

*White Paper*

# Hybrid Cloud 2.0: Evolution & Modernization



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Infrastructure  
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**The IT landscape is changing rapidly and now! It demands agility, flexibility, and innovation to keep up with high needs. As businesses strive to stay competitive, the need for adaptable and scalable solutions has become paramount.**

Hybrid cloud, a blend of on-premises, private, and public cloud services has emerged as a vital solution for modern enterprises since 2015. It offers the perfect balance between security, performance, and cost-efficiency, making it indispensable in today's business world. During the initial days of hybrid cloud adoption, around the early 2010s, enterprises faced several limitations:

- **Complex Integration:** Integrating on-premises infrastructure with public and private clouds was challenging, often requiring custom solutions.
- **Security Concerns:** Ensuring consistent security policies across different environments was difficult.
- **Latency Issues:** Data transfer between different cloud environments could introduce latency, affecting performance.
- **Cost Management:** Managing costs across multiple environments was complicated without unified tools.

Despite these challenges, early hybrid cloud models provided a foundation for the more advanced and capable solutions we see today.





## Hybrid Cloud 2.0: The Next Generation

The early days of hybrid cloud provided a strong steppingstone, laying the groundwork for the robust solutions we use today. However, those initial limitations such as complex integration, security concerns, and performance bottlenecks, hindered the true potential of this technology. Hybrid Cloud 2.0 represents a significant leap forward, addressing these and many challenges head-on. The next-gen approach offers a seamless and secure environment, optimized for performance and unified management. Let's dive into the key benefits that unlock the full potential of hybrid cloud in the modern business landscape.

**Under a unified management and tooling lens, next-gen hybrid cloud environments offer:**

### *Seamless Integration*

Better integration capabilities. Easy connectivity to multiple environments and simplified management.

### *Enhanced Security*

Unified security policies and advanced threat detection. Ensures robust protection across all environments.

### *Optimized Performance*

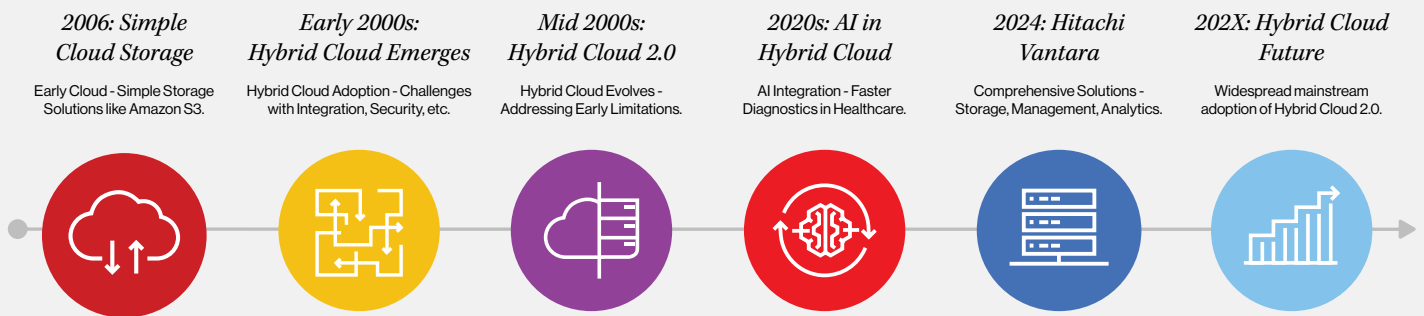
Reduced latency and improved data transfer speeds. Performance enhancements.

### *Cost Efficiency*

Optimized resource utilization and cost management.

The evolution of Hybrid Cloud demands not just advanced technologies, but a partner that understands the complexities of modern business landscapes. Rising to the occasion, Hitachi Vantara stands at the forefront, delivering innovative solutions that unlock the full potential of this next-generation approach. Our state-of-the-art offerings, like the Hitachi Virtual Storage Platform One (VSP) and Hitachi iQ, are designed to address the specific challenges faced by today's enterprises. [Hitachi VSP One](#) streamlines hybrid cloud operations, ensuring optimal resource management and operational excellence. Furthermore, [Hitachi iQ](#) empowers businesses with AI-driven insights and automation, allowing them to leverage the full potential of their hybrid cloud for unmatched performance and efficiency.

