MySQL Cluster Manager 1.3 Release Notes

Abstract

This document contains information about changes in successive versions of MySQL Cluster Manager 1.3, starting with the most recent release (MySQL Cluster Manager 1.3.2). Changes in previous MySQL Cluster Manager releases can be found afterwards, ordered from newest to oldest.

For additional MySQL Cluster Manager 1.3 documentation, see http://dev.mysql.com/doc/mysql-cluster-manager/1.3/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 (http://dev.mysql.com/downloads/), it means that the version has not yet been released.

The date mentioned with a release version is the date of the last revision control system changeset on which the release was based, not necessarily the date when the distribution packages were made available. The binaries are usually made available a few days after the date of the tagged changeset because building and testing all packages takes some time.

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.

Document generated on: 2014-08-18 (revision: 3944)

Table of Contents

Preface and Legal Notices 1
Changes in MySQL Cluster Manager 1.3.2 (2014-08-15) 3
Changes in MySQL Cluster Manager 1.3.1 (2014-04-30) 5
Changes in MySQL Cluster Manager 1.3.0 (2014-01-13) 6

Preface and Legal Notices

This document contains information about changes in successive versions of MySQL Cluster Manager 1.3, starting with the most recent release (MySQL Cluster Manager 1.3.2). Changes in previous MySQL Cluster Manager releases can be found afterwards, ordered from newest to oldest.

Legal Notices

Copyright © 2009, 2014, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. MySQL is a trademark of Oracle Corporation and/or its affiliates, and shall not be used without Oracle's express written authorization. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this material is subject to the terms and conditions of your Oracle Software License and Service Agreement, which has been executed and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced, or distributed to anyone outside Oracle without prior written consent of Oracle or as specifically provided below. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

This documentation is NOT distributed under a GPL license. Use of this documentation is subject to the following terms:

You may create a printed copy of this documentation solely for your own personal use. Conversion to other formats is allowed as long as the actual content is not altered or edited in any way. You shall not publish or distribute this documentation in any form or on any media, except if you distribute the documentation in a manner similar to how Oracle disseminates it (that is, electronically for download on a Web site with the software) or on a CD-ROM or similar medium, provided however that the documentation is disseminated together with the software on the same medium. Any other use, such as any dissemination of printed copies or use of this documentation, in whole or in part, in another publication, requires the prior written consent from an authorized representative of Oracle. Oracle and/or its affiliates reserve any and all rights to this documentation not expressly granted above.

For more information on the terms of this license, or for details on how the MySQL documentation is built and produced, please visit MySQL Contact & Questions.

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.

Changes in MySQL Cluster Manager 1.3.2 (2014-08-15)

This section documents all changes and bug fixes that have been applied in MySQL Cluster Manager 1.3.2 since the release of MySQL Cluster Manager version 1.3.0.

Functionality Added or Changed

- **Agent; Client:** In order to improve execution robustness, MySQL Cluster Manager now fails any commands that reconfigure a cluster with the message `ERROR 5027 Unable to perform command due to utility <proc_name> with pid <ospid> on <host>` if any utility process (for example, `mysql_upgrade`, `mysql_install_db`, or `ndb_restore`) that was started by a previous command is still remaining (running or hung) on any host when the command is issued. (Bug #18966650)

- **Client:** MySQL Cluster Manager now throws an error if the user tries to import a cluster or a cluster configuration using the import cluster or import config command while the user who runs the `mcmd` process does not have permissions to the cluster processes' PID files. This happens typically when `mcmd` is started with the user “mysql” while the cluster is started with “root.” (Bug #18887139)

Bugs Fixed

- **Agent; Client:** On Windows platforms, when a data node could not be restarted during a rolling restart of the cluster, it was not reported to the user. With this fix, the user now gets a report when a maintenance restart of a data node failed. (Bug #19227535)

- **Agent; Client:** The import config command did not import configuration settings from a cluster's `my.cnf` file properly; problems included:

  - Some settings in the `[mysqld]` section were left out (for example, `key_buffer_size` and `query_cache_type`).

  - Some options in the `[client]` section were included by mistake.

  - The `!include` and `!includedir` statements for including settings from other files were ignored

  - Quoted values were not handled properly—the quotes were taken literally.

  - Lines starting with “;” were not treated as comments.

  - The option modifiers `loose_` and `maximum_` were not recognized.

  - Option group for specific release series (for example, [mysqld-5.6]) were not imported.

