

City of Bloomington Builds Community with the Help of Hybrid Storage

| Case Study I

THE CLIENT

Founded in 1858, the City of Bloomington, MN has grown to an urban center with over 85,000 residents and 500 full-time government employees. Maintaining the highest triple-A bond ratings from Standard and Poor's, Moody's and Fitch, the fiscal responsibility of the city is only matched by their responsibility to the citizens. Tasked with building and renewing the community through affordable services, the City of Bloomington must be able to process everything from zoning permits to road maintenance.



GOALS

In an attempt to refresh their storage capabilities, the city wanted to increase their capacity and performance in order to realize a virtualized environment.

CHALLENGES:

Implementing a virtualized environment requires a high level of performance that is not always available on legacy disk arrays. Issues such as VM density and managing hot spots can jeopardize entire networks if the Input/Output Operations per Second (IOPS) are not high enough. The traditional fixes to this problem are either to add spindles or switching to all-flash alternatives which are neither cost effective nor adequately solve the capacity vs. performance trade off. In order to efficiently implement a VMware environment, the City of Bloomington needed a cost effective way to improve storage performance without sacrificing their capacity.

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THE PARALLEL SOLUTION: A Unique Hybrid Storage Array

In order to refresh Bloomington's storage architecture, Parallel Technologies understood the need to build on existing arrays and improve the performance without having to do a complete storage overhaul. Parallel conducted a vendor independent assessment of potential solutions for the city, and concluded that the Tegile Zebi, an advanced hybrid storage system, fit both their storage need and was within budget.

The Tegile Zebi is uniquely adapted for VM environments, as it brings the IO performance, simplified management, and protection features necessary to get the most out of their network systems. This is because virtualized servers have highly random read and write I/O that can cause boot storms or other malfunctions. And without an insurance that your system has enough to handle this high read, every boot up can be a gamble.

RESULTS:

Leveraging the strengths of DRAM, Flash SSD, and rotating disk, the Tegile Zebi provided the City of Bloomington with the performance boost they needed. With the Zebi, IO performance is multiplied up to 7x that of their legacy arrays, allowing for higher VM density and strong performance. Because user sets are generally similar between the OS and applications in virtualized environments, the Zebi's unique in-line deduplication cuts unnecessary copies of data which decreases capacity usage by 75% on average. The ability to cut waste while increasing IOPS allowed the City of Bloomington to refresh their storage capabilities and competitively install their VMware environment.

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