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# MySQL Enterprise Monitor 3.2 Release Notes

## Abstract

This document lists the changes to the MySQL Enterprise Monitor 3.2 product, beginning with the most recent release. Each release section covers added or changed functionality, bug fixes, and known issues, if applicable. For information about changes in a different MySQL Enterprise Monitor series, see the release notes for that series.

For additional MySQL Enterprise Monitor 3.2 documentation, see the [MySQL Enterprise Monitor 3.2.10 Manual](#).

For legal information, see the [Legal Notices](#).

For help with using MySQL, please visit either the [MySQL Forums](#) or [MySQL Mailing Lists](#), where you can discuss your issues with other MySQL users.

For additional documentation on MySQL products, including translations of the documentation into other languages, and downloadable versions in variety of formats, including HTML and PDF formats, see the [MySQL Documentation Library](#).

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## Preface and Legal Notices

This document lists the changes to the MySQL Enterprise Monitor 3.2 product, beginning with the most recent release.

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## Changes in MySQL Enterprise Monitor 3.2.10 (2017-10-10)

### Bugs Fixed

- A fatal error occurred when upgrading a MySQL Enterprise Service Manager installation which used an external repository instead of the bundled repository.



#### Note

The existing installation was unchanged.

(Bug #26870405)

- MySQL Enterprise Monitor Proxy closed unexpectedly while executing queries. A segmentation fault occurred. (Bug #26798914)

## Changes in MySQL Enterprise Monitor 3.2.9 (2017-09-22)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and MySQL Enterprise Monitor Aggregator have been upgraded to 1.0.2l.
- The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.6.37.
- The Tomcat server, bundled with the MySQL Enterprise Service Manager, has been upgraded to 7.0.79.
- The bundled JRE was updated to 1.8.0\_141 for both the Agent and Service Manager.

### Bugs Fixed

- Under certain circumstances, such as filtering on many graphs on the **All Timeseries** page, the resulting graphs were not correctly populated with data. This was caused by the default value for the `maxHttpHeaderSize` in the Tomcat configuration file, `server.xml`, which is set too low for large quantities of data. The value is set to 32K by default.

As of this release, the value of `maxHttpHeaderSize` is doubled, to 64K, and applied to both the SSL and non-SSL connector configurations in `server.xml`.

If you are upgrading to this version from a previous version, you must edit `server.xml` and add `maxHttpHeaderSize="65536"` to each of the default connectors.

If you are performing a clean installation of MySQL Enterprise Service Manager, you do not need to edit any files, the new values are included by default. (Bug #26391094)

- Validation messages were not displayed on the Settings page after a successful change was made.
- It was not possible to edit multiple advisors using the **Edit Selected** button.

- Clicking on the **Database Availability** graph, on the **Overview** dashboard, opened a blank page instead of the **Events** page.
- On Mac OS X platforms, the `java_home_dir` variable was not set properly by the installer. As a result, the configuration report contained the following error: `***unknown variable java_home_dir.`
- On Linux, Unix, and Mac OS X platforms, the MySQL Enterprise Service Manager upgrade installer could not upgrade the installation if the installation directory contained files or directories created by a different user, or a user with permissions which differed from those of the user running the upgrade.

As of this release, the installers check the installation directory to ensure all files and directories have the correct permissions. If they do not, it exits with an informative error message.

- Under certain circumstances, it was not possible to monitor an instance which had previously been monitored and then deleted by MySQL Enterprise Service Manager.

## Changes in MySQL Enterprise Monitor 3.2.8 (2017-06-13)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- The **Replication Configuration** advisor now generates an event if `slave_pending_jobs_size_max` or `slave_max_allowed_packet` are less than the source's `max_allowed_packet`. (Bug #25996472)
- The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.6.36.
- The Tomcat server, bundled with the MySQL Enterprise Service Manager, has been upgraded to 7.0.77.
- The bundled JRE was updated to 1.8.0\_131 for both the Agent and Service Manager.
- An agent installer is now available for FreeBSD 11.

### Bugs Fixed

- A Null Pointer Exception was logged if the Average Statement Execution Time advisor was enabled but all its notice thresholds were disabled. (Bug #25872561)
- The documentation erroneously stated that SSL certificates which existed in the previous installation must be manually imported after an upgrade.

