

Business Continuity

Enabling business resilience with Vcinity's access-on-demand solutions

BENEFITS

- Near-zero RTO with greatly improved RPO
- Enables instantaneous access to backup data in-place before primary site is fully recovered
- Allows entirety of datasets to be backed up rather than needing to prioritize data
- Reduces time for backups – backup window time and the number of backup windows required
- Minimizes bandwidth amount required for remote transfer of large datasets
- Provides flexibility for selecting a remote target backup site



Challenge

Business continuity strategies are being compromised by explosive data growth in terms of capacity and geo-diversity imposing a significant challenge for data protection operations such as backup/recovery, disaster recovery and avoidance, data center synchronization, and application failover. Data is growing beyond what traditional solutions can handle given the constraints of today's economics and associated distance limitations. As a result, businesses are unable to meet SLAs for Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO) creating a scenario where business operations are becoming highly vulnerable. The answer to these serious challenges cannot include regressing back to selectively prioritizing which data to move or shipping physical copies of data between sites. Both options hamper business's resilience creating a significant risk.

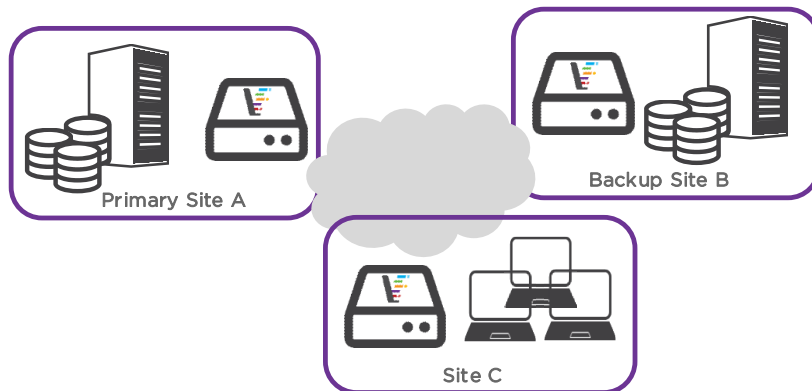
As such, the target backup approach now needs to leverage more distributed sites potentially at greater distances from the primary location. However, inherent limitations associated with existing transfer methods over long distances pose major barriers and adversely impact:

- The amount of time allocated to the backup window - expansion of which could go beyond the typical off-peak backup hours impacting productivity during regular business hours
- The need to prioritize the type of data to be backed up
- The amount of bandwidth to accommodate the transfer of the large datasets
- The speed at which the organization can restore their data from the backup site or gain access to it in case of disaster recovery or to maintain business continuity
- The options available for selecting the most economical distant location for the target backup site

The Vcinity Solution

Vcinity's performance scales with data growth meeting the most aggressive RTO/RPO objectives while transferring, providing access to, and recovering data predictably, independent of distance. These solutions enable more efficient transfer of data, and/or the ability to naturally access data where it resides. In the deployment scenario shown in Figure 1, sites A and B are configured so they can be used in active-active or active-standby configurations replicating data between each other as required. The user at site C can access either site A or B or both depending on the use case. The solution facilitates the following options:

- Real-time synchronization: In active-active or active-standby configurations, the solution enables sites A and B to be kept in sync in real-time by the deterministic, highly efficient mechanisms of the Vcinity technology. As both sites are in sync, if one of the sites fails, Vcinity helps achieve near-zero RTO and greatly improved RPO.



Primary Site A to Backup Site B – Replicating/Connecting Storage
 Site A/B/C to Site A/B Storage – Remote Access

Figure 1. Seamlessly enabling business continuity with Vcinity's solutions

- Reduced time for backup or recovery of large datasets: Vcinity allows for smaller backup windows or the ability to protect larger amounts of critical information within the current backup timeframes.
- Remote access to data: In the event of a primary site failure, Vcinity enables site C applications to access the data at standby site B. This is facilitated without the penalty of additional distance and latency attributes allowing for a transparent experience in accessing backup data while the primary site is being recovered.

The Vcinity approach seamlessly integrates and complements existing backup/recovery tools and processes. The solution links together data storage resources across disparate locations by creating a global storage fabric while removing the traditional barriers associated with longer distances. This enables the remote data to appear local to the existing backup and data replication solutions. These solutions can then leverage their native processes to transfer data as required.

In addition, Vcinity minimizes the amount of bandwidth needed to transfer large datasets and allows for greater options in selecting placement of the target backup location. More economical, preferred sites previously ruled out due to connection size and distance limitations can now be considered. Overall this results in guaranteed service up-time, streamlined business continuity processes, improved economics and workflow transparency.

Key Performance Indicators

Vcinity's Ultimate X™ (ULT X) solution recently showcased its scalable performance by transferring 1 Petabyte in less than 24 hours over a 100Gbps fiber link across 3,000 miles.

The ULT X solution has also proven to backup a variety of datasets with significant improvement (up to 66 times) across ~4900 miles compared to existing TCP/IP and UDP-based extreme file transfer methods.

Data Transferred	TCP Protocol		Vcinity	
	Per Hour	Per Day	Per Hour	Per Day
10 Gb @ 15ms	910 GB	21.9 TB	4.35 TB	104.4 TB
10 Gb @ 40ms	353 GB	8.49 TB	4.32 TB	103.8 TB

Without Vcinity
 61% reduction in amount of data moved solely due to distance

With Vcinity
 <1% reduction in amount of data moved due to distance

Backup/Replication Windows	TCP Protocol		Vcinity	
	@ 15ms	@ 40ms	@ 15ms	@ 40ms
100 TB @ 10 Gb (1 window)	110hrs	283hrs	22.9hrs	23.1hrs
100 TB @ 10 Gb (# 8 hr windows)	14	36	3	3

Without Vcinity
 3x increase in # of maintenance windows to migrate data due to distance

With Vcinity
 NO difference in # of maintenance windows, even when doubling the distance



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