
Release Notes for Platform RTM

Platform RTM
Version 8.0.2
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Release Notes for Platform RTM 8.0.2

Obtaining Platform RTM

You can fresh install Platform RTM 8.0.2 or upgrade to this distribution from version 2.1.2 for RHEL/CentOS and from version 2.0.1 for SLES.

To obtain RTM, contact Platform Computing or download the files from my.platform.com.

This site is your one-stop-shop for information, forums, e-support, documentation and release information. my.platform.com provides a single source of information and access to new products and releases from Platform Computing.

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1. Navigate to the distribution area for the release:
<http://my.platform.com/products/platform-lsf-family/platform-rtm>
2. Under Version, click RTM v8.0.2.
3. Under Download, click the Download link of the binaries and documentation file you wish to download.
4. When you are done, log out of my.platform.com.

What's New in Platform RTM 8.0.2

Platform RTM 8.0.2 has the following new features:

- Platform RTM with new look and feel.
- Support for LSF 8 and LSF 8.0.1 data pollers.
- Job Detail query performance enhanced significantly over RTM 8.0.
- Increased Cacti poller reliability when using Platform certified Cacti Templates.
- Estimated Job Run Time added to the Job Details interface.
- Added new User Group Data Query Graph Templates.
- Version update
 - RHEL 6.0 and 6.1 (64 bit)
 - Internet Explorer 9
 - Firefox 4.0

What's Changed in Platform RTM 8.0.2

System requirements

Hardware requirements for Platform RTM 8.0.2 vary, depending on the number of hosts in the cluster, number of jobs daily, and the data retention period. The requirements below can comfortably support 500 hosts with 100,000 jobs and the default data retention settings.

RTM 8.0.2 supports x64 architectures with a minimum of 2 GB of RAM and 40 GB of disk space, running the following operating systems:

- RHEL version 5.2, 5.3, 5.4, 5.5, 5.6, 6.0, and 6.1
- CentOS version 5.2, 5.3, 5.4, 5.5, and 5.6
- SLES version 10 SP2 and SLES 11 SP1

If you want to use RTM to monitor clusters beyond these requirements, refer to the Performance Tuning section in the Administration Guide.

Supported LSF versions

Platform RTM 8.0.2 supports clusters running LSF versions 6.1, 6.2, 7.0.1, 7.0.2, 7.0.3, 7.0.4, 7.0.5, 7.0.6, 8.0, and 8.0.1.

LSF ports that RTM requires

Platform RTM 8.0.2 requires access to the LIM (load information manager) and `mbatchd` (master batch daemon) ports. If you do not specify these ports, RTM will not be able to communicate with the LSF cluster

The default LIM port is 6879 for LSF 6.1/LSF6.2 clusters and 7869 for LSF 7.x and LSF 8.0 clusters.

Platform RTM 8.0.2 does not need access to the `sbatchd` (slave batch daemon) and RES (remote execution server) ports, as it does not need to communicate with these LSF components.

Installing a new version of Platform RTM

For more information on performing an installation of Platform RTM 8.0.2 refer to the *Platform RTM Installation Guide*.

Upgrading from previous versions

You can upgrade Platform RTM from version 2.1.2 to 8.0.2 and/or from version 8.0 to 8.0.2. For more details on the supported upgrade versions, see the *Platform RTM Installation Guide*.

Known Issues

Issue	Category	Description
Job data is lost when Platform RTM is down for a long time	Platform RTM Design	If Platform RTM services abnormally stop, a lot of LSF data is lost after Platform RTM is restarted. As a workaround, follow these manual steps: <ol style="list-style-type: none">1. Copy <code>l sb. acct</code> to local RTM server or make sure that the LSF poller binary can read <code>l sb. acct</code>.2. Run <code>gri dacct</code> command with <code>l sb. acct</code> (full path) parameter.

