Major Bank Builds Always-On Services with Two-Site Active-Active Storage

Organization

A major financial institution

Industry

Banking & Financial Services

Requirements

- Each storage system required sub-millisecond latency, 99.999% system availability.
- HA cluster delivers near-zero downtime and zero data loss, even in the event of a storage system or site-level failure.

Solution Overview

- EonStor GS 5024UE
- HA Service (Block-level)

Key Benefits

- Business continuity with HA service
- Sub-millisecond latency per storage system
- Preventing data loss with Zero-RPO protection

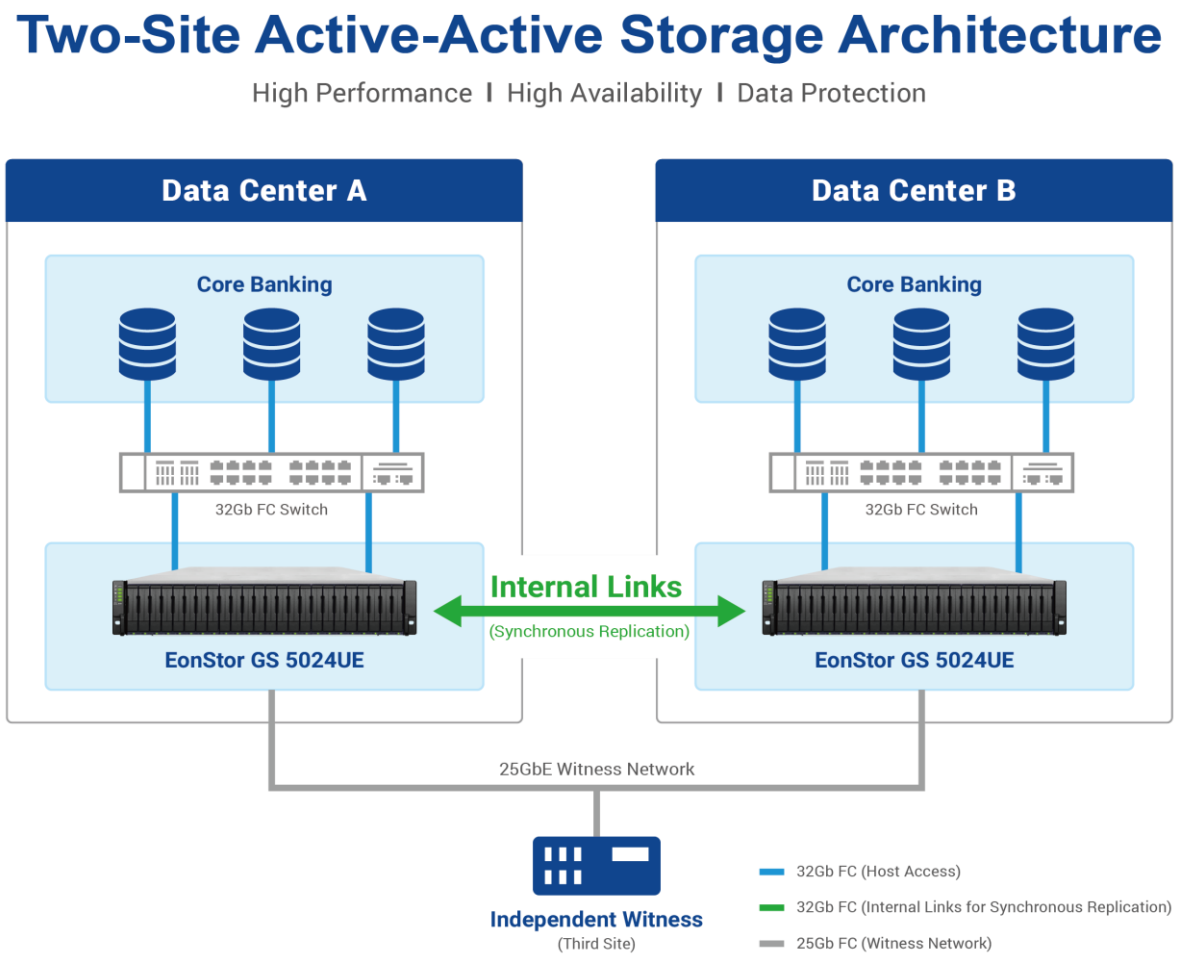
As banking services become increasingly digital and always-on, a major bank needed a storage infrastructure that could keep its critical transactional database workloads continuously available and responsive. Each storage system had to deliver **average latency below 1 ms for transactional databases and 99.999% system-level availability**. Beyond the requirements for each storage system, the overall architecture had to span **two sites**, integrate with the bank's **existing Fibre Channel infrastructure**, and keep services running through any storage system or site-level failure with automatic failover. Data also had to be synchronously replicated between the two sites to achieve Zero-RPO.

Solution Overview & Architecture

To achieve continuous service, the bank deployed **two Infortrend EonStor GS 5024UE** storage systems with HA Service license to build a **two-site Active-Active Block HA cluster**. Both systems serve workloads during normal operations. If one system or site becomes unavailable, the surviving system automatically takes over storage services. Each system also features dual redundant controllers, so if one controller fails, the other automatically takes over.

Each GS 5024UE uses a full-NVMe configuration for consistently fast access to transactional data. On each controller, two 32Gb FC ports connect to hosts through the bank's existing FC fabric, requiring no network changes. Two additional 32Gb FC ports provide dedicated replication links, keeping replication traffic separate from host traffic. Synchronous replication

writes every transaction to both sites before confirming it, achieving zero RPO. An independent witness on a separate 25GbE network provides quorum, ensuring only the surviving system takes over during a failure, preventing split-brain and keeping failover controlled and reliable.



Solution Benefit

- **Continuous banking services**
  With Infortrend's Active-Active HA service and each system's calculated five-nines system availability*, customers and branches experience little to no service interruption, helping the bank minimize the risk of costly outages.

**System-level availability of 99.999% is a calculated value based on MTBF (mean time between failures) and MTTR (mean time to repair).*

- **Sub-millisecond system performance**
  GS 5024UE is designed for ultra-low latency, supporting the bank's per-system requirement of average latency below 1 ms for transactional databases. This system-level performance keeps transaction processing fast and responsive as financial operations run around the clock.

- **Safeguard critical data**
  Even in a site-level failure or disaster, critical transactional data remains intact and consistent, safeguarding the bank's most valuable asset.

Additional Information

- Explore the EonStor GS 5024UE and other models in the EonStor GS family.
- Learn more about the HA Cluster

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