

The ICCG M3 Alert Monitor and Performance Database

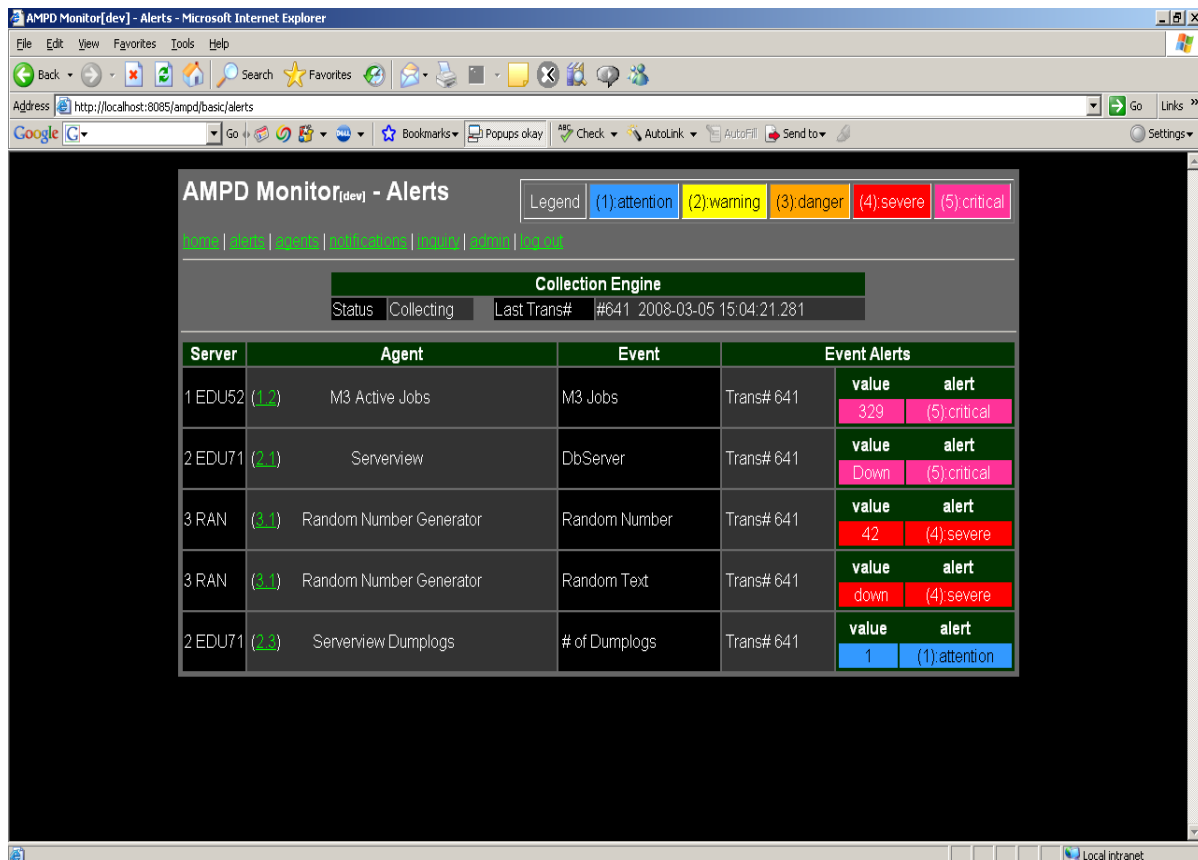
Custom Software

Objective:

Help statistically address and improve M3 performance with pro active alerts and monitoring- ***NO MORE PRODUCTION JVM PROBLEMS!!!!***

The M3 Alert Monitor and Performance Database Server

The M3 Alert Monitor and Performance Database (AMPD) is software that works with M3 application software various versions. The M3 AMPD software is a Java J2EE Web application and works in conjunction with a database and a Web application server. Together, the M3 AMPD software, the database and the Web application server form the M3 Alert Monitor and Performance Database (AMPD) server.



The screenshot shows the AMPD Monitor Alerts web application interface. At the top, there is a legend for alert levels: (1) attention (blue), (2) warning (yellow), (3) danger (orange), (4) severe (red), and (5) critical (pink). Below the legend, there are navigation links: Home, Alert, Alerts, Configuration, Issues, Admin, and About. The main content area is titled "Collection Engine" and shows the status "Collecting" and "Last Trans# #641 2008-03-05 15:04:21.281". Below this, there is a table with columns: Server, Agent, Event, and Event Alerts. The Event Alerts column is further divided into "value" and "alert".