  (Bug #19078129)

- **Agent; Client:** When the configuration of a running cluster was being imported using the import config command, even if the parameter `ThreadConfig` was not defined in the `config.ini` file, its value could be imported from the running node's setting for it. The imported value overrode the configuration prescribed by the `MaxNoOfExecutionThreads` parameter in `config.ini`, which is supposed to set the thread configuration when `ThreadConfig` is not specified in `config.ini`. This fix prevents the

import of the value for `ThreadConfig` from the running node, making MySQL Cluster Manager rely on the `config.ini` file for the thread configuration. (Bug #19032714)

- **Agent; Client:** The import config command sometimes imported MySQL server default values that were not specified in the cluster's configuration files. With this fix, no such values are imported. (Bug #18651301)
- **Agent; Client:** When using the import config command, the format of an imported configuration setting was sometimes changed from that which was used in the `config.ini file`—for example, a value in megabytes was imported as a value in bytes and then shown as such by the `get` command. That made it more difficult for the user to compare the original and the imported value. This fix makes MySQL Cluster Manager follow the original format in the `config.ini` file when importing a cluster's configuration. (Bug #18651726)
- **Agent:** The MySQL Cluster Manager agent might crash when running an import config command if it was managing more than one cluster at the time. (Bug #19380825)
- **Agent:** During a recovery for a MySQL Cluster Manager agent that uses IP addresses instead of hostnames, the agent sent out an excessive amount of information, the processing of which slowed down the restart process considerably. This fix changes the way the IP addresses are handled, reducing the amount of sent information to a much more reasonable level. (Bug #19269735)
- **Agent:** Upgrade from MySQL Cluster Manager 1.2.4 (to 1.3.1) failed if the last command executed before the upgrade was any one of backup cluster, restore cluster, abort backup, or import cluster. This has been fixed, and users of version 1.2.4 can now upgrade to version 1.3.2. (Bug #19199645)
- **Agent:** The MySQL Cluster Manager agent sometimes got SIGABRT errors while executing SQL statements. (Bug #19032927)
- **Agent:** `mcmd` crashed due to an out-of-memory error after a combination of the following conditions:
  - An abrupt failure of one of the site machines, instead of a clean stop.
  - Only a minority of the agents are available.
  - Some unmanaged SQL slots came into use and changed their states to “connected,” and the changes are reported by a `ndb_mgmd` process.

  (Bug #18781345)
- **Client:** Restoration of a cluster failed when the cluster contained both API nodes with and without specified hostnames. (Bug #19313429)
- **Client:** If a `mysqld` process was specified in a `create cluster` statement using the `mysqld@* syntax` (with no host specified), the `show status --process` commands would never show the process as connected, even when it was. (Bug #19152161)
- **Client:** When using the show status command with the `--backup` option, the MySQL Cluster Manager client sometimes accepted an additional option, which was actually meaningless. This fix makes the client throw an error when any other option is used in combination with `--backup`. (Bug #19032714)
- **Client:** MySQL Cluster Manager threw an error when the add package command was run with the argument for the `--basedir` option being double quoted, complaining the path did not exist. It was because MySQL Cluster Manager took the double quotes literally, as parts of the path name. (Bug #18973711)
- **Client:** On Windows platforms, the MySQL Cluster Manager client's response to the `list hosts` command was very slow when any one of the MySQL Cluster Manager agents was down. (Bug #18966650)

- **Client:** When using the import config command, some process level settings in the cluster's `config.ini` file were imported as instance level settings. (Bug #18651663)
- **Client:** When the configuration of a running cluster was being imported, the import config command took the settings from the global session variables instead of the configuration files of the cluster and the MySQL servers. This fix makes MySQL Cluster Manager import the settings from the configuration files, and only use values of the global session variables when it cannot find, open, or access the configuration files. (Bug #18652366)

Changes in MySQL Cluster Manager 1.3.1 (2014-04-30)

This section documents all changes and bug fixes that have been applied in MySQL Cluster Manager 1.3.1 since the release of MySQL Cluster Manager version 1.3.0.

Functionality Added or Changed

- **Important Change; Client:** Added the `import config` command. This command simplifies the process of importing a previously autonomous MySQL Cluster into MySQL Cluster Manager by importing automatically most of the cluster's configuration data into the cluster definition that has been created as part of the import process, eliminating the need for reading of configuration files and `SHOW VARIABLES` output and issuing of most `set` commands needed to prepare a cluster for import.

  This command also supports a `--dryrun` option (short form: `-y`) for testing purposes.

  You should note that any nonstandard ports used by `ndb_mgmd` or `mysqld` processes in the existing MySQL Cluster must be configured manually (using `set`) for the corresponding processes in the target cluster before trying to use `import cluster` to import the wild cluster's data.

  For more information, see The `import config` Command, and Importing MySQL Clusters into MySQL Cluster Manager.

- **Client:** The `--import` option for `create cluster` now enables assignment of node ID values less than 49 for `ndb_mgmd`, `mysqld`, and `ndbapi` processes. The `create cluster` command used without this option continues to enforce the rule that processes that are not data node processes must have node IDs greater than 48. (Bug #18181039)

Bugs Fixed

- **Agent:** When executing `backup cluster` and `abort backup` with `--waitstarted` commands in succession, it was possible in some circumstances for the agent to use the wrong backup ID internally. (Bug #18027413)
- **Client:** After performing an initial start of a cluster, the cluster is no longer aware of any backup IDs that have previously been used. If you take a new backup of the cluster afterwards without specifying a backup ID, the cluster tries to use 1 as the ID for the first such backup, even if you restored the cluster from a backup having 1 as its ID, which results in an error. This is expected behavior, for which there are at least 2 workarounds:

  1. Move or rename the backup files following the restoration.
  2. Execute the `backup cluster` command using the `--backupid` option, to specify a backup ID that is not already in use.