Issue	Category	Description
ssusp time differs between LSF accounting and RTM accounting	Platform RTM Design	It is difficult to catch ssusp time in Platform RTM if the total ususp time is less than the poller interval. A workaround is to decrease the poller interval but this may not apply to all due to system size.
stime, utime, and mem rusage reports for finished jobs are not same in RTM and LSF	LSF Design	For Platform LSF 7.0.2 or earlier version, the stime, utime, and mem rusage reports for finished jobs in RTM and LSF do not match.
All pollers stop if a shared pool of licenses are used for multiple RTM servers.	Licensing	If your cluster exceeds the amount of licenses you have, the poller stops and all your clusters will be down. Try not to exceed your license count.
RPMs not relocatable	Installation	<p>Due to specific configuration management system and hardcoded paths in some files, no packages can be installed in /opt thus, the RTM RPMs are not relocatable and the <code>rpm --prefix=/usr/local/workspace/rtm-rtm*.rpm</code> command does not work.</p> <p>For now, Platform RTM has to be installed in /opt/, turn off system cleanup script, and perform symbolic links in /opt as required.</p>
License features truncated in Platform RTM	FLEXlm	<p>The lmstat output truncates feature names to 23 characters when showing the expiry date information (-i output). If there are feature names greater than 23 characters and the first 23 characters are the same, RTM only shows one feature.</p> <p>To workaround this issue, buy and use Flexlm API.</p>
Timeout after executing limstartup	Control	<p>When using user/password mode with SSH, timeout is seen after executing the limstartup by cluster in the Grid>Management by cluster page.</p> <p>For RTM 8.0.2, as a workaround follow these steps:</p> <ol style="list-style-type: none"> 1. Add a new cluster and choose SSH\user\password for User Authentication settings. 2. Execute the limstartup by cluster in Grid>Dashboards cluster page
Timezone Setting is inconsistent	Configuration	This happens if you are using RHEL6.X and SLES10.2 and SLES11.1. If you change the system timezone, then it is necessary to modify the php.ini file manually.
Data Query graphs appear to have the same title in Platform RTM	Configuration	Two graphs have the same title when they are created with data query. As workaround, navigate to Console>Configuration>Settings - Visual >Data Queries> Maximum Field Length . You must increase the maximum data query field length value.

Issue	Category	Description
Problems when starting the remote poller for LSF Clusters	Configuration	<p>These are the problems you may encounter when starting the remote poller for LSF Clusters:</p> <ul style="list-style-type: none"> • Poller_Loc environment variable is not recognized by lsfpollerd. There is a warning message when starting the service • Advocate can only execute local grid Admin • Grid<grid_name> can only access local /opt/rtm/etc/<clusterid>/lsf.conf
License data filtering does not work when fields contain commas or quotes	Configuration	<p>Filtering does not work if the license server has commas in any of the filter fields. If the vendor name has a comma, it displays correctly on the detail page but if you try to filter by the vendor name it removes all data and sets vendor filter name back to All.</p>
Rsyslog cannot start due to missing module	Configuration	<p>On some systems, you will see an error in /var/log/messages when you try to start rsyslogd.</p> <p>Example:</p> <pre>Oct 11 21:40:06 xrh51612 rsyslogd: could not load module '/usr/lib64/rsyslog/ommysql', dl open: /usr/lib64/rsyslog/ommysql: cannot open shared object file: No such file or directory</pre> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Go to /usr/lib64/rsyslog/ directory. 2. Check for ommysql.so shared library. <p>If this is missing, it means that you have not installed the mysql module for rsyslog. Check your OS reference to install it.</p> <ol style="list-style-type: none"> 3. Create symbolic link: <pre>ln -s ommysql.so ommysql</pre> 4. Restart service: <pre>service rsyslog restart</pre>
Remote Host action cannot connect to a SLES Host and Java session hangs when password is entered	Configuration	<p>Follow these workaround steps:</p> <ol style="list-style-type: none"> 1. Edit /etc/ssh/sshd_config file and change the line: <pre>PasswordAuthentication no</pre> <p>to</p> <pre>PasswordAuthentication yes</pre> 2. Restart sshd on the machine.
Any user can turn on the ALL status option in Job Details page	Configuration	<p>Currently, any user can turn on the ALL status option in Setting >General tab of the Job Details page. This can impact Platform RTM's performance as this filter option queries all jobs in the database.</p>

