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# CA Unified Infrastructure Management for Servers



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## Executive Summary

CA Unified Infrastructure Management (CA UIM, formerly CA Nimsoft Monitor) offers support for Novell Open Enterprise Server (formerly NetWare), IBM Power Systems servers (formerly AS/400 and iSeries), Linux, Windows and UNIX from a single, easy-to-use console. The solution monitors core server resources, including CPU, memory, disk, event logs and counters. In addition, it enables centralized management of remote processes and services, such as automated and manual start/restart/stop. The solution also offers packaged monitoring for a wide variety of server configurations, including Web, email and database. All server status information can be presented in real-time alarm dashboards, performance trend reports and SLA compliance reports.

## Solution Overview

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

CA UIM can monitor the following server subsystems and components:

- CPU, memory and 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

CA UIM centrally monitors heterogeneous server environments, offering support for the following platforms:

- IBM Power Systems servers (formerly AS/400 and iSeries)
- Linux
- Novell Open Enterprise Server (formerly NetWare)
- UNIX (Solaris, AIX, HPUX, Tru64)
- Windows (Win98 and upwards)

### CA UIM: Key Features

- Extremely quick and easy to implement
- Lightweight and modular—install just what is needed
- Customizable real-time alarm dashboards
- Long and short term historical performance reporting
- SLA-based monitoring and compliance reporting
- Highly scalable to support hundreds to thousands of servers
- Alert escalation and flexible notification options—including email, SMS and cell phone
- TCP/IP based server monitoring provides reliable data transport
- Centralized management of application processes and services, including start, restart and stop

CA UIM offers packaged monitoring for a wide variety of server configurations:

- Web servers
  - Directory servers
  - Email servers
  - Database servers
  - Application servers
  - Terminal servers
- 

## Service-Centric Monitoring

Each server configuration is unique and is dictated by the role the server must play in the business environment. CA UIM can easily adapt its availability and service quality measures for a range of server configurations. CA UIM can track 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, CA UIM 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
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## Server Monitoring Differentiators

### Broad server platform support

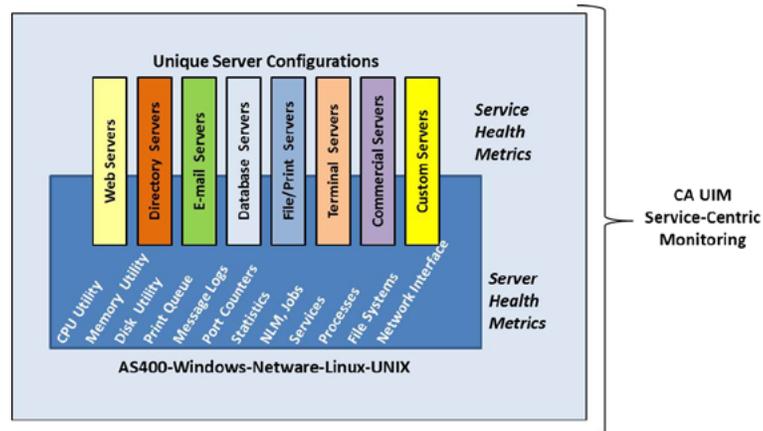
CA UIM is unique in the broad server platform coverage it provides. Businesses running virtually any combination of Linux, Windows, UNIX, Open Enterprise Server and IBM Power Systems servers can look to CA UIM for a single, cohesive monitoring tool.

### 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 CA UIM means minutes, hours and days; not weeks or months. Rapid deployment enables immediate monitoring for newly deployed servers and servers currently in production.

**Figure A.**

CA UIM focuses health monitoring on core server resources and the unique business services that utilize those resources.



### Complete process and service monitoring

On a per-process basis, CA UIM checks if CPU, memory or number of threads rises above, or falls below, defined threshold values. Additionally, the solution monitors to ensure expected users run processes and the proper number of process instances is running. CA UIM will also verify if a process or service is running or not running. If a service is not running, CA UIM can enable administrators to manually force it into a desired state, or it can be configured to do so automatically.

