Nimsoft for Server Monitoring

A Nimsoft Service Level Management Solution White Paper
Nimsoft for Server Monitoring

Table of Contents

Nimsoft for Server Monitoring – Solution Overview ................................................................. 3
  Primary Features .......................................................................................................................... 3
  Additional features .................................................................................................................... 3

Nimsoft 'Service-centric' Server Monitoring ............................................................................ 4

Nimsoft Server Monitoring Differentiators ............................................................................. 5
  Brodest server platform support ............................................................................................... 5
  Quick and easy to deploy server monitoring .......................................................................... 5
  Complete process and service monitoring .............................................................................. 5
  Quick monitoring customization ............................................................................................... 5
  Server response time monitoring ............................................................................................. 6
  Quick and easy performance reporting .................................................................................... 6
  Server level compliance reporting ........................................................................................... 6
  Lowest server resident resource requirement ......................................................................... 6
  Reliable data transport when server conditions arise ............................................................... 7
  Server cluster monitoring ......................................................................................................... 7
  Server network interface bandwidth monitoring ...................................................................... 7

Realtime Availability and Performance Alerting ........................................................................ 8

Historical Performance Reporting ............................................................................................ 9

SLA Compliance Reporting ....................................................................................................... 10

Nimsoft Server Monitoring – Unique Value Proposition for Service Providers .................. 11

About Nimsoft ............................................................................................................................. 12
Nimsoft for Server Monitoring – Solution Overview

The Nimsoft for Server Monitoring solution supports iSeries AS400, Netware, Linux, Windows, and UNIX from a single, easy-to-use console. The solution monitors core server resources (CPU, memory, disk, event logs, counters, etc.) and enables centralized management of remote processes and services (automated and manual start/restart/stop). The solution also offers packaged monitoring for a wide variety of server configurations (i.e. web, email, database, etc.). All server status information is presented in realtime alarm dashboards, performance trend reports, and/or SLA compliance reports.

Servers, and their configured application services, are the critical foundation on which the business operates. Nimsoft monitors and reports on the status of server resources with, or without, a business service context. Nimsoft ’service-centric’ server monitoring helps IT gain a business service perspective from the multitude of server platforms they have deployed.

Primary Features

- Monitors the following server subsystems and components
  - CPU, memory, disk
  - Print jobs and queues
  - Event logs, message queues, and screens
  - Statistics and performance counters
  - Processes, services, jobs and NLMs
  - Directory and file system
  - Network interfaces

- Centrally monitors heterogeneous server environments. Platform support includes:
  - AS400
  - Linux
  - Netware
  - UNIX (Solaris, AIX, HPUX, Tru64)
  - Windows (Win98 and upwards)

- Packaged monitoring for a wide variety of server configurations, sample listing includes:
  - Web servers
  - Directory servers
  - Email servers
• Database servers
• Applications servers
• Terminal servers

• Extremely quick and easy to implement
• Lightweight and modular – install just what is needed
• Customizable realtime alarm dashboards
• Long and short term historical performance reporting
• SLA-based monitoring and compliance reporting

Additional features
• Highly scalable to support hundreds to thousands of servers
• Alert escalation and flexible notification options (i.e. email, sms, cell, pager, etc.)
• TCP/IP based server monitoring provides reliable data transport
• Monitors hundreds of server health metrics from a single look-and-feel interface
• Centralized management of application processes and services, i.e. start/restart/stop

Nimsoft ‘Service-centric’ Server Monitoring
Each server configuration is unique and is dictated by the role the server must play in the business environment. Nimsoft server monitoring solutions can easily adapt its availability and service quality measures for a myriad of server configurations.

Figure below: In addition to Nimsoft’ ability to monitor core server components across a broad platform range, Nimsoft also provides out-of-the-box monitoring for a wide variety of server configurations:
Nimsoft can monitor server resources in the context of the applications consuming its resources. It can be quickly configured to target monitoring for applications and services sitting on top of base operating systems.

To ensure high availability and performance of configured applications and services, Nimsoft can be quickly configured to perform the following ‘service-centric’ monitoring:

- Monitor log files for application and service specific error messages
- Monitor application processes and services that are running or not running on each server
- Monitor the amount of CPU and Memory resource each application process is consuming
- Monitor disk volumes/shares that hold application directories and files
- Monitor objects and performance counters that are associated with deployed application services
- Monitor application service port/sockets for connectivity and proper state (running, not running)
- Monitor the server’s network interface and calculate bandwidth utilization per application

**Nimsoft Server Monitoring Differentiatores**

**Broaddest server platform support**

Nimsoft is unique in the broad server platform coverage it provides. Businesses running any combination of Linux, Windows, Netware, UNIX, and AS400 servers can look to Nimsoft for a single look and feel monitoring tool.
Quick and easy to deploy server monitoring

Rapid server monitoring deployment is a common request for businesses in pursuit of server monitoring solutions. Rapid deployment for Nimsoft means minutes, hours and days; not excessive weeks or months. Rapid deployment enables immediate monitoring for newly deployed servers and servers currently in business production.

Complete process and service monitoring

On a per process basis, Nimsoft monitors if CPU, memory, or number of threads rises above, or falls below defined threshold values. Additionally, Nimsoft monitors to ensure expected users run processes and the proper number of process instances is running. Nimsoft will also monitor if a process or service is running or not running; and if not, it can automatically (or manually) force it into a desired state.

Quick monitoring customization

Important to any monitoring solution is its ability to be quickly tailored to focus monitoring for business unique server configurations. Nimsoft easily adapts its monitoring to deliver on this requirement.