The upgrade creates a backup of any existing SSL certificates and imports them into the upgraded version as part of the upgrade process. (Bug #25833748)

- MySQL Enterprise Service Manager stopped responding if a custom graph was imported, and the graph's definition included a hyphen (-) in the name.

If a service restart was attempted, an `Unexpected token` error was logged and Tomcat would not start. (Bug #25761280)

- Network speeds were incorrectly reported on the **Network Interfaces** table of the **MySQL Instances** dashboard. (Bug #25636784)
- OS X 10.12 Sierra was not recognized and was listed as Unknown. (Bug #25511036)

- It was not possible to export graphs to PNG in Internet Explorer 11. (Bug #24831338)
- It MySQL Enterprise Monitor Agent encountered an error, it failed to restart due to a permissions issue. The `mysql-monitor-agent.pid` ran as root and could not be stopped by the `agentrestart.sh` which runs under the same user as MySQL Enterprise Monitor Agent.

As of this release, the `mysql-monitor-agent.pid` is created with the permissions 644 (-rw-r--r--). (Bug #24667408)

- On Windows platforms, it was not possible to install to a path which contained spaces on any drive other than the C:\ drive.

For example, trying to install to `D:\Program Files\MySQL\Enterprise\Monitor` failed, while `C:\Program Files\MySQL\Enterprise\Monitor` succeeded. (Bug #24482872)

- The MySQL Enterprise Monitor Agent was not properly displayed as running and monitoring an instance. This occurred if it was stopped and it's monitored instance removed from the MySQL Instances dashboard, and then the MySQL Enterprise Monitor Agent was restarted.
- Empty groups were not displayed on the **Advisors** page.
- If an instance was renamed on the **MySQL Instances** dashboard, the instance name was not updated immediately elsewhere in the user interface.
- Under certain circumstances, if a overrides were defined on MySQL instances in an advisor, both the parent and child schedules were evaluated for the overridden instance, instead of child schedule only. As a result, duplicate collections were performed and incorrect events displayed.
- The upgrade process prompted you to re-import SSL certificates from the backup of the previous version. This is not necessary unless you are using LDAP and had imported your own SSL certificates into the keystore of the JRE bundled with MySQL Enterprise Monitor.

The prompt has been updated.

- Under certain circumstances, a monitored MySQL instance could be reported as having two, different `server_uuid` values. This could happen if the monitored instance was part of a replication topology, or installed in a docker container, and used **Host Plus Data Directory** from the **MySQL Instance Identity Source** menu.
- Microsoft Windows 2016 Server systems were reported as `Unknown`.

## Changes in MySQL Enterprise Monitor 3.2.7 (2017-03-13)



### Important

As of this release, MySQL Enterprise Monitor documentation is now included in the MySQL Enterprise Service Manager, MySQL Enterprise Monitor Agent, and MySQL Enterprise Monitor Proxy and Aggregator packages available from [My Oracle Support](#) or [Oracle Software Delivery Cloud](#).

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- As of this release, MySQL Enterprise Monitor Agent no longer creates the `mysql.inventory` table on MySQL Server 5.6, or higher. The value of `server_uuid` is used to uniquely identify the server.

For MySQL Server 5.5, the functionality is unchanged and the agent creates the `mysql.inventory` table. (Bug #24699549)

- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and MySQL Enterprise Monitor Aggregator have been upgraded to 1.0.2k.
- The Tomcat server, bundled with the MySQL Enterprise Service Manager, has been upgraded to 7.0.75.

### Bugs Fixed

- **Security Fix:** MySQL Enterprise Service Manager has been updated to use Apache Struts 2.3.32, which has been publicly reported as not vulnerable to [CVE-2017-5638](#). (Bug #25698531, CVE-2017-5638)
- MySQL Enterprise Service Manager failed to start if the operating system's locale was set to FR\_FR. (Bug #25615156)
- MySQL Enterprise Monitor Agent installer stopped unexpectedly on Solaris platforms. This occurred for both unattended and text installation modes during the agent user credential step. (Bug #25427615)
- No error was generated if the General and Limited user passwords violated a server-side password validation rule. This error occurred if the MySQL server used the password validation plug-in.