  Issues arose in such cases because the error message returned was not sufficiently descriptive, and it could be difficult to determine the true nature of the problem without reading the management server and cluster log files. Now the error message returned in the `mcm` client makes it clear that the backup failed due to collision with an existing backup ID. (Bug #18465705)

- **Client:** Executing the `create site` command using the names of one more hosts on which the MySQL Cluster Manager Agent was not running returned `ERROR 1002 (00MGR): Agent on host <UNKNOWN>: (delivery status does not match current view) is unavailable`. Now in such cases, the name of each host lacking an agent is included as part of the error message. (Bug #18200900)

- **Client:** Attempting to set any of the `mysqld` configuration attributes relating to the thread pool plugin (see Thread Pool Components and Installation)—including `thread_pool_algorithm`, `thread_pool_high_priority_connection`, `thread_pool_max_unused_threads`, `thread_pool_prio_kickup_timer`, `thread_pool_size`, and `thread_pool_stall_limit`—failed with the error `No such configuration parameter ... for process mysqld`. (Bug #18127968)

Changes in MySQL Cluster Manager 1.3.0 (2014-01-13)

This section documents all changes and bug fixes that have been applied in MySQL Cluster Manager 1.3.0 since the final release of MySQL Cluster Manager 1.2.

Collect log and other files for offline/offsite analysis

- **Client:** In the event of major problems with a MySQL Cluster, it is often necessary to collect all of the cluster's log and configuration files and to send or to copy these off-site for analysis. Formerly, this had to be done manually, or by using the `ndb_error_reporter` utility included with the MySQL Cluster distribution, but it is now possible to accomplish this task from within the `mcm` client, using the `collect logs` command added in this release. (Bug #11757603)

Import of standalone clusters

- **Agent; Client:** MySQL Cluster Manager can now take a standalone MySQL Cluster under its own control using the `import cluster` command implemented in this release, and manage this cluster just as if it had been created in the `mcm` client.

  In addition, the `create cluster` command has been enhanced with an `--import` option, which identifies the cluster as having been created as a target for importing a cluster; such a target cluster can be identified in the output of `show status --process` as `import`; in addition, none of the commands `start cluster`, `restart cluster`, `start process`, or `stop process` can be used with this cluster until the cluster has been prepared using `import cluster`.

  For more information about these commands, see The `import cluster` Command, and The `create cluster` Command. For information about the process required for importing a new MySQL Cluster into MySQL Cluster Manager, see Importing MySQL Clusters into MySQL Cluster Manager. (Bug #17480585)

Obtain next reserved node IDs

- **Client:** MySQL Cluster Manager normally assigns IDs to new node processes automatically (although this can be overridden when issuing `create cluster` or `add process`). The `list nextnodeids` command added in this release prints the next node ID that has been reserved for the next new process of each type added to the cluster named *`cluster_name`*.

Log Rotation for mcmd

- **Agent; Client:** A new `rotate log` command for the `mcm` client has been added in this release, to enable and configure log rotation for `mcmd`. (Bug #16982252)

Functionality Added or Changed

- **Important Change; Packaging:** The directory structure of the MySQL Cluster Manager distribution archive has changed. The top level within the archive now contains a single directory named `mcm-x.y.z`, where `x.y.z` is the version number of the current release. The former top-level directories such as `bin`, `libexec`, and `etc` are now found within this `mcm-x.y.z` directory.

  For more information, see Installing MySQL Cluster Manager on Unix Platforms.

Bugs Fixed

- **Important Change; Client:** The `delete cluster` command no longer removes configuration or data directories for cluster processes by default. Now, such directories are removed only when this command is invoked with the `--removedirs` option added in this release. (Bug #17455398)
- **Agent:** Using hosts with different package locations in the same cluster did not work. (Bug #17491230)
- **Client:** Setting the user or password option (or both) in a `my.cnf` file caused the MySQL Cluster Manager client to fail on startup with the error `Illegal username or password`. As part of the fix for this issue, the MySQL Cluster Manager client now reads only the `[mcm]` section of any option files, and ignores all other sections. (Bug #17540585)
- **Client:** It was possible to start an SQL node, using the `start process` command, in an otherwise stopped cluster. In addition, the node could not be stopped using `stop process` afterwards.

  Now when you attempt to start a `mysqld` process in a cluster that is stopped, or in which the data nodes are otherwise unavailable, `start process` fails with an error. (Bug #17073352)
- **Client:** The `mcm` client tried to add `mysql` client options which must be specified first on the command line in the wrong order. Now the `mcm` client checks for such options and makes sure that they are passed to `mysql` first. (Bug #16598776)