



Insight Enterprises

Utilizing Infrastructure Instrumentation & Monitoring to Reduce Business Risk and Improve Cross-silo Collaboration

Company Overview

Insight Enterprises Inc. is a Fortune 500 global technology company that focuses on business-to-business and information technology (IT) capabilities for Mid-market, public sector and enterprise organizations. Insight has offices in 22 countries with operations in 200 locations, with North America data centers in Phoenix, Chicago, and Montreal.

IT Environment

Most of Insight's strategic business-critical applications utilize SAP and Oracle deployed on IBM AIX servers. Host operating systems include Red Hat Linux and Windows.

VirtualWisdom is monitoring Insight's Tier 1 storage, which is mostly EMC XtremIO using VPLEX, with everything connected via Brocade switches. IT does everything from supporting revenue generating systems, which include a digital marketing engine, sales, customer relationship management and order processing, to running the global network operations center. In addition, IT also serves as a reference for prospective Insight customers. Insight is a value-added reseller, so they are their own best reference for their partners and clients.

Challenges Overview

From a maturity standpoint, IT at Insight has come a long way. Two or three years ago, there were a lot of challenges in the environment...systems instability, intense firefighting and a lack of collaboration.

Carlos Sotero, an Insight IT Director, with global responsibilities for data center, user collaboration, database and IT service assurance notes, "We no

CASE STUDY

“If you want to see what's going on in your environment on a day-to-day basis, hour-to-hour, or, minute-to-minute basis, use VirtualWisdom. You set up your reports and you can look and see the complete environment in a matter of minutes. You can be proactive versus reactive and that's a huge win for everybody.”

Greg Arnerich
SENIOR DATA
CENTER ENGINEER

“I look at the VirtualWisdom platform more like GPS. It gives you precision and data to know exactly where you are and where you need to look. That's not something I've ever seen in another product before.”

Carlos Sotero
IT DIRECTOR

longer want to be focused on issues that keep us up at night, but what gets us up in the morning. The Insight IT team must maintain a level of stability and credibility with the business functions. With the help of VirtualWisdom, we've been able to transform our data center into a modern data center with the agility needed to say yes to the business with confidence. Virtual Instruments has been integral to that transformation."

Key Challenges

1. The Insight IT team has to meet high standards. According to Carlos, "Performance and availability of critical, client-facing systems are one thing that gets measured. In addition to that, how are we doing from a budget perspective? And what's unique to us is: what are we doing to transform and be our own best reference?"
2. According to Greg Arnerich, senior data center engineer, maintaining performance SLAs was always an ongoing challenge. Prior to deploying VirtualWisdom, he used to regularly get calls from the database, host and application teams, which usually started with, "my system is slow."
3. Before VirtualWisdom, Insight used reports from their storage vendor. Because the storage usually always looked good, it was hard to troubleshoot. Some examples of this type of challenge: a batch job running that someone forgot about, or a hung process, or antivirus software running on a Windows box at the same time that backups are running. Without end-to-end infrastructure monitoring, these were very difficult to troubleshoot.
4. Latency issues were reported to the storage team, but according to Greg, "95% of the time the actual cause of the problem wasn't the storage system."
5. Due to resource contention, backups would not always complete on time.
6. There was a sense that VM use was unbalanced, wasting financial and staff resources, and causing unnecessary latency issues.

Solution Investigation

Insight evaluated several solutions to simplify storage reporting and problem identification. They looked at traditional storage reporting management and SRM solutions, using a formal Vendor Evaluation Matrix, which considers factors like performance, security, analytics, reporting, and cost.

Greg first ran into Virtual Instruments at an industry conference, liked what he saw, and brought in the rest of the team to do a complete evaluation. During the Proof of Concept test, the VI team actually corrected a known, lingering problem, and the Insight team was sold on the value.

Carlos explained that his team found that the level of precision and the level of information that he could get from the VirtualWisdom platform is unmatched. He explained, "I was previously a storage administrator. So, ten years ago when I had to troubleshoot a storage performance issue it would be a matter of looking through logs, guessing, tweaking something here or there, hoping the database administrator wouldn't ask me again. Today, my team has the capabilities to figure out what those issues are before I get a call."