As of this release, if a monitoring connection request fails because the General or Limited user's passwords do not meet the requirements on the server, an error is displayed with the server error message and the username which caused the error. (Bug #25153652)

- Query detail graphs were not displayed on the **Graphs** tab of the query details dialog on the Query Analyzer page if the locale was set to Japanese. (Bug #24830763)
- If `agent.sh` was run as `root`, incorrect permissions were applied to some log and keystore files, making them inaccessible to the agent, which runs as `mysql`.

As of this release, it is not possible to run `agent.sh` from the command line as `root`, but only as `mysql`. (Bug #24338452)

- The agent failed to start on Solaris platforms due to incorrectly defined permissions. (Bug #24327644)
- MySQL Enterprise Monitor Agent upgrades overwrite custom, log4j configuration files with a new, default configuration file. As of this release, the custom log4j configuration files are preserved, and the new, default configuration is written to the same directory with the filename `log4j.properties.default`. (Bug #18501221)
- MySQL Enterprise Service Manager upgrade, installed as root, reported errors on OS X. Services did not start after the upgrade completed, but could be started manually.

## Changes in MySQL Enterprise Monitor 3.2.6 (2017-01-20)



### Important

As of this release, MySQL Enterprise Monitor documentation is available from the [MySQL Enterprise Products](#) page, only.

MySQL Enterprise Monitor documentation is no longer available as a separate, downloadable package from [My Oracle Support](#) or [Oracle Software Delivery Cloud](#).

■ Online help is still installed with MySQL Enterprise Service Manager.

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

#### Functionality Added or Changed

- The value defined in **Show entries** on the **Event Handlers** page is saved as default. (Bug #24347638)
- The bundled JRE was updated to 1.8.0\_112 for both the Agent and Service Manager.
- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and MySQL Enterprise Monitor Aggregator have been upgraded to 1.0.2j.
- The **Slave Master Info/Relay Log Info Not Crash Safe** is removed in this version. Its functionality is rolled into the **Replication Configuration** advisor.
- The specific operating system version is now displayed in the **Host Details** section of the **MySQL Instances** dashboard.
- The MySQL database, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.6.35.

#### Bugs Fixed

- Under certain circumstances, the asset selector list would not load on the **Assets** tab of the **Groups** page. (Bug #25051693)
- Under certain circumstances, if a notification group contained one or more invalid email addresses, the notification failed.

As of this release, the invalid address exception generated by the email server is handled correctly, the invalid email address is removed, and the notification is resent. If the notification group contains multiple invalid addresses, they are removed and the message resent until either the notification is sent or no email addresses remain.

Errors are logged to the Action Log. (Bug #25037204)

- If the backup directory was set to the same directory as the installation directory, the upgrade installer removed the installation, and the upgrade process failed.

As of this release, the installers check if the backup directory is set to the same directory as the installation directory.

This issue affected the upgrade installers for the MySQL Enterprise Service Manager, MySQL Enterprise Monitor Agent, and the MySQL Enterprise Monitor Proxy and Aggregator. (Bug #25027413, Bug #25078184, Bug #25078204)

- The **Show n entries** drop-down menu on the **Query Analyzer** page was too small. This affected the Google Chrome browser, only. (Bug #24948388)
- Comma-separated external role definitions were not correctly parsed on the **Roles** page. (Bug #24918199)
- The **External Role** field on the **Roles** and **Settings** pages, was too small. (Bug #24917944)
- The fields on the **Encryption Settings** tab of the **Add MySQL Instance** or **Edit Instances** dialogs did not reflect the actual configuration. (Bug #24833411)

- The **Group Settings** tab on the Edit Instance dialog was too small to properly display its contents. (Bug #24481474)
- **Resume Event Handler** dialog was too small for its contents. (Bug #24481411)
- Duplicate actions were taken, and notifications sent, if multiple event handlers used the same advisor. As of this release, duplicate actions and notifications are combined into a single action or notification. However, each event handler is logged as handling the event. (Bug #24341371)
- The Line and Stack graph controls were not displayed for graphs with many series. (Bug #22378850)
- The `auto-update` parameter of the MySQL Enterprise Service Manager configuration utilities, `config.sh`, did not behave as expected.
- Fields of the **Add Instance** dialog, for unmonitored instances, did not auto-populate with the correct, agent, hostname, or port number.

