PERCONA

Distribution for MongoDB Documentation 5.0

5.0.23 (December 21, 2023)

Percona Technical Documentation Team

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Percona Distribution for MongoDB includes the following components:

- Percona Server for MongoDB is a fully compatible source-available, drop-in replacement for MongoDB.
- Percona Backup for MongoDB is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

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Last update: March 16, 2023

Created: December 9, 2022

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2.1   Release Notes

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Last update: November 9, 2023
Created: December 9, 2022

2.2   Percona Distribution for MongoDB 5.0.23 (2023-12-21)

Installation

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

- *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.23-20 and Percona Backup for MongoDB 2.3.1.

2.2.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB are the following:

- AWS IAM authentication is now generally available, enabling you to use this functionality in production environments.
- Improved the Primary Only Service interface to expose the primary state upon lookup
- Ensured that shard primaries commit a majority write before using new routing information from the config server.
- Fixed the rollback-to-stable behavior to read the newest transaction value only when it exists in the checkpoint.
- Hid expected eviction failures from the application and don't rollback in case of errors

Percona Backup for MongoDB 2.3.1 enhancements include the following:

- Support for Percona Server for MongoDB 7.0.x
- The ability to define custom endpoints when using Microsoft Azure Blob Storage for backups
- Improved PBM Docker image to allow making physical backups with the shared mongodb data volume
- Updated Golang libraries that include fixes for the security vulnerability CVE-2023-39325.

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Last update: December 21, 2023
Created: December 21, 2023

2.3   Percona Distribution for MongoDB 5.0.22 (2023-11-09)

Installation

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.22-19 and Percona Backup for MongoDB 2.3.0.

2.3.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB are the following:

- Added the ability to configure the retry behavior for Percona Server for MongoDB to connect to the KMIP server when using data-at-rest encryption.
- Fixed the behavior of the `quiet` global server parameter for logging.
- Fixed the conversion form string to doubleValue to not lose precision and be able to rountrip and retrieve the same value back.
- Improved chunk migration logic by avoiding traversing routing table in the migration destination manager.
- Improved the recipient shard behavior during the chunk migration to wait for changes to catalog cache to be persisted before the cloning phase.

Percona Backup for MongoDB 2.3.0 enhancements include the following:

- The support for MongoDB 4.2 is deprecated. Existing functionality in Percona Backup for MongoDB remains compatible with MongoDB 4.2 and Percona Server for MongoDB 4.2; however, further enhancements and bug fixes are no longer tested against this version.
- The ability to view the backup contents improves troubleshooting of backups in environments where databases are often created and / or dropped.
- The ability to make physical backups in mixed deployments with MongoDB Community and Percona Server for MongoDB (PSMDB) nodes streamlines the backup flow for organizations that are still evaluating or migrating their data sets against PSMDB.
- Improved validation of a base backup snapshot for point-in-time recovery aligns the recovery flow for logical and physical backups.

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Last update: November 9, 2023

Created: October 12, 2023

2.4   Percona Distribution for MongoDB 5.0.21 (2023-10-12)

(**Installation**)

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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• *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.21-18 and Percona Backup for MongoDB 2.3.0.

2.4.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB are the following:

• Fixed the flow for converting a replica set into a sharded cluster by adding support for the drivers to communicate the signed `$clusterTimes` to shardsvr replica set before and after the `addShard` command is run

• Improved performance of updating the routing table and prevented blocking client requests during refresh for clusters with 1 million of chunks

• Fixed commit point propagation for exhaust oplog cursors during node sync

• Disallowed the retry to forcibly evict the page during reconciliation.

Percona Backup for MongoDB 2.3.0 enhancements include the following:

• The support for MongoDB 4.2 is deprecated. Existing functionality in Percona Backup for MongoDB remains compatible with MongoDB 4.2 and Percona Server for MongoDB 4.2; however, further enhancements and bug fixes are no longer tested against this version.

• The ability to view the backup contents improves troubleshooting of backups in environments where databases are often created and / or dropped.

• The ability to make physical backups in mixed deployments with MongoDB Community and Percona Server for MongoDB (PSMDB) nodes streamlines the backup flow for organizations that are still evaluating or migrating their data sets against PSMDB.

• Improved validation of a base backup snapshot for point-in-time recovery aligns the recovery flow for logical and physical backups.

