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# MySQL Cluster Manager 9.6 Release Notes

## Abstract

This document contains information about changes in MySQL Cluster Manager version 9.6.

For additional MySQL Cluster Manager 9.6 documentation, see <https://dev.mysql.com/doc/mysql-cluster-manager/9.6/en/>.

Updates to these notes occur as new product features are added, so that everybody can follow the development process. If a recent version is listed here that you cannot find on the download page (<https://dev.mysql.com/downloads/>), the version has not yet been released.

The documentation included in source and binary distributions may not be fully up to date with respect to release note entries because integration of the documentation occurs at release build time. For the most up-to-date release notes, please refer to the online documentation instead.

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

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

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## Preface and Legal Notices

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## Changes in MySQL Cluster Manager 9.6.0 (2026-01-26, Innovation Release)

Version 9.6.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.6 and 8.4, but also supports the 8.0 series.

This release contains no functional changes or bug fixes and is published to align the version number with the MySQL NDB Cluster 9.6.0 release.

## Changes in MySQL Cluster Manager 9.5.0 (2025-10-23, Innovation Release)



### Note

These release notes were created with the assistance of MySQL HeatWave GenAI.

Version 9.5.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.5 and 8.4, but also supports the 8.0 series.

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

## Functionality Added or Changed

- **Agent:** The `libxml2` library bundled in the Windows distribution of MySQL Cluster Manager has been upgraded to version 2.14.5. (Bug #38198545)
- **Client:** MySQL Cluster Manager now uses the third-party library GLib version 2.84.3. The new GLib version is included in the MySQL Cluster Manager distribution archive. (Bug #38198580)
- `OperationBegin` and `OperationEnd` events are now logged to the event log for the agent connected to the client. The output looks similar to the following:

```
1754993119061902;1:create site --hosts=100.103.24.29,100.103.24.180 mysite
1754993119384512;100;10129;{30e31bae 1 0}
1754993119393989;101;10129;{30e31bae 1 0};0
1754993119394073;2;333;0
```

(Bug #38229518)

- The advisor mechanism was extended with the following:
  - A new CLI command, `list advice`.
  - Cluster `DataMemory` advice
  - `mcmd` disk usage advice.
  - `mcmd` RAM usage advice. An event was also added to the eventlog for both the high and normalized cases.
  - `mcmd` CPU usage advice. An event was also added to the eventlog for both the high and normalized cases.
  - `mcmd` agent missing or disabled TLS configuration advice.
  - `mcmd` agent default credentials advice. This is only visible through the `list advice` command.
  - Threshold checking for the advice, so it does not fire again until the average drops below the threshold.

(Bug #38037622, Bug #38394698, Bug #38386063, Bug #38364624, Bug #38359140, Bug #38352225, Bug #38331179, Bug #38037652, Bug #38423571, Bug #38423550)

## Bugs Fixed

- **Agent:** The `mcmd` event log was not reloaded on `mcmd` startup. As of this release, if an event log exists, it is reloaded. (Bug #38222837)
- Under certain circumstances, the event log could write incorrect timestamps to file. (Bug #38224675)
- The backup advisor only triggered once if no backup was performed. As of this release, it triggers each time the defined period is reached. (Bug #38210378)

## Changes in MySQL Cluster Manager 9.4.0 (2025-07-23, Innovation Release)



### Note

These release notes were created with the assistance of MySQL HeatWave GenAI.

Version 9.4.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.4 and 8.4, but also supports the 8.0 series.

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

## Functionality Added or Changed

- **Agent:** The `libxml2` library bundled in the Windows distribution of MySQL Cluster Manager has been upgraded to version 2.14.4. (Bug #38073806)
- **Agent:** A new advisor mechanism has been created for MySQL Cluster Manager. Currently, only one advisor is provided: a backup advisor gives a warning when a cluster backup has not been performed in the last 24 hours. The warning can be queried with the `list warnings` command. (Bug #37886705)
- **Agent:** XCom communications among `mcmd` agents can now be encrypted with TLS to enhance security for the system. (Bug #35549980)

- **Agent:** There is now an event log (`mcmd_eventlog.csv`) that records major events for MySQL Cluster Manager (system information, beginnings and completions of commands and processes, etc.). The event log is found in the folder specified by the `--logging_folder` option, and is collected by the `collect logs` command. (Bug #35042269)

## Bugs Fixed

- **Agent:** The `sample_mcmd.conf` file has been updated to have the `mcmd_password` entry uncommented. That makes the file consistent with the requirement since release 9.3.0 that a user-defined `mcmd` password must be added to the configuration file. (Bug #38031559)

References: See also: Bug #37457513.

