

# BMC® Performance Manager Express Monitoring Studio by Sentry Software™

## Reference Guide



### Supporting

BMC® Performance Manager Express Monitoring Studio by Sentry Software™  
Version 2.5.00

January 2007



## Customer Support

You can obtain technical support by using the Support page on the Sentry Software Web site or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see the section “Before Contacting Sentry Software” given below.

### Support Web Site

You can obtain technical support from Sentry Software 24 hours a day, 7 days a week at <http://www.sentrysoftware.net/support.asp>. From this Web site, you can

- register a case online
- report a problem or ask a question
- read overviews about support services and programs that Sentry Software offers
- find the most current information about Sentry Software products
- download trial versions of products
- download product documentation
- consult the Online Technical Library that provides detailed product documentation

### Support by Telephone or E-mail

To find telephone and e-mail contact information for the Sentry Software support center please, refer to the Contact Us section of the Support page on the Sentry Software Web site at <http://www.sentrysoftware.net/support.asp>

### Before Contacting Sentry Software

Before you contact Sentry Software, please ensure you have the following information available so that Customer Support can begin working on your problem immediately:

#### *Product information*

- product name
- product version (release number)
- license number and password (trial or permanent)

#### *Operating system and environment information*

- machine type
- operating system type, version, and service pack or other maintenance level such as PUT or PTF
- system hardware configuration
- serial numbers
- related software (database, application, and communication) including type, version, and service pack or maintenance level

#### *Sequence of events leading to the problem*

#### *Commands and options that you used*

#### *Messages received (and the time and date that you received them)*

- product error messages
- messages from the operating system, such as *file system full*
- messages from related software



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## Overview

BMC® Performance Manager Express Monitoring Studio is an agent-less Performance Manager for the BMC® Portal environment. It enables you to setup the monitoring, without any coding, of diverse applications, devices, IT components and non-standard technologies. The solution enables you to centralize diverse monitoring needs within the Portal framework with a single solution – instead of juggling with separate tools and consoles.

BMC® Performance Manager Express Monitoring Studio offers the following monitoring tools:

1. Command line execution and analysis
2. Java MBean polling on JBoss, JOnAS, WebSphere, WebLogic and generic JMX application servers
3. LOG file monitoring and analysis
4. SNMP polling
5. SQL database query analysis (Oracle Database Server, Microsoft SQL Server, MySQL Server)
6. WBEM requests (CIM over RPC & CIM over HTTP)
7. Web requests (Simple-HTTP GET & Forms-HTTP POST)

In addition you can run *String searches* and perform *Numeric Value extractions* on the result outputs of the monitored instances of all the above application classes/monitoring tools.

This document details the various application classes of BMC® Performance Manager Express Monitoring Studio.

Being a Performance Manager specifically designed for BMC Portal, BMC Performance Manager Express Monitoring Studio uses the Portal's web-based interface and features for installing, managing and monitoring your infrastructure.

This reference guide details the main application classes corresponding to the main monitoring tools, plus the sub-application classes for *String search and Numeric Value extraction* that are integrated within each monitoring tool.

This document gives details on the parameters for each application class as well as the alert conditions for each parameter.

## Application Classes

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This section enumerates the different application classes with aim of giving details on the parameters and alert conditions.















Certain “sub-classes” have been grouped under their “main” class as the parameters are identical, for instance: Studio – JMX (JBoss), Studio – JMX (JOnAS) etc have been grouped under Studio-JMX in this document.

On the other hand, certain classes that are integrated within each monitoring tool such as the Numeric Value extraction, String search classes and LOG file Numeric Value extraction and LOG file String search are detailed separately in this document.