**A recent study found that a significant 78% of organizations rely on a combination of on-premises and public cloud for building and utilizing GenAI solutions. This trend signifies the need for flexible and adaptable IT infrastructure that hybrid cloud provides.<sup>5</sup>**



Key Milestones in the Hybrid Cloud 2.0 Journey

### The Foundations of Hybrid Cloud

Naturally, cloud computing has also come a long way from its inception in the 2000s. From the early days of simple storage solutions, such as Amazon S3, to today's complex, multi-cloud environments, the evolution has paved the way for hybrid models that offer the best of both worlds<sup>1</sup>. Leveraging robust platforms like Azure<sup>3</sup>, businesses can seamlessly integrate on-premises infrastructure with cloud resources, enhancing flexibility and optimizing performance.

Managing hybrid environments can be complex and challenging. However, automation brings significant benefits, simplifying operations and enhancing efficiency:

- **Operational Efficiency:** Hitachi Vantara's automation solutions, such as the [Hitachi Virtual Storage Platform One](#), streamline hybrid cloud operations, ensuring optimal resource management and operational excellence.
- **Cost Savings:** Automation in hybrid cloud leads to substantial cost savings, increased efficiency, and reduced errors.
- **Strategic Focus:** By automating routine tasks, businesses can focus on strategic initiatives that drive growth.

Automation in hybrid cloud environments not only simplifies management but also drives innovation and competitive advantage.

## The Hybrid Cloud Landscape Today and Tomorrow

As of 2024, Hitachi Vantara offers a comprehensive suite of hybrid cloud solutions, encompassing storage, management, and analytics, designed to meet the diverse needs of modern enterprises. Products like the Hitachi Virtual Storage Platform One are at the forefront of seamless hybrid cloud integration, offering features that enhance performance and reliability.

Real-world customer success stories showcase the effectiveness of Hitachi Vantara's hybrid cloud solutions:

- **Healthcare:** Since 2020, healthcare organizations have been using AI for faster diagnostics<sup>2</sup>. By implementing Hitachi Vantara's storage solutions, the [Isle of Wight NHS Trust](#) was able to enhance patient services through innovative medical imaging capabilities. This resulted in improved data accessibility and faster diagnostics, potentially leading to better patient outcomes.
- **Finance:** [China Southern Fund Management](#), a fund management company successfully optimized data storage and improved management of unstructured data, leading to potential cost savings and enhanced investment insights.
- **Manufacturing:** A leading manufacturer, [SFS Group](#), achieved a 20% increase in production efficiency by optimizing its supply chain and manufacturing processes with Hitachi Vantara's hybrid cloud solutions. This resulted in improved operational performance and potentially higher output for the company.
- **Retail:** [BOE Technology Group](#), a global retail company implemented Hitachi Vantara's hybrid cloud solutions and experienced a major reduction in transaction times. This likely led to improved customer experience and potentially higher customer satisfaction due to faster checkouts.

Hitachi Vantara's AI portfolio, including Hitachi iQ, empowers businesses to unlock the full potential of their hybrid cloud environments. AI optimizes resource allocation, automates tasks, and provides deeper insights from data across hybrid environments, enhancing decision-making and operational efficiency. This demonstrates the ability of the hybrid cloud to cater to various workloads and optimize data management across different environments<sup>4</sup>.

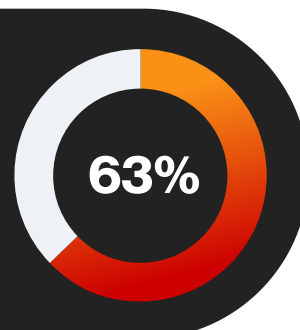


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*Optimizing hybrid cloud technologies is a top focus for businesses today. 54% of organizations view it as their most critical priority for the next 12-24 months, and 42% rank it among their top three priorities.<sup>6</sup>*

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**The desire for hybrid approaches extends beyond traditional applications. 63% of organizations anticipate their data pipeline activities would take place in a hybrid cloud environment.<sup>5,6</sup>**





## Unleashing the Power – Hitachi Solutions Partnership

Through a strategic partnership with [Hitachi Solutions](#), a leading global systems integrator, Hitachi Vantara goes beyond its own offerings to provide comprehensive hybrid cloud solutions. Leveraging deep expertise in Azure and Databricks, this collaboration brings together expertise in Cloud Data Analytics, empowering businesses to unlock the full potential of their data in a hybrid cloud environment.

