

Achieve strict zero RTO and RPO with Hitachi Storage Virtualization Operating System's global-active device. Ensure continuous operations for key applications and nonstop, uninterrupted data access for critical SAN and NAS deployments.

DATASHEET

Global-Active Device: Continuous Operation and Availability for Key Applications

Simplify and Automate High Availability

Hitachi Storage Virtualization Operating System (SVOS) provides the global-active device feature, which simplifies both distributed system design and operations for both SAN and NAS workloads. Global-active device allows organizations to achieve zero recovery time and point objectives (RTO and RPO) by enabling synchronous replication up to 500 kilometers.

The feature supports read/write copies of the same data in two places at the same time. Its active-active design implements cross-mirrored storage volumes between two Hitachi Virtual Storage Platform (VSP) systems that accept read/write I/Os on both sides, which are continuously updated. Global-active device supports VSP model intermix. For example, a VSP 5000 series system can be replicated to a VSP F900. Check the matrix for model intermix compatibility. If a disk controller failure occurs at one site, the controller at the other site automatically takes over and accepts read/write I/Os. Global-active device assures that an up-to-date storage volume is always available and enables production workloads on both systems, while maintaining full data consistency and protection (see Figure 1).

Global-active device simplifies and automates high availability to ensure continuous operations for your most mission-critical data and applications: for both SAN and NAS

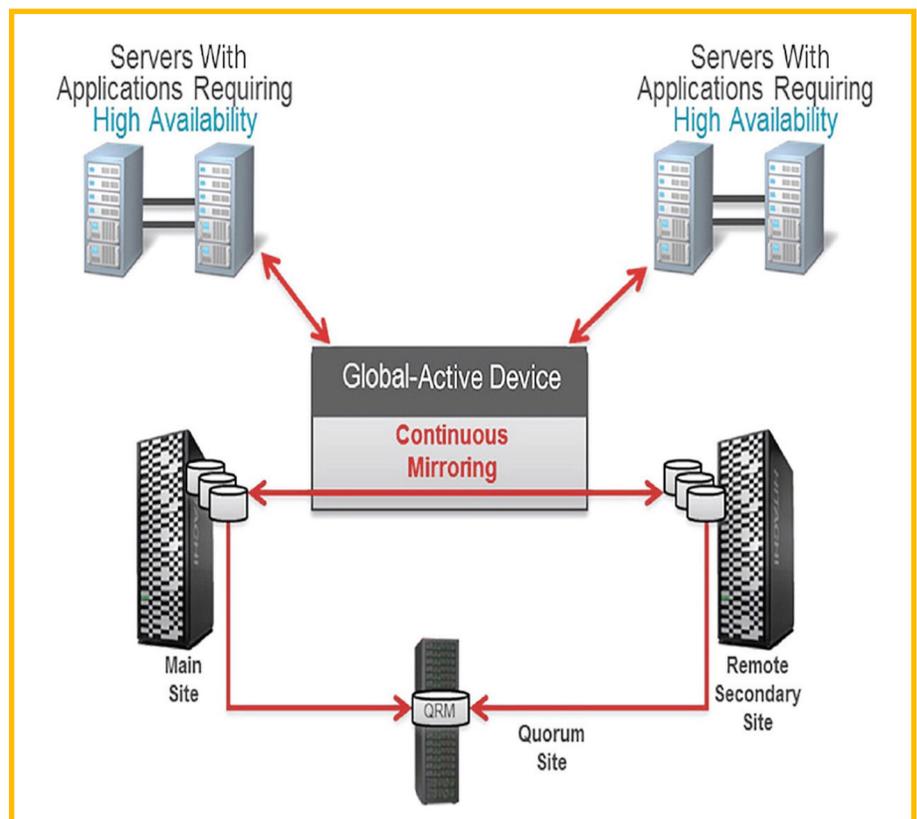


Figure 1. Global-Active Device High-Level Architecture

deployments, whether they are block or file. By leveraging some of the unique capabilities of the VSP family, global-active device assures that an active and up-to-date storage volume is available to a production application in spite of the loss of a virtualized controller.

In addition, the embedded NAS modules can be configured to mirror NVRAM

transactions across the system chassis to enable a stretched NAS cluster that can also be used for nondisruptive workload migration and automated failover across sites.

If a controller fails at either site, the NAS services running on that controller are automatically failed over to the surviving site.