## 1. Studio – JMX Polling

Applies to the following classes:

- Studio - JMX Polling (JBoss)
- Studio - JMX Polling (JOnAS)
- Studio - JMX Polling (WebLogic)
- Studio - JMX Polling (WebSphere)
- Studio - JMX Polling (Standard JMX application)

Parameter Name	Type	Description	Alert Conditions						
<b>Execution Status</b>	Text	<p> Execution Status</p> <p>Sep 5, 2007 5:50:06 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Execution Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that reflects the connection status to the JMX application server.</p> <p>“OK” indicates successful connection to the JMX MBeanServer of the Java Application Server.</p> <p>“Failed” indicates failure of connection to the JMX MBeanServer of the Java Application Server. The possible causes will be stated.</p>	Status and Parameter	Currently	History	 Execution Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for regular expression “Failed”</p>
Status and Parameter	Currently	History							
 Execution Status	OK								
<b>Text Value</b>	Text	<p> Text value</p> <p>Sep 5, 2007 5:55:17 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Text value</td> <td>sid=0,name=S0,gateway=-1</td> <td></td> </tr> </tbody> </table> <p>Parameter displays the value of the specified attribute of the specified MBean object – when this attribute is a text type value.</p> <p>“No data found” indicates that the specified MBean attribute is a numeric type value. In such a case, this parameter will be grey and it is the <i>Numeric Value</i> parameter that will display the polled values.</p>	Status and Parameter	Currently	History	 Text value	sid=0,name=S0,gateway=-1		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
 Text value	sid=0,name=S0,gateway=-1								

Parameter Name	Type	Description	Alert Conditions
<b>Numeric Value (HB)</b>	Numeric	<p>Displays the value of the specified attribute of the specified MBean object – when this attribute is a numeric type value (integer, float, etc.).</p> <p><i>Unit: General numbers</i></p> <p>“No data” indicates that the specified MBean attribute is a text type value and hence this parameter is in grey. In such a case, it is the Text Value parameter that will display the content polled.</p> <p>Activate the thresholds on this parameter if a higher count is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
<b>Numeric Value (LB)</b>	Numeric	<p>Displays the value of the specified attribute of the specified MBean object – when this attribute is a numeric type value (integer, float, etc.).</p> <p><i>Unit: General numbers</i></p> <p>“No data” indicates that the specified MBean attribute is a text type value and hence this parameter is in grey. In such a case, it is the Text Value parameter that will display the content polled.</p> <p>Activate the thresholds on this parameter if a lower count is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>

Thresholds can be set and modified on all parameters.

#### **HB = "Higher is Better" and LB = "Lower is Better"**

HB and LB parameters will always display the same value since, basically, both represent the same value. The purpose of having two parameters for the same value is to be able to set different alert thresholds depending on the nature of the monitored object.

For instance, an alert can be set to be triggered on the HB parameter when the value dips too low (it breaches the lower threshold of the range) and an alert can be set on the LB parameter to go off when the value rises too high.

The setting of alerts is flexible and can be done on either of the two parameters, on both, or on neither; it depends entirely on nature of the monitored object and the user's specific needs.

## 2. Studio – LOG File Monitoring and Analysis

Parameter Name	Type	Description	Alert Conditions
<b>Access Rights</b>	Text	<p>On UNIX/Linux systems: Parameter displays the access rights to the monitored file in the form: “rwxrwxrwx”</p> <p>On Windows system: The parameter is unavailable. The message “No data” is displayed.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
<b>Exists</b>	Text	 <p>Parameter that reflects whether or not the monitored file is currently present.</p> <p><i>Unit: Boolean - True or False</i></p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>Alarm activated by default</p>
<b>Group</b>	Text	<p>On UNIX/Linux: Parameter displays the owner group of the file.</p> <p>On Windows systems: The parameter is unavailable. The message “No data” is displayed.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
<b>Growth Percentage</b>	Numeric	 <p>Parameter displays the growth of the monitored file relative to its previous size in percentage.</p> <p>The parameter’s value is calculated as follows:</p> $\text{Growth Percentage} = \frac{\text{Current Size} - \text{Previous Size}}{\text{Previous Size}} \times \frac{1}{\text{Current Time} - \text{Previous Time}} \times 100\%$ <p><i>Unit: %/min (Percentage per minute)</i></p> <p><i>Note: The value can be negative when the file shrinks in size.</i></p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>

