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Deployment Guide

Monitoring Web Engagement Server

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Monitoring Web Engagement Server

Web Engagement provides access to **metrics** and other key performance indicators (KPIs).

It also gives you the ability to configure Message Server **alarms** when a KPI passes its threshold value.

Web Engagement Metrics

Web Engagement 8.5.1 integrates with the third-party **Metrics Java library** to keep track of several Web Engagement metrics. The Metrics toolkit includes counters, timers, histograms, and gauges.

You will probably want to use Java Management Extensions (JMX) as your main way of reporting on these metrics. We show how to do that **here**. Or you may want to check out some of the **other tools** that are available.

You can also use REST—which is helpful for performance testing—or write your metrics to a log file or to the console.

Available Metrics

Web Engagement Server generates the following kinds of metrics:

- Cache usage statistics
- Event processing time statistics
- A flag for incorrect load balancing
- A flag for interactions that are running too long

Metric name	Description
<CacheName>.CacheSize	Returns the approximate number of entries in this cache
<CacheName>.EvictionCount	Returns the number of times an entry has been evicted
<CacheName>.HitCount	Returns the number of times that cache lookup methods have returned a cached value
<CacheName>.LoadExceptionCount	Returns the number of times that cache lookup methods have thrown an exception while loading a new value
<CacheName>.LoadSuccessCount	Returns the number of times that cache lookup methods have successfully loaded a new value

Metric name	Description
<CacheName>.MissCount	Returns the number of times that cache lookup methods have returned an uncached (newly loaded) value
<CacheName>.TotalLoadTime	Returns the total number of nanoseconds the cache has spent loading new values
<CacheName>.isFull	Returns true if the cache is full; otherwise returns false
monitoring.event.timer	Provide event-processing statistics
lb.routing.correct	Returns true if a sticky cookie has a valid application name; otherwise returns false
interaction.duration.exceeded	Returns true if a media interaction has been processed for too long; otherwise returns false

The following cache names are available:

- DroolsSessionCache
- EventsCache
- IxnProfileCache
- VisitProfileCache

For example, the cache size for the events cache will be available as a metric called **EventsCache.CacheSize**.

Web Engagement Alarms

Web Engagement lets you use tools from the **Genesys Management Layer** for monitoring and controlling your applications. These tools can be an important factor in improving performance—especially **alarms**, which let you set performance thresholds for these key metrics:

- Event duration
- Incorrect load balancer routing
- Interaction duration
- **VisitProfile** cache size
- **IxnProfile** cache size
- **Events** cache size
- **DroolsSession** cache size
- Garbage collection latency
- Heap memory usage

Alarm Configuration

Alarm name	Alarm description	Alarm Condition object					Related configuration option
Threshold type	Selection mode	Application type	Detect Event ID	Cancel Event ID			
Event Duration	Indicates that the time spent processing the event was greater than the specified limit.	predefined	Select by Application Type	Web Engagement Backend Server	100601	100602	EventDuration.threshold (metrics section)
Incorrect load balancer routing	Indicates that a request from a specific client has come to a node that is different from the nodes to which previously served requests from that client were routed.				100401	100402	N/A
Interaction duration	Indicates that a "short-lived" media interaction was detected. This may mean there is malicious traffic that can corrupt the results of the pacing algorithms.				100501	100502	interactionMinProcessingTime (pacing section)
VisitProfile cache size	Indicates that the VisitProfile				100305	100306	N/A

Alarm name	Alarm description	Alarm Condition object					Related configuration option
	object cache is full. This usually means that the server needs more memory						
IxnProfile cache size	Indicates that the IxnProfile object cache is full. This usually means that the server needs more memory				100303	100304	N/A
Events cache size	Indicates that the Event object cache is full. This usually means that the server needs more memory				100301	100302	N/A
DroolsSession cache size	Indicates that the Drools session object cache is full. This usually means that the server needs more memory				100201	100202	N/A
Heap Memory Usage	Defines the heap memory usage threshold value. This is the ratio of used heap memory to				10001	10002	HeapMemoryUsage.threshold (metrics section)

Alarm name	Alarm description	Alarm Condition object					Related configuration option
	maximum heap memory.						
GC Latency	Defines the garbage collection latency threshold value, in milliseconds, in relation to the last time the garbage was collected within the configured time interval.				10005	10006	GcLatency.threshold (metrics section)

Alarm Actions

Alarm name	Detect alarm message example	Problem description	Solution	Cancel alarm message
Event Duration	[ERROR] Average event duration is too long %s	The average event processing time is too long.	• Resolve performance issues • Correct the solution configuration	[INFO] Average event duration is back to normal
Incorrect load balancer routing	[ERROR] Incorrect routing for request %s	Invalid sticky cookie in request	• Correct invalid StickyCookieFilter configuration • Correct invalid Load Balancer configuration	[INFO] Routing is back to normal
Interaction duration	[ERROR] Interaction duration %s is too short	The media interaction processing time is too short. Potential DDoS attack, due to an excessively large number of chat requests.	Resolve network security issues	[INFO] Interaction duration is back to normal
VisitProfile cache size	[ERROR] VisitProfile Cache is full	The cache is not large enough to effectively process the actual number of visit profiles.	• Increase cache size • Resolve performance issues	[INFO] Cache size is back to normal
IxnProfile cache size	[ERROR] IxnProfile Cache is full	The cache is not large enough to effectively process the actual number of engagement profiles.	• Increase cache size • Resolve performance issues	[INFO] Cache size is back to normal
Events cache size	[ERROR] Events Cache is full	The cache is not large enough to effectively process the actual number of events.	• Increase cache size • Resolve performance issues	[INFO] Cache size is back to normal

Alarm name	Detect alarm message example	Problem description	Solution	Cancel alarm message
DroolsSession cache size	[ERROR] DroolsSession Cache is full	The cache is not large enough to effectively process the actual number of drools sessions.	• Increase cache size • Resolve performance issues	[INFO] Cache size is back to normal