Server	Agent	Event	Event Alerts	
1 EDU52 (1.2)	M3 Active Jobs	M3 Jobs	Trans# 641	value alert 329 (5):critical
2 EDU71 (2.1)	Serverview	DbServer	Trans# 641	value alert Down (5):critical
3 RAN (3.1)	Random Number Generator	Random Number	Trans# 641	value alert 42 (4):severe
3 RAN (3.1)	Random Number Generator	Random Text	Trans# 641	value alert down (4):severe
2 EDU71 (2.3)	ServerviewDumplogs	# of Dumplogs	Trans# 641	value alert 1 (1):attention

In real time,¹ an M3 AMPD server collects information from one or more Lawson M3 v12/5.2/7.1 Java environments and provides two primary services:

- An alert service: real time notification of M3 Java Virtual Machine (JVM) events
- A performance database of M3 JVM performance to be used for statistical analysis

The Alert Monitor

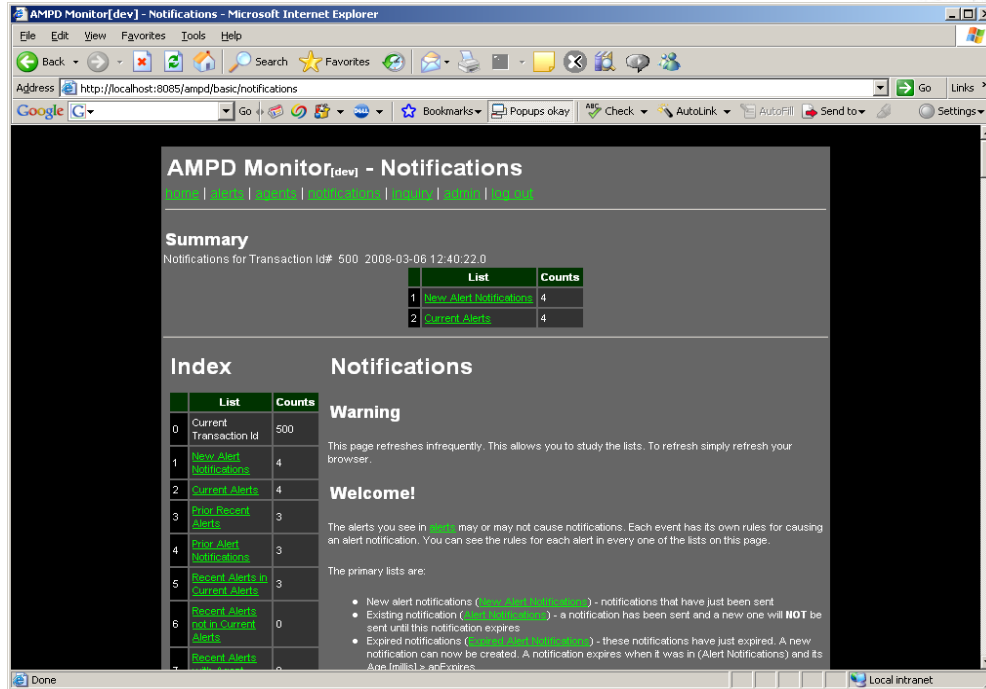
The M3 AMPD alerts are real time notifications of events within the Java virtual machines (JVMs) within the business engine (e.g. within Serverview) of each Lawson M3 environment. The alerts are presented on the *Alert Monitor* Web page and also sent as emails to appropriate recipients.

To view the M3 AMPD Alert Monitor simply open your browser to the M3 AMPD *Alert Monitor* Web page, select the M3 environment to *watch*, and sit back and look at the *Alert Monitor* Web page periodically. The *Alert Monitor* Web page automatically refreshes, giving a “live” picture of the M3 alerts. Or open several browsers, one per M3 environment, and watch them all at the same time.