Issue	Category	Description
<p>Job's running record status is shown as Exited and the job record is not found on the Job Graph/Job Detail page as the time zone of the Isfpoller in RTM Server is not adjusted to remote Isfpoller</p>	Configuration	<p>All remote pollers must be in the time zone of the cluster. The timezone of the Cluster can be set in Console->Grid Management->Cluster [edit]->Advanced.</p>
<p>Error logged polling multiple license servers</p>	Configuration	<p>When configuring Platform RTM to poll multiple license servers, you may encounter the following error message in the <code>cacti.log</code> file:</p> <pre>LIC ERROR: A database insert failed! Error: '1114'</pre> <p>Error 1114 indicates that the table is full. The error occurs because the default value of <code>max_heap_table_size</code> for the MySQL database is 64M. This can result in the License Dashboard "Features In Use" records not being fully updated and experiencing decreased system performance.</p> <p>To resolve this issue, edit the <code>/etc/my.cnf</code> file and increase the specified value for <code>max_heap_table_size</code>. The new value you should specify depends on the number of license servers that Platform RTM polls:</p> <p>Number of license servers — <code>max_heap_table_size</code></p> <ul style="list-style-type: none"> 10—128M, 20—256M, 30—1024M 40—1280M 50—1536M <p>These values assume that for each license server, there are a total of 1000 features, 100 licenses issued per feature, and 10 licenses in use (checked out) per feature. Therefore, these values assume that the total number of checkouts per server is 10 000.</p>

Issue	Category	Description
Job graph not drawn if RRD file's last update time is greater than update time	Configuration	<p>The rrd files updates are based on the RTM hosts where as the rusage update time are based on cluster. This happens when the actual time was out of sync and a few minutes ahead of the LSF cluster.</p> <p>Follow these workaround steps:</p> <ol style="list-style-type: none"> 1. Update rrd file. <i>Example:</i> <pre data-bbox="808 520 1388 808">/usr/bin/rrdtool update /opt/cacti/gridcache/923_0_3_1280202981_absolute.rrd --template utime:stime:mem:swap:npi ds:npgi ds:threads 1280203322:67:1:577764:801592:3:1:4 1280203478:165:2:577764:801592:3:1:4 ERROR: illegal attempt to update using time 1280203322 when last update time is 1280203428 (minimum one second step) # date -d '1970-01-01 1280203428 sec utc' Tue Jul 27 12:03:48 CST 2010 # date -d '1970-01-01 1280203322 sec utc' Tue Jul 27 12:02:02 CST 2010</pre> 2. Delete the update_time="2010-07-27 12:02:02" record in the table "grid_jobs_rusage". The correct Job graph is drawn.
Not able to apply new skin for Platform RTM while using third party plugin	Compatibility	<p>Certain non-certified Cacti third party plugins may be incompatible with the new Platform RTM look and feel. If you encounter compatibility issues with third party plugins, you may disable the Ptskin plugin from Console ->Configuration ->Plugin Management to restore functionality of those plugins.</p>
Job time not reported correctly for jobs with pre-execution scripts	Compatibility	<p>If a job has a pre-execution script, LSF includes the time in the running value and RTM includes this in the pending value.</p>
LSF does not track swap space correctly for Solaris nodes	Compatibility	<p>Platform RTM does not track swap space correctly for Solaris nodes in LSF.</p>
Issues with requeue jobs	Compatibility	<ul style="list-style-type: none"> • The final job status is not updated after a requeued job is finished. Sometimes Platform RTM does not show the correct status of a finished job that was requeued. Since LSF reset's the run time when the job is requeued, the total time shown will be based on the last requeue. • Value of PEND time on the Job List page is not updated for re-queued jobs. Currently, Platform RTM does not show the correct details for the pending time in the Job List page. Get the correct information from the Job Details page. • Job RUN TIME does not show correct information if a job is requeued multiple times.