## Changes in MySQL Enterprise Monitor 3.2.5 (2016-10-20)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- **Important Change:** As of this release, it is not possible to use MySQL Server 5.1 or 5.5 as the MySQL Enterprise Monitor repository. The installer displays an error and the installation process stops.
- A new Monitoring and Support Services advisor, **Duplicate Host Identity**, is added. This advisor generates events if duplicate host identities are discovered on the monitored network. This can be caused by duplicated SSH keys or Windows SIDs. (Bug #24620458)
- The event status is now included in the body of the notification mail. (Bug #24311586)
- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and MySQL Enterprise Monitor Aggregator have been upgraded to 1.0.1u.
- The configuration menu item **Event Handling** was renamed **Event Handlers**.
- The bundled JRE was updated to 1.8.0\_102 for both the Agent and Service Manager.
- The MySQL database, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.6.34.

### Bugs Fixed

- The **Processes** report did not properly report data from MySQL 5.7 instances. (Bug #24642042)
- The documentation did not specify the correct format for the `ssl-ca-keystore-path` parameter. It was listed as a file path, but is a URL. For example:  
`ssl-ca-keystore-path=file:///mysql/enterprise/agent/etc/mykeystore` (Bug #24386496)
- The Event Handler **Asset** column did not display any assets for the eleventh handler created. That is, the **Asset** column correctly displayed assets for the first 10 event handlers, but did not for any other event handler. (Bug #23543149)



- Under certain circumstances, when monitoring MySQL 5.7, warnings were generated in Query Analyzer due to a conflict between the default `mysql_mode` and the `mysql_mode` set by MySQL Enterprise Monitor. (Bug #23033046)
- The advice page generated by the **MySQL Enterprise Backup Health** advisor contained broken links to the InnoDB chapters of the MySQL Reference Manual. It also incorrectly referred to the `--start-lsn` option as the `--lsn` option.
- The **Overview** page elements did not resize properly if the browser window was resized.
- On certain browser versions, the symbol `<<` was transformed to `Â<<`.
- Replication filter information was not collected. As a result, the replica's **Filter/Delay Status** frame of the **Source Replication Status** was not correctly populated.

## Changes in MySQL Enterprise Monitor 3.2.4 (2016-07-22)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- **Important Change:** The bundled sys schema is upgraded to version 1.5.1.



#### Important

If you have installed an older version of sys schema on your monitored instances, it is recommended to upgrade to the latest version. The upgrade must be performed from the command line. It is not currently possible to upgrade sys schema from MySQL Enterprise Service Manager.

- The following commands are added to the MySQL Enterprise Service Manager configuration utility (`config.sh/config.bat`):
  - `--renew`: renews the existing self-signed certificate.
  - `--import-certificate=<value>`: imports the defined certificate
  - `--import-key=<value>`: imports the defined private key.
- The **Has Errant Trxs** is removed in this release, due to an issue with the underlying calculations.

### Bugs Fixed

- Attempting to monitor a group replication topology caused all replication topology discovery to fail. (Bug #24376827)
- The documentation on installing SSL certificates incorrectly named the keystore, `myKeystore`. The Tomcat keystore is named `keystore`. (Bug #24327783)
- The **InnoDB Redo Log Pending Writes** graph was not displayed for MySQL 5.7 instances. (Bug #23563358)
- LDAP configuration settings were not validated by the upgrade process. Some of the fields were empty. As of this release, default values are added to the empty fields. (Bug #23299301)

- Under certain circumstances, deleting events resulted in a long-running query which generated empty events. (Bug #22247688)
- A NullPointerException was logged for replication monitoring. This exception did not affect the performance of replication monitoring.
- The binlog-based, replication-promotion candidacy was incorrectly calculated.