Parameter Name	Type	Description	Alert Conditions						
<b>Growth Speed</b>	Numeric	<p><input checked="" type="checkbox"/> Growth Speed</p> <p>Oct 18, 2007 5:20:40 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Growth Speed</td> <td>0.000 KB/min</td> <td></td> </tr> </tbody> </table> <p>Parameter displays the growth of the monitored file calculated as follows:</p> $\text{Growth Speed} = \frac{\text{Current Size} - \text{Previous Size}}{\text{Current Time} - \text{Previous Time}}$ <p>Unit: KB/min (Kilobytes per minute)</p> <p>Note: The value can be negative when the file shrinks in size.</p>	Status and Parameter	Currently	History	Growth Speed	0.000 KB/min		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
Growth Speed	0.000 KB/min								
<b>Last Modified</b>	Numeric	<p><input checked="" type="checkbox"/> Last Modified</p> <p>Oct 18, 2007 5:24:49 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Last Modified</td> <td>307.00 minute(s)</td> <td></td> </tr> </tbody> </table> <p>Parameter reflects the time elapsed since the last modification of the monitored file.</p> <p>Unit: Minutes</p>	Status and Parameter	Currently	History	Last Modified	307.00 minute(s)		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
Last Modified	307.00 minute(s)								
<b>Monitored File</b>	Text	<p><input checked="" type="checkbox"/> Monitored File</p> <p>Oct 18, 2007 5:28:25 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Monitored File</td> <td>c:\bmcsoftware\remote.service.monitor\ism23\server\ism\log\ism.log</td> <td></td> </tr> </tbody> </table> <p>Parameter displays the full path of the currently monitored file.</p> <p>Note: This parameter allows you to easily identify which file is monitored when wildcards have been used in the field for "name" of the file to be monitored.</p>	Status and Parameter	Currently	History	Monitored File	c:\bmcsoftware\remote.service.monitor\ism23\server\ism\log\ism.log		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
Monitored File	c:\bmcsoftware\remote.service.monitor\ism23\server\ism\log\ism.log								
<b>Owner</b>	Text	<p>On UNIX/Linux systems: Parameter displays the owner of the file.</p> <p>On Windows: Parameter is not available. The message: "No data" is displayed.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>						

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Parameter Name	Type	Description	Alert Conditions						
Size	Numeric	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #90EE90; padding: 2px;">✔ Size</div> <p style="text-align: center;">Oct 18, 2007 5:39:54 PM CEST</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td>✔ Size</td> <td style="text-align: center;">121.853 KB</td> <td style="text-align: center;">✔</td> </tr> </tbody> </table> <p>Parameter displays the size of the monitored file.</p> <p><i>Unit: KB (Kilobytes)</i></p> </div>	Status and Parameter	Currently	History	✔ Size	121.853 KB	✔	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
✔ Size	121.853 KB	✔							

Thresholds can be set and modified on all parameters.

### 3. Studio – Remote Command Line Execution and Analysis

Parameter Name	Type	Description	Alert Conditions						
Execution Status	Text	<p><input checked="" type="checkbox"/> Execution Status</p> <p>Sep 4, 2007 10:53:03 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Execution Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that gives the execution status of the command line or script.</p> <p>“OK” indicates successful command/script execution.</p> <p>“Failed” indicates execution failure. The possible causes will be stated.</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Execution Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Execution Status	OK								
Execution Time	Numeric	<p><input checked="" type="checkbox"/> Execution Time</p> <p>Sep 4, 2007 10:55:41 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Execution Time</td> <td>18.266 Seconds</td> <td></td> </tr> </tbody> </table> <p>Parameter shows the time taken to execute the command/script and for the command or script to complete.</p> <p><i>Unit: Seconds</i></p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Execution Time	18.266 Seconds		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Execution Time	18.266 Seconds								
Return Output	Text	<p><input checked="" type="checkbox"/> Return output</p> <p>Sep 4, 2007 10:56:38 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Return output</td> <td>Active Connections Proto Local Address Foreign Address State TCP ec... ↓</td> <td></td> </tr> </tbody> </table> <p>Successful execution of the command displays the output returned on execution of the command/script.</p> <p>“No data” displayed indicates no data is found. The possible causes will be stated.</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Return output	Active Connections Proto Local Address Foreign Address State TCP ec... ↓		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Return output	Active Connections Proto Local Address Foreign Address State TCP ec... ↓								

Thresholds can be set and modified for all parameters.