### Quick monitoring customization

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

### Server response time monitoring

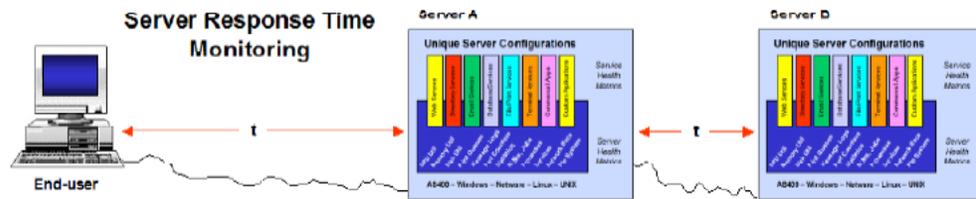
CA UIM provides server response time monitoring from an end-user-to-server perspective and from a server-to-server perspective. CA UIM detects degrading server response before end-users and business productivity is affected.

Examples of CA UIM 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

**Figure B.**

With CA UIM, administrators can track response times from the end-user's perspective.



### Quick and easy performance reporting

A highly compelling feature of CA UIM 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 CA UIM, performance reporting is an inherent component of the solution, making report generation a simple point-and-click process.

### Server level compliance reporting

Taking performance reporting to the next level, CA UIM 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. CA UIM 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

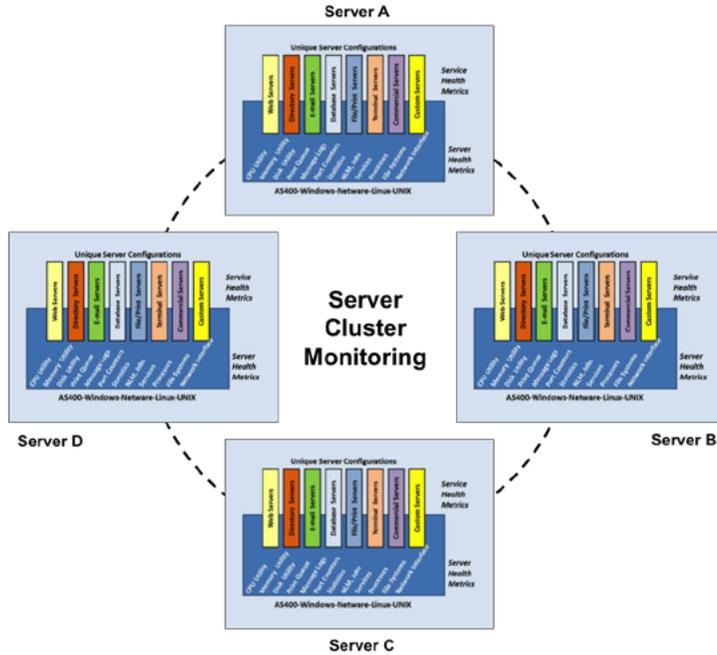
A server monitoring investment is made to provide businesses with reliable and higher levels of server status visibility. If server status data does not arrive and present itself in a timely fashion, a server monitoring solution will quickly lose its value. CA UIM is architected to ensure reliability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

### Server cluster monitoring

CA UIM offers cluster monitoring that generates alarms if a resource group or cluster node changes state. The CA UIM cluster probe enables fail-over support for standard CA UIM probes that are installed on cluster nodes. When CA UIM is associated with a resource group, the monitoring configuration will follow that group to the cluster node where the group is currently running. CA UIM offers support for Veritas (Solaris and Windows) and Microsoft clusters.

**Figure C.**

CA UIM enables the efficient monitoring of server clusters.



### Server network interface bandwidth monitoring

CA UIM tracks network traffic in and out of server network interface cards (NICs) and determines bandwidth utilization by network protocol, including TCP/IP, UDP and ICMP, and by service port, for example, HTTP, FTP and SMTP. Monitoring bandwidth capacity will allow for pinpointing heavy application consumers and ensure network data flow in and out of the server remains optimal.

## Real-Time Availability and Performance Alerting

CA UIM provides historical performance reporting and it enables users to easily plot server statistics in real-time alarm dashboards. When thresholds are crossed, alerts can be generated and displayed in active alert lists and graphic map elements, or forwarded via a wide variety of notification options, including cell, SMS and email.

## Historical Performance Reporting

In addition to viewing server availability and performance in real time, CA UIM 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. Hundreds of server data points can be archived. CA UIM performance reports can be viewed in a Web browser or a Windows client.

## SLA Compliance Reporting

Using the service level management capabilities of CA UIM, it is possible to define SLAs within the context of entire services. The image above shows server components defined and monitored in the context of a Web service. CA UIM features graphical SLA templates that facilitate SLA definition. Once an SLA template is created, the solution immediately performs an initial compliance calculation and automatically generates a Web report that displays current compliance results.

## Unique Value Proposition for Service Providers

CA UIM 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 solution’s broad platform support combined with broad application/service support allows managed service providers, hosting providers, cloud providers and others to promote monitoring for a broader range of server/service platforms. The result is a broader prospective customer base. CA UIM offers these capabilities:

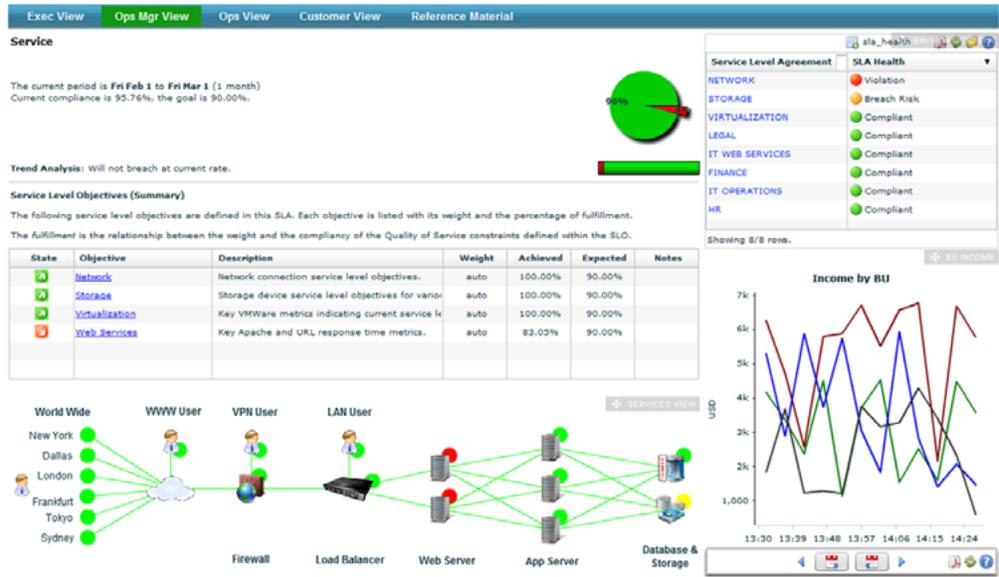
- Centrally monitor servers situated at colocation and customer sites
- Manage customer servers and services in the context of negotiated SLAs
- Commit to server and service quality with the confidence you can achieve service quality goals
- Approach prospective customers with SLA report examples showing 360-degree monitoring of their servers and services
- Provide performance reports that show your customers that you have a watchful eye on conditions
- Deliver web-based dashboards that customers can access

**Figure D.**  
CA UIM provides fast insights into real-time server status.



**Figure E.**

With CA UIM, administrators can gain access to portals that provide at-a-glance views of infrastructure and SLA compliance status.



## Conclusion

Server monitoring has never been more critical or more challenging. With CA UIM, organizations can centrally manage their servers, whether they’re running Novell Open Enterprise Server, IBM Power Systems servers, Linux, Windows or UNIX—or any combination thereof. CA UIM offers a single, easy-to-use console that administrators can use to track core server resources, including CPU, memory, disk, event logs and counters. With these capabilities, administrators can gain the insights they need to track, manage and optimize the performance of their servers.

For more information, visit [ca.com/UIM](http://ca.com/UIM).



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