Hitachi Solutions [Empower Data Platform](#) addresses the challenge of consolidating disparate, often industry-specific data sources into a manageable location where they can be leveraged easily for analytical insights. The Empower Data Platform integrates with enterprise cloud environments of any size, ensuring businesses can leverage scalable, flexible, and cost-efficient solutions while bringing the future of AI-fueled analytics into the present. Empower deploys the data foundation for advanced data engineering and GenAI productivity gains at half the cost of doing it yourself. SLA options like managed services are available for continuous performance, robust disaster recovery options, and industry-focused solutions. By utilizing AI, Data Science, and Machine Learning Operations, Hitachi Solutions delivers advanced analytics to aid informed decision-making and continuous digital transformation.

Through unified data and AI management, Hitachi Solutions delivers state-of-the-art capabilities:

Challenge	Solution	Benefit
<b>Comprehensive Cloud Integration</b>	Seamlessly integrates with both public and private cloud environments.	Leverage the best of both worlds.
<b>Scalability</b>	Provides scalable solutions that can grow with the business.	Ensures infrastructure needs are met as demands increase.
<b>Data Management</b>	Offers robust solutions for data migration, synchronization, and backup.	Optimizes data management across hybrid environments.
<b>Security</b>	Implements advanced security measures across hybrid cloud setups.	Ensures compliance with industry standards and regulations.
<b>Cost Efficiency</b>	Optimizes costs by efficiently leveraging cloud resources.	Reduces unnecessary expenses while managing workloads effectively.
<b>Flexibility</b>	Supports a wide range of applications and workloads.	Provides flexibility for diverse business operations.
<b>GenAI and ML Operations</b>	Utilizes AI and machine learning for advanced analytics.	Enhances data-informed decision-making with AI-driven insights.
<b>Managed Services</b>	Oversees and maintains hybrid cloud environments.	Ensures continuous performance and reliability.
<b>Disaster Recovery</b>	Provides robust disaster recovery solutions.	Helps businesses recover quickly from disruptions with minimal downtime.
<b>Industry Expertise</b>	Tailors hybrid cloud solutions to specific business needs.	Ensures optimal performance and value through deep industry knowledge.

**Specific Hitachi Solutions capability offers available for Hybrid deployments:**

**01**

**GenAI document processing:**  
 Best-of-breed RAG architectures spanning ground and cloud deliver insights and relationships between data on any size corpus.