## 4. Studio - SNMP Polling

Parameter Name	Type	Description	Alert Conditions						
<b>Status</b>	Text	<p><input checked="" type="checkbox"/> <b>Status</b></p> <p>Sep 5, 2007 2:31:08 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that reflects the connection status to the SNMP agent.</p> <p>“OK” indicates successful connection to the SNMP agent.</p> <p>“Failed” indicates failure of connection to the SNMP agent. Possible causes are stated.</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”.</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Status	OK								
<b>Text Value</b>	Text	<p><input checked="" type="checkbox"/> <b>Text value</b></p> <p>Sep 5, 2007 2:32:20 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Text value</td> <td>Hardware: x86 Family 15 Model 4 Stepping 7 AT/AT COMPATIBLE -</td> </tr> </tbody> </table> <p>Parameter displays the value of the specified OID – when this OID is a text type value.</p> <p>If the polling is for an entire SNMP table, then the content of the SNMP table will be formatted as follows:</p> <ul style="list-style-type: none"> <li>- One line per table row</li> <li>- Semi-colon separated columns.</li> </ul> <p>“No data found” indicates that the specified OID is a numeric type value. In such a case, this parameter will be grey and it is the <i>Numeric Value</i> parameters that will display the polled values.</p>	Status and Parameter	Currently	<input checked="" type="checkbox"/> Text value	Hardware: x86 Family 15 Model 4 Stepping 7 AT/AT COMPATIBLE -	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>		
Status and Parameter	Currently								
<input checked="" type="checkbox"/> Text value	Hardware: x86 Family 15 Model 4 Stepping 7 AT/AT COMPATIBLE -								
<b>Numeric Value (HB)</b>	Numeric	<p>Parameter displays the value of the specified OID – when this OIS is a numeric type value (integer, counter, etc.).</p> <p><i>Unit: General number</i></p> <p>“No data” indicates that the specified OID is a text value and hence this parameter is in grey. In this case, it is the Text Value parameter that will display the content polled.</p> <p>Activate the thresholds on this parameter if a higher value is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>						

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Parameter Name	Type	Description	Alert Conditions
<b>Numeric Value (LB)</b>	Numeric	<p>Parameter displays the value of the specified OID – when this OID is a numeric type value (integer, counter, etc.).</p> <p><i>Unit: General number</i></p> <p>“No data” indicates that the specified OID is a text value and hence this parameter is in grey. In this case, it is the Text Value parameter that will display the content polled.</p> <p>Activate the thresholds on this parameter if a lower value is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>

Thresholds can be set and modified on all parameters.

### **HB = "Higher is Better" and LB = "Lower is Better"**

HB and LB parameters will always display the same value since, basically, both represent the same value. The purpose of having two parameters for the same value is to be able to set different alert thresholds depending on the nature of the monitored object.

For instance, an alert can be set to be triggered on the HB parameter when the value dips too low (it breaches the lower threshold of the range) and an alert can be set on the LB parameter to go off when the value rises too high.

The setting of alerts is flexible and can be done on either of the two parameters, on both, or on neither; it depends entirely on nature of the monitored object and the user's specific needs.

## 5. Studio – SQL Query

Applies to the following classes:















- Studio - SQL Query (Oracle Database Server)
- Studio - SQL Query (Microsoft SQL Server)
- Studio - SQL Query (MySQL Server)

Parameter Name	Type	Description	Alert Conditions						
Connection Status	Text	<p><input checked="" type="checkbox"/> <b>Connection Status</b></p> <p>Sep 4, 2007 11:17:58 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Connection Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that reflects the connection status to the database.</p> <p>“OK” indicates successful connection to the database.</p> <p>“Failed” indicates connection failure. The possible causes will be stated.</p>	Status and Parameter	Currently	History	Connection Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
Connection Status	OK								
Execution Time	Numeric	<p><input checked="" type="checkbox"/> <b>Execution Time</b></p> <p>Sep 4, 2007 11:21:18 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Execution Time</td> <td>0.015 Seconds</td> <td></td> </tr> </tbody> </table> <p>Parameter shows the time taken to execute the query.</p> <p><i>Unit: Seconds</i></p>	Status and Parameter	Currently	History	Execution Time	0.015 Seconds		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
Execution Time	0.015 Seconds								
Query Status	Text	<p><input checked="" type="checkbox"/> <b>Query Status</b></p> <p>Sep 4, 2007 11:22:11 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Query Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that displays the status of the database query execution.</p> <p>“OK” indicates successful execution of the database query.</p> <p>“Failed” indicates failure. The possible causes will be stated.</p>	Status and Parameter	Currently	History	Query Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
Query Status	OK								