- **Agent:** The `upgrade cluster` command did not reject invalid downgrade paths for MySQL NDB Clusters (for example, from one innovation release to another). (Bug #37921613)
- **Agent:** The `stop process` command timed out on a non-running node that had been successful added by a command that failed subsequently. With this fix, the `stop process` command returns success in this scenario. (Bug #37889501)
- **Client:** When a path to a file instead of a folder is given with the `add package` command as the argument for the `--basedir` option, the `mcm` client complained that the file did not exist. With this fix, `mcm` throws the proper error and complains on the wrong path type. (Bug #37808054)

## Changes in MySQL Cluster Manager 9.3.0 (2025-04-16, Innovation Release)

Version 9.3.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.3 and 8.4, but also supports the 8.0 series.

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

## Functionality Added or Changed

- **Important Change:** For platforms on which OpenSSL libraries are bundled, the linked OpenSSL library for MySQL Cluster Manager has been updated to version 3.0.16. Issues fixed in OpenSSL version 3.0.16 are described at <https://openssl-library.org/news/openssl-3.0-notes/>. (Bug #37656086)
- **Important Change:** The `libxml2` library bundled in the Windows distribution of MySQL Cluster Manager has been upgraded to version 2.13.6. (Bug #37475571)
- **Important Change:** Starting from this release, a user-defined `mcmd_password` must be provided in the [MySQL Cluster Manager Configuration File](#) when starting the `mcmd` agent, even for bootstrapping, or `mcmd` will fail to start. As a result, the `--password` option of the `mcm` client must also be specified for a client to connect to an agent. (Bug #37457513)
- **Agent:** For a bootstrapped cluster, the parameter `StopOnError` for `ndbmysqld` nodes is now set to `false` by default, to allow a `ndbmysqld` node to restart automatically after it fails. (Bug #37633409)
- The `--privilege-tables` option has been removed from the `restore cluster` command. (Bug #37511555)
- A new client command, `list certs`, lists the files created by the `create certs` command for a cluster. (Bug #36698435)
- The dependency of MySQL Cluster Manager on the GLib library has been removed, and the library is no longer shipped with MySQL Cluster Manager distributions. (Bug #34613622)

## Bugs Fixed

- **Agent:** At the initial startup of a cluster, `mcmd` emitted the warning that the `high_water_mark` file could not be opened. The warning is now removed, as the file is not supposed to exist in the situation. (Bug #37696293)
- **Agent:** The `stop process` timed out for processes in the `ADDED` state. (Bug #37691818)
- **Agent:** The `create certs` command failed after an `mcmd` agent queried another agent for the certificate authority and key, which were not created by that agent. With this fix, the agent moves on to query another agent in that situation. (Bug #37639369)
- **Agent:** The `backup cluster` command failed with an "Access denied" error when the `mcmd_password` had a '#' at the end. (Bug #37609816)
- **Client:** A `delete cluster` command failed if the backup's schema file containing the metadata of the NDB tables was missing (for example, due to accidental manual deletion). With this fix, the command works in such situations. (Bug #37660069)
- **Client:** At the `debug` log level, the `mcmd` log prints the wrong comments for some of the planned steps for the `create certs --renew --certs` command. (Bug #37464246)

## Changes in MySQL Cluster Manager 9.2.0 (2025-01-22, Innovation Release)

Version 9.2.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.2 and 8.4, but also supports the 8.0 series.

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

### Functionality Added or Changed

- **Packaging:** The following packages for MySQL Cluster Manager will no longer be offered by Oracle:
  - SLES12 packages
  - Solaris SPARC packages
  - Generic Linux glibc2.12 packages (generic Linux glibc2.17 packages are offered now instead) (Bug #37292788)
- The `delete cluster` command now fails if a backup of the cluster exists somewhere under `/path-to-mcm-data-repository/clusters/clustername` (the default arrangement). The backup should first be moved to another other location or be deleted before the `delete cluster` command is executed. This is to prevent an unexpected loss of the cluster backup. (Bug #37326544)

### Bugs Fixed

- **Agent:** `mcmd` sometimes failed to load its information XML files when they are malformed, causing errors in its operations. With this fix, proper error handling is put in place for loading the files, in order to avoid subsequent errors. (Bug #37247168)

## Changes in MySQL Cluster Manager 9.1.0 (2024-10-16, Innovation Release)

Version 9.1.0 is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.1 and 8.4, but also supports the 8.0 series.

