, storage, analytics, 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 designs. Our CI solutions offer high levels of performance at scale, a 100% unmatched availability guarantee, and support for security, governance, mobility, and analytics. In addition, our SAP competency includes a strong ecosystem in oXya and HCC, the latter now part of Hitachi, as well as successful deployment of hundreds of projects globally.

With a cooperative support model, decades of integration of Cisco networking into Hitachi solutions, and thousands of mutual customers worldwide, you can have confidence that our proven experience can help you accelerate your SAP workloads and achieve faster insight. Our solutions can help you:

- Reduce complexity and easily onboard SAP workloads and SAP HANA databases
- Consolidate data and make data available for analytics
- Deploy on premises or in a hybrid cloud
- Accelerate time to market and reduce operations costs

## Built on innovation

### Cisco UCS B-Series Blade Servers

- Provide massive computing power
- Offer half-width and full-width form factors with two or four 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 Platforms

- Use NVMe to deliver speed, efficiency, intelligent storage tiering, and massive scalability with no performance degradation
- Mitigate risk with superior application availability and flash resilience to help ensure that your data is always available
- Simplify storage and storage management so that you can integrate artificial intelligence (AI) and machine learning (ML) and consolidate more to save time and money

### Cisco MDS 9000 Series Multilayer Switches

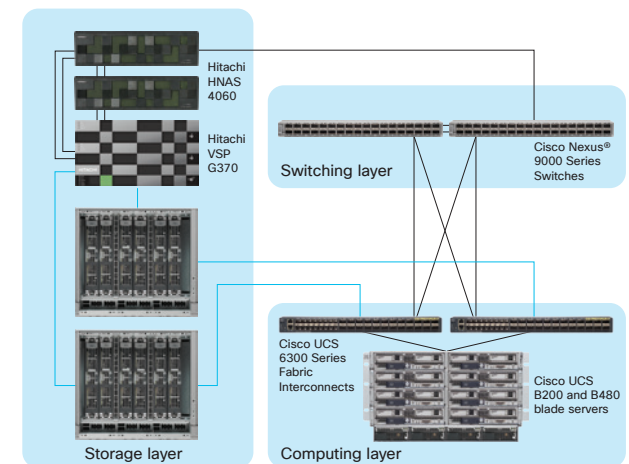
- Offer state-of-the-art multiprotocol and multiservice convergence, redundant components, and a fault-tolerant design
- Adapt to accommodate physical, virtual, and cloud environments

- **Scalable capacity:** Our validated TDI designs use a pay-as-you-grow approach that lets you 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). You can scale out to 16 SAP HANA nodes in high-performance, highly available configurations so that you can run big data, growth-oriented applications, and analytics on the same infrastructure. Flash-memory capacity can be added to integrate SAP applications into the CI solution, and you can extend the virtualized storage system to 69 petabytes of capacity and 21 million I/O operations per second (IOPS), and reduce latency to as low as 70 microseconds for faster response.

## Simplify and accelerate deployment

Our solutions include unified management capabilities that help accelerate deployment and simplify ongoing management tasks. Automation, orchestration, and lifecycle management capabilities 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.

Cisco and Hitachi Adaptive Solutions for SAP HANA TDI is ready for Cisco Intersight™. This software-as-a-service platform provides a lifecycle management platform for your SAP infrastructure, regardless of where it resides. You can manage all of your infrastructure from a single point regardless of location. In addition, Cisco Intersight brings intuition to your data center. With an integrated recommendation engine, the service can proactively alert you to infrastructure issues before they become problems. And you can continue to use any of our existing management tools to gain a global view of your infrastructure.



**Figure 1** Architecture of the latest validated design, the Cisco and Hitachi Adaptive Solutions for SAP HANA TDI

## Reduce risk

Deployment delays and service disruptions can affect your company's profitability. That's why it's important to deploy IT infrastructure right the first time. Cisco and Hitachi work together to test, validate, and document solutions so that you can get the infrastructure you need for your SAP deployments up and running quickly and with confidence. These Cisco Validated Designs reduce risk and guesswork by giving your architects and administrators a guidebook for implementing solutions that are optimized for SAP HANA and SAP applications.

## Learn more

Read the [Cisco and Hitachi Adaptive Solutions for SAP HANA Tailored Data Center Integration design guide](#)

Read the [Cisco and Hitachi Adaptive Solutions for SAP HANA TDI design guide](#)

Visit [Cisco and Hitachi Adaptive Solutions for Converged Infrastructure](#) on [cisco.com](#)

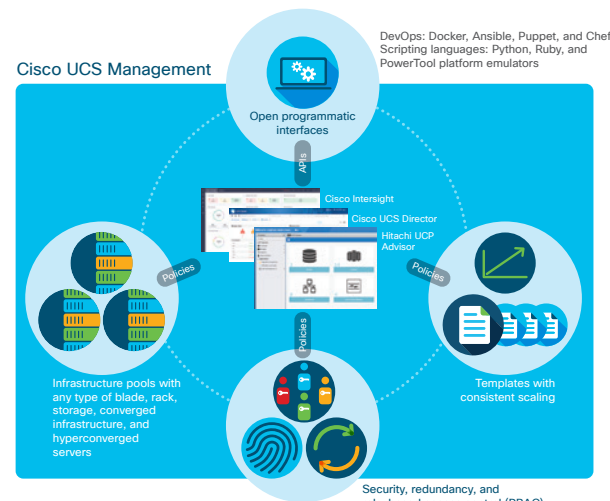
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## Deliver continuous access

We recognize that fast and continuous access to data is essential to SAP workloads. Cisco and Hitachi Adaptive Solutions for SAP HANA TDI can help you:

- **Safeguard your SAP data:** Our CI designs make 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.



**Figure 2** Cisco and Hitachi Adaptive Solutions for CI unify management operations

- **Optimize and accelerate operation:** Our approach brings a higher level of performance, scalability, and reliability to SAP HANA and SAP landscape applications. By integrating reliable storage systems that support data mirroring and offer a 100% data availability guarantee, you can reduce unplanned downtime and maintain workload performance at scale.
- **Increase IT efficiency:** Built-in software orchestrates a wide range of tasks and resources to deliver operations success. 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 you implement optimal configurations and avoid storage bottlenecks.

## Move to a platform you can trust

When you need to modernize your data center and better support your SAP HANA and SAP application landscapes, consider Cisco and Hitachi Adaptive Solutions for SAP HANA TDI. With decades of industry expertise and superior technology, we can help you create a resilient, agile, and flexible IT foundation for your SAP workloads and your business.