Continuous Operations

For many mission-critical applications, any failure that prevents access to data results in application interruption and possibly manual failover to another copy of data, potentially at a second site. Global-active device can now provide active-active stretched clusters over local and metro distances. Multipath software allows application access to replicated data from the shortest path for highest performance. Applications can avoid manual failovers and access the second copy of data either locally or between metro-distance sites. This enables high availability and continuous operations with access to data, assuring critical business application availability and integrity.

Workload Mobility

To balance a processing workload during peak usage periods, administrators often move an application to a second server. The concurrent data mirroring capability of global-active device makes data immediately available to servers at a second site (over metro distances), enabling workloads to be migrated without application interruption.

Mirroring of the NVRAM across the NAS modules allows the NAS cluster logic to be extended across sites, allowing Enterprise Virtual Servers (EVS) workload to be non-disruptively balanced across sites and provide an active/active workload distribution (see Figure 2).

This process could also be used to take servers offline temporarily for routine maintenance and updates, and to perform nondisruptive upgrades.

Nondisruptive Data Migration

Global-active device is also a powerful tool in the case where a second VSP family system is being installed and brought online when the primary system has critical application volumes in use.

SVOS
Benefits:
Global-Active
Device

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STORAGE MANAGEMENT SOFTWARE SERVICES

Hitachi Vantara Global Services Solutions (GSS) incorporates the industry's best people, products, tools and methodologies to help you transform your data center and reach your continuous cloud infrastructure milestones. GSS consultants help you plan, design, install, implement, transition, migrate, integrate, manage and optimize storage infrastructure solutions that meet your needs.

GSS designs and implements optimal configurations, to improve the performance and availability of mission-critical business applications, while ensuring adherence to application-specific service level agreements: Application users experience faster response times and fewer outages, resulting in improved business productivity.

Using disaster recovery solutions from Hitachi, GSS can bring up a production global-active device based environment for block or NAS environments in just a few hours and provide enhanced monitoring and auto-fix capabilities.

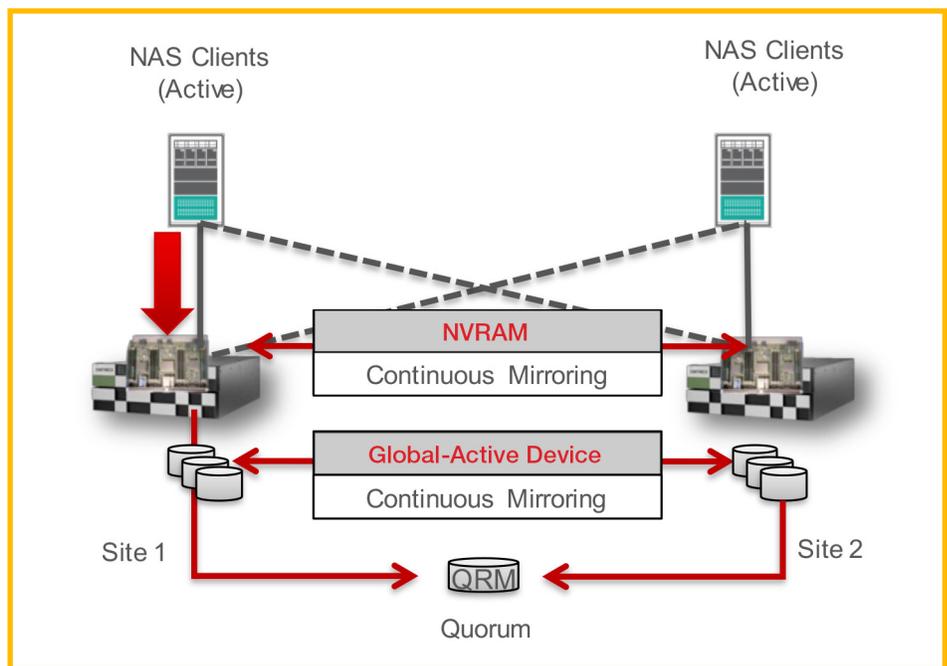


Figure 2. Global-Active Device Enhanced for NAS High-Level Architecture

Data volumes can be migrated to the second VSP without disruption to normal operations.

For organizations seeking simpler business continuity, global-active device makes nonstop operations and workload mobility between systems and data centers a

reality. Global-active device provides simplified and automated operations, greater flexibility, reliability and scalability and delivers unmatched resiliency by eliminating downtime for mission-critical data and applications.

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