



## Introduction:

Since the release of JDK 5 the JVM uses JMX technology to provide information on performance and resource consumption of the applications running in the JVM. Together with the JConsole tool we can use this information to monitor our applications and locate problems. To maintain the JBoss server in good health, it's important to have an overview on server and application performances. Therefore, Jconsole is very suitable to monitor JBoss Server.

However, in order to centralize monitoring informations, we would like to integrate JBoss Server monitoring within WhatsUp Gold. We will, therefore, in this document describe a solution which allows monitoring a JBoss Server from your WhatsUp Gold console but with the same purpose as the Jconsole.

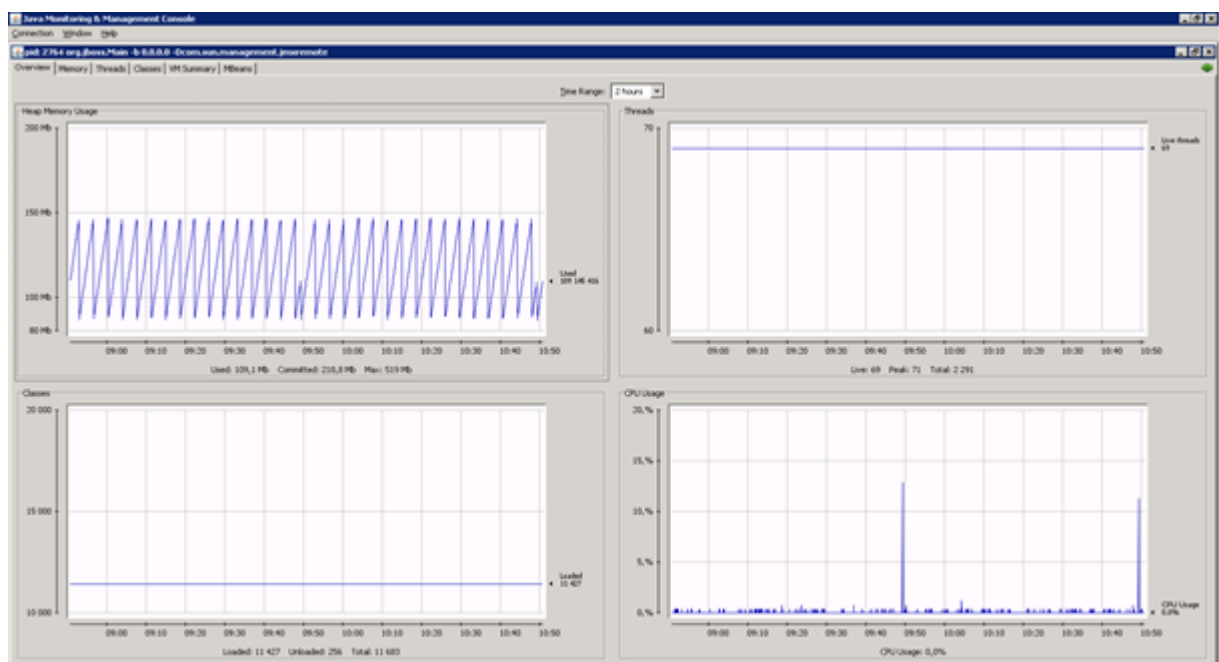
## JBoss 6 Monitoring by Jconsole

Jconsole allows monitoring a lot of parameters on JBoss Server:

- Memory
- Threads
- Classes
- VM Summary
- Mbean diagnostics

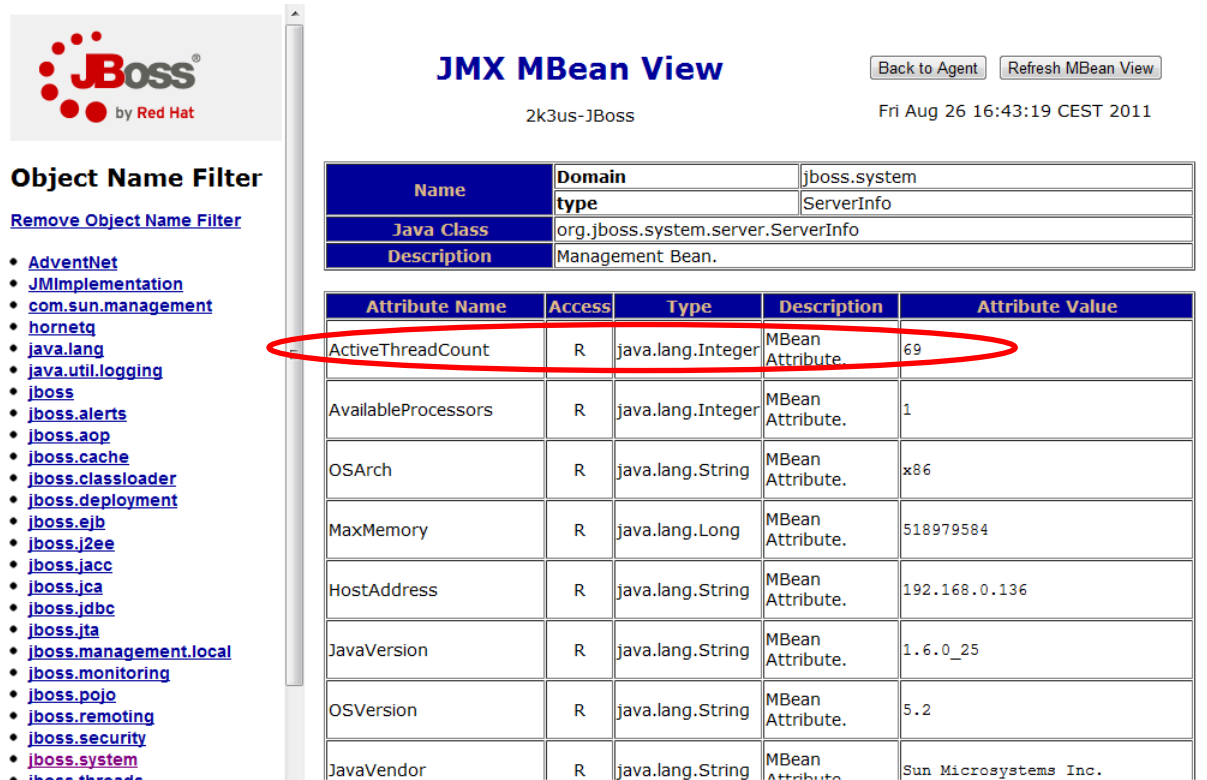
Some remote server performances graphs are available on the Home page of Jconsole.

### Jconsole, performance graphs



Jconsole allow accessing to all MBean attributes. In the following example, we will configure a thread count monitor on Jconsole.

### Mbean attributes in Jboss web interface



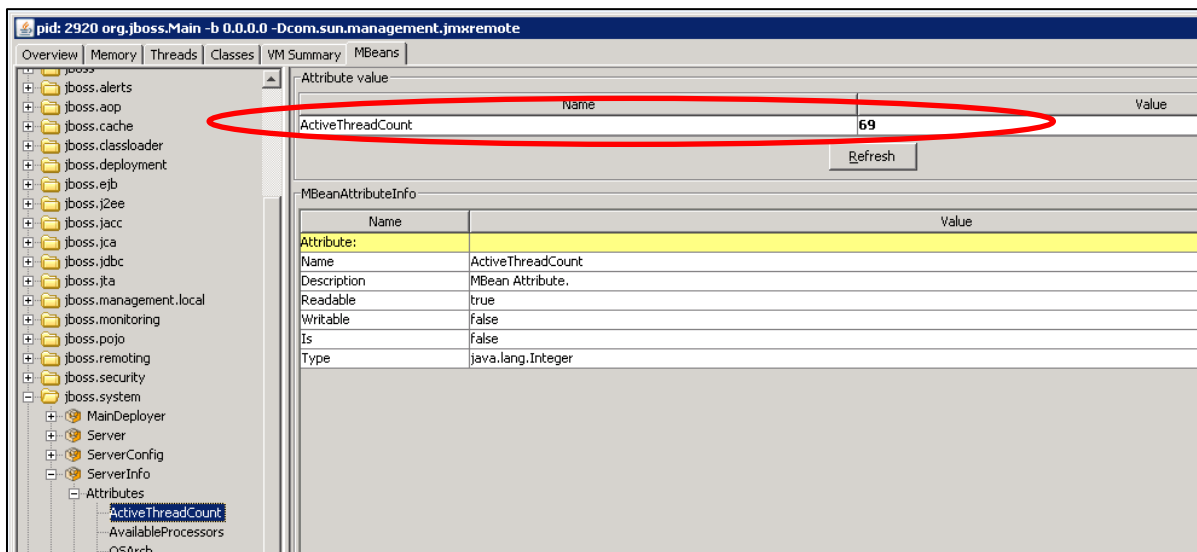
The screenshot shows the JBoss JMX MBean View interface. On the left is an 'Object Name Filter' with a tree view of JBoss components. The main area displays 'JMX MBean View' for '2k3us-JBoss' on 'Fri Aug 26 16:43:19 CEST 2011'. It includes a table for MBean details and a table for MBean attributes. The 'ActiveThreadCount' attribute is circled in red.