## Changes in MySQL Enterprise Monitor 3.2.3 (2016-07-05)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- **Important Change:** It is not possible for MySQL Enterprise Monitor Agent 2.3.x to communicate with MySQL Enterprise Service Manager 3.2.3. This configuration is no longer supported. It is strongly recommended to use the same version of agents as service manager.
- It is now possible to configure alerts for incremental backups in the **MySQL Enterprise Backup** advisor. (Bug #23091335)
- The **Warnings Not Being Logged** advisor text was updated.
- Events for any future-dated asset which is not an agent, OS, or MySQL instance, are deleted. Under certain circumstances, these events contained empty fields.
- Timeout connection handling has been improved in this release.
- It is now possible to see which replicas are candidates for promotion. For more information, see **Most Appropriate Candidates for Source Promotion** in [Group Status](#).

### Bugs Fixed

- **HTTP Server KeyStore's Certificate About to Expire** advisor did not behave as expected when provided with a relative path to the keystore and logged many errors. (Bug #23564467)
- Auto-refresh did not behave as expected on the Replication Group Overview. The refresh loaded the last-viewed replication group instead of refreshing the overview. (Bug #23558653)
- The following advisors contained incorrect Emergency threshold labels:
  - **Relay Log Space Very Large**
  - **Replication Too Far Behind**(Bug #23512644)
- The LDAP and SSL documentation did not contain information on how to connect to LDAP servers which implement AES256. (Bug #23507489)
- The following variables were missing from the **Fulltext Search** section of the MySQL Instance **InnoDB** tab:
  - innodb\_ft\_enable\_diag\_print
  - innodb\_ft\_result\_cache\_limit

- `innodb_ft_total_cache_size`

(Bug #23474063)

- LDAP configuration was not validated when saved. As a result, if the LDAP connection information was incorrectly configured, `NullPointerExceptions` were logged, and it was not possible to connect to the LDAP server. (Bug #23299288)
- The certificate to keystore upgrade process attempted to use the system's openSSL installation instead of that delivered with the installer. As a result, if openSSL was not installed on the system, the upgrade failed. As of this release, the upgrade only uses the openSSL libraries delivered with the installer. (Bug #22522309)
- Replication status details were not reported correctly if source members of the replication topology were not monitored.
- The MySQL Enterprise Service Manager utility `config.sh` returned a stack trace for unsupported commands, instead of redirecting the user to the help.
- Custom agent service names were not maintained by the agent upgrade process. The custom name was overwritten by the default agent service name, `MySQLEnterpriseMonitorAgent`.

## Changes in MySQL Enterprise Monitor 3.2.2 (2016-06-08)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- **Important Change:** It is now possible to configure the MySQL Enterprise Service Manager from the command line, or from a script, using the MySQL Enterprise Service Manager Configuration Utilities defined in `config.sh`, or `config.bat` on Windows platforms. This tool is located in the `bin` directory of your MySQL Enterprise Service Manager installation.
- A Replication Overview dashboard is added in this release. This dashboard enables you to see the status of all replication groups at a glance. (Bug #23279303)
- The query collection for Query Analyzer was improved in this release. (Bug #22179215)
- The required privileges for configuring a non-bundled repository were updated in this release. (Bug #21534737)
- The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.6.31.
- The Tomcat server, bundled with the MySQL Enterprise Service Manager, has been upgraded to 7.0.69.
- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and MySQL Enterprise Monitor Aggregator have been upgraded to 1.0.1t.

### Bugs Fixed

- The agent rights documentation contained information specific to older versions of MySQL. The following additions were made:
  - It is not necessary to grant `SUPER` privileges to the General User if you are monitoring a MySQL instance newer than 5.1.63.

- It is not necessary to grant `SELECT` on `mysql.inventory` if you are monitoring a MySQL instance version 5.6 or newer.

For more information, see [Creating MySQL User Accounts for the Monitor Agent](#). (Bug #23192415)

- It was possible to check/uncheck the assets in the **Select Instances** field on the **Edit Replication Group** tab, although the selection or deselection had no effect on the contents of the replication group. Replication groups are populated dynamically, not manually. (Bug #22620609)
- The help output of the agent configuration utility contained spelling errors and a duplicated entry.

## Changes in MySQL Enterprise Monitor 3.2.1 (2016-05-03)

- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Functionality Added or Changed

- **Important Change:** It is not possible to upgrade directly from MySQL Enterprise Monitor 2.3 to 3.2. To upgrade that version, you must first upgrade to 3.1 and from there to 3.2.
- The default font used in MySQL Enterprise Service Manager is now Open Sans Fontface 1.4.2.
- The **Memory Usage - OS Resident** graph now also displays filesystem buffer and cache data for Linux systems.

