

Backup with ReachIO

Simplifying Backup Windows

BENEFITS

- Eliminate the need for onsite backup copies
- Reduce the storage requirement for backup data by 50%
- Eliminate replication windows
- Continue to meet existing RPO and RTO goals
- Maximize the utilization of your WAN

Performing backups has always been a chore; there is simply never enough time. Increasing pressures on Recovery Point Objective (RPO) and Recovery Time Objective (RTO) don't align well with the continuous explosion of data. The hope is that data in the backup set is never required—that it's simply an insurance policy. However, that insurance policy is expensive. When called upon, the backup sets protect against two different needs: operational restore and disaster restore.

To satisfy both needs, the traditional approach is to always maintain two backup copies of each cycle; one copy onsite and one offsite with the sole reason for the onsite copy being to service fast restores. What if the offsite copy supported fast restores? Both types of demands on backup could be serviced by a single backup copy.

Until Vcinity's ReachIO™ was introduced, this idea was impossible because the RTO would suffer for restores served by offsite data; it is just too slow. By exploiting the Ultimate X® (ULT X) solution from Vcinity™, distance is taken out of data by constantly achieving LAN performance over WAN links for the entire backup and restore cycle. While this might sound impossible, the 'single' backup image is (from a geographical sense) both 'here' and 'there' with Vcinity ReachIO.

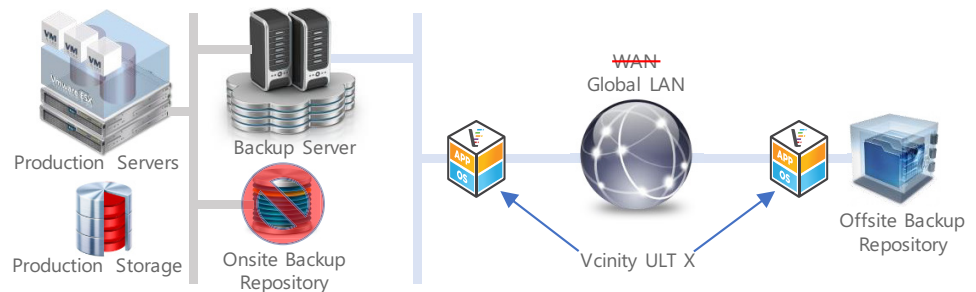


Figure 1. Data protection topology

Vcinity's ULT X is configured as a local NFS/SMB share for local backups as shown in Figure 1; however, local copies are not required. How? Simple—the data for backups written to the onsite ULT X is saved offsite. ULT X at the onsite location receives backup output and stores it permanently at the offsite location exploiting ReachOut™, the output side of ReachIO. ReachIO extends LAN performance across thousands of miles while exploiting the existing WAN. The result is the WAN is converted into a global LAN. For all intents and purposes, offsite backups are onsite for operational restores, but offsite for the purpose of business recovery in the event of a disaster.

Relief on the 24-hour window is realized because the offsite replication process of the backup cycle is eliminated. The backup window accomplishes the off-siting of the data returning the time assigned to replication to other uses depicted as 'New Idle' in Figure 2. Now the 24-hour backup cycle is completely different returning a total of 7 hours back to idle time.

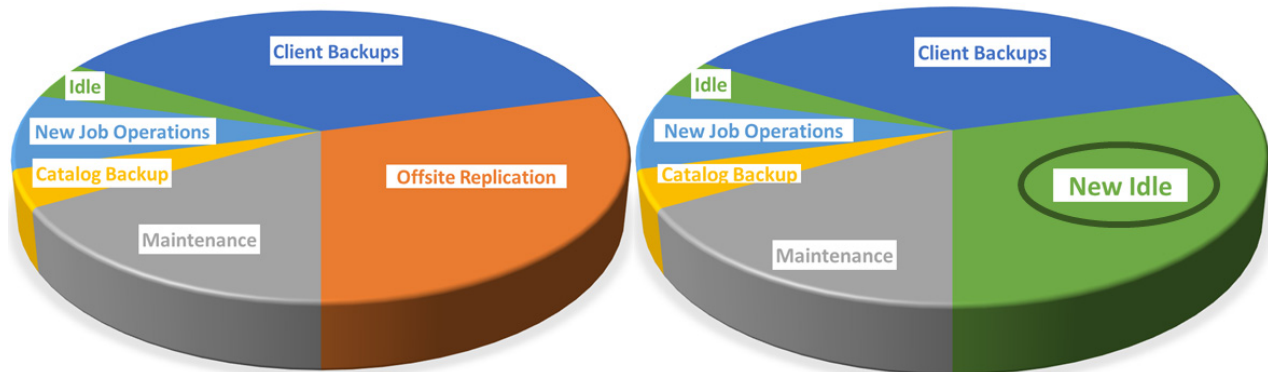


Figure 2. Before and after view of new 24-hour backup window

The question left to be answered is the ability of ReachIn™ to perform at a satisfactory level when doing a single stream restore.

Restore Source	Elapsed Time	Throughput
Onsite	0:00:34	700 MB/s
Offsite	0:34:06	14 MB/s
Offsite with Vcinity	0:00:33	710 MB/s

Table 1. Single stream restore performance comparison

Table 1 shows results from tests performed between San Jose, CA and Germantown, MD, in which the two locations were connected by a dedicated wave. A single stream restore request drove performance over the link between offices over 2,500 miles apart at 710 MB/s. This is equivalent to the performance measured when performing a restore of the same file from an onsite repository, proving 'there' is now 'here'.

ReachIO is compatible with all the major backup applications including, Cohesity, Commvault, NetBackup, Networker, RMAN, Rubrik, Spectrum Protect and Veeam.

In summary, ReachIO provides relief to the backup window and general daily tasks by:

- Eliminating the offsite replication process
- Maintaining the ability to satisfy tactical restores
- Functioning as if there were a local backup copy—'there' (offsite) is now 'here' (onsite)
- Providing immediate, tangible savings in storage by eliminating the need for two copies
- Creating greater flexibility to consider offsite backup locations based upon cost not distance
- Reducing backup copies in two locations down to one