

Tegile Systems Partners with West Monroe Partners' Performance Services



West Monroe's team is made up of an uncommon blend of business savvy consultants and technical experts that work together to achieve sustainable success. Their business consultants are driven by opportunities to contribute to company's commercial success. West Monroe partners with companies to help generate revenue, reduce costs and transform thinking, operations, and capabilities.



Industry

- Professional Services: Managed Services Practice Line

Challenge

- West Monroe Partners (WMP) Performance Services team needed to address a variety of issues negatively affecting a high performance database workload; poor performance was threatening WMP's ability to meet customer SLA response time; perform system and application maintenance as well as back up the database successfully.

Solution

- WMP added Tegile's all-flash technology to deliver the performance needed by their critical database workload.
- WMP also utilized Tegile's hybrid technology to address general virtualization workloads to support the rest of Performance Services' solution delivery stack.
- In addition, WMP deployed an all-flash array in a HA site to support immediate database failover of its critical applications.

They are also deep technical experts dedicated to building solutions that address the toughest technology and business challenges. Their work is measured on its significance—the impact they have businesses and the value they create.

West Monroe Partners thrives in high pressure, high stakes environments and own the outcomes of their work.

WMP's multiple solution areas and industry teams work with powerhouse customers in a variety of industries, including financial, insurance and healthcare, providing technology solutions for mergers and acquisitions, operations excellence and managed services. The Performance Services team specifically delivers a variety of operational services to clients ranging from Service Desk to Data Center Management and Engineering to Application and Data Management.

Since Performance Services must be the IT support and strategic counsel for its customers, the company is required to support a variety of applications for their own operations – service desk and ticketing platforms, monitoring platforms, remote control platforms and software distribution platforms. All of these must run flawlessly so that WMP can in turn provide excellent customer services to their clients.

According to Justin Stefano, Director of Performance Services, "Businesses nationwide look to us for management and technology expertise. It is important for us to set an example when it comes to effectively and efficiently managing our IT operations and Infrastructure."

The Challenge: WMP had a number of issues impacting the performance of a critical database workload; these challenges were threatening Performance Services' ability to scale effectively while maintaining customer SLA response time; was impacting basic system and application maintenance as well as putting database backups at risk.

Given WMP's wide ranging area of IT expertise and services, a high powered solution to manage delivery of their high performance database workloads was needed. The main struggle for WMP prior to deploying Tegile Systems was poor performance of their critical monitoring platform caused by database latency.

"These challenges were threatening Performance Services' ability to scale effectively while maintaining customer SLA response time; were impacting basic system and application maintenance, as well as putting database backups at risk," said Justin.

Performance Services' server infrastructure is 100% virtualized on VMware. Their monitoring platform is comprised of multiple Linux systems with a MySQL back end. The rest of their

service delivery stack is a mix of with Windows 2012 and 2008 VMs delivering customer facing services. WMP utilizes Cisco Networking and HP servers. Their storage protocol is 10G iSCSI.

"Customer response time is critical in our business. If a client has a critical issue, our monitoring system alerts us and our NOC begins the remediation process immediately. Anytime we have issues impacting the availability of our monitoring application we could put our clients at risk," said Justin. "As load started to increase on the system, post recovery or maintenance restart times could take 20 minutes or more and once up it could take another 20 minutes for queued alerts to start flowing back to the NOC, potentially delaying customer response up to 40 minutes, putting SLAs at risk. Additionally, it could take telemetry and performance tracking data useful in troubleshooting client problems 2 to 24 hours to catch up depending on the monitoring load on the database. We were forced to modify and disable automated database maintenance tasks during high-load timeframes, delay maintenance and upgrades, and most frustratingly, we had to slow down a critical project to convert all of our clients to our chosen platform due to these performance issues."

"Long IO wait times due to latency on our storage platform was the root cause of our performance issue. We worked with our incumbent provider, for many months to address this issue, but ultimately we had to look for another vendor," said Dan O'Connell, Infrastructure Architect in Performance Services. The incumbent vendor recommended upgrading to their top-end array and adding additional cache in order to fix the issues WMP was experiencing, but at that point, WMP did not have confidence the existing storage architecture would address its challenges.

"The main challenge for us was that our critical application does not cache well. Our previous vendor's caching-only hybrid architecture and was not a good fit for our tremendously high performance workload," said Dan. "What we needed was an all flash system but that was not on their menu. So

we looked elsewhere and that was the first step in discovering what Tegile could do for us. We researched other arrays and only Tegile could meet all our requirements."

The Solution: Tegile's All Flash Array to deliver maximum low-latency performance, superior data reduction and density and shorter reboot, start-up and back-up times

Tegile arrays feature four eight-core Xeon processors, significant memory, sizable read and write caches using flash, multiple networking interfaces, dual power supplies and hot disk spares to provide high performance at low cost. The systems' software simplifies administration and optimizes storage for various applications, including virtualization, file services and databases. All-inclusive pricing for features such as auto-snapshot, auto-replication, near-instant recovery, on or offsite failover, and virtualization management provides simplified software licensing at a fraction of the cost of storage incumbents.

Dan and his team researched many solutions before deciding on the Tegile platform.

"Compared to Tegile, I thought offerings from the big-name legacy vendors were too expensive and complex or lacked the performance needed or data reduction services we wanted, while then next-gen vendor solutions were incomplete- lacking the ability to deliver both all-flash and hybrid options." Said Dan. The incumbent vendor was excluded because it lacked a true all-flash option needed to guarantee low latency.

WMP decided to test Tegile Systems to see if it could solve their many challenges and once deployed, they were astonished with the results. WMP installed a Tegile all-flash array to address their critical workload.

"In addition to delivering high speed and low latency, we found that Tegile could offer us superior data reduction, with inline compression and inline deduplication giving us additional density," said Dan. "The

clinchier -- Tegile offers all-flash as well as hybrid solutions, so we could extend the solution to other workloads in the future"

Dan and his team noticed an immediate improvement. WMP saw a minimum of 20X performance improvement. Latencies that were averaging > 20ms with spikes of 4X that number dropped to sustained sub millisecond. System backups that used to take 36 hours could now be completed in six hours, and start-up times for the critical database system went from 20 to two minutes. In addition - they achieved 69% data reduction on their monitoring platform from 5.9 TB to 1.8 TB.

Maintenance was no longer a challenge with Tegile in place; reboots dropped to two minutes, and there was virtually no "catchup" for re-ingesting queued data. High load periods no longer noticeably impacted performance so database maintenance tasks could remain on at all times as intended.

The Tegile infrastructure deployment took only a few hours - much to the delight of the WMP IT team. Dan said. "Deploying legacy platforms (as I have done in the past) would have taken us days - we've saved so much time with Tegile."

Since the initial installation of Tegile's all-flash solution, WMP has deployed another Tegile flash array in an HA site and a second hybrid array was purchased to host the remainder of the managed services' applications stack in their primary site. WMP Performance Services is now **100% on Tegile.**

"When we installed Tegile we weren't sure of what to expect at first," said Dan. "But Tegile products had everything we needed to meet our challenges, protect our critical business delivery systems, and keep up with the rapid growth of our practice."