The initial alerts provided by an M3 AMPD server are:

- JVM CPU percent > a configurable threshold
- JVM heap size > a configurable threshold
- Ratio of current heap size to maximum heap size > a configurable threshold
- JVM status = an alertable status, where an alertable status is configurable
- The M3 environment supervisor has “lost” contact with the M3 JVM
- Total number of JVM’s > a configurable threshold
- Total number of threads per server > a configurable threshold

¹ Real time means the information is updated “every x seconds”, where x is configurable.



AMPD Monitor[dev] - Notifications

Home | Alerts | Alerts | Alerts | Alerts | Alerts | Alerts | Alerts

Summary
Notifications for Transaction Id# 500 2008-03-06 12:40:22.0

List	Counts
1 New Alert Notifications	4
2 Current Alerts	4

Index

List	Counts
0 Current Transaction Id	500
1 New Alert Notifications	4
2 Current Alerts	4
3 Prior Recent Alerts	3
4 Prior Alert Notifications	3
5 Recent Alerts in Current Alerts	3
6 Recent Alerts not in Current Alerts	0
7 Recent Alerts	0

Notifications

Warning

This page refreshes infrequently. This allows you to study the lists. To refresh simply refresh your browser.

Welcome!

The alerts you see in [green](#) may or may not cause notifications. Each event has its own rules for causing an alert notification. You can see the rules for each alert in every one of the lists on this page.

The primary lists are:

- New alert notifications ([New Alert Notifications](#)) - notifications that have just been sent
- Existing notification ([Current Alerts](#)) - a notification has been sent and a new one will **NOT** be sent until this notification expires
- Expired notifications ([Prior Recent Alerts](#)) - these notifications have just expired. A new notification can now be created. A notification expires when it was in (Alert Notifications) and its Age (inSec) >= Expires.

All M3 AMPD alerts are configurable by the user; each monitored M3 event has associated with it a variable number of thresholds. The number of thresholds and the value of each threshold are configurable and stored in a properties file. **For example, we may configure three thresholds for JVM CPU percent: 50 percent is yellow (warning), 60 percent is orange (danger) and 75 percent is red (severe).**

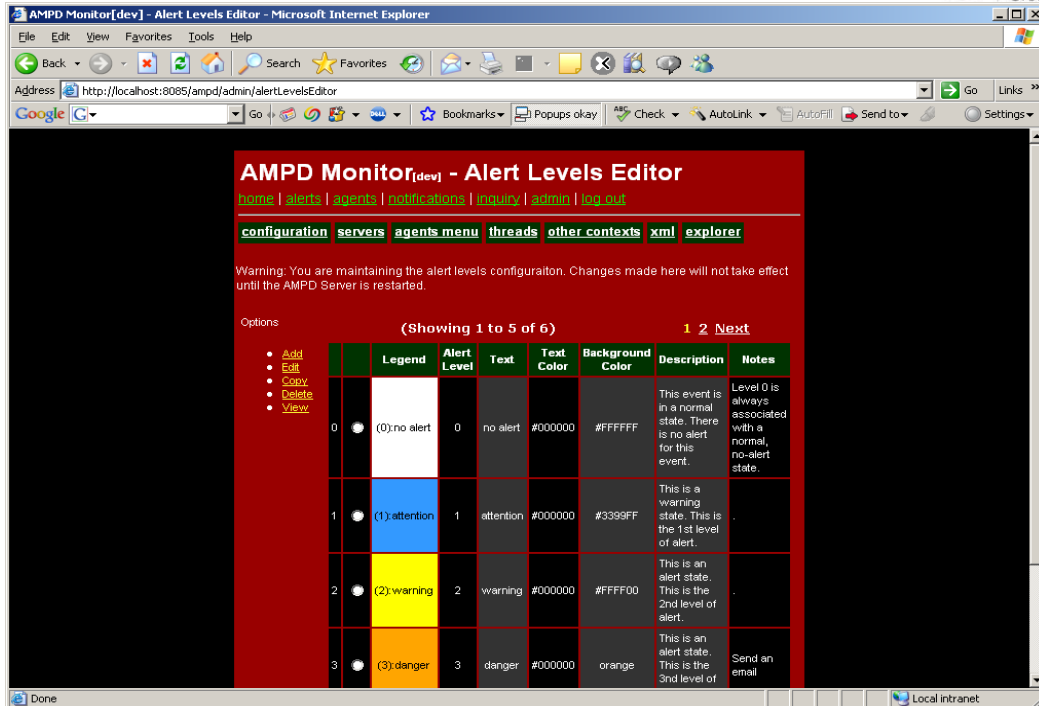
The Performance Database

The M3 AMPD server will build a performance database of each M3 environment. It will write the information collected from the Lawson M3 Java environments to the M3 AMPD performance database. All events that are collected, alertable or not, are written to the AMPD database. The performance database can then be queried using any standard query tool or report tool and used for statistical analysis.

Note: The statistical analysis and reporting will not be part of the M3 Alert Monitor and Performance Database software.

Supports Multiple Lawson M3 Environments

An M3 Alert Monitor and Performance Database (AMPD) server can simultaneously support multiple Lawson M3 environments: each Lawson M3 environment can be running on the same server platform or on different server platforms.



Easy To Use

The alert service and performance database of an M3 AMPD server are easy to use: access the *Alert Monitor* Web page using a Web browser, read the alert email with your email client, and query the M3 AMPD performance database using any database query tool or report tool.

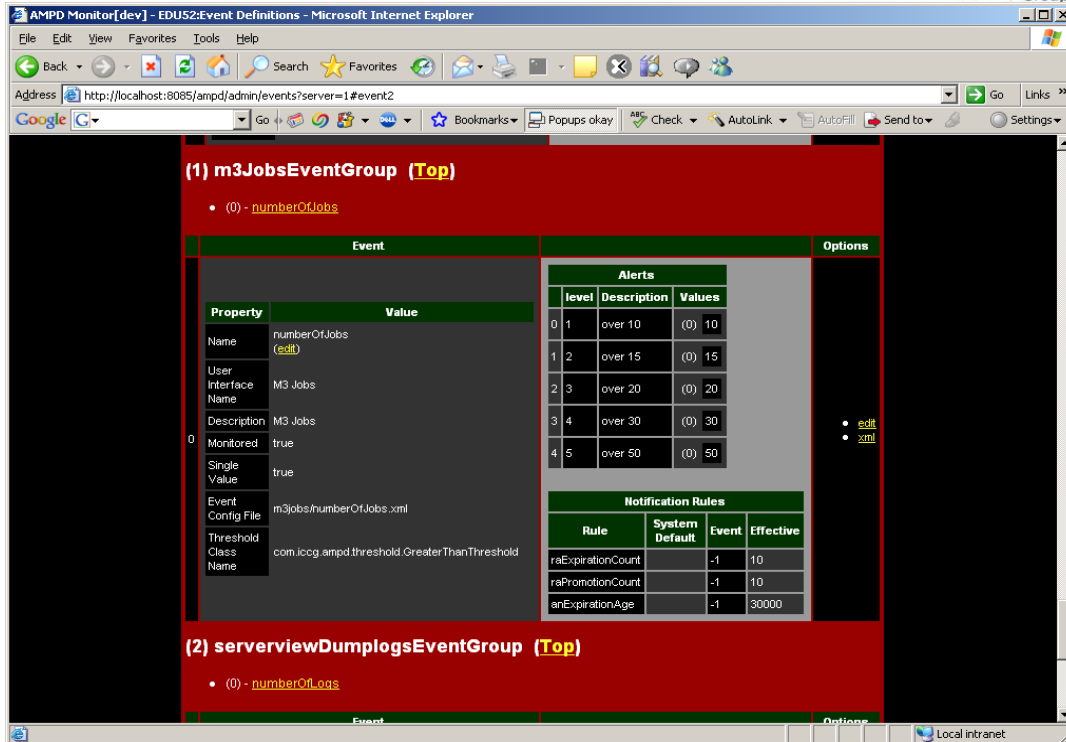
Flexible Deployment

The M3 AMPD software is a Java J2EE Web application and requires a database and a Web application server to run. To deploy and run an M3 AMPD server requires

- Network server hardware(s)
- A Web application server
- Install and configure the database
- Install the M3 AMPD database on the database server
- Install and configure the M3 AMPD Java J2EE Web application in the Web application server

The M3 AMPD software is a Java J2EE Web application and requires a Web application server, such as IBM WebSphere Application Server or Apache Tomcat, to run.