Parameter Name	Type	Description	Alert Conditions				
<b>Return Output</b>	Text	<p><input checked="" type="checkbox"/> Return output</p> <p>Sep 4, 2007 11:23:06 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> </tr> </thead> <tbody> <tr> <td> Return output</td> <td>p4sg86rZZmGw4KhlTqDa0f5mcae3e001;eco_RSM;GLOBAL;2.5.00;172.16.8.243;e..</td> </tr> </tbody> </table> <p>Successful execution of the database query displays the output returned on query execution. The result is formatted as follows:</p> <ul style="list-style-type: none"> <li>- One line per record of the result set</li> <li>- Semicolon-separated columns</li> </ul> <p>“No data” displayed indicates no data is found. Possible causes are stated.</p>	Status and Parameter	Currently	Return output	p4sg86rZZmGw4KhlTqDa0f5mcae3e001;eco_RSM;GLOBAL;2.5.00;172.16.8.243;e..	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently						
Return output	p4sg86rZZmGw4KhlTqDa0f5mcae3e001;eco_RSM;GLOBAL;2.5.00;172.16.8.243;e..						

Thresholds can be set and modified on all parameters.

## 6. Studio – WBEM Request

Parameter Name	Type	Description	Alert Conditions						
Query Status	Text	<p> <b>Query Status</b></p> <p>Sep 5, 2007 6:01:43 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Query Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Text parameter that shows the overall status of the WBEM query executed. This includes connection status as well as query status.</p> <p>“OK” indicates successful execution of the query/connection.</p> <p>“Failed” indicates failure of the query/connection. Possible causes are stated.</p>	Status and Parameter	Currently	History	 Query Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
 Query Status	OK								
Return Output	Text	<p> <b>Return output</b></p> <p>Sep 5, 2007 6:03:08 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Return output</td> <td>System Idle Process; System; SMSS.EXE; CSRSS.EXE; WINLOGON.EXE; SERVI...</td> <td></td> </tr> </tbody> </table> <p>Parameter that displays the output returned on successful execution of the WBEM query. The result is formatted as follows:</p> <ul style="list-style-type: none"> <li>- One line per instance of the result class</li> <li>- Semicolon-separated properties of each instance</li> </ul> <p>“No data” indicates no data is found. Possible causes are stated.</p>	Status and Parameter	Currently	History	 Return output	System Idle Process; System; SMSS.EXE; CSRSS.EXE; WINLOGON.EXE; SERVI...		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
 Return output	System Idle Process; System; SMSS.EXE; CSRSS.EXE; WINLOGON.EXE; SERVI...								

Thresholds can be set and modified on all parameters.

## 7. Studio – Web Request Analysis

Applies to the following classes:

- Studio - Web Request (Post a Form, HTTP POST)
- Studio - Web Request (Simple, HTTP GET)

Parameter Name	Type	Description	Alert Conditions						
<b>Sever Connection State</b>	Text	<p><input checked="" type="checkbox"/> <b>Server Connection State</b></p> <p>Sep 5, 2007 2:13:39 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Server Connection State</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Parameter that reflects the connection status to the web server.</p> <p>“OK” indicates successful connection to the server.</p> <p>“Failed” indicates failure of connection to the server</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Server Connection State	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Server Connection State	OK								
<b>Execution Time</b>	Numeric	<p><input checked="" type="checkbox"/> <b>Execution Time</b></p> <p>Sep 5, 2007 2:05:33 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Execution Time</td> <td>2.281 Seconds</td> <td></td> </tr> </tbody> </table> <p>Parameter displays the time taken to execute the HTTP request.</p> <p><i>Unit: Seconds</i></p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Execution Time	2.281 Seconds		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Execution Time	2.281 Seconds								
<b>HTTP Status Code</b>	Numeric	<p><input checked="" type="checkbox"/> <b>HTTP Status Code</b></p> <p>Sep 5, 2007 2:10:09 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> HTTP Status Code</td> <td>200</td> <td></td> </tr> </tbody> </table> <p>Parameter that displays the standard HTTP response code procured on execution of the web request.</p> <p><i>Unit: General number</i></p> <p>Example: 404 = Not found/web page unavailable</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> HTTP Status Code	200		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> HTTP Status Code	200								