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Last update: October 12, 2023
Created: October 12, 2023

2.5   Percona Distribution for MongoDB 5.0.20 (2023-09-07)

Installation

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.20-17 and Percona Backup for MongoDB 2.2.1.

2.5.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB are the following:

- Fixed the issue with the incorrect output for the query where the `$or` operator rewrites the `$elemMatch` extra condition.
- Fixed commit point propagation for exhaust oplog cursors.
- Blocked the `$group` min/max rewrite in timestamp if there is a non-meta filter.
- Improved the reconciliation time and slow eviction for pages with lots of updates by avoiding saving the update chain when there are no updates to be written to the history store
- Fixed the Rollback to Stable behavior to skip tables with no time window information in the checkpoint.

Percona Backup for MongoDB 2.2.1 provides the ability to increase the wait time for physical backup to start. This eliminates the PBM failure when creating `$backupCursor` takes longer than usual.

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Last update: September 7, 2023

Created: September 7, 2023

2.6   Percona Distribution for MongoDB 5.0.19 (2023-08-10)

Release date:	**August 10, 2023**
Installation:	Installing Percona Distribution for MongoDB

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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- *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.19-16 and Percona Backup for MongoDB 2.2.1.

2.6.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB are the following:

- The ability to configure AWS STS endpoint improves authentication and connectivity with AWS services.
- Allowed automatic retry of time series insert on DuplicateKey error.
- Prevented unnecessary logging of `WriteConflictExceptions` during the execution of a `findAndModify` command.
- Changed the index build behavior so that in-progress index builds are no longer accounted for `indexFreeStorageSize` when running dbStats.
- Fixed performance issues of the aggregation framework by improving the `Value::hash_combine()` function operation on big-endian platforms.
- Enabled session dhandle sweep and session cursor sweep to run more often.

Percona Backup for MongoDB 2.2.x improvements include the following:

- Automated Point-in-time recovery from physical backups offloads your DBAs from performing manual oplog replay on top of physical restore, ensures data consistency and unifies the user experience with PBM.
- Owners of large data sets can now use PBM to create external physical backups as EBS snapshots or via a technology of their choice and restore from those backups with the data consistency guaranteed by PBM. Thereby they benefit from increased performance and reduced downtime, and are sure that their data remains consistent. This is the technical preview feature.
- The ability to restore from physical and incremental backups to a new environment with different replica set names extends the set of compatible environments for physical restore.
- The ability to increase the wait time for physical backup to start eliminates the PBM failure when creating `$backupCursor` takes longer than usual.

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Last update: August 10, 2023

Created: August 10, 2023

2.7 Percona Distribution for MongoDB 5.0.18 (2023-06-01)

Release date:	**June 1, 2023**
Installation:	Installing Percona Distribution for MongoDB

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.18-15 and Percona Backup for MongoDB 2.1.0.

2.7.1 Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB 5.0.18-15 are the following:

- Fixed the bug with WiredTiger failing to load the incremental backup change bitmap for a file. The issue affects MongoDB versions 4.4.8 through 4.4.21, 5.0.2 through 5.0.17, and 6.0.0 through 6.0.5 causing the server to crash with the checksum error if the affected incremental backup was restored and the affected data is accessed.

  If you are using incremental backups, upgrade to the fixed upstream version 5.0.18 / Percona Server for MongoDB 5.0.18-15 as soon as possible. Follow closely the upstream recommendations to remediate the negative impact.

- Updated the built-in timezone files the latest version by upgrading the timezone library
- Improved the oplog application behavior to finish without issues during a recovery from a stable checkpoint
- Fixed the syslog severity level for INFO messages
- Added support for `$collStats` aggregation stage on timeseries collections

Percona Backup for MongoDB 2.1.0 improvements include the following:

- The general availability of incremental physical backups are now generally available enabling you to use them in production environments. Note that due to the changes in metadata files required for the restore, backups made with previous PBM versions are incompatible for the restore with PBM 2.1.0.

- Selective backup and restore of sharded collections improves the management of a desired subset of data in sharded clusters and saves you extra costs on data storage and transfer. This is the tech preview feature due to some known limitations.

- The support of parallel download of data chunks from the S3 storage improves the physical restore performance up to 7.5 times. Read more about the benchmarking in the Speeding up MongoDB restores in PBM blog post by *Andrew Pogrebnoi*.

