PLEX Manufacturing ERP

Benefits

Plex was looking for a solution that would provide real-time monitoring, data collection and analysis of infrastructure performance including availability, throughput, response time and resource utilization, as well as workload and storage I/O performance.

The Virtana product portfolio met all of the requirements. Virtana WorkloadWisdom provides workload performance analysis to find optimal storage configurations across a range of workload types running on a variety of systems, storage, and networks.

"We use Virtana to detect performance anomalies and quickly identifying errors before they affect customer operations."

Darrel Schueneman
Team Lead, Storage Infrastructure

Virtana Empowers Peak Performance for the Plex Manufacturing Cloud

Customer Overview

Plex is a leader in cloud-based manufacturing ERP and MES software for a variety of industries including automotive, aerospace, food and beverage, industrial machinery and precision metalforming. With an end-to-end solution that captures information from the 'shop floor to the top floor' for analytics and reporting, Plex enables its customers to make crucial business decisions more quickly and efficiently.

The Plex Manufacturing Cloud is distributed across four data centers that house several petabytes of Hitachi and EMC storage connected via Cisco switches, serving approximately 600 customers across 2,000 facilities in more than 20 countries.

Background

As Plex has grown, continuously improving its IT infrastructure has remained a priority to maintain high levels of performance and reliability. As part of this effort, Plex is constantly evaluating system performance, reliability and scalability. Against a backdrop of healthy global growth, Plex decided to increase their investment into server and storage infrastructure health and performance monitoring to meet customer requirements for performance, reliability, and scalability.

Plex was looking for a solution that would provide real-time monitoring, data collection and analysis of infrastructure performance—including availability, throughput, response time and resource utilization, as well as workload and storage I/O performance. Because Plex's cloud- based solution is hybrid, it was important that the solution work seamlessly across physical and virtual environments. In addition, Plex had several important technical requirements.

Technical Requirements

- Monitor
  - VMware virtualization
  - Communication between VMware and storage arrays
  - Traffic between storage arrays and back-up data
  - Communication between SQL servers and storage arrays
  - Fibre channel storage (all aspects)

- Collect both real-time and historical data for deeper insight— in order to enable proactive management and trend analysis
- Provide pre-production storage/workload validation
- Tight integration with VMware, Cisco switches, EMC and Hitachi storage
- Quick installation and time-to-value

Solution

The Virtana product portfolio met all the requirements. Virtana WorkloadWisdom provides workload performance analysis to find optimal storage configurations across a range of workload types running on a variety of systems, storage and networks.

Virtana VirtualWisdom application-centric infrastructure performance management offers real-time insight into performance across Plex's multiple cloud-based data centers. Using these solutions, Plex is able to meet customer requirements for performance and reliability, as well as resolve issues before they impact customers. Let's look more closely at some specific results.

Results

Plex provides a mission-critical cloud service. Even a minute of downtime or unacceptably slow performance can mean lost revenue or productivity to its manufacturing customers. With VirtualWisdom, Plex is able to address problems proactively, resolving performance-related issues with real-time monitoring of critical infrastructure components.

For example, Plex monitors storage infrastructure in real-time, looking at fibre channel traffic and storage arrays at a very granular level that isn't possible with alternative monitoring solutions. Darrel Schueneman, Team Lead, Storage, at Plex Systems noted, "The Plex Cloud must be very responsive, with storage and fibre channel infrastructure running optimally at all times. For example, we use Virtana to detect performance anomalies in fibre channel communication, quickly identifying errors and replacing faulty components in our physical infrastructure before they affect customer operations. Without VirtualWisdom we would spend

days to find issues like that, with a huge potential cost to both Plex and its customers."

Schueneman continued, "After the PowerPlex user conference, our customers tend to adopt and use new aspects and features of our applications, based on what they learned at the conference. Using tools like VirtualWisdom ensures we are covered for any spikes in usage by expanding to add more throughput or storage capacity."

WorkloadWisdom allows Plex to run tests that simulate production workloads to capture performance metrics. When Plex was evaluating the EMC VMAX storage array pre- purchase, WorkloadWisdom was used to validate EMC performance claims. Virtana set up the configuration in the EMC test lab, gathered the workload profiles, set up a simulation to mimic production scenarios, studied workload patterns and helped Plex perform all the testing—concluding that the EMC VMAX met or surpassed Plex's performance requirements.

Finally, Virtana's partnership with Cisco is very important to Plex. Schueneman observed, "With most of our storage being EMC and our heavy use of Cisco switches, we are able to get critical information across our entire infrastructure, which makes it easier to identify trends and tie different events together."

Next Steps

VirtualWisdom is currently deployed in all four of Plex's data centers. As Plex grows and expands its footprint, the company will continue to rely on Virtana solutions to improve performance and availability for Plex customers. In addition, Plex is working with Virtana to integrate with other infrastructure management elements including ServiceNow, to improve automation and show trends, linkages and dependencies across infrastructure.

One of Plex's other goals is to extend the use of automation throughout the Plex Manufacturing Cloud, creating processes that are repeatable and consistent. Automating those processes to do things such as configuration and capacity planning is the next phase. The Virtana product portfolio is in lockstep, providing information on historical trends as well as real-time data to support automated tasks.

Learn more about VirtualWisdom

Contact a Virtana Expert

View more Resources

Virtana
2331 Zanker Road
San Jose, CA 95131
Phone: +1.408.579.4000