Server response time monitoring

Nimsoft provides server response time monitoring from an end-user-to-server perspective and from a server-to-server perspective. Nimsoft detects degrading server response before end-users and business productivity is impacted.

Examples of Nimsoft server response time monitoring include:

- DNS Server – domain name lookup response time
- LDAP Server – query response time
- Email Server – email send and email roundtrip response time
- Web Server – URL page load time
- Network Server – server and service port connectivity and response time
- Application Server – application transaction response time
- Database Server – database record read/write response time
- Terminal Server – session logon/logoff response time
Quick and easy performance reporting

A highly compelling feature of the Nimsoft server monitoring solution is its ability to have a broad array of performance trend reports generated in a matter of minutes. Other market solutions require extensive configuration efforts or complex integrations into high-cost third party reporting applications. With Nimsoft, performance reporting is an inherent component of the Nimsoft monitoring solution, making performance report generation a simple point and click process.

Server level compliance reporting

Taking performance reporting to the next level, Nimsoft allows for mapping its server performance and realtime alarm data into SLA definitions. The performance of individual server technologies are calculated against service level commitments and the results of those calculations are presented in intuitive SLA compliance reports.

Lowest server resident resource requirement

Many server monitoring tools on the market have a substantial disk space requirement (>150MB) for each server that will be monitored. While disk space is rarely a highly guarded resource, CPU is. Heavy disk footprints typically translate into heavy CPU and memory resource requirements. This is in order to process the high volume of local binaries and configuration files that make up other vendor server monitoring solutions. Nimsoft weighs in extremely light, requiring less than 15MB disk space per managed server, and less than 1% CPU utilization.

Reliable data transport when server conditions arise

A server monitoring investment is made to provide businesses with reliable and higher levels of server status visibility. If server status data does not arrive and present itself in a timely fashion, a server monitoring solution will quickly lose its value. Nimsoft is architected to ensure reliability of alarm and performance data transport from remotely monitored servers to the central Nimsoft data consolidation and processing server.

Server cluster monitoring

Nimsoft cluster monitoring generates alarms if a Resource Group or Cluster Node changes state. The Nimsoft cluster probe enables fail-over support for standard Nimsoft probes that are installed on cluster nodes. When Nimsoft monitoring is associated with a Resource Group, the monitoring configuration will follow that group to the cluster node where the group is currently running. Nimsoft current cluster monitoring support is for Veritas (Solaris and Windows) and Microsoft clusters.
Server network interface bandwidth monitoring

Nimsoft monitors network traffic in and out of server NICs (Network Interface Cards) and determines bandwidth utilization by network protocol (TCP/IP, UDP, ICMP, etc) and by service port (i.e. HTTP, FTP, SMTP, etc.). Monitoring bandwidth capacity will allow for pinpointing heavy application consumers and ensure network data flow in and out of the server remains optimal.

Realtime Availability and Performance Alerting

Nimsoft solutions provide historical performance reporting—this functionality will provide the necessary visibility to foresee and Nimsoft easily plots server statistics in realtime alarm dashboards. In the example below Nimsoft is graphing CPU utilization for four servers against a defined threshold of 75% (red line in graph). When thresholds are crossed, alerts can be generated and displayed in Nimsoft active alert lists and graphic map elements, or forwarded to a wide variety of notification options (i.e. pager, cell, email).
Historical Performance Reporting

In addition to viewing server availability and performance in realtime (as depicted on previous page), Nimsoft allows for long term archival and reporting of server performance data. This level of visibility is key for proactive capacity planning, load balancing, and preemptive problem resolution for degrading server conditions. Depicted below is a Nimsoft historical performance report. Hundreds of server data points can be archived. The report below is showing CPU, Disk, and Memory for three servers. Nimsoft performance reports can be viewed in a web browser and/or a Windows client.
SLA Compliance Reporting

Using Nimsoft Service Level Manager, it is possible to define SLAs specific to server/service configurations ('service-centric' server monitoring). The top screen image shows server components defined and monitored in the context of a Web Service. Immediately upon completion of the SLA definition (using the Nimsoft SLA template depicted below), a HTML report is generated. The lower screen image is the resultant web-based SLA/SLO compliance report.
Nimsoft Server Monitoring – Unique Value Proposition for Service Providers

Server Monitoring for Managed Service Providers, ASPs, Hosting Providers

Nimsoft makes it possible for Service Providers to offer a high functionality, cost effective server monitoring solution that is priced to fit customer’s budgetary requirements and does not compromise monitoring functionality.

The Nimsoft broad platform support combined with broad application/service support allows MSPs, ASPs, etc. to promote monitoring for a broader range of server/service platforms. The result is a broader prospective customer base. Nimsoft is also an ideal solution for co-lo and server hosting providers:

Nimsoft enables centralized monitoring for servers situated at colocation and customer sites

- Effectively manage customer server/services in the context of negotiated SLAs
- Commit to server/service quality with the confidence you can achieve service quality goals
- Approach prospective customers with SLA report examples showing 360 degree monitoring of their servers and its configured services
- Show performance reports to demonstrate to your customers that you have a watchful eye on developing conditions
- Show web-dashboard examples that are customer consumable (such as the one depicted below). Dashboards allow your customers to monitor your attention to their business servers.

Nimsoft realtime alarm and performance dashboard depicting Customer A server status.
About Nimsoft

Nimsoft is a global leader in IT Management-as-a-Service. The company's lightweight ITMaaS solutions make it easy for enterprises and service providers to implement comprehensive, adaptable monitoring and service desk capabilities essential for managing today's dynamic computing environments. Learn more at www.nimsoft.com.