The M3 AMPD database is MySQL version 5.0 but can be any database with a JDBC driver.



The screenshot shows a web browser window titled "AMPD Monitor[dev] - EDUS2:Event Definitions - Microsoft Internet Explorer". The address bar shows "http://localhost:8085/ampd/admin/events?server=1#event2". The main content area displays two event groups:

(1) m3JobsEventGroup (Top)

- (0) - [numberOfJobs](#)

Event		Alerts			Options
Property	Value	level	Description	Values	
Name	numberOfJobs (edit)	0 1	over 10	(0) 10	• edit • xml
User Interface Name	M3 Jobs	1 2	over 15	(0) 15	
Description	M3 Jobs	2 3	over 20	(0) 20	
Monitored	true	3 4	over 30	(0) 30	
Single Value	true	4 5	over 50	(0) 50	
Event Config File	m3Jobs/numberOfJobs.xml				
Threshold Class Name	com.iccg.ampd.threshold.GreaterThanThreshold				

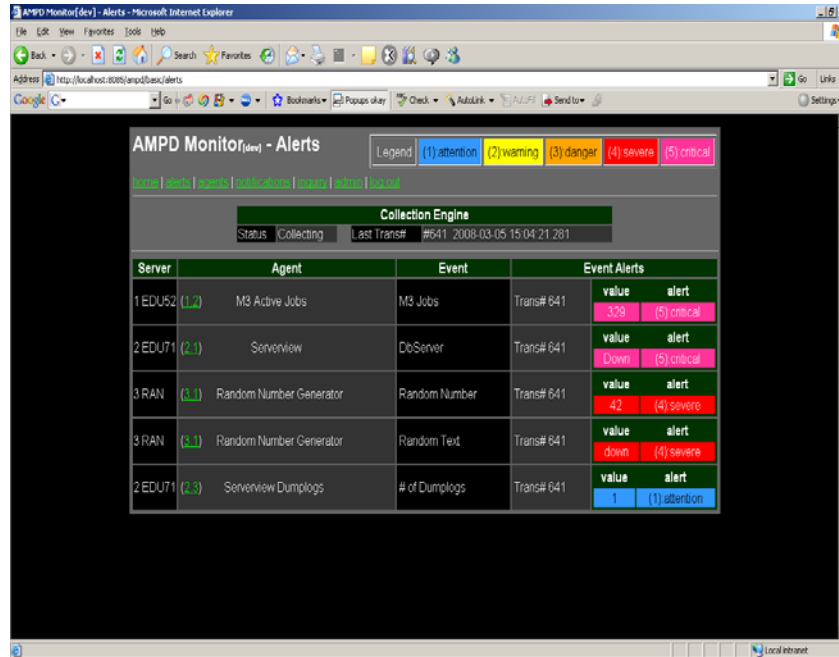
(2) serverviewDumplogsEventGroup (Top)

- (0) - [numberOfLogs](#)

Tiered Architecture

In addition, the M3 AMPD software uses a 'tiered' or 'layered' architecture. The four tiers of the M3 Alert Monitor and Performance Database (AMPD) are:

- The Collection Tier
- The Monitor Logic and Database Tier (i.e., business logic tier)
- The XML Tier
- The Presentation Tier

