

Solution Profile

Accelerate Application Development and Testing with Software-Defined Storage

Unlock faster deployment cycles and improved management, enabling teams to innovate and deliver applications with ease.



Responsive agility

Quickly provide storage volumes and seamlessly scale capacity and performance

Intelligent automation

Replace or reduce manual provisioning with automated data placement, workload balancing, and storage tiering

Seamless Hybrid Cloud mobility

Ensure smooth data migration without downtime and take advantage of the Hitachi Vantara's common data service powered by the Storage Virtualization Operating System (SVOS) across on-premises and public clouds for a consistent experience

Hitachi Vantara Virtual Storage Platform One (VSP One) SDS delivers data management across on-premises and cloud environments, accelerating application dev and testing by providing a unified data plane with automated provisioning and scalability.

Application development and testing teams that have access to rapid self service provisioning, enhanced resource utilization and on-the-fly scaling have a distinct advantage in the market. Unfortunately, this functionality is too often more of a dream than reality for today's application dev and test teams.

Long provisioning cycles, complex management and lack of scalability can add weeks and months to development cycles potentially adding costs to key software projects. In addition, block migration projects are encountering significant challenges around ensuring data integrity, minimizing downtime, and managing large volumes of data across different storage systems efficiently. To make matters worse third-party block migration tools can increase complexity and extend migration times due to limitations in:

These tools may also lack integration with modern IT environments like cloud and containers and comprehensive storage management features, making them less adaptable to diverse and evolving infrastructure setups.

Without more adaptable storage solutions your teams will struggle to keep up with the rapid pace of development and innovation as well as losing your company's competitive edge or market opportunity.

Software Defined Storage solutions are a prescriptive solution to address many of these issues. By abstracting storage resources from the underlying hardware, the control, and data planes, you gain a virtualized programmable layer for storage management. This virtualized layer allows you to use policies, rules, and APIs to meet resource requests for instances and workloads based on performance, capacity, and availability. In addition, Agile development methodologies and CI/CD applications can request, and release resources



Flexibility



Scalability



Vendor compatibility

Accelerate Dev/Test Application Development with Software-Defined Storage

based on their needs automatically. Using automated resource allocation means resources are assigned and reallocated as development and testing requirements change.

Taking advantage of centralized management, teams can create a pooling system for storage devices; creating a unified resource. This simplifies administration and provides a holistic view of available storage.

VSP One SDS meets the requirements of application development and testing teams through its comprehensive software-defined storage (SDS) capabilities. VSP One SDS abstracts storage resources from the underlying hardware, offering a unified data plane that spans on-premises, cloud, and hybrid environments, thus providing the flexibility and scalability essential for dynamic development needs. In addition, Hitachi VSP One SDS provides;

- **Responsive Agility:** Hitachi Vantara's SDS enables rapid provisioning of storage volumes and non-disruptive scaling of capacity and performance on-demand.
- **Optimal Data Efficiency:** 2:1 guaranteed data reduction through deduplication and compression allows you to manage multiple dev/test environment copies efficiently.
- **Seamless Hybrid Cloud Mobility:** Common data services (SVOS) across on-premises and public clouds deliver consistent experience and seamless data migration for dev/test across hybrid environments. Hitachi Vantara SDS provides smooth data migration without downtime or service interruptions.
- **Intelligent Automated Management:** Policy driven data placement, workload balancing and storage tiering, reduce manual effort for dev/test teams.

The platform's centralized management via Hitachi Vantara Ops Center and policy-based provisioning streamline storage operations, reducing setup times and manual intervention. By integrating seamlessly with existing infrastructures and supporting modern development practices, VSP One SDS enables development and testing teams to accelerate their workflows, improve efficiency, and reduce costs, enhancing their ability to deliver high-quality applications rapidly.

Dev/Test Applications and Workloads

Dev/Test Environment Provisioning: Rapid on-demand storage provisioning reducing setup time and enabling faster iteration cycles for development and testing teams.

Database Development and Testing: High-performance storage tailored for databases enabling accurate simulation of production workloads and rapid identification of performance bottlenecks.

Containerized Application Testing: Dynamic persistent storage volumes for stateful applications across environments providing seamless portability and consistent performance of containerized workloads

Database Cloning and Refreshing: Efficient database cloning/refreshing with snapshots minimizing storage overhead and enabling rapid creation of up-to-date test environments.

Big Data and Analytics Testing: Availability for testing workloads with large datasets and intensive I/O requirements with flexible scaling and optimized performance for data-intensive analytics without hardware constraints.

Continuous Integration and Continuous Deployment (CI/ CD): Automated storage provisioning pipelines help shorten development cycles and ensure consistent, reliable deployments.

Database Migration and Upgrade Testing: Isolated test environments that match production create risk-free validation of upgrades and migrations while minimizing impact on live systems.

Performance Testing: Dedicated performance-specific storage resources for testing and benchmarking which enables more accurate benchmarking and faster time-to-market.



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Solution Benefits

Hitachi Vantara's unique Polyphase Erasure Coding (HPEC) provides better data read performance and capacity savings while increasing reliability. Providing 5x9's of uptime without using mirroring, reducing hardware investment or cloud credits by up to 30%.

Seamlessly provision and scale storage for database applications (i.e., MySQL) through automated, policy-based management that allows for quick allocation and dynamic scaling of resources.

2:1 data reduction ratio, effectively doubling the usable capacity of storage resources for development and testing environments.

Scales-out from three nodes to 18 in the cloud providing flexible growth options for cloud-based development and testing scenarios. On-prem scales to 32 nodes ensuring

storage growth, without compromising performance or manageability

Avoid the high costs of maintaining separate storage solutions for nonproduction environments by consolidating storage resources into a unified, efficient system. Simplifying management with a single, cost-effective storage platform for all their nonproduction needs.

Deliver seamless scalability with VSP One SDS architecture that separates the data (SVOS) and control planes which enables on-demand resource provisioning, global scalability, operational simplicity and reduces downtime.

Repurpose underutilized storage resources, maximizing the efficiency of existing infrastructure and reducing waste in development and testing environments. Create multiple development copies effortlessly and accelerate the overall software development lifecycle.

Take advantage of centralized management and automated storage operations using API integrations with DevOps automation tools aligned to CI/CD processes; Ansible and Terraform.

[Learn more →](#)

About Hitachi Vantara

Hitachi Vantara is transforming the way data fuels innovation. A wholly owned subsidiary of Hitachi, Ltd., we're the data foundation the world's leading innovators rely on. Through data storage, infrastructure systems, cloud management and digital expertise, we build the foundation for sustainable business growth.



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