"The value of VirtualWisdom is to see everything from the system through the fabric through the storage at one time. I can look at everything in one picture. I can look at the whole environment and see what's going on at that particular time."

Greg Arnerich
SENIOR DATA
CENTER ENGINEER

"It's no longer finger pointing or mean-time-to-innocence. We're actually able to correct and identify the problems with data, whether that's an infrastructure issue, something in the database layer, OS layer, or whatever. It gives us that precision to solve problems instead of guessing and hoping it doesn't happen again."

Carlos Sotero
IT DIRECTOR

The VI Solution

Insight acquired VirtualWisdom, with SAN Performance, Switch, and Virtual Machine Probes, including use of VI Professional Services.

A Critical Infrastructure Assessment (CIA) was delivered early in the deployment. Based on the assessment, the IT team made several impactful changes. Greg observed that “the VI professional service team is awesome, because they were able to show me how to not only use the product but how to troubleshoot and correct several issues in our VM and storage environments. We created a lot of change tickets based on the CIA.” He added, “They were able to educate me and get me to look at things like buffer credits, and a lot of other things I’d never looked at before. It’s amazing what you can learn from them; the transfer of knowledge was enormous”.

Benefits of the VI Solution

Virtual Instruments’ VirtualWisdom infrastructure performance monitoring and analytics products provide comprehensive, real-time instrumentation and measurement that allows IT managers to optimize the three IT imperatives of Cost, Risk, and Cycle Time. VirtualWisdom enables IT managers to optimize the performance, utilization, and availability of their physical and virtual IT infrastructure.

1. According to Greg, “The value of VirtualWisdom is to see everything from the system through the fabric through the storage at one time. I can look at everything in one picture. I can look at the whole environment and see what’s going on at that particular time and that’s the best way to troubleshoot a problem.”
2. Metrics that other monitors simply can’t see are fundamental to VirtualWisdom. Thanks to the unique physical layer metrics, Greg goes on to state “I got a latency call. Using VirtualWisdom, we noticed that the fabric switches looked like they were having some low light levels. So we cleaned the cables as well as the ports and the latency problem was gone.”
3. Problem solving is done scientifically. According to Carlos, “Before VirtualWisdom, we’d get on an incident management bridge and try to figure out what the issues were. Today, it’s not that those don’t happen, but it’s no longer on a daily basis, and when it does occur we actually have the ability and the instrumentation to immediately figure out what the issue is. It’s no longer finger pointing or mean-time-to-innocence. We’re actually able to correct and

identify the problems with data, whether that’s an infrastructure issue, something in the database layer, OS layer, or whatever. It gives us that precision to solve problems instead of guessing and hoping it doesn’t happen again.”

4. Teamwork is vastly improved. Daily reports are generated and sent to the various IT teams to show them the health and performance of their systems, from the point of view that makes sense to each team. Because of the breadth and depth of the reports, using data from the SAN Performance, Network Switch, and Virtual Server Probes, VirtualWisdom reveals issues in the application development environment and actually helps to troubleshoot problems with code.
5. VirtualWisdom analytics are used to show the VM admins if there is over or under allocation of resources on an ESX host, and recommend how to move the VMs to balance usage, significantly improving performance. During the CIA, VirtualWisdom Analytics showed that the VMs were approximately 60 percent unbalanced. Greg states that “We’ve fixed a lot of issues with the analytics.”
6. Insight uses Virtual Instruments to balance existing resources, to ensure that backups, snapshots and clones are done effortlessly with no impact to the business.
7. Going forward, Insight is looking at how we they can leverage VirtualWisdom to de-risk major initiatives, like transitioning from an IBM AIX platform to an X86 platform to help lower their overall costs.

Summary

Insight views Virtual Instruments as an essential part of their overall data center modernization strategy. Beyond providing the most stable possible platform for today’s customer-facing applications, they want to make informed decisions when making major platform moves: How to size things, what can be moved, can applications be moved to the cloud? Insight will use the data and metrics from their VirtualWisdom deployment to build workload models in Load DynamiX Enterprise, and right-size future deployments. According to Carlos, “When you do these type of things, everybody over-provisions and you wind up with 3x what you need in order to match or even improve workload performance. We’re leveraging and looking at it not only to de-risk IT, but also to make sure financially we’re being responsible as well.”



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