Name	Domain	Value
	jboss.system	
Java Class	org.jboss.system.server.ServerInfo	
Description	Management Bean.	

Attribute Name	Access	Type	Description	Attribute Value
ActiveThreadCount	R	java.lang.Integer	MBean Attribute.	69
AvailableProcessors	R	java.lang.Integer	MBean Attribute.	1
OSArch	R	java.lang.String	MBean Attribute.	x86
MaxMemory	R	java.lang.Long	MBean Attribute.	518979584
HostAddress	R	java.lang.String	MBean Attribute.	192.168.0.136
JavaVersion	R	java.lang.String	MBean Attribute.	1.6.0_25
OSVersion	R	java.lang.String	MBean Attribute.	5.2
JavaVendor	R	java.lang.String	MBean Attribute.	Sun Microsystems Inc.

We will access this attribute in Jconsole,



The screenshot shows the JConsole interface for the process 'pid: 2920 org.jboss.Main -b 0.0.0.0 -Dcom.sun.management.jmxremote'. The 'MBeans' tab is active, and the 'ActiveThreadCount' attribute is circled in red. Below the attribute value, there is an 'MBeanAttributeInfo' table.

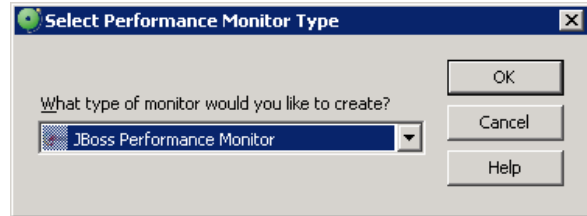
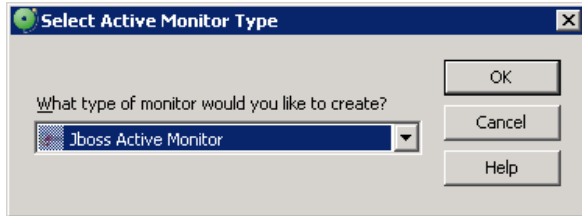
Name	Value
ActiveThreadCount	69

Name	Value
Attribute:	
Name	ActiveThreadCount
Description	MBean Attribute.
Readable	true
Writable	false
Is	false
Type	java.lang.Integer