Issue	Category	Description
Email message text box restricted to 255 characters	Cacti Design	The text box in the email message can only save 255 characters. For now, users who already have RTM installed should do the following in MySQL Cacti: <ol style="list-style-type: none"> 1. Alter table settings modify column `value` varchar(1024) not null default "". 2. Quit.
Internet Explorer cannot handle URL with underscore ("_")	Browser Compatibility	If you use the Internet Explorer (IE) to log into a Platform RTM system that has an underscore in the hostname, it lets you enter the login and password but it only stays on the password page when Login is clicked. This problem applies in both IE7 and IE8. <p>As workaround, use a different alias for the host or it's IP address in the URL.</p>
Existing host's graph is not updated after changing the host template's Associated Graph Templates or Associated Data Queries	Automation	After changing the host template's Associated Graph Templates/Associated Data Queries, the Data Queries are not automatically added and are reindexed only. For now, only Graph Templates are updated after more than 10 minutes.

Troubleshooting notes

Detecting usual causes of RTM cluster's diminished status

If RTM cluster is shown in diminished state, refer to the list below for useful tips on resolving specific issues related to this state:

- Ping `masterhost/rtm host`. Both hosts should be able to ping each other.
 - Add `ip/hostname` in either `/etc/hosts` or `LSF_TOP/hosts` and restart the cluster.
 - Add the `rtm hostname` as a client host in the `lsf.cluster.cname` file. Then run `badmi n reconfi g, l sadmi n reconfi g`, then restart master `lim` only.
- Check that EGO is enabled. While adding cluster to RTM, the setting for "EGO enabled" should match LSF cluster's setting.
- "Diminished" status happens when the "minor" collection period is set to be greater than the "major" collection period in the Job Collection Settings for cluster.
- Check the `lim` log. If LSF `lim` is not accepting requests from RTM host, it logs a message at default log level when it rejects API requests from RTM host. You should add host as LSF client.
- Check for firewall issues:

```
telnet <lsfmasterhost> <lim port>
```

Source the LSF environment in RTM host and run commands like `l si d`, `l sl oad`, and `b hosts`, in case LSF is installed on a shared filesystem that is accessible on RTM host.

- Check `/opt/cacti/log/cacti.log` directory for sufficient poller licenses. The presence of `lc_license` errors indicate lack of `lsfpoller` licenses.

- Check that RTM is able to obtain data using LSF APIs from master host, run:

```
./gridhosts -C <clusterid> -d
```
- Check that the appkey in the database matches with the one in /opt/rtm/etc/.appkey.

Example:

```
# cat /opt/rtm/etc/.appkey  
a064a7beac71a0596181b6939980eff620ffd6b4  
# mysql cacti -e "select * from settings" | grep -i key  
app_key a064a7beac71a0596181b6939980eff620ffd6b4
```

- Verify that LSF version matches with RTM cluster configuration for that cluster.
- Check if the grid_processes have been running for a unreasonably long time:

```
mysql cacti -e "select * from grid_processes"  
ps -aef | grep -i grid
```

Due to a known design issue, if grid binaries for one cluster hang, other clusters are shown in diminished status.

Use reasonable LSF API timeouts and timeouts in RTM configuration. If the problem persists even after timeout period, do the following:

- Disable the cluster.
- Kill the hanging grid binaries so that data collection for other cluster continues. Try to identify why the grid binaries for the cluster hangs.

Automatic adding of cluster host as device

By default, the option to automatically add the cluster host as a device is enabled and the interval is set to 40 minutes.

Controlling the poller interval

You may see the lim is shut down and cluster status is Down but the Load/Batch of master host status is Ok.

Note that RTM is not in real time and lim status is not refreshed in real time. The data depend on how often data are polled (configurable) and how often data are aggregated (5 minute cron job and daily aggregation). There is a configuration option to control the interval named poller_interval with 300 secs as default value.

Example:

```
$ mysql -uroot -p -e "select * from cacti.settings  
where name='poller_interval'"
```

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