



Cloud Storage for Multi-Site Data Access

Imagine running a business where data storage is distributed across 20 geographically separated sites. How do you efficiently manage those sites? What happens when one site runs out of storage capacity? What if one site were hit with a disaster or flood? Surely there ought to be a centralized disaster site to protect against site outage or data loss, right? And who manages each site? Would there be an administrator at each site or traveling from site to site?

These questions may give you the impression that multi-site storage management across sites can be difficult. What can you do to ease this management burden?



Here are some of the key benefits cloud storage can deliver to simplify your multi-site infrastructure:

- 1) Accessibility to an unlimited pool of storage from each site that grows on demand— meaning never having to worry about running out of capacity
- 2) A centralized disaster site with unlimited bandwidth and multi-datacenter redundancy, network optimization and data security
- 3) A centralized portal that monitors and proactively alerts the health status of each site — without an onsite presence

Cloud storage does this via software or hardware hybrid storage appliances like CloudArray, that provides optimized data access from each site combined with a central point of management. CloudArray lets you recover your data virtually anywhere— on-premise, off-premise or even in the cloud using pay-as-you-go compute resources, all in minutes. There is indeed a better way to manage growing data storage needs across multiple locations.

DR Anywhere

For a business that already spans multiple sites, using one of their existing sites for disaster recovery (DR) may be beneficial, although, it may not be best if the fixed storage capacity would have to be doubled. With cloud storage secondary data copies can reside in the cloud on a pay-as-you-go basis. Using a cloud storage hybrid appliance, like CloudArray, allows instant access to data from any site if a primary site experiences a disaster. With Cloudarray's automatic and secure configuration backup, a quick download is all it takes to restore access to data from any site.

However, even with a secondary copy of data in the cloud, using an existing site for DR may not be a viable option for a number of reasons, including:

- Insufficient bandwidth/scale to aggregate replicated updates or provide access during a disaster



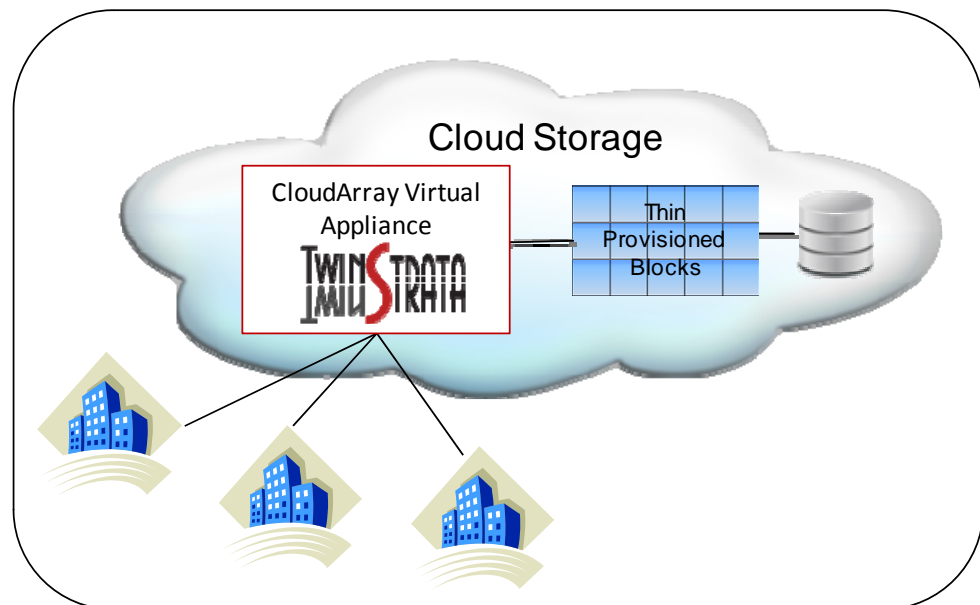
- Insufficient dedicated servers to bring up all critical applications during a disaster
- Lack of administrative staff to build and support a secondary site

With these constraints, using the cloud as the DR site can be a very compelling alternative. Recovering applications in the cloud means no dedicated DR infrastructure: no servers, no storage, and no staff to maintain that infrastructure. Since CloudArray runs in the cloud, accessing data in the cloud is just as simple as accessing from a new location.

One thing to take into consideration when using the cloud for DR is the process of restarting applications in the cloud. In a virtual environment, if the cloud provider runs the same hypervisor that is running on-premise, the process of recovering applications involves moving virtual machines. On the other hand, if the cloud provider runs a different type of hypervisor or it is operating in a physical server environment, conversion utilities or third party software may be necessary to restart applications in the cloud.

Compute Anywhere

A secondary site with excess compute capacity might be an ideal solution when purchasing additional dedicated hardware proves wasteful. With CloudArray, moving ownership of a data volume or a snapshot of a data volume between sites is simple. The data or a copy of the data is accessible wherever and whenever.



Without excess compute capacity at a secondary site or any site, and if growing server infrastructure is just not an option, another instance of CloudArray can be brought up in the cloud and analytics can be run using pay-as-you-go cloud compute, paying only for the compute cycles used, with no need to purchase additional hardware.

Not every cloud storage solution supports the capability to access your data for compute tasks anywhere. Some **gateways** make cloud storage look like a local storage array, with only a single local point of access. Other **appliances** appear as storage arrays, with an extra tier of storage in the cloud that is only accessed internally. CloudArray gives you all of the benefits of cloud storage, with local-speed performance, seamless interoperability and a multi-site distributed storage model.

Los Angeles Unified School District Consolidates 15 Sites in the Cloud

The Los Angeles Unified School District (LAUSD), the largest public school system in California and second largest public school district in the U.S. was at a crossroads in their search to replace some failing hardware in the individual sites and didn't want to continue purchasing storage, tape and file servers.

LAUSD chose cloud storage to address the situation. They placed TwinStrata CloudArray cloud storage gateway virtual appliances in 15 remote locations across the district to back up 80 TB of primary storage to the Amazon Simple Storage Service (S3) cloud.

Previously, each site required either BackupExec or homegrown archiving scripts to back up a file server and then write to tape or ship the data across the WAN to a central location. Now, the CloudArray virtual appliances, take daily snapshots in the S3 cloud, for all fifteen remote locations across the district.



LAUSD was able to deploy each site in less than an hour, and within 48 hours, all data was synchronized to the cloud with full disaster recovery capabilities to any one of its other sites. Just as important as quick setup, pay-as-you-go storage and like-local access to data were the cost savings. As a result of deploying TwinStrata CloudArray, LAUSD estimates it will save \$283,000 over five years by eliminating tape and using lower-cost commodity servers.

“After a fairly lengthy evaluation process, we chose TwinStrata over competing solutions because the combination of performance, ease of use, and storage array feature set provided everything we were looking for from traditional storage arrays and backup software for far less cost without the added maintenance overhead,” said Steve Saitman, senior systems specialist for LAUSD. “Moving to the cloud has not only reduced the cost and burden of maintaining the multi-site infrastructure, it has eliminated the need for future data migrations and costly upgrades. Our upgrade plans now are to simply purchase new servers every three years.”

Try CloudArray for Free

You can download a free CloudArray virtual appliance today and see how easy it is to start consolidating your storage in the cloud.

For more information, please visit www.twinstrata.com.