Parameter Name	Type	Description	Alert Conditions						
<b>Return Output</b>	Text	<p><input checked="" type="checkbox"/> Return output</p> <p>Sep 5, 2007 2:14:43 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Return output</td> <td>Web NASDAQ.com Get Up To 10 Quotes NASDAQ 1,930,345,600 Stocks Funds ...</td> <td></td> </tr> </tbody> </table> <p>Successful execution of the Web request displays the output returned on request execution.</p> <p>“No data” displayed indicates no data is found. Possible causes are stated.</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Return output	Web NASDAQ.com Get Up To 10 Quotes NASDAQ 1,930,345,600 Stocks Funds ...		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Return output	Web NASDAQ.com Get Up To 10 Quotes NASDAQ 1,930,345,600 Stocks Funds ...								
<b>Status</b>	Text	<p><input checked="" type="checkbox"/> Status</p> <p>Sep 5, 2007 2:18:30 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Status</td> <td>OK</td> <td></td> </tr> </tbody> </table> <p>Text parameter that reflects the overall status of the web request.</p> <p>“OK” indicates a successful web request.</p> <p>“Failed” indicates failure of any one or all parameters. The possible causes will be stated.</p>	Status and Parameter	Currently	History	<input checked="" type="checkbox"/> Status	OK		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>By default <b>Alarm</b> is enabled for the regular expression “Failed”</p>
Status and Parameter	Currently	History							
<input checked="" type="checkbox"/> Status	OK								

Thresholds can be set and modified on all parameters.

## 8. LOG File Numeric Value Extraction

Parameter Name	Type	Description	Alert Conditions
<b>Value (HB)</b>	Numeric	<p>Parameter displays the value extracted from the LOG file.</p> <p><i>Unit: General number</i></p> <p>“No data” displayed indicates no numeric values matching the specified criteria are found. Possible causes are stated.</p> <p>Activate the thresholds on this parameter if a higher value is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
<b>Value (LB)</b>	Numeric	<p>Parameter displays the value extracted from the LOG file.</p> <p><i>Unit: General number</i></p> <p>“No data” displayed indicates no numeric values matching the specified criteria are found. Possible causes are stated.</p> <p>Activate the thresholds on this parameter if a lower value is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>

Thresholds can be set and modified on all parameters.








### **HB = "Higher is Better" and LB = "Lower is Better"**

HB and LB parameters will always display the same value since, basically, both represent the same value. The purpose of having two parameters for the same value is to be able to set different alert thresholds depending on the nature of the monitored object.

For instance, an alert can be set to be triggered on the HB parameter when the value dips too low (it breaches the lower threshold of the range) and an alert can be set on the LB parameter to go off when the value rises too high.

The setting of alerts is flexible and can be done on either of the two parameters, on both, or on neither; it depends entirely on nature of the monitored object and the user's specific needs.