- Improved deletion of old backups and point-in-time recovery oplog chunks simplifies the automation of backup storage cleanup.

- The improved handling of master keys for data-at-rest encryption in Percona Server for MongoDB and the retrieval of the key ID/secret path by PBM from a backup simplifies the environment preparation for the physical restore and improves the restore flow.

- The support of AWS tokens for the access to the S3 storage improves the security of your infrastructure and the integration with applications that interact with AWS resources via tokens.

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Last update: June 1, 2023
Created: May 4, 2023

2.8   Percona Distribution for MongoDB 5.0.17 (2023-05-04)

Release date:	**May 4, 2023**
Installation:	Installing Percona Distribution for MongoDB

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.17-14 and Percona Backup for MongoDB 2.1.0.

2.8.1   Release Highlights

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB 5.0.17-14 are the following:

- Fixed a hang when inserting or deleting a document with large number of index entries

- Fixed the failing `$group` min-max rewrite logic for time-series collections when there is a non-constant expression

- Fixed MigrationBatchFetcher/Inserter completion reliance to not spawn an extra cleanup thread

- Fixed deadlock between `stepdown` and `restoring` locks after yielding when all read tickets exhausted

- Fixed the issue with early kills of the cursor during the logical session cache refresh by properly handling write errors.

- Added accounting for array element overhead for `listCollections`, `listIndexes`, `_shardsvrCheckMetadataConsistencyParticipant` commands

- Improved the rename path behavior for a collection in sharded clusters by fixing the check for the databases to reside on the same primary shard

- Allowed queries with search and non-simple collations

Percona Backup for MongoDB 2.1.0 improvements include the following:

- The general availability of incremental physical backups are now generally available enabling you to use them in production environments. Note that due to the changes in metadata files required for the restore, backups made with previous PBM versions are incompatible for the restore with PBM 2.1.0.

- Selective backup and restore of sharded collections improves the management of a desired subset of data in sharded clusters and saves you extra costs on data storage and transfer. This is the tech preview feature due to some known limitations.

- The support of parallel download of data chunks from the S3 storage improves the physical restore performance up to 7.5 times. Read more about the benchmarking in the Speeding up MongoDB restores in PBM blog post by *Andrew Pogrebnoi*.

- Improved deletion of old backups and point-in-time recovery oplog chunks simplifies the automation of backup storage cleanup.

- The improved handling of master keys for data-at-rest encryption in Percona Server for MongoDB and the retrieval of the key ID/secret path by PBM from a backup simplifies the environment preparation for the physical restore and improves the restore flow.

- The support of AWS tokens for the access to the S3 storage improves the security of your infrastructure and the integration with applications that interact with AWS resources via tokens.

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Last update: May 4, 2023

Created: May 4, 2023

2.9   Percona Distribution for MongoDB 5.0.15 (2023-03-16)

Release date:	**March 16, 2023**
Installation:	Installing Percona Distribution for MongoDB

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.15-13 and Percona Backup for MongoDB 2.0.4.

2.9.1   Release Highlights

> ⚠️ **Warning**
>
> Due to critical issues identified in previous releases that may affect data integrity and performance, we recommend upgrading all production environments to the latest version - currently Percona Distribution for MongoDB 5.0.15. Find details about those issues in MongoDB 5.0 Community Edition release notes.

- The support for authentication using AWS IAM enables you to natively integrate Percona Server for MongoDB with AWS services, increase security of your infrastructure by setting up password-less authentication and offload your DBAs from managing different sets of secrets. This is the technical preview feature
- Improved master key rotation for data at rest encrypted with HashiCorp Vault enables you to use the same secret key path on every server in your entire deployment thus significantly simplifying the secrets management and key rotation process.