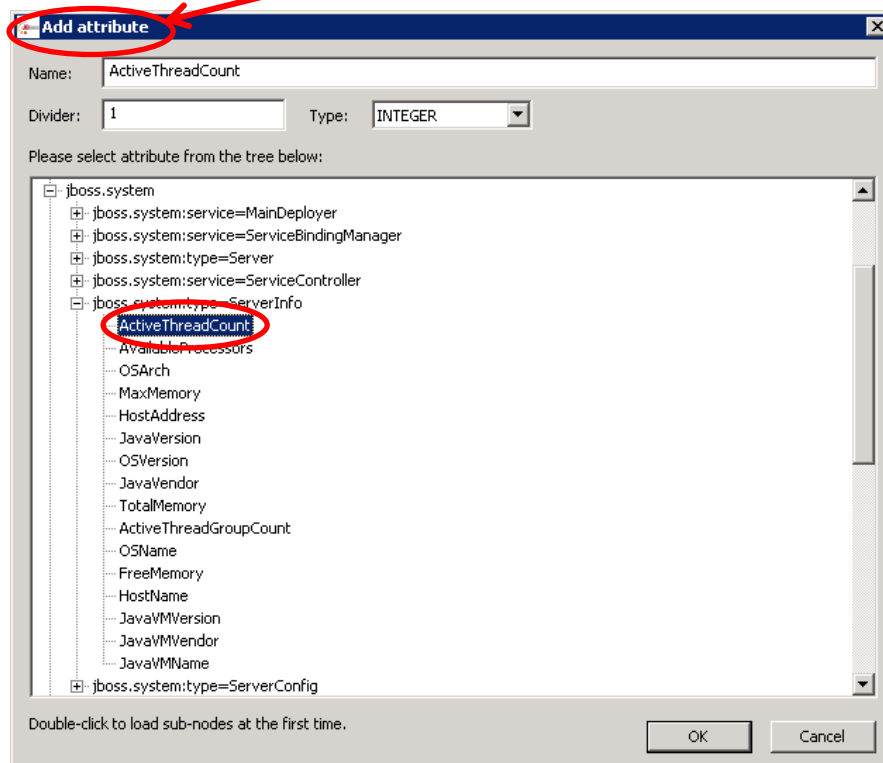
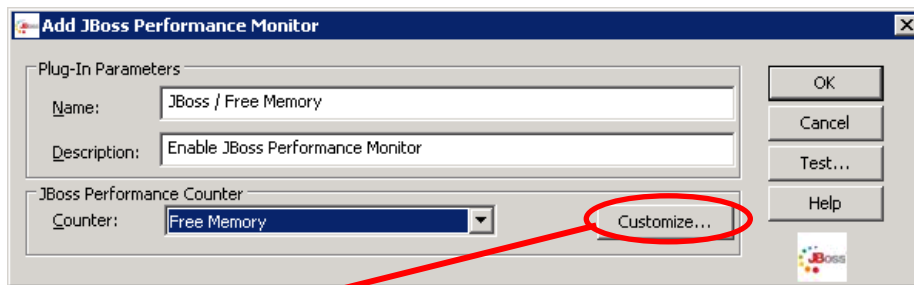
## Monitoring JBoss Server from WhatsUp Gold

In WhatsUp gold, an Active Monitor and a Performance Monitor are available to monitor JBoss Server. It uses the same principles as Jconsole and offers the same possibilities. More, Active Monitor allows implementing thresholds and generating alerts.

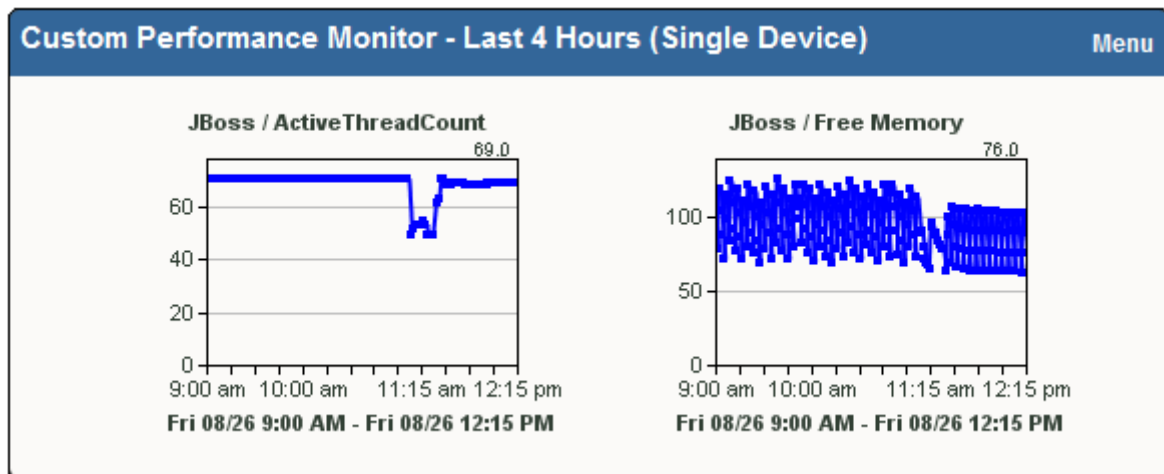


Before using JBoss Active Monitor, you need to deploy collector.sar component to your JBoss server by extracting and copying collector.sar directory to your deploy folder. In most case, the full path is <Path to your jboss>\server\default\deploy.

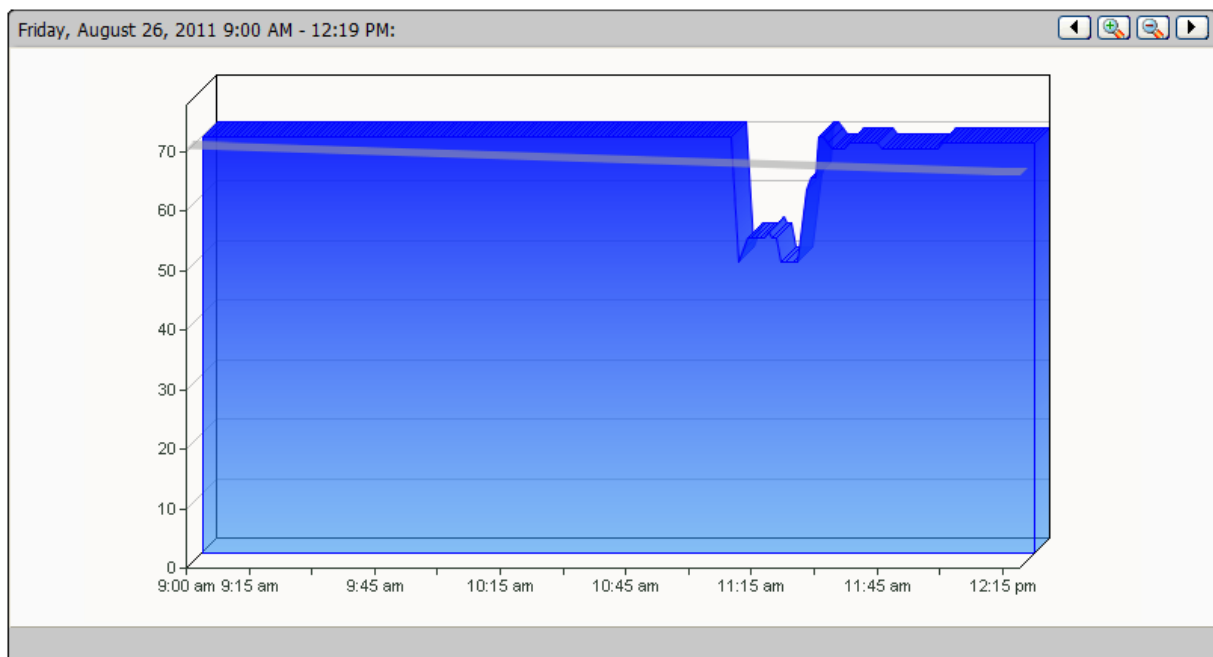
Like in the previous example, we will implement a thread count monitor on WhatsUp Gold. We will choose performance monitor, and search ActiveThreadCount attribute in JBoss MBean tree.



After the establishment of your Performance Monitor, you can add the performance graphs in the web interface, like in the following example.



### Detailed graph Thread Count



WhatsUp Gold provides a good monitoring solution for JBoss Server. Performance Monitor allows integrating same monitoring functionalities as Jconsole, and this offers the possibility to aggregate all monitoring informations in a single console. More, the Active Monitor allows implementing alerts on different attributes of JBoss. JBoss Active and Performance Monitor are available at:

<http://www.orsenna.com/store/>