

Monitors

- VMware ESX Server hosts and virtual machines (VM), including system, CPU, memory, disk, and network metrics.
- VM-resident OS and business applications.
- VMware VirtualCenter server, including server status and performance, database performance statistics, and application status.
- Response times of end user applications.

Features

- Comprehensive visibility into host/virtual machine, application performance, and end user responsiveness.
- Point-and-click access to alarms and real-time performance status.

Benefits

- Improved performance and uptime. Proactive monitoring and alerting accelerates identification of performance issues—enabling response before end user productivity is affected.
- Enhanced resource optimization. Centralized, cohesive view of performance delivers insights into opportunities for resource optimization and “right sizing” of hardware investments.
- SLA compliance. Instant alerts and real-time dashboards notify service managers in advance of SLA compliance breaches.

NimBUS for VMware Monitoring

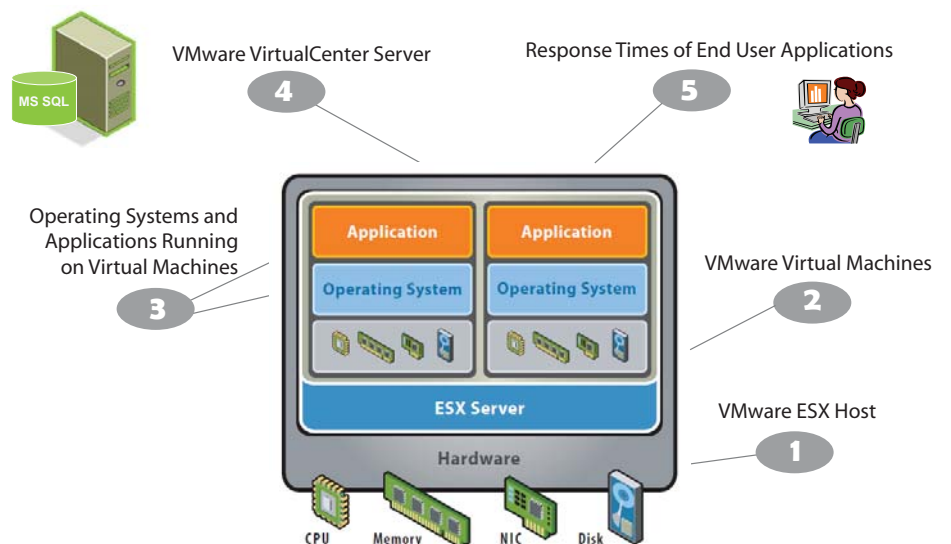
Optimizing Performance, Utilization, and Reliability in Virtualized Server Environments

Introduction

While VMware’s virtualization capabilities ushered in a world of potential benefits, they also brought an entirely new world of challenges from a monitoring perspective. When virtualization gets implemented, an entirely new layer of “moving parts” gets added to the mix, and dramatically increases the complexity of monitoring business applications and the infrastructure upon which they rely. How can organizations efficiently monitor this virtualized infrastructure? How can they ensure that the VMware infrastructure and all the applications that run in this virtual environment are optimized?

The Solution

The NimBUS for VMware Monitoring solution enables organizations to monitor and fully optimize their VMware environments. With its support for VMware Infrastructure 3 (VI3), NimBUS products provide unrivaled and unprecedented depth in VMware virtualization monitoring, including the ESX Host, virtual machines, and VirtualCenter. Plus, with the NimBUS solution, organizations can monitor and manage all the operating systems and business applications that run in this virtualized environment—and get insights into the performance end users experience from these business applications. By offering this comprehensive monitoring picture through a centralized solution, organizations can take a more holistic and service-led view of the virtualized environment—and much more effectively optimize the performance, utilization, and reliability of the entire infrastructure.





