

Five Reasons to Consider a 3-Data-Center Storage Strategy

IMPROVE BUSINESS CONTINUITY, DISASTER RECOVERY AND AGILITY

The most important asset for most organizations is data. The loss of financial records, product designs, customer relationship management history, inventory control information or human resource files, or even losing access to them for an extended period of time, can have a devastating impact on any business. Fortunately, in addition to protecting data by copying it, there are ways to make data assets more accessible while reducing the impact of data copy operations on your production systems.

❑ 1. ENSURE ZERO DATA LOSS

Making a copy of critical data and moving it to a separate location has always been a best practice for enabling business continuity (BC) and disaster recovery (DR). The proximity of the locations to each other determines the amount of data that is at risk of loss when disaster strikes. Two systems in close proximity allow for synchronous replication and zero data loss; yet, the two sites potentially may be within the same impact zone of a major disaster, such as a large storm, earthquake or power outage. Placing the secondary site outside any potential disaster zone, however, requires the use of asynchronous replication, which results in seconds to hours of data at risk, depending on the distance and network latency.

Hitachi advantage: With a [multiple data center](#) solution from Hitachi, you can have the best of both worlds without placing any additional load on your production servers. Two sites in close proximity can be joined with either Hitachi TrueCopy synchronous replication or the more advanced active-active storage clustering of our global-active device feature. Hitachi offers both cascade and multitarget 3-data-center (3DC) topologies. In a 3DC cascade topology with TrueCopy, Hitachi Universal Replicator can provide asynchronous replication between the second site and a third site in a geographically dispersed location, anywhere in the world. Or, with either global-active device or TrueCopy, a multitarget 3DC topology that incorporates Universal Replicator can be used to send data to both the second and third sites directly from the primary site; this approach ensures resiliency if any one or two of the sites fail.

❑ 2. BUILD FLEXIBILITY, SCALABILITY AND AGILITY INTO YOUR BC AND DR PLAN

Many disaster recovery strategies consist of a collection of application-specific point solutions that must be individually maintained and managed. These must then be individually executed at the time of a disaster. This situation results in “hidden” costs and risks to the organization. These “hidden” costs and risks are a function of the recovery complexity that only gets worse as the organization scales up, provisioning new applications and/or data.

Hitachi advantage: Hitachi storage can consolidate all of your BC and DR processes using a flexible combination of [in-system](#) and [remote replication](#) capabilities. [Hitachi Data Instance Director](#) software also dramatically simplifies the configuration, management, automation and orchestration of these modern data protection technologies.

❑ 3. DATA CENTER RELOCATION OR MIGRATION WITH ZERO OR MINIMAL SCHEDULED DOWNTIME

As data volumes grow and business demands change, there may come a time when the current production data center will no longer meet operational requirements. Moving to a new facility can be a complex, time-consuming and costly project. How do you complete the move without experiencing unacceptable downtime and while maintaining your data protection and disaster recovery profile?

Hitachi advantage: Hitachi offers a range of nondisruptive data migration options. If the new data center is near the old one (within 500km), setting up a clustered storage relationship with global-active device, while maintaining the asynchronous replication to a disaster recovery site, will provide seamless data migration to the new site. Alternatively, over longer distances, Hitachi Universal Replicator with delta-resync provides effective migration of the data with zero data loss, and allows switchover to the new site with minimal scheduled impact to either production or DR service level agreements (SLAs).

❑ 4. OFFLOAD SECONDARY ACCESS REQUIREMENTS FROM CRITICAL SYSTEMS

You store your most vital data on Tier 1 or Tier 1.5 storage to support the business processes that drive your success. Granting data access to secondary business operations, such as test and development, finance and big data analytics, can put an unwanted burden on your storage and hamper its performance. Similarly, using your disaster recovery system for these workloads can put your resiliency at risk if an outage in your primary data center occurs.

Hitachi advantage: Organizations that have the highest performance requirements for their primary and recovery systems have found that Hitachi can solve this challenge: We provide a frequently refreshed third copy of their data in a separate system, often in a different location, such as the test and development lab. This solution is configured using a Universal Replicator asynchronous link between the disaster recovery system and the third system. Any actions taken by the users on the third system have zero impact on both the production and disaster recovery systems.

❑ 5. MAINTAIN CONTROL OF SECURITY, RESILIENCE, COSTS AND LONGEVITY

Many organizations are considering the use of a third-party “disaster-recovery-as-a-service” (DRaaS) solution as an option for storing a copy of their data, either in a vault or in the cloud. The primary benefits of these services are cost reduction and replacing large equipment capital costs with smaller monthly operating expenses. However, trusting your data with a third party exposes the organization to several potential risks. The most obvious risk is data security. The service provider may employ more advanced security protection than a typical business can; however, they are potentially a much bigger target for hackers, and you have no direct control of their employees and contractors. You also have to put your faith in their ability to recover from a disaster of their own to ensure continuous availability of your data, if that is even part of the service. Their low “pay-as-you-go” pricing models may be attractive today as the service providers seek to gain market share at the expense of profit margins, but as the service industry consolidates, those prices will likely rise. And, as has been demonstrated several times, the business failure of a service provider can make it nearly impossible to retrieve or move the data they have been storing for their customers.

3DC
Disaster
Recovery

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Hitachi advantage: Hitachi continues to develop and provide cost-effective data storage, business resiliency and disaster recovery solutions for organizations that prefer to maintain total control of their data assets. Equipment leasing options are available, offering an attractive alternative to “pay-as-you-go” services from third parties. Other solutions, such as managed or hosted services, can be tailored to meet specific customer requirements.