## 9. LOG File String Search

Parameter Name	Type	Description	Alert Conditions						
<b>Matching Line Rate (HB)</b>	Numeric	<p>Parameter displays the number of lines per minute that match the specified criteria.</p> <p><i>Unit: Lines/min (Lines per minute)</i></p> <p>Activate this parameter if a higher line rate is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>						
<b>Matching Line Rate (LB)</b>	Numeric	<p>Parameter displays the number of lines per minute that match the specified criteria.</p> <p><i>Unit: Lines/min (Lines per minute)</i></p> <p>Activate this parameter if a lower line rate is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>						
<b>Matching Lines</b>	Text	<p> <b>Matching Line(s)</b></p> <p>Sep 5, 2007 6:37:22 PM CEST</p> <table border="1"> <thead> <tr> <th>Status and Parameter</th> <th>Currently</th> <th>History</th> </tr> </thead> <tbody> <tr> <td> Matching Line(s)</td> <td>S&amp;P 500 1474.54 -14.88 1.00%</td> <td></td> </tr> </tbody> </table> <p>Parameter displays the lines that match the specified criteria extracted from the monitored file. If more than 1 kilobyte of text is to be shown, only the last kilobyte of matching lines is displayed in the parameter.</p>	Status and Parameter	Currently	History	 Matching Line(s)	S&P 500 1474.54 -14.88 1.00%		<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>
Status and Parameter	Currently	History							
 Matching Line(s)	S&P 500 1474.54 -14.88 1.00%								
<b>Matching Line Count (HB)</b>	Numeric	<p>Displays the number of lines that match the specified criteria since the last acknowledgement or reset.</p> <p>This parameter keeps increasing for each line that matches the specified criteria. It is automatically reset to zero when the specified acknowledgement string is found, or when the specified timeout is reached.</p> <p><i>Unit: General number</i></p> <p>Activate the thresholds on this parameter if a higher count is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>						

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Parameter Name	Type	Description	Alert Conditions
<b>Matching Line Count (LB)</b>	Numeric	<p>It displays the number of lines that match the specified criteria since the last acknowledgement or reset.</p> <p>This parameter keeps increasing for each line that matches the specified criteria. It is automatically reset to zero when the specified acknowledgement string is found, or when the specified timeout is reached.</p> <p><i>Unit: General number</i></p> <p>Activate the thresholds on this parameter if a lower count is desirable.</p>	<p><b>Alarm or Warning</b></p> <p><b>Alarm</b></p> <p>No default thresholds or alerts set</p>

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## 10. Numeric Value Extraction

Parameter Name	Type	Description	Alert Conditions
<b>Value (HB)</b>	Numeric	Value extracted from the searched content  <i>Unit: General number</i>  "No data" displayed indicates no numeric values matching the specified criteria are found. Possible causes are stated.  Activate the thresholds on this parameter if a higher value is desirable.	<b>Alarm or Warning</b>  <b>Alarm</b>  No default thresholds or alerts set
<b>Value (LB)</b>	Numeric	Value extracted from the searched content  <i>Unit: General number</i>  "No data" displayed indicates no numeric values matching the specified criteria are found. Possible causes are stated.  Activate the thresholds on this parameter if a lower value is desirable.	<b>Alarm or Warning</b>  <b>Alarm</b>  No default thresholds or alerts set

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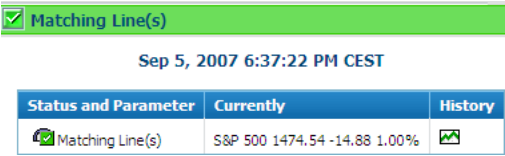
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## 11. String Search

Parameter Name	Type	Description	Alert Conditions
<b>Count (HB)</b>	Numeric	Parameter displays the number of lines that match the specified criteria in the searched content.  <i>Unit: Lines/min (Lines per minute)</i>  Activate the thresholds on this parameter if a higher count is desirable.	<b>Alarm or Warning</b>  <b>Alarm</b>  No default thresholds or alerts set
<b>Count (LB)</b>	Numeric	Parameter displays the number of lines that match the specified criteria in the searched content.  <i>Unit: Lines/min (Lines per minute)</i>  Activate the thresholds on this parameter if a lower count is desirable.	<b>Alarm or Warning</b>  <b>Alarm</b>  No default thresholds or alerts set
<b>Matching Lines</b>	Text	 <p>Parameter displays the lines that match the specified criteria extracted from the monitored file. If more than 1 kilobyte of text is to be shown, only the last kilobyte of matching lines is displayed in the parameter.</p>	<b>Alarm or Warning</b>  <b>Alarm</b>  No default thresholds or alerts set

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BMC Software, Inc. [NYSE:BMC], is a leading provider of enterprise management solutions that empower companies to manage their IT infrastructure from a business perspective. Delivering Business Service Management, BMC Software solutions span enterprise systems, applications, databases, and service management. Founded in 1980, BMC Software has offices worldwide and fiscal 2004 revenues of more than \$1.4 billion. For more information about BMC Software, visit [www.bmc.com](http://www.bmc.com).

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