

StoreJanitor in Apache Cocoon (2.1 legacy document)

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Warning:

This document was copied as is from the Cocoon 2.1 documentation, but has not yet been fully reviewed or moved to its new home.

1. Goal

This document describes the usage of the StoreJanitor under Apache Cocoon.

2. Description

The implementation is quite simple! Every implementation of a Store can register in the StoreJanitor. It checks at a configurable interval if memory is running low. If low, it greps via Round Robin a victim (Store) and frees xx% of all elements in this Store. After that the StoreJanitor sleeps and waits for the next iteration.

3. Configuration

```
<store-janitor logger="root.store"> <parameter name="freememory" value="1000000"/>
<parameter name="heapsize" value="60000000"/> <parameter
name="cleanupthreadinterval" value="10"/> <parameter name="threadpriority" value="5"/>
<parameter name="percent_to_free" value="10"/> </store-janitor>
```

The right configuration is very important, because wrong settings can cause a high system load.

3.1. Example configuration

- Tomcat settings in tomcat.sh or tomcat.bat:

```
%_RUNJAVA% %TOMCAT_OPTS% -Dtomcat.home="%TOMCAT_HOME%" \
-Xmx200000000 org.apache.tomcat.startup.Tomcat %2 %3 %4 %5 %6 %7 %8 %9
```

- StoreJanitor settings:

The freememory and heapsize parameters always depend on the Xmx parameter.

```
<store-janitor logger="root.store"> <parameter name="freememory" value="50000000"/>
<parameter name="heapsize" value="150000000"/> <parameter
name="cleanupthreadinterval" value="10"/> <parameter name="threadpriority" value="5"/>
<parameter name="percent_to_free" value="10"/> </store-janitor>
```

It is recommended to have heapsize equal to -Xmx, especially on Sun's JVM which is unable to shrink its heap once it grows above the minimum. The freememory parameter should be greater than the amount of memory necessary for normal application operation.

The cleanupthreadinterval defines the interval (in seconds) of the background thread which checks memory. Also this parameter should be configured wisely. A too short interval can also cause a high system load. The threadpriority defines the priority of the background thread (1 is the lowest level and 10 the highest).

The percent_to_free parameter describes what percentage of the elements of each registered Store shall be removed when low on memory.

1. Comments

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