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# MySQL Enterprise Monitor 8.0 Release Notes

## Abstract

This document lists the changes to the MySQL Enterprise Monitor 8.0 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 8.0 documentation, see the [MySQL Enterprise Monitor 8.0.14 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.

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## Preface and Legal Notices

This document lists the changes to the MySQL Enterprise Monitor 8.0 product, beginning with the most recent release.

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## Changes in MySQL Enterprise Monitor 8.0.14 (2019-01-21)



### Important

It is not possible to upgrade to MySQL Enterprise Monitor 8.0.14 from versions preceding MySQL Enterprise Monitor 3.4. To upgrade an older version, it is recommended you first upgrade to MySQL Enterprise Monitor 4.0 before running the MySQL Enterprise Monitor 8.0.14 upgrade process.

MySQL Enterprise Service Manager 8.0.14 bundled repository is MySQL Server 8.0.14.

- [MySQL Product Versioning](#)
- [Functionality Added or Changed](#)

- [Bugs Fixed](#)

## MySQL Product Versioning

- **Important Change:** Beginning with version 8.0.14, MySQL Enterprise Monitor is now aligned with the version number of the MySQL product line. Version numbers 8.0.4 to 8.0.13 are skipped.

## Functionality Added or Changed

- **Important Change:** It is now possible to delete obsolete or unused assets from the MySQL Enterprise Monitor inventory using the user interface.



### Important

Deleting assets from the inventory does not delete or uninstall assets from their installed locations. The delete process removes all record of an asset or group of assets from the internal record of MySQL Enterprise Service Manager, only. This enables you to remove entries for clusters, topologies, agents, hosts, and instances which were monitored, but are no longer in use.

For more information, see [Deleting Assets](#) (Bug #26805727)

- **Important Change:** The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 8.0.14.



### Important

It is strongly recommended you backup your existing MySQL Enterprise Monitor repository, and test the backup, before upgrading to MySQL Enterprise Monitor 8.0.14.

The following MySQL 5.7-specific configuration parameters have been removed from the MySQL configuration file included with the bundled repository. These parameters were removed because they are either obsolete and no longer used by MySQL 8, or because the values defined by them are now defaults in MySQL 8.

- `default_storage_engine=INNODB`
- `default_tmp_storage_engine=INNODB`
- `event_scheduler=ON`
- `explicit_defaults_for_timestamp=1`
- `sql_mode=STRICT_TRANS_TABLES,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION`
- `innodb_file_format=Barracuda`
- `innodb_file_per_table`
- `innodb_support_xa=0`
- `innodb_adaptive_flushing=1`
- `innodb_locks_unsafe_for_binlog=1`
- `skip_external_locking`

- `local_infile=0`
- `--skip-symbolic-links`
- `performance_schema`

For more information on parameters added, changed, deprecated, or removed in MySQL 8, see [What Is New in MySQL 8.0](#).

The MySQL X plugin is disabled by default. If enabled in an existing configuration, the upgrade process disables it.

`log-bin` is disabled, by default, by setting `--skip-log-bin`. If you enabled `log_bin`, your setting is preserved by the upgrade process.

It is recommended you backup your configuration before upgrading.

- **Important Change:** New asset views are added in this release. These asset views enable you to examine, in detail, the configuration and status of Agents, Hosts, and NDB Clusters.

For more information, see [Asset Management](#)

- **Important Change:** As of this release, to install MySQL Enterprise Monitor on Solaris platforms, you must install the Oracle Developer Studio 12.6 Runtime libraries first. If the installer does not detect those libraries, the installation displays an error and cannot proceed until the prerequisite libraries are present.
- A new configuration view filter form is added in this release. It is used by the **Query Analyzer**, and the **Agent, Hosts**, and **NDB Cluster** asset views.

These views enable you to define default viewing options such as graphs, filtering, and sorting.

For more information, see [Configuration Views](#). (Bug #18203424)

- The user interface of the Query Analyzer has been completely redesigned. Building upon Oracle's JavaScript Extension Toolkit (JET) framework, this new design improves navigation in the Query Analyzer and introduces advanced configuration options which enable you to customize, sort, and filter the data displayed.

For more information, see [Query Analyzer User Interface](#). (Bug #18203339)

- The bundled JRE was updated to 1.8.0\_202 for both the Agent and Service Manager.
- As of this release, `performance-schema-consumer-events-statements-history-long` is enabled on the bundled repository. If you are using an external repository, you must enable this consumer by adding the following to your MySQL configuration file:

```
performance_schema_consumer_events_statements_history_long=ON
```

- The OpenSSL libraries used by the MySQL Enterprise Monitor installers and have been upgraded to 1.0.2q.

## Bugs Fixed

- The documentation describing the Active Directory configuration incorrectly stated that a port was required in addition to the hostname. The port is 389 and cannot be altered. (Bug #29173152)

- In certain circumstances, MySQL Enterprise Service Manager did not start after upgrading from version 3.4 to version 8.0. The error `cannot determine singular foreign key name for normalized_statements_by_server_by_schema` was logged. (Bug #28938022)
- The documentation describing the logic of replica promotion to source was incorrect. (Bug #28905972)
- It was not possible to remove the **CPU Utilization - Mysql Server - CPU** graph from the **Overview** if only a single instance was selected. (Bug #28794385)
- Several Advisor tooltips contained broken links and links pointing to outdated content. (Bug #28171028)
- The graph range selection controls (Cancel selection and Query Analysis) were visible through any menu or dialog which overlaid the selection. (Bug #17555151)
- It was not possible to use the percentage character (%) in filter names. The filter was saved and was displayed in the list of available filters, but did not display the configured data when selected.
- Automatic page refresh did not pause if an asset was selected.
- Null Pointer Exceptions were logged relating to Query Analysis and Explain Plan when monitoring MySQL 8. These exceptions were caused by the removal of `EXPLAIN EXTENDED` in MySQL 8.

As of this release, MySQL Enterprise Monitor checks which MySQL version is being monitored and only attempts to use `EXPLAIN EXTENDED` on versions which support it.

- The vertical scroll bar did not behave as expected in Microsoft Internet Explorer 11. No other browser was affected by this issue.

## Changes in MySQL Enterprise Monitor 8.0.3 (2018-10-16)

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

### Functionality Added or Changed

- The Tomcat server, bundled with the MySQL Enterprise Service Manager, has been upgraded to 8.5.34.

### Bugs Fixed

- It was not possible to use the percentage character (%) in filter names. The filter was saved and was displayed in the list of available filters, but did not display the configured data when selected.
- Automatic page refresh did not pause if an asset was selected.
- Under certain circumstances, Out Of Memory errors caused the MySQL Enterprise Monitor Agent to restart. In the previous release, the default agent heap size, defined by the `MEM_AGENT_JAVA_OPTS` parameter in the `setenv.sh/bat` file, has been increased to 128MB.



#### Important

In the previous release, this issue was corrected for new installations. As of this release, this issue is also corrected for upgrades.

If you changed `MEM_AGENT_JAVA_OPTS` to a value greater than 128MB, the value is not changed by the upgrade. If you changed `MEM_AGENT_JAVA_OPTS` to a value lower than 128MB, the upgrade process updates the value to 128MB.

- Null Pointer Exceptions were logged relating to Query Analysis and Explain Plan when monitoring MySQL 8. These exceptions were caused by the removal of `EXPLAIN EXTENDED` in MySQL 8.

As of this release, MySQL Enterprise Monitor checks which MySQL version is being monitored and only attempts to use `EXPLAIN EXTENDED` on versions which support it.

## Changes in MySQL Enterprise Monitor 8.0.2 (2018-09-13)

- [Security Notes](#)
- [Bugs Fixed](#)

### Security Notes

- MySQL Enterprise Service Manager has been updated to use Apache Struts 2.3.35, which has been publicly reported as not vulnerable to [CVE-2018-11776](#). (Bug #28577924)

### Bugs Fixed

- Under certain circumstances, Out Of Memory errors caused the MySQL Enterprise Monitor Agent to restart. As of this release, the default agent heap size, defined by the `MEM_AGENT_JAVA_OPTS` parameter in the `setenv.sh/bat` file, has been increased to 128MB.



#### Note

The new default is set for new installations only. If you are upgrading from a previous version, you must edit the `setenv.sh/bat` manually.

If you have already customized this value, ensure the custom value is at least equal to 128MB.

## Changes in MySQL Enterprise Monitor 8.0.1 (2018-07-24)

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

### Functionality Added or Changed

- The usability of the Context and Target selection fields has been improved. As of this release, you can select a group or asset from the list or by searching for the name of a group or asset.

The view is no longer refreshed after making a selection in the **Global Summaries** field. As of this release, the filter is not applied until you select an asset from the **All Targets** field. (Bug #27019694)

- It is now possible to delete entries from the MySQL Enterprise Monitor inventory. Deleting assets from the MySQL Enterprise Monitor inventory does not delete or uninstall assets from their installed locations. The delete process removes all record of an asset or group of assets from the internal record of the MySQL Enterprise Service Manager, only. This enables you to remove entries for clusters, topologies, and instances which were monitored, but are no longer in use.

Ensure the asset or group is either not running, or not installed, before attempting to delete it from the MySQL Enterprise Monitor inventory.

For more information, see [Deleting Assets from the Command Line](#). (Bug #26981023)

- The Oracle JavaScript Extension Toolkit (JET) is upgraded to version 4.2.0 in this release.

- The installers were updated with improved Japanese and Chinese translations.

Also, to better support Japanese installations, the `configuration_report` files, generated by the installer, now use the `utf8` character set.

- The OpenSSL libraries used by the MySQL Enterprise Monitor installers have been upgraded to 1.0.2o.
- The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.7.23.
- The bundled JRE was updated to 1.8.0\_181 for both the Agent and Service Manager.

## Bugs Fixed

- Several Advisor tooltips contained broken links and links pointing to outdated content. (Bug #28171028)
- Changes to the **Query Analysis Reporting** advisor's configuration were ignored by the built-in agent of the MySQL Enterprise Service Manager. The changes were created correctly, but the built-in agent continued using the default schedule and configuration.



### Important

This issue affected the built-in agent of the MySQL Enterprise Service Manager only. It did not affect the standalone MySQL Enterprise Monitor Agent.

For information on this distinction, see [MySQL Enterprise Monitor Component Overview](#).

(Bug #27986851)

- The MySQL Enterprise Service Manager always used the default data purge values, regardless of what values were specified. (Bug #27869486)
- MySQL Enterprise Monitor Agent parsed all `name=value` pairs, even if they were inside comments, or outside legal config sections in a Cluster `config.ini`.

As of this release, only configuration values in legally defined sections are parsed. (Bug #27844552)

- The Query Analyzer's **Configure Query Analyzer** link did not link to the Query Analyzer advisors. (Bug #27844552)
- It was not possible to add or remove sparkline graphs from the **Global Overview**. Also, an error was logged if the **Reset to Default** button was clicked. (Bug #27733748)
- If a range was selected on the graph for a single instance, and the Query Analyzer was opened from the selected range, the single instance selected was replaced by **All Targets** context selection when the view reloaded. (Bug #27268314)
- The plus character (+) was added to search criteria on the Query Analyzer filter's **Value** field. These characters were added if a search was performed, the **Details** page was opened for one of the search results, then the Query Analyzer page was opened again.

For example, searching for `INSERT INTO `mem__quan`` resulted in the string `INSERT+INTO +`mem__quan``.

- The agent upgrade option, `--ignore-old-proxy-aggr` was present in the MySQL Enterprise Monitor Agent and documentation. The upgrade from MySQL Enterprise Agent Proxy Service 2.3 is no longer supported.



- If the configuration of the **Query Analysis Reporting** advisor was changed, for example by disabling, then re-enabling, the Example Query or Explain, the **Auto-Explain Threshold** value was set to zero instead of to the default value of 100 milliseconds. This resulted in an error and no new queries were displayed on the **Query Analyzer**.
- The **Example Statements** configuration message, displayed if EXAMPLE/EXPLAIN query was not enabled, incorrectly referenced `performance_schema_events_statements_history_size` instead of `performance_schema_events_statements_history_long_size`.
- The bottom of the Query Analyzer Details dialog was truncated by the bottom of the screen if the **Graphs** tab was selected, making it impossible to close the dialog.
- The graph range controls on the Query Analyzer graphs, **Cancel selection**, **Query Analysis**, and **Zoom to selection** were visible, overlaid on the Statement Details dialog.
- If the data retention policy was set to zero, or a negative value, and the MySQL Enterprise Service Manager was upgraded, the upgraded MySQL Enterprise Service Manager failed to start.

## Changes in MySQL Enterprise Monitor 8.0.0 (2018-04-19)



### Important

It is not possible to upgrade to MySQL Enterprise Monitor 8.0 from versions preceding MySQL Enterprise Monitor 3.3. To upgrade an older version, it is recommended you first upgrade to MySQL Enterprise Monitor 4.0 before running the MySQL Enterprise Monitor 8.0 upgrade process.



### Important

MySQL Enterprise Service Manager 8.0's bundled repository is MySQL Server 5.7.22.

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

## Functionality Added or Changed

- MySQL Enterprise Service Manager supports monitoring of MySQL 8.



### Important

Due to password plugin changes in the server, only MEM 8.0 and later support monitoring MySQL 8.0.11, or higher.



### Note

If you intend to use MySQL 8 as an external repository, the installer no longer checks for `innodb_file_format` or `innodb_locks_unsafe_for_binlog` as they are deprecated in MySQL 8.

For more information, see [Prerequisites](#).

Several system and status variables used by the MySQL Enterprise Service Manager's advisors were deprecated in MySQL 8. As such, some advisors do not evaluate for MySQL 8. Instead of presenting advice, as they do for earlier versions of MySQL, a warning is displayed, advising you that the advisor does not evaluate against MySQL 8, or higher.



The following advisors do not evaluate for MySQL 8:

- **InnoDB Not Using Newest File Format**
- **Insecure Password Authentication Option is Enabled**
- **Next-Key Locking Disabled For InnoDB But Binary Logging Enabled**
- **Warnings Not Being Logged**
- **Query Cache Has Sub-Optimal Hit Rate**
- **Query Cache Is Excessively Fragmented**
- **Query Cache Potentially Undersized**

The **InnoDB Undo Logs** graph is not displayed for MySQL 8 instances.

For more information on the variables added and removed in this release, see [Server and Status Variables and Options Added, Deprecated, or Removed in MySQL 8.0](#). (Bug #25877130)

- System variables introduced in MySQL 8 are available in MySQL Enterprise Monitor views such as the per-instance drilldown on the MySQL instance dashboard. For more information on the variables added and removed in this release, see [Server and Status Variables and Options Added, Deprecated, or Removed in MySQL 8.0](#).
- The MySQL server, bundled with the MySQL Enterprise Service Manager, has been upgraded to MySQL 5.7.22.
- **Memory Usage** report enables you to view how memory is allocated within the MySQL Instance.

For more information, see [Memory Usage Report](#).

- Query Analyzer Statement Details view is updated in this release.

For more information, see [Detailed Query Information](#).

## Bugs Fixed

- The documentation did not clearly state that the GUI-based advisors could not be copied as the basis for custom advisors. Only expression-based advisors can be copied in this manner. (Bug #27731494)
- The **Time Span** and **Graph From:** labels did not display multibyte characters correctly. The character codes were displayed instead of the characters themselves. (Bug #27695440)
- The **Zoom** links on the **Query Analyzer** page did not alter the graph time range. (Bug #27410942)
- The columns of the **Current Emergency & Critical Events** list, on the **Overview** page, contained chevrons, indicating it was possible to sort the events. It is not possible to sort the events of this list, the emergency events are always listed first, and the list is sorted by **Current** and **Time**. (Bug #27011755, Bug #27720503)
- Retrieving Query Analyzer data for the Statement details report resulted in resource-intensive index scans on the `normalized_statements_by_server_by_schema_data` table.

As part of the Query Analyzer performance improvements in MySQL Enterprise Monitor 8.0, this index scan is no longer performed. (Bug #17731793)

- On Windows platforms, the agent service description contained an incorrect version number.
- The emailed links were incorrect for events generated by the **SQL Statement Generates Warnings or Errors** and **Average Statement Execution Time Advisor** advisors.
- It was not possible to edit any notification groups other than the first 10 displayed. The remaining groups were displayed as inactive.
- The link to the **Settings** page, in the **Important Product-Related Announcements** section of the **What's New** page, did not link to the **Settings** page.