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB 5.0.15-13 are the following:

- Fixed the issue with blocked networking calls preventing the oplog fetching process to re-establish the connection to an unresponsive sync-source node

- Fixed the issue with incorrect projection parsing when a collection level collation is specified

- Changed the yielding policy of dataSize command to YIELD_AUTO for both when the command is called with estimate:true or false

- Disallowed creating the 'admin', 'local', and 'config' databases with alternative cases in names on sharded clusters

- Fixed the incorrect behavior of the `mapReduce` command with single reduce optimization in sharded clusters

- Fixed a crash during startup from backup can lose metadata by not deleting checkpoints during recovery from backup

- Fixed a memory leak in reconciliation after aborted eviction

- Fixed mapReduce with single reduce optimization from failing in sharded clusters

- Fixed the issue with not removing the jumbo flag upon successful split of the chunk

- Fixed the deadlock between index build setup, prepared transaction and stepdown by unlocking and relocking Replication State Transition Lock (RSTL) during index build setup

Percona Backup for MongoDB 2.0.4 provides the ability to specify the custom path to `mongod` binaries to simplify the physical restore process.

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Last update: March 20, 2023
Created: March 16, 2023

2.10   Percona Distribution for MongoDB* 5.0.14 (2022-12-08)

Release date:	**December 8, 2022**
Installation:	Installing Percona Distribution for MongoDB

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This release of |pdmdb| is based on Percona Server for MongoDB 5.0.14-12 and Percona Backup for MongoDB 2.0.2.

2.10.1   Release Highlights

With this release, `$backupCursor and $backupCursorExtend aggregation stages is now generally available, enabling you to use it for building custom backup solutions.

The bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB 5.0.14-12 are the following:

- Fixed the bug where an unexpected behavior could negatively impact existing TTL indexes with improper configuration and could cause the sudden expiration of TTL-indexed documents in a collection. This sudden expiration could cause data to be aged out prior than planned and could negatively impact write performance.

This bug involves TTL indexes with the `expireAfterSeconds` value of NaN (not-a-number). The TTL indexes are treated as 0 instead of NaN and that resulted in the sudden expiration of TTL-indexed documents in a collection. The bug affects MongoDB 5.0.0 through 5.0.13 and MongoDB 6.0.0 through 6.0.1.

It could be hit on MongoDB 4.4/4.2 when initially syncing from a 5.0.0-5.0.13 or 6.0.0-6.0.1 node and on MongoDB 5.0.0-5.0.13 when restoring from a `mongodump` of 4.2 / 4.4 collection or initially syncing from a 4.2/4.4 node that has a TTL configured with expireAfterSeconds: NaN.

The issue is fixed upstream in version 5.0.14 and 6.0.2. As the general recommendation, avoid using expireAfterSeconds: NaN as a configuration and correct this config anywhere it exists.

Follow closely the upstream recommendations to detect affected indexes and modify them using the collMod command.

- Corrected a potential race condition where multiple writing threads can update collection metadata in a way where overwrites could possibly happen. This could cause data/documents to be either unavailable or lost.
- Fixed the issue with how the server handles batches of writes when running $out with secondary read preference by updating write size estimation logic in `DocumentSourceWriter`
- Improved the performance of inserts into unique indexes
- Prevented dropping empty path component from `elemMatch` path during index selection

Percona Backup for MongoDB 2.0.2 fixes the usability issues for applications operating with it by providing the error messages for the status output in the JSON format.

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Last update: January 3, 2023

Created: December 8, 2022

2.11   Percona Distribution for MongoDB 5.0.13 (2022-10-12)

Release date:	**October 12, 2022**
Installation:	Installing Percona Distribution for MongoDB

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This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.13-11 and Percona Backup for MongoDB 2.0.1.

2.11.1   Release Highlights

This release of Percona Distribution for MongoDB includes bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB 5.0.13-11. Among them are the following:

- Data at rest encryption using the KMIP protocol is now generally available, enabling you to use this functionality in production environments.

- *Percona Server for MongoDB* Docker container now includes the `mongodb-tools` utility set to align with the upstream container. This enables users to manage backup/restore operations of *Percona Server for MongoDB*.

- Fixed security vulnerability CVE-2022-3602 for Percona Distribution for MongoDB 5.0.8 and higher installed from tarballs on Ubuntu 22.04.

- Updated exit code and status message during the master key rotation improves the user experience while using data-at-rest encryption with KMIP.

- Detected and resolved table logging inconsistencies for WiredTiger tables at startup

- Prevented the server from hanging in chunk migration when a step-down occurs.

- Fixed the issue with incorrect chunk size comparison during split by preventing the AutoSplitVector from using the clientReadable.