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

## Functionality Added or Changed

- **Important Change:** For platforms on which OpenSSL libraries are bundled, the linked OpenSSL library for MySQL Cluster Manager has been updated to 3.0.15. Issues fixed in OpenSSL version 3.0.15 are described at <https://openssl-library.org/news/openssl-3.0-notes/>. (Bug #37021997)
- **Client:** The `mcm` client has been updated to align with the latest `mysql` client in terms of its functionality. See [Changes in MySQL 9.1.0](#) for details. (Bug #37023118)
- **Client:** When a `mysqld` node quit unexpectedly, the error message given was uninformative. The `mcm` client now displays error information extracted from the `mysqld` log in the situation. (Bug #36840761)
- **Client:** MySQL Cluster Manager now uses the third-party library GLib version 2.80.3. The new GLib version is included in the MySQL Cluster Manager distribution archive. (Bug #36782677)
- **Client:** The `mcm` command `create certs` now gets a new option, `--renew`, for renewing the TLS keys . See the description of the option for details. (Bug #36556506)

## Bugs Fixed

- **Agent:** The `INFO_SRC` file in the delivery packages of MySQL Cluster Manager was missing the line on release maturity. (Bug #36924101)
- **Client:** The error text for the `COMMAND_OPTION_DEPENDENCY` error was incorrect, with the command name being replaced by the cluster name. (Bug #36954160)
- **Client:** `mcm` allowed setting the `mysqld` system variables `telemetry.otel_exporter_otlp_traces_max_tls` and `telemetry.otel_exporter_otlp_traces_min_tls` to an empty string, which was not allowed by the `mysqld` node and caused the node to fail. With this fix, setting the variables to empty strings are no longer allowed by `mcm`. (Bug #36508351)

## Changes in MySQL Cluster Manager 9.0.1 (2024-07-23, Innovation Release)

Version 9.0.1. is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.0 and 8.4, but also supports the 8.0 series.

This release contains no functional changes or bug fixes and is published to align the version number with the MySQL NDB Cluster 9.0.1 release.

## Changes in MySQL Cluster Manager 9.0.0 (2024-07-02, Innovation Release)



### Important

This release is no longer available for download. It was removed due to a dependency on a version of the server which is also no longer available for download. See [MySQL 9.0.0 Release Notes](#). Please upgrade to MySQL Cluster Manager 9.0.1 instead.

Version 9.0.0. is the latest innovation Release of the MySQL Cluster Manager. It is intended for use with MySQL NDB Cluster 9.0 and 8.4, but also supports the 8.0 series.

Listed below are functionality changes and bug fixes for MySQL Cluster Manager 9.0.0, in comparison to release 8.4.0.

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

## Functionality Added or Changed

- **Client:** Starting with the 9.0.0 innovation release, MySQL Cluster Manager no longer supports MySQL NDB Cluster 7.6, which will continued to be supported by MySQL Cluster Manager 8.4 LTS and 8.0. (Bug #36567056)

## Bugs Fixed

- **Agent:** `mcmd` quit unexpectedly sometimes while trying to back up a large cluster. (Bug #36675015)
- **Client:** MySQL Cluster Manager did not handle correctly the version information for some cluster parameters' introduction or removal, so that it was sometimes confused with the availability of those parameters for a cluster. (Bug #36647522)
- **Client:** `mcm` did not issue a deprecation warning when the deprecated `validate_password` plugin was being used for `mysqld` connections. (Bug #36589037)
- **Client:** When `ndb_restore` failed, the error message did not give much information. With this patch, a more informative message is given in the situation. (Bug #36388952)
- **Client:** The format of the `mysqld` XML configuration file (`mcm-installation-dir/var/mysqld.xml`) has been updated to better organize the configuration information. (Bug #36298214)
- Certain restrictions for upgrading and downgrading on MySQL Cluster Manager have been removed. Please refer to [Upgrading and Downgrading NDB Cluster](#) for valid upgrade and downgrade paths for MySQL NDB Cluster and MySQL Cluster Manager. (Bug #36610348, Bug #36720575)
- Some Windows binaries for MySQL Cluster Manager had wrong or missing version or product name information under its Properties. (Bug #36510070)
- In the MySQL Cluster Manager installation packages (`.tar`, `.rpm`, `.zip`, and `.msi` files), there was an extra layer of folder on top of the files to be installed. That folder layer has now been removed, in order to keep things simple. (Bug #35982027)