ActualTech Media

SolarWinds Server and Application Monitor

vs.

Ipswitch WhatsUp Gold

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Table of Contents

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Introduction

Monitoring an IT environment can be a bit like dealing with insurance. No one ever likes to shop for let alone purchase it, but when something bad happens, most people are absolutely thrilled that they have that layer of protection in their lives.

For some, monitoring and management software falls into the same category. In a perfect world, everything would simply ***work*** the way it was intended and there would be no need to keep tabs on everything happening in the environment. However, the world in which we live is imperfect and, over the years, IT pros have certainly learned hard lessons around availability in the various areas of the supported environment. Just like that happy insurance customer, if an important application or server goes down in the wee hours of the morning, most administrators, while groggy, are far happier to be alerted in some manner rather than discovering the outage upon walking into the office and being besieged by angry users carrying virtual pitchforks.

With the right tools, administrators gain the ability to begin addressing issues immediately rather than encountering a situation in which an outage may go on for some time, thus negatively impacting the business.

When it comes to monitoring the modern datacenter, there are a number of critical infrastructure areas that must be monitored in order to ensure complete visibility. In this paper, we will compare how the features found in SolarWinds Server and Application Monitor and IPswitch's WhatsUp Gold monitor the critical infrastructure that makes up the modern datacenter.

Monitoring Servers

Understanding the health of the server environment is a critical task for any organization. There are many key metrics to measure and monitor for servers. Below are a few of the top areas that are important to understand and monitor.

Ping monitoring

The first important area to address is to make sure there is understanding and alerting if a server goes down. This is referred to as ***up/down*** or ***ping monitoring***. A server may become unavailable for many reasons. For example, the server may experience an operating system crash, lose its network connection, or experience a different network related issue. Any of these issues can create an availability issue in the environment.

Event monitoring

Another important part of monitoring servers is understanding the events that occur on different types of servers. When something is going wrong on a server there are events that are written to various log files. Monitoring tools can monitor these logs for alarming events. The goal is to quickly understand when something is failing or has already failed on a server. On a Windows server, when a service that is running stops an event is placed in the logs. If the service was related to the application running on the server it may be causing an outage. Identifying and monitoring services is key for administrators.

Performance monitoring

Performance monitoring is another critical part of monitoring the environment. The applications on a server may actually be available and being used by clients, but may be performing so poorly that they impact the business. A poorly performing application can cost a business customers, credibility, and money. Understanding how well servers are performing can be just as important as knowing when a system is unavailable. Performance issues are often more common than a server actually going down.

A performance issue can be caused by applications, operating system related issues, network issues, and storage related issues. This leaves a lot of directions in which to look when trying to identify the cause of a performance problem. If servers are monitored for such performance issues, administrators should have the data necessary to work to pinpoint the root cause of the problem and reduce the time it takes to correct.

Table 1 provides an overview for how the two products compare when it comes to server monitoring.

Table 1

	SolarWinds	WhatsUp Gold
Server Hardware monitoring	Able to monitor HP, Dell and IBM for health indicators	Via SNMP MIBs
Performance stats	Yes	CPU, Memory and Disk utilization
Server actions	Start stop services, kill processes, restart servers	Telnet, Browser, RDP, Traceroute, Ping
Server processes	Process explorer allows remote viewing of Task Manager	Allows remote viewing of Task Manager
Log Viewer	View and filter Windows events from central point	Requires Event Log Management plugin
Supported Operating Systems	AIX HP®-UX Linux Unix Solaris Windows Server/Hyper-V vSphere	Anything that talks to SNMP
Changeable Thresholds (Able to adjust trigger levels for CPU, memory, disk alerts)	Yes, & baseline thresholds	Yes

Monitoring Applications

In today's world the application is king and while applications need servers and infrastructure to run, it's very possible to have application issues without a failure in the other layers.

Applications have a broad range of complexity; for example, they can be very simple with a single application installed on a single server. In this model there may be just an executable and some services to monitor. However, many enterprise applications are far more complex. Often referred to as "three tier applications", they consist of services that are comprised of three layers, or tiers: the database tier, the application tier, and the web tier. In these kinds of applications, each tier talks to the other and there is significant interdependence between the systems in the different tiers. Moreover, to ensure high availability to the application, each tier will usually contain multiple servers to allow for protection against failure. Further, the servers within the tiers may need to be load balanced to provide the scale needed to support applications that need to span servers.

It becomes very easy to see that selecting the right monitoring application can be a challenging problem. Understanding if an issue is application related or server related is powerful and can speed issue resolution and cut down on finger pointing between different IT groups or IT and vendors.

Table 2 on the next page provides an overview for how SolarWinds and Ipswitch compare when it comes to application monitoring.