- Fixed the logger deadlock by adding a check against recursive logging

- Fixed the global time window state before performing the rollback to stable operation by updating the pinned timestamp as part of the transaction setup.

- Fixed the issue that could lead to data inconsistency by introducing the additional validation of field types for shard key patterns. Users should not modify the type (hashed or range) for the existing shard key fields

- Fixed the issue with failing resharding operation by introducing the start and end time metrics for resharding recipient

Percona Backup for MongoDB 2.0.1 improvements include the following:

• The support of server-side encryption with customer-provided keys managed on the customer side (SSE-C) enables you to use the S3-compatible storage of your choice thus preventing the vendor lock-in and saving your costs on AWS KMS (Key Management Service).

• The ability to configure Percona Backup for MongoDB remotely simplifies its management when *Percona Backup for MongoDB* is deployed in Docker, Kubernetes or other cloud services.

• The ability to configure the sidecar mode for Percona Backup for MongoDB improves its operation as part of Kubernetes Operator for MongoDB.

• Troubleshooting enhancements:

```
* The ability to [define a timezone for logs and to follow the logs dynamically](https://
docs.percona.com/percona-backup-mongodb/reference/pbm-commands.html#pbm-logs).

* Indication of arbiter nodes as non-supported ones in `pbm status` output
```

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Last update: January 3, 2023
Created: December 9, 2022

2.12   Percona Distribution for MongoDB 5.0.11 (2022-09-01)

Release date:	**September 1, 2022**
Installation:	Installing Percona Distribution for MongoDB

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

• *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.

• *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.11-10 and Percona Backup for MongoDB 1.8.1.

2.12.1 Release Highlights

> 🔥 **Important**
>
> With this release, the `kmipKeyIdentifier` option for data-at-rest encryption using the KMIP protocol (tech preview feature [1]) is optional. This change serves to improve the user experience with Percona Server for MongoDB as the option names and behavior are similar to those of MongoDB Enterprise. However, if data-at-rest encryption using KMIP is configured, it is the breaking change because the standard upgrade procedure does not work. We do recommend to use the data-at-rest encryption using the KMIP protocol only for testing purposes until it is in the general availability stage.
>
> If you have configured data at rest encryption and it is absolutely necessary to upgrade your MongoDB instance, see the upgrade instructions.

This release of Percona Distribution for MongoDB includes bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB and Percona Distribution for MongoDB. Among them are the following:

- Fixed the issue that caused inconsistency in sharding metadata when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 as soon as possible.
- Improved handling of large/NaN (Not a Number) values for text index and geo index version.
- Prevented potential server crash or lost writes when a resharding retry happens after the primary node failover. This is fixed by refreshing the routing information on the primary node during resharding.
- Prevented rollback to stable operation to generate wrong updates/tombstones by always reading the cell time window information to decide the history store update visibility.
- Fixed memory leak in update restore eviction.
- Failed chunk migrations can lead to recipient shard having different config.transactions records between primaries and secondaries - inconsistent data.
- Fixed the issue when resharding a collection with a very large number of zones configured may have stalled on config server primary indefinitely.
- Fixed the issue when retrying a failed resharding operation after a primary failover could lead to server crash or lost writes.
- Prevented sharding DDL coordinator to lock itself out in distlock retry loop.

Percona Backup for MongoDB 1.8.1 improvements include the following:

- Fixed the restore failure on a different cluster. Now the UUID of users and system collections are not preserved when replaying the oplog.
- The Point-in-Time recovery chunks display is now consistent in both `pbm status` and `pbm list` outputs

2.12.2 Packaging Notes

Debian 9 ("Stretch") is no longer supported.

> ✏️ **See also**
>
> Percona Blog: OS Platform End of Life (EOL) Announcement for Debian Linux 9

1. Tech Preview Features are not yet ready for enterprise use and are not included in support via SLA. They are included in this release so that users can provide feedback prior to the full release of the feature in a future GA release (or removal of the feature if it is deemed not useful). This functionality can change (APIs, CLIs, etc.) from tech preview to GA. ↵

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Last update: January 3, 2023

Created: December 9, 2022

2.13   Percona Distribution for MongoDB 5.0.10 (2022-08-09)

Release date:	**August 9, 2022**
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> We don't recommend this version for the production use due to the critical issue with sharding metadata inconsistency: SERVER-68511. The metadata inