

# CA Unified Infrastructure Management for Apache Tomcat



## At a Glance

CA Unified Infrastructure Management (CA UIM, formerly CA Nimsoft Monitor) for Apache Tomcat helps organizations gain enterprise-grade performance and availability from their Tomcat servers. With CA UIM, administrators can centrally monitor an unlimited number of distributed servers and confirm that potential issues or irregularities are detected at the earliest possible stage.

### Key Benefits/Results

- Enjoy cost and time savings through streamlined, centralized administration of complex Web environments
- Boost operational efficiency through improved resource visibility and capacity management
- SLA compliance of business-critical services

### Key Features

- Robust, intuitive management interface for simplifying and speeding administrative tasks
- Enables central management of multiple Tomcat servers
- Includes automatic resource discovery capabilities for simplified management configuration
- Supports agentless monitoring of Tomcat servers running on supported platforms

## Business Challenges

Apache Tomcat is a popular open-source Java server used in place of high end application servers in a large portion of organizations.

As the product gets utilized in increasingly large-scale, mission-critical deployments, administrators often find that Tomcat's inherent complexity and lack of integrated monitoring capabilities present real challenges—making it time consuming and difficult to verify optimal performance, scalability and availability.

How can administrators efficiently monitor multiple Tomcat servers in distributed environments and confirm they're performing optimally? How can they gain the insights they need to proactively manage the performance of these open source systems?

## Solution Overview

The quality of service data provided by CA UIM for Apache Tomcat makes it possible to detect performance trends, enabling administrators to take precautionary actions before users notice service degradation and thus more effectively optimize performance and availability.

With CA UIM service level management solutions, enterprises and service providers gain a centralized, cohesive view of their infrastructure. Whether IT organizations want to monitor a specific network element or the infrastructure on which a mission-critical application is based—including the associated network elements, databases, application servers and more—they can do it all with the CA Unified Infrastructure Management product suite.

## Critical differentiators

CA UIM uses a Message Bus Architecture as a core element that is streamlined, comprehensive and efficient. It enables all monitoring components to communicate with each other, without direct program-to-program connections and acts as an abstraction layer between the core system and the monitoring probes. This leads to significant improvements in reliability, scalability and development agility.

CA UIM offers an array of features specifically designed to make it easy to configure and manage the monitoring of large, distributed Tomcat environments:

- **Agentless monitoring.** Utilizing Tomcat's native JMX interface, CA UIM gathers a wealth of availability and performance metrics—without requiring agents or other software to be added to the Web server host.

- **Automatic discovery.** CA UIM automatically discovers the Tomcat installation on a host machine, as well as all subcomponents.
- **Centralized administration.** With CA UIM, administrators can monitor an unlimited number of servers through a single, intuitive interface.

### Monitoring features that yield practical insights:

- Offers central, agentless monitoring of multiple Tomcat servers
- Monitors server performance and response time, and status of individual requested resources
- Monitors standard and custom-developed MBeans
- Enables real-time alerts that appraise administrators immediately of issues
- Provides quality of service data for trend analysis
- Monitors compliance with service level agreements

### With these robust capabilities, administrators can:

- Detect Tomcat server problems and degradations more quickly
- Immediately identify the source of bottlenecks and failures
- More proactively control service levels and minimize downtime

### Requirements

Requires JSR 160 and Java 1.5 or above

### Checkpoints monitored

The list of all checkpoints available for monitoring with CA UIM is too long to include in this document. Following is a subset of the list, featuring some of the

CA UIM for Apache Tomcat centrally monitors distributed servers.

Name	Value	Unit	Thresh	Message	Alert	Ops	Description	Value Definition
ClassLoadingLoadedCla...	1771	int	<	1729	ClassL...	yes	QO... LoadedClass...	current
ClassLoadingTotalLoade...	1774	long	>	1734	ClassLo...	no	QO... TotalLoadedCla...	current
GarbageCollectorCopyC...	8429	long	>	785	Monitor...	no	QO... CollectionTime	current
MemoryHeapMemoryUs...	4006888	java.lang	>	3384408	Memory...	no	QO... committed	current
MemoryNonHeapMemory...	3060584	java.lang	>	3384408	Memory...	yes	QO... used	current
MemoryNonHeapMemory...	10645600	java.lang	>	10420224	Memory...	no	QO... committed	current
MemoryNonHeapMemory...	10449136	java.lang	>	10211984	Memory...	no	QO... used	current
MemoryPoolCodeCache...	1982272	java.lang	>	1783360	Memory...	yes	QO... used	current
MemoryPoolEdenSpace...	524288	java.lang	>	524288	Memory...	no	QO... used	current
MemoryPoolPermGenP...	8466884	java.lang	>	8917264	Memory...	no	QO... used	current
MemoryPoolSurvivorSp...	65536	java.lang	>	65536	Memory...	no	QO... used	current
MemoryPoolTenuredGe...	2034436	java.lang	>	3032304	Memory...	no	QO... used	current
OperatingSystemComm...	22628304	long	>	22454272	Monitor...	no	QO... CommittedVirtual	current
OperatingSystemFreePh...	125206	long	>	114852	Monitor...	no	QO... FreePhysicalMe...	current
RuntimeUptime	474003	long	>	1328310	Monitor...	no	QO... Uptime	current
ThreadingCurrentThre...	78125000	long	>	93750000	Monitor...	no	QO... CurrentThread...	current
ThreadingTotalStarte...	8409	long	>	37	Thre...	no	QO... TotalStarte...	current

more broadly relevant checkpoints:

- Memory
- Heap memory usage
- Non heap memory usage
- Memory pool “Eden Space”
- Memory pool “Survivor Space”
- Memory pool “Tenured Gen”
- Memory pool “Code Cach”
- Memory pool “Perm Gen” threads
- Number of threads/total started
- Number of threads/peak
- Number of threads/live threads
- Classes
- Number of loaded classes/total loaded
- Number of loaded classes/loaded

### Related products

In addition to UIM for Apache Tomcat, the CA Unified Infrastructure Management product family includes capabilities for Apache, RedHat Linux, BEA WebLogic, IBM WebSphere, Microsoft Active Directory, Citrix, JBoss, Microsoft Exchange, Microsoft IIS, IBM Lotus Notes, SAP R/3 and other widely deployed applications. These are complemented by database modules for IBM DB/2, IBM Informix, Oracle, Microsoft SQL Server and Sybase ASE; server platform solutions for Windows, UNIX, Linux, AS400/iSeries and Novell Netware; and solutions for managing network infrastructure, including routers, switches and firewalls.

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

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