Monitoring of ESX Server Hosts and Virtual Machines—The NimBUS probe enables administrators to monitor and remediate potential performance degrading conditions on ESX Server hosts and virtual machines, before they affect critical applications. With the NimBUS solution, administrators can monitor these metrics:

	ESX Host	VM		ESX Host	VM
SYSTEM			MEMORY (cont.)		
Running state	x		Memory swapped target		x
Is in maintenance mode	x		Memory usage	x	x
Power state		x	Memory zero (% of memory size)	x	x
Guest operating system name		x	Memory used by vmkernel (% of mem. size)	x	
Guest heartbeat status		x			
Disk capacity of datastore (GB)	x		NETWORK		
Disk free in datastore (GB)	x		Network data receive rate	x	x
Disk free in datastore (in % of Capacity)	x		Network data transmit rate	x	x
Physical memory size in MB	x		Network packets transmitted	x	x
Memory size in MB		x	Network packets received	x	
Amount of memory guaranteed (MB)		x			
Guest memory usage (in % of mem.)		x	DISK		
Host memory usage (in % of mem.)		x	Disk bus resets	x	x
Memory not to exceed limit		x	Disk commands abort	x	x
Number virtual CPUs		x	Disk commands issued	x	x
Overall CPU usage		x	Disk read rate	x	x
Amount of CPU guaranteed (in MHZ)		x	Disk read requests	x	x
CPU not to exceed limit		x	Disk write rate	x	x
Resource CPU usage in MHZ	x		Disk write requests	x	x
Number of CPU cores	x				
CPU speed per core in MHZ	x		EVENTS		
Number of CPU packages	x		Error	x	x
Number of CPU threads	x		Warning	x	x
Overall alarm status	x		Information	x	x
Heartbeats		x	User	x	x
Total time	x	x			
			CPU		
MEMORY			CPU used (% of available)	x	x
Memory active (% of mem. size)	x	x	CPU usage (average/rate)	x	x
Memory consumed (% of mem. size)	x	x	CPU usage in MHz (% of limit)	x	x
Memory granted (% of mem. size)	x	x	CPU idle time (% of available)	x	
Memory balloon (% of mem. size)		x	CPU reserved capacity	x	
Memory balloon target (% of mem. size)		x	CPU extra (% of available)		x
Memory heap (% of mem. size)	x		CPU guaranteed (% of available)		x
Memory heap free (% of mem. size)	x		CPU ready (% of available)		x
Memory overhead (% of mem. size)	x	x	CPU wait (% of available)		x
Memory reserved (% of mem. size)	x				
Memory unreserved (% of mem. size)	x		RESERVED CPU		
Memory shared (% of mem. size)	x	x	CPU Active average over 1/5/15 min.	x	x
Memory shared common (% of mem. size)	x		CPU Active peak over 1/5/15 min.	x	x
Memory state	x		CPU Refused average over 1/5/15 min.	x	x
Memory swap in	x	x	CPU Running average over 1/5/15 min.	x	x
Memory swap out	x	x	CPU Running peak over 1/5/15 min.	x	x
Memory swap used (% of mem. size)	x	x	CPU Sample Count	x	x
			CPU Sample Period	x	x

Monitoring VMware VirtualCenter Server—With NimBUS, administrators gain essential insights into the VirtualCenter server's health, including server status, performance and availability of the Windows operating system, performance statistics on the SQL Server database, and the processing status of the application itself.

Monitoring Operating Systems and Applications Running on Virtual Machines—NimBUS offers capabilities for monitoring the following:

- All major operating systems, including Windows, Unix, Linux, and Netware.
- A host of common business applications, including Microsoft Exchange, Microsoft Active Directory, Microsoft IIS, Lotus Notes, SAP, WebSphere, e-commerce applications, and custom-built applications.
- All prevalent databases, such as Oracle, MS SQL Server, and Sybase.

Monitoring Response Times of End User Applications—Through its extensive support for response time solutions across a range of applications, NimBUS provides vital insights into what is really happening from an end user perspective.

NimBUS offers a range of capabilities for simulating transactions that end users conduct with business applications. With NimBUS, these simulations are easy to implement and automate, and they yield a wealth of practical insights and alerts if end user processing is degraded or down.

Critical Performance Data: When and How it's Needed—NimBUS compiles, analyzes, and monitors performance data to provide real-time tracking of VMware virtualized infrastructures. NimBUS delivers this vital information via alarms, operator consoles, business dashboards, long-term trend reports, and SLA compliance reports.

About Nimsoft

Nimsoft's mission is to deliver business-focused Service Level Management solutions that customers can easily deploy and use. Nimsoft solutions are used by hundreds of companies across diverse industries to manage complex networked systems and meet service level agreement targets. Nimsoft solutions combine advanced SLM functionality and broad platform coverage with unprecedented ease of implementation, deployment, and use. For more information, visit www.nimsoft.com.

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