### Bugs Fixed

- The user interface was not correctly localized in Japanese. English was displayed instead. (Bug #23083897)
- The default instance name was not applied to a instance which had been renamed, deleted, then added again. The custom name was cached and reapplied to the newly detected instance. (Bug #23063022)
- The default replication group name was not applied to a replication group which had been renamed, deleted, then added again. The custom name was cached and reapplied to the newly detected group. (Bug #23062844)
- Customizations to Advisors, Replication Groups, Event Handlers, and other system elements were lost during the upgrade from MySQL Enterprise Service Manager 3.1.0 to 3.2.0. (Bug #23018309)
- Replication groups were removed from event handlers during the upgrade process for upgrades from 3.0.x to 3.2. (Bug #23012687)
- The SQL statement tooltip was not displayed for the contents of the **Info** column of the **Status by Worker** table on the Replication dashboard's **Group Status** tab. (Bug #23003249)
- The agent troubleshooting documentation incorrectly stated that the agent failed to start if the supplied credentials were incorrect. (Bug #22989144)
- The documentation on installing SSL certificates was not included. (Bug #22724280)
- If the network was misconfigured, SSL certificate generation failed because the `CN` could not be defined. As of this release, if the fully-qualified domain name cannot be retrieved, the system falls back to the contents of `hostname`, or, if `hostname` does not return a usable value, uses `localhost.localdomain` as the `CN` value. (Bug #22583338)

## Changes in MySQL Enterprise Monitor 3.2.0 (2016-04-06)

- [Replication Monitoring Enhancements in MySQL Enterprise Monitor 3.2](#)
- [Functionality Added or Changed](#)
- [Bugs Fixed](#)

### Replication Monitoring Enhancements in MySQL Enterprise Monitor 3.2

- **Important Change:** The Replication dashboard has been updated. As of this release, the new dashboard displays graphical topologies, supports multi-source replication, and so on. For more information, see [Replication Dashboard](#). (Bug #17637011, Bug #11750713)
- The Replication dashboard now displays the global maximum replication delay. (Bug #11748039)
- The Replication advisors **Slave SQL Thread Reading From Older Relay Log Than I/O Thread** and **Slave Execution Position Too Far Behind Read Position** were consolidated in the advisor **Replica Execution Position Too Far Behind**.
- The Replication advisor **Slave Too Far Behind Master** was renamed to **Replication Too Far Behind**. The default thresholds were decreased, also.
- The Replication advisor **Slave Relay Log Space Is Very Large** was renamed to **Relay Log Space Very Large**.

The following new thresholds definitions were added to this advisor:

- **Total Space Thresholds (in GB):** Alerts generated if total relay log space exceeds these thresholds.
- **Channel Space Thresholds (in GB):** Alerts generated if per channel relay log space exceeds these thresholds.

This advisor is also responsible for the new Relay Log Space Very Large graphs.

### Functionality Added or Changed

- The Agent backlog is no longer written to the filesystem, but to active RAM only.
- A new graph, **Database Queries - Per MySQL Instance** is added to the **All Timeseries Graphs** section in this release. This graph is based on the [Queries](#) status variable.
- The **Processes** report displays all running processes on the selected instance. This report is available from the **Reports and Graphs** menu.



#### Note

The Process report uses the sys schema [processlist](#) view. As such, some data is only available for MySQL 5.7, or higher.

- The OpenSSL libraries bundled with MySQL Enterprise Monitor and the MySQL Enterprise Monitor Proxy and Aggregator have been upgraded to OpenSSL 1.0.1s.

### Bugs Fixed

- The Event label **Worst Alarm Time** is renamed **Time of Worst Status** (Bug #22849129)
- It was not possible to delete replication groups which were created by the Topology Discovery process. (Bug #22295066)

- The help text of the **Binary Log Space Exceeds Specified Limit** advisor was updated. (Bug #2078129)
- Group discovery did not correctly detect group members if a group member had been deleted and added again. Information on the deleted instance was not properly removed from the system.