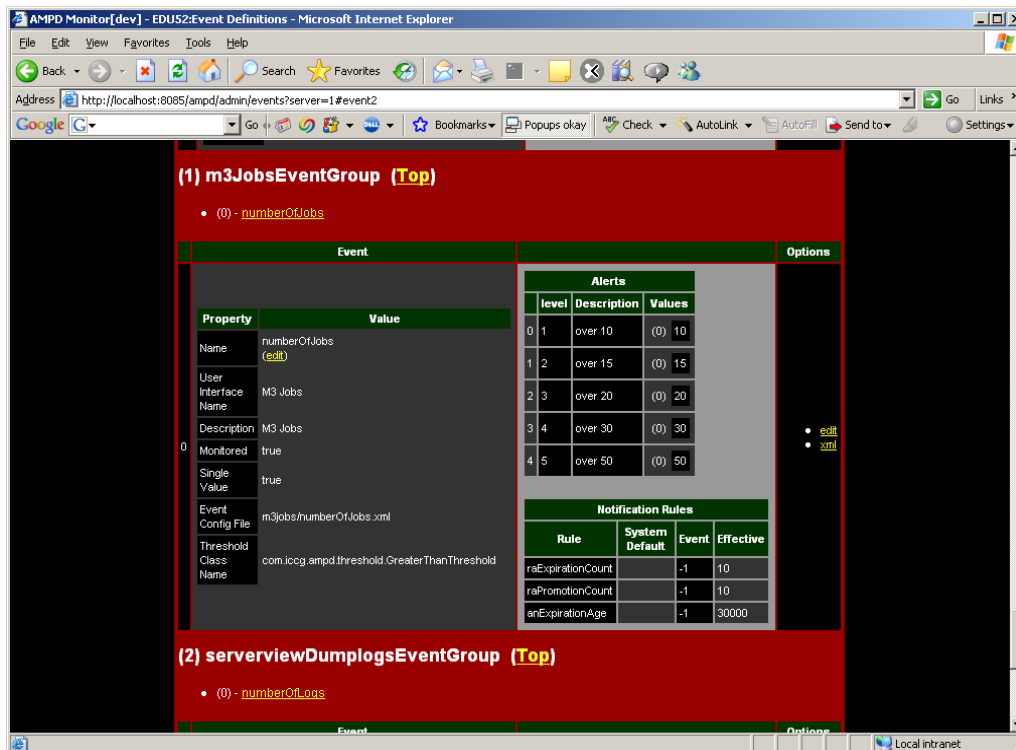


AMPD Monitor[dev] - Alerts

Legend (1) attention (2) warning (3) danger (4) severe (5) critical

Collection Engine
Status: Collecting Last Transf# #641 2008-03-05 15:04:21.281

Server	Agent	Event	Event Alerts
1 EDU52	M3 Active Jobs	M3 Jobs	Transf# 641 value 379 alert (5) critical
2 EDU71	Serverview	DbServer	Transf# 641 Down alert (5) critical
3 RAN	Random Number Generator	Random Number	Transf# 641 42 alert (4) severe
3 RAN	Random Number Generator	Random Text	Transf# 641 down alert (4) severe
2 EDU71	Serverview Dumplogs	# of Dumplogs	Transf# 641 1 alert (1) attention



AMPD Monitor[dev] - EDU52:Event Definitions

(1) m3JobsEventGroup (Top)

- (0) - numberOfJobs

Event		Alerts		Options
Property	Value	level	Description	Values
Name	numberOfJobs (edit)	0 1	over 10	(0) 10
User Interface Name	M3 Jobs	1 2	over 15	(0) 15
Description	M3 Jobs	2 3	over 20	(0) 20
Monitored	true	3 4	over 30	(0) 30
Single Value	true	4 5	over 50	(0) 50
Event Config File	m3jobs/numberOfJobs.xml	Notification Rules		
Threshold Class Name	com.iccg.ampd.threshold.GreaterThanThreshold	Rule	System Default	Event
		raExpirationCount	-1	10
		raPromotionCount	-1	10
		anExpirationAge	-1	30000

(2) serverviewDumplogsEventGroup (Top)

- (0) - numberOfLogs

Which DB, Application Server and Version of Java

The M3 AMPD software is a Java J2EE Web application and can be compiled to run under *any* Web application server supporting Java J2EE versions 1.2, 1.3 or 1.4. The M3 AMPD software requires Java JVM 1.3, 1.4 or 1.5.

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Two popular J2EE Web application servers are IBM WebSphere and Apache Tomcat. Both IBM WebSphere and Apache Tomcat have versions supporting each of the J2EE levels: J2EE 1.2, J2EE 1.3 and J2EE 1.4.

IBM WebSphere Application Server runs on i5/os, os/400, Windows, AIX, Linux, Solaris, HP-UX. Refer to IBM WebSphere Application Server hardware requirements for more details.

Apache Tomcat runs on multiple operating systems. Refer to <http://tomcat.apache.org/> for more details.

The M3 AMPD database will be mySQL version 5.0, but can be any database with a JDBC driver. MySQL v5.0 can be installed and run on Windows, Linux, Sun Solaris, FreeBSD, Mac OS X, HP-UX, QNX, Novell Netware, and SCO Unix.

For free demo please contact:

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