Datasheet

Hitachi Virtual Storage Platform One Global-Active-Device: Continuous Operations

Enable nonstop data operations for mission-critical applications

Ensure high-availability data access for key application workloads while achieving zero RTO and RPO.

Hitachi Virtual Storage Platform One (VSP One) data platforms with Hitachi Storage Virtualization Operating System (SVOS) global-active device can simplify distributed storage system designs for continuous data operations across both SAN and NAS deployments. Achieve zero recovery time and recovery point objectives (RTO and RPO) by enabling synchronous data replication operations for up to 500 kilometers. This enables nonstop data operations with the availability, integrity and reliability to ensure high availability for your mission-critical business applications, even in the event of a failure.

Growing Need for Continuous Operations

For applications requiring 24/7 uptime, high-availability storage designs are needed to improve data reliability and business continuity to prevent disruptions in case of a failure. Data consistency and resilience are required for all data operations to guarantee continuous data processing and ensure data is protected.

Automate High-Availability Data Operations

Global-active device automates read/write copies of the same data in two locations at the same time. Its active-active storage design implements cross-mirrored storage volumes between two VSP One storage systems, accepting read/write I/Os on both sides, which are continuously updated.

Global-active device supports the intermix of VSP models. For example, a VSP 5000 series system could be replicated and synchronized to a VSP One Block High-End system. If a disk controller failure occurs on a system at one site, the storage controller at the other site will automatically take over and accept read/write I/Os to ensure nonstop data operations. Global-active device will ensure an up-to-date storage volume is always available to enable production workloads on both distributed VSP One systems, while maintaining full data consistency, protection and resiliency.

Global-Active Device: Key Benefits

- Enables 24/7 data operations and business continuity for mission-critical applications.
- Hardens data availability, resiliency and protection for production workloads.
- Automates high-availability data access and recovery.
- Assures nonstop data operations even in the event of a failure.

Continuous Data Operations

For many mission-critical applications, any failure preventing access to data results in an application interruption and possibly a manual failover to another copy of data, potentially at a secondary site. Global-active device can provide active-active, stretched storage clusters over local and metro distances. Multipathing capabilities enable application access to replicated data from the shortest path for the highest performance.

Applications can avoid manual failovers with nonstop data access to a secondary copy of data, either locally or between metro-distance sites. This enables continuous data access for application workloads required to maintain high-availability operations and business continuity objectives.

Global-active device can be configured for up to three data center environments. Used with Hitachi Universal Replicator for asynchronous replication, it enables seamless failover and fallback of production workloads while still maintaining a disaster recovery site.

Workload Mobility

To load balance a processing workload during peak usage periods, administrators often need to move an application workload to a secondary server. The concurrent data mirroring capabilities of global-active device makes data immediately available to servers at a secondary site (over metro distances up to 500km), enabling production workloads to be migrated and balanced without an application interruption.

For NAS environments, the mirroring of the NVRAM across the NAS systems allows the NAS cluster to be extended across sites, allowing workloads to be nondisruptively balanced across sites and continue to provide an active/active workload distribution.

These workload mobility capabilities can also be used to take servers offline temporarily for routine system maintenance, updates or to perform nondisruptive upgrades.

Nondisruptive Data Migration

Global-active device enables synchronous remote copy pairs of data volumes where the pair volumes (primary and secondary) are seen by the application host servers as a single volume on a storage system. Integrated multipathing capabilities are used to determine the valid and optimized paths for host I/O between the primary and secondary storage systems.

Global-active device enables high-availability operations in the case where a second VSP One storage system is being installed and brought online when the primary system still has critical data volumes in use. Production data volumes can be migrated nondisruptively to the second VSP One system without an interruption to normal operations.

Global-Active Device Enables Always-On Data Operations

- Ensures continuous server I/O when a failure could prevent access to data volumes.
- Delivers synchronous data mirroring and consistency for production workloads.
- Enables automatic load balancing with nondisruptive data mitigation.
- Provides production server failover and failback without storage system impact.

Global-Active Device Advantage

Hitachi SVOS global-active device for VSP One data platforms makes nonstop data operations and workload mobility between systems a reality, improving business continuity goals. Global-active device enables automated data operations to eliminate downtime for mission-critical applications while delivering unmatched data reliability, scalability and resiliency.

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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