

Replacing Legacy IBM Spectrum Control Deployments (aka TPC) with VirtualWisdom

Virtual Instruments' VirtualWisdom is designed to provide comprehensive, real-time instrumentation and measurement capabilities that enable server and storage operations teams to optimize the performance and availability of virtualized applications and the utilization of SAN and NAS infrastructure. Virtual Instruments is a leading provider of innovative solutions to instrument, measure, analyze, and optimize fibre channel-based storage area networks and NAS infrastructures in virtualized environments, and our products and services are specifically designed for these purposes.

IBM Spectrum Control is a very expensive fully-featured SRM suite, designed to help manage the capacity utilization of storage systems, file systems and databases, and automate file-system capacity provisioning, perform device configuration and management of multiple devices from a single user interface, and manage, monitor and control the SAN fabric. There is significant overlap with array-specific management tools. As with all storage "single-pane-of-glass" resource management tools, SAN performance monitoring and reporting are not core to the design. As with all storage vendor-supplied management solutions, Spectrum is optimized to provide the most benefit to IBM storage hardware-based SANs sacrificing features when deployed with non-IBM-based SANs.

Why Replace?

In addition to its extreme high ongoing expenses, Spectrum Control (TPC) has three deficiencies in Infrastructure Performance Management:

- First, Spectrum Control dashboards and reports suffer from lack of all-inclusive correlations from the host to the storage, and lack of advanced analytics. VirtualWisdom sees I/O from the VM to the LUN or filesystem, and our performance analytics don't require you to know where to look for problem causes.

Our trend matcher and "heat map" look at over 400 metrics and direct you to what's causing a problem. And without writing a single report, our real-time dashboard lets you see the most granular performance metrics end-to-end, VM-to-storage, for every VM and every LUN or file.

- Second, Spectrum Control does not monitor performance "on the wire". It reads log files and polls discrete devices via a variety of protocols, but does not see every I/O from the VM/host to the LUN or file system. So, it takes averages, which miss many important events and are unsuitable for mission-critical application environments.

Unlike Spectrum Control, VirtualWisdom is a true real-time monitoring system and also sees the physical layer so you can uncover the hardest-to-find issues like slow-draining devices and CRC errors.

- Third, Spectrum Control doesn't support NetApp CDOT, and its support of non-IBM infrastructure components is weak.

VirtualWisdom equally supports 7-mode and the latest CDOT releases, as well as all NAS and SAN based storage components, plus vSphere, Hyper-V, and PowerVM.

Summary

Software monitoring and management products, like SRMs are not built for application centric storage focused performance. And they are not deep or granular enough to provide support for mission critical applications. They miss important events that can result in slowdowns and even downtime.

Though all tools like Spectrum Control claim to do some level of performance and root cause analysis, none look at the physical I/O layer, what is referred to as "wire data". None can see what VirtualWisdom sees or find what VirtualWisdom finds.

VirtualWisdom is purpose-built for large enterprises which, to stay competitive, must optimize application performance, availability, and resources in their storage infrastructure, while capping costs.

Learn what companies and agencies like Geico, Sprint, Unilever, and NYU know. They reduced or eliminated their Spectrum Control deployments and added VirtualWisdom, saving money, and realizing huge improvements in performance monitoring and management.

VirtualWisdom is the only platform that can non-intrusively optimize the performance of applications, in continuous real-time by measuring each SAN/NAS I/O, from the VM to the datastore, at huge scale, without agents, and without requiring a PhD in Performance-ology, at a fraction of the cost of a Spectrum Control/TPC deployment.

Compared to Spectrum Control, VirtualWisdom:

- Adds continuous real time monitoring and filtering that calculate statistics based on seeing "all" the fibre channel frames or IP packets that are traveling through the storage network, from the host/VM to the LUN/filesystem, while adding no latency or risk. Spectrum Control polls and averages metrics. Imagine asking this question: "Do I ever hit 100% utilization on a datastore?" And you're getting the answer from a 5-minute average from Spectrum Control. Maybe utilization is 100% for 2 minutes, then its 50% for 3 minutes. That would show up as 70% utilized, and you would think you have room to grow! At VirtualWisdom's one-second reporting granularity, you would know without a doubt that you are exhausting that resource.
- Reports on the minimum and maximum transaction times for ALL transactions. With Spectrum Control, when you combine one command that takes 30 seconds with a million others, everything looks fine. But the one command that took 30 seconds is a failure, and VirtualWisdom knows it. And so do you.
- Advanced analytics are designed to do more than correlate events; they lead you to the problem cause. With Spectrum Control, you can get reports on port or VM utilization, but there's no inherent intelligence that quickly leads you to trouble spots. It's one thing to know there's a problem, it's quite another thing to know the cause.
- Instantly proves whether the SAN/NAS, or changes to the SAN/NAS, are the cause of application slowdowns.
- Adds performance trending of SAN/NAS device components to identify hardware degradation allowing you to preemptively replace components before they actually fail.
- Adds the ability to gather in-depth statistics such as pending exchanges to tune queue depths for maximum performance, or network credits to identify slow draining devices.
- Provides a single pane of glass for storage and the VM admins, including vSphere, Hyper-V and PowerVM admins, and ANY storage, no matter the generation, or vendor.

Summary

Because of its unique design and continuous real time physical layer monitoring of wire data, Virtual Instruments' VirtualWisdom can perform crucial functions that other systems cannot. VirtualWisdom is like a virtual SAN/NAS/VM administrator. It constantly scans for problems, alerting you if any are found, then has an expert set of tools to zero in and resolve them. If you are currently using Spectrum Control for storage infrastructure performance monitoring and have experienced performance problems, you now know why you still have problems you cannot easily solve. When combined with the immense expense of SC/TPC, relying on the combination of VirtualWisdom and your device-specific tools is a much more cost-effective approach.

What Gartner says:
In its paper entitled "Optimize IT Operations Using ITSM, ITIL, and DevOps Primer for 2016", Gartner has a lot to say about the merits of "wire data" and how it's becoming increasingly important. We encourage Gartner customers to acquire this report.

Gartner quote:
"While log data will certainly have a role in future monitoring and analytics, it is wire data – radically rethought and used in new ways – that will prove to be the most critical source of data for availability and performance management over the next five years."

"We don't need tens and hundreds of Infrastructure Admin's because we've got a solution, VirtualWisdom, that will allow us to do the monitoring and alerting."

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