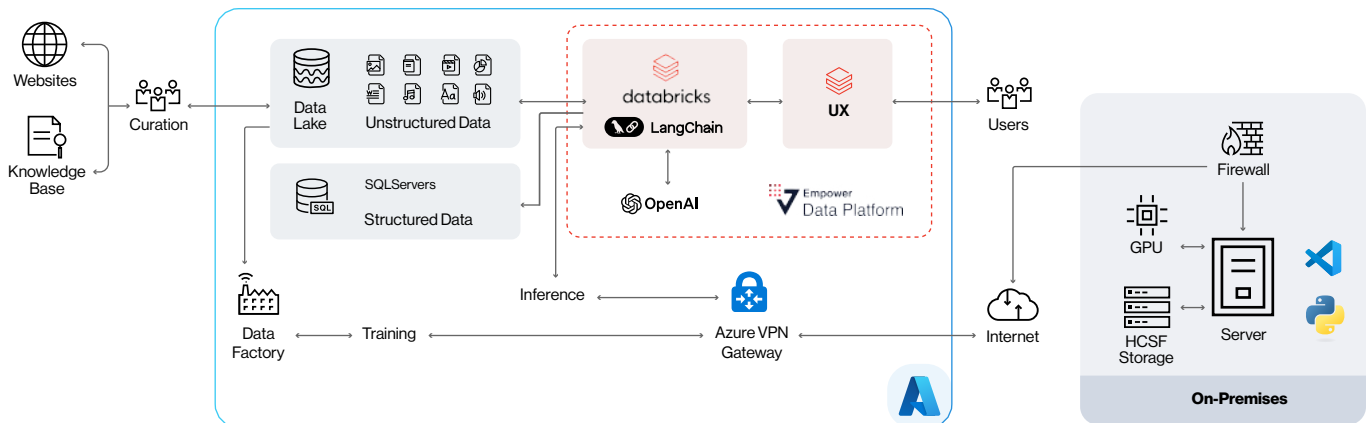
**02**

**GenAI Q&A Research Assistant:**  
 Talk to all your data quickly, reliably, and safely.

**03**

**Neural Network inferencing:**  
 Real-time answers, guaranteed availability with cost efficiency.

**Architecture Diagram:**



Customers can seamlessly run both traditional data lake analytics and AI models within their hybrid environment. Leverage your existing on-premises data alongside valuable cloud-based resources to gain a holistic view of your information and generate advanced insights. Our solutions are designed with scalability in mind, adapting to the unique needs of your business and seamlessly scaling to meet your evolving data demands.

**What We Can Do for Your Business**

By leveraging the combined strengths of Hitachi Vantara and Hitachi Solutions, you can unlock the full potential of hybrid cloud data analytics:

- **Consolidate & Analyze Data:** Bridge the gap between on-premises and cloud data silos. Gain a unified view of your data for better decision-making.
- **Optimize Resource Utilization:** Reduce costs by optimizing the use of cloud and on-premises resources for data storage and processing.
- **Accelerate Innovation:** Drive faster time-to-insights with advanced analytics capabilities in your hybrid environment.

## Conclusion

Hybrid cloud, powered by Hitachi Vantara's solutions and the expertise of Hitachi Solutions, offers a compelling path to success. Gain cost savings, enhance efficiency, and unlock the power of innovation with our comprehensive hybrid cloud and data analytics offerings.

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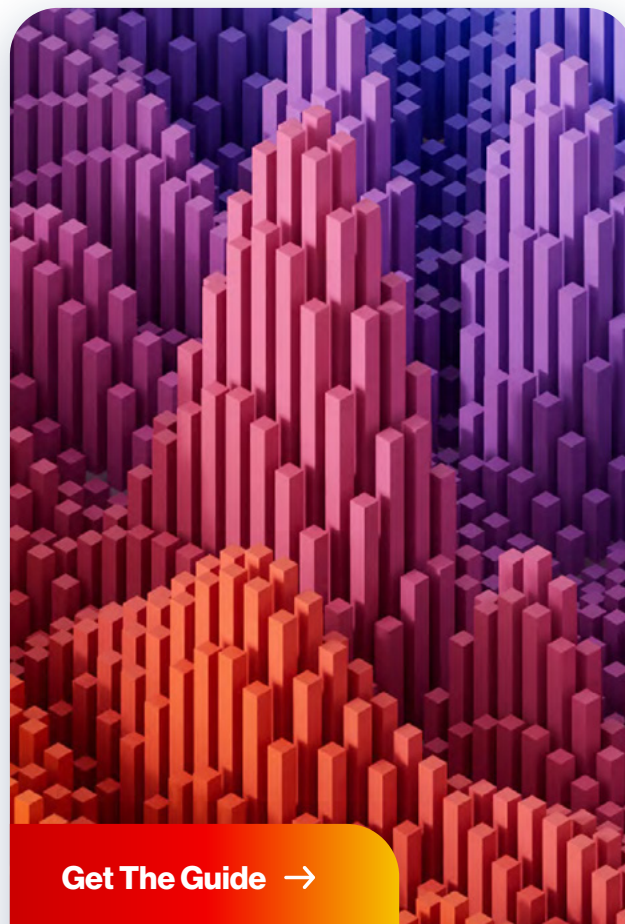
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Fred Heller is the Senior Director, Data Science and Machine Learning at Hitachi Solutions. He leads a team that's not only focused on the Empower Data Platform but many Data Science initiatives at the company and Hyperscalers such as Azure.

Peer reviewers: Dilip Modi, Manoj Kumar, Raj Mohan Rao, Spencer Tidwell, Ted DuBois.



Get The Guide →

*Ready to achieve cloud agility performance and efficiency?*

Download our free **Hybrid Cloud Buyer's Guide** and discover a roadmap to success tailored to your unique business needs.

**Take the next step:** Explore Hitachi Vantara's solutions and contact us to discuss how we can help you implement a winning hybrid cloud strategy to meet your unique business needs.



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