

# Global Manufacturing Company Works with Virtana and Serious Solutions to increase NFS performance



## ABOUT

**Industry**  
Manufacturing

**Headquarters**  
USA



## OBJECTIVE

Gain definitive insights into causes of and solutions for slow-downs in key workloads



## RESULTS

Zero guesswork on how to drive responsible capacity growth and significantly reduce MTRR

### ABOUT:

This diversified global manufacturing Company provides solutions to customers by bringing technology and engineering together in the industrial, commercial, and consumer markets worldwide. The Company operates through four segments: Process Management, Industrial Automation, Climate Technologies, and Commercial & Residential Solutions, with annual revenues exceeding \$20 billion.

This Company has two core business platforms — Automation Solutions and Commercial & Residential Solutions, to help customers confront the challenges of an increasingly complex and unpredictable marketplace from a position of strength. A complex business application suite is core to running the business end-to-end and is dependent on block-based Oracle apps running on IBM SSD-based arrays and NetApp file-based (NFS) apps working together. The NFS platforms are NetApp FAS systems, often called filers.

### THE CHALLENGE:

## Inconsistent workload performance with no root cause

A NetApp filer system exhibited performance problems, and due to the criticality of the mission-critical (MC) application, the Customer had to solve them. Specifically, when they created a large number of files on their filer, it would impact the application running on the block FC array. The short-term workaround was to delete files, then recreate them.

The Company is a long-time, highly-satisfied Customer of Virtana for SAN infrastructure monitoring. Through the years, this Company has used Virtana to help tune its systems to optimize performance, availability, and cost.

The Company knew Virtana would be a natural fit for the NAS / NFS investigation. They brought Virtana in to do an Infrastructure Monitoring. Infrastructure Monitoring are specifically designed to test the health, utilization, and performance of critical IT infrastructures.



With the help of Virtana’s Professional Services (PS) team, the Company used Virtana’s Infrastructure Monitoring and the NAS Performance Probe to baseline existing performance on their existing filer, then again on their new filer, to provide delta reports. Once the Virtana PS team completed the Infrastructure Monitoring instrumentation, the team analyzed their two primary filers and made recommendations. Virtana partnered with Sirius Solutions, whose customer relationship and keen understanding of the Company’s IT environment were key to the success of the investigation and solution.

**THE SOLUTION:**

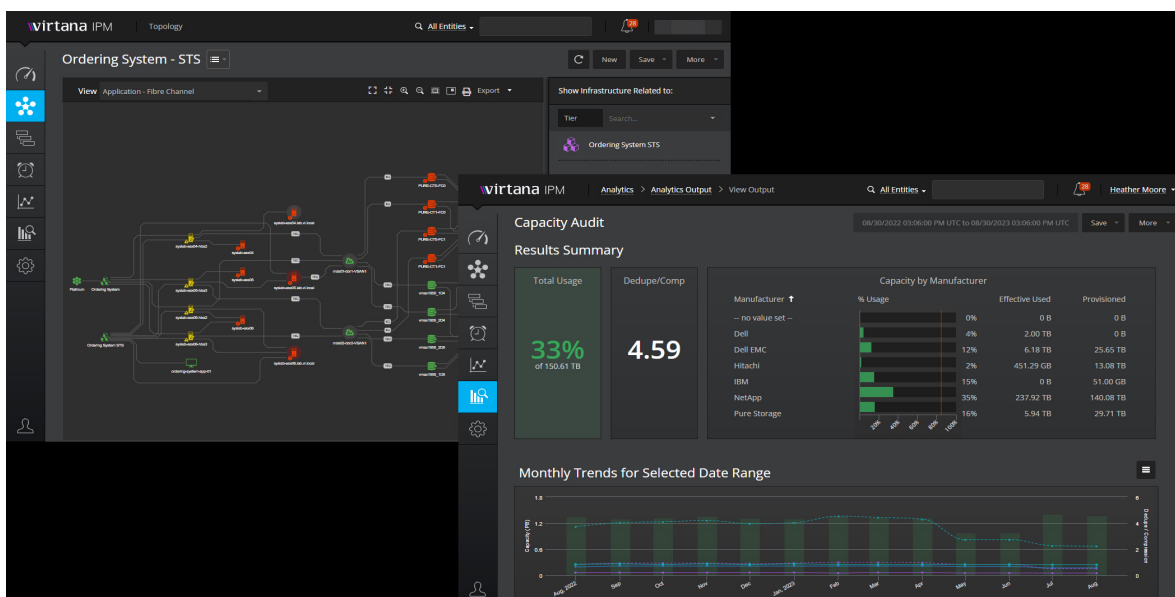
**IPA with deep insights and actionable resolution**

The Virtana team provided the first empirical NAS-to-FC protocol correlation to show the NAS filer impacting the FC environment.

Virtana discovered that some of the Customer’s hosts were driving both FC/SAN and NAS workloads.

The test provided evidence of the need for a 2nd filer that was dedicated to the MC app. Performance problems were attributed to the scale of files and impact of daily clean-up processes.

Filer 1 was running multiple applications, and the performance of the MC application limited the number of files that could be created before they had to be removed. When the same workload ran on filer 2, which was dedicated to this app, the number of files could be significantly increased before they needed to be removed.





**THE RESULTS:**

**Stronger, consistent performance with lower costs**

The Company uses Virtana's Infrastructure Monitoring solution to gain comprehensive, real-time instrumentation and measurement insights that allow their IT managers to identify the causes of workload performance problems before they become outages. Specifically, they realized these benefits from the Infrastructure Monitoring service:

- Identified causes of potential slow-downs definitively and provided corrective action
- Enabled to accurately monitor, analyze, and optimize performance in real-time, with no impact on application hosts
- Eliminated guesswork by leveraging quantitative modeling and proved the need for additional capacity



The Company considers Virtana products and professional services as an essential part of its overall data center optimization strategy. They are using Infrastructure Monitoring not only to optimize the health, utilization, and performance of resources, but also to make sure they are being responsible in managing their costs. The Company was so pleased with the Infrastructure Monitoring service that they purchased a NAS Performance Probe to complement their existing FC SAN based monitoring. The next steps for the Company include looking at how they can leverage Infrastructure Monitoring in other groups to optimize other major environments.