Table 2

	SolarWinds	WhatsUp Gold
Built-in Templates for popular applications.	Yes	Requires Application Performance Monitoring (APM)
Number of supported applications	200+	Not comprehensive
SQL Monitoring	Performance, expensive queries, fragmentation, log sizes and more	Requires APM
Exchange Monitoring	Mailbox DB, Capacity, mailbox quota, Exchange store and more	Requires APM
Service levels	Assign base line values for application metrics. Notification if metrics are violated	Requires APM
Central Event Console	Yes	Requires Event Log Management plugin

Monitoring Virtualization

Over the past decade, the virtualization layer has become an increasingly critical part of the infrastructure stack. As organizations began widely virtualizing workloads, the hypervisor became a tier one application in and of itself. Some customers have started talking a multi-hypervisor approach to supporting their workloads, thus further complicating the monitoring and reporting requirements that exist in this layer.

Server-specific monitoring tools excel at keeping an eye on virtualization hosts at a high level, but do not generally provide virtualization-specific metrics. The two monitoring applications being compared in this paper offer the ability to monitor the virtual infrastructure a single platform. Table 1 on the next page provides an overview for how the products compare with one another for monitoring the virtual infrastructure.

Table 1

	SolarWinds	WhatsUp Gold
Hypervisor Support	VMware vSphere & Hyper-V	With WhatsVirtual - VMware vSphere

Inventory Summary	Displays Host and VM counts and resource totals. Shown by hypervisor and total	With WhatsVirtual-vCenter inventory totals
Resource Monitoring	Host & VM CPU/Memory consumption Host network utilization/VM Network Traffic	With WhatsVirtual-VM Stats for CPU utilization, memory utilization, disk utilization, network utilization

SolarWinds also has a pre-integrated product, Virtualization Manager, which provides additional performance metrics (% ready, datastore usage, etc.), sprawl management and capacity planning.

Extensibility

Creating a comprehensive monitoring application is no easy task. Since there are so many different pieces to monitor in the modern data center, vendors will typically focus a lot of energy on several core services.

The important part in evaluating these products is determining how they offer coverage for an organization's most critical services. Is it possible to use a single product or will it require multiple monitoring tools with no integration between them?

SolarWinds has done a nice job of integrating their deeply focused monitoring products with their Server and Application Monitor (SAM) product. Solarwinds offers pre-integrated products to include: Network Performance Monitor, Storage Resource Monitor and Virtualization Manager that can be used with SAM to offer a deeper centralized view of the data center.

WhatsUp Gold has a single monitoring application and has created add-ons for a few specific technologies. The add-ons are available for virtualization, applications and a few other technologies and are there to add or improve the features in the core product.

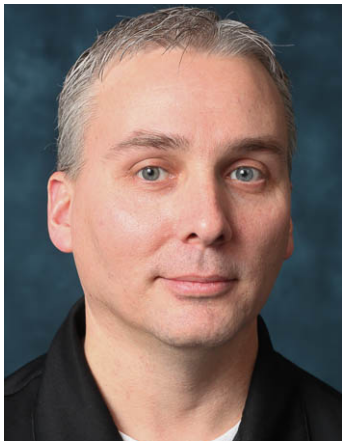
Closing

The WhatsUp Gold product still feels very much like a network monitoring tool with server and virtualization monitoring bolted on. On the other hand, SolarWinds has

created a comprehensive offering and has done an outstanding job integrating their various products into a single solution. Based on the quality and comprehensive features found in the Solarwinds solution, we must recommend Solarwinds in this comparison.

For more information about Solarwinds infrastructure monitoring solutions, visit www.Solarwinds.com/SAM

About the Authors



Brian Suhr is Senior Solutions Architect for a VMware partner. He spends his days working with customers to Design and Architect solutions around virtualization technologies, VDI, Cloud computing, storage and compute infrastructure and related technologies. Brian has helped with leading the Chicago VMUG for five years and has presented multiple sessions at local and regional VMUG meetings. Brian writes for his virtualizatips.com and datacenterzombie.com sites and several community sites that include TechTarget, Petri.co and VMware SMB blog.

Scott Lowe is co-founder of ActualTech Media and the Senior Editor of EnterpriseStorageGuide.com. Scott has been in the IT field for close to twenty years and spent ten of those years in filling the CIO role for various organizations. Scott is also a micro-analyst for Wikibon and an InformationWeek Analytics contributor. In addition, Scott has also written thousands of articles and blog postings and regularly contributes to such sites as TechRepublic, Wikibon, and virtualizationadmin.com. Because of his unique blend of skills (CIO/strategic & Engineer/tactical) Scott is also a sought-after resource for marketing collateral, including white papers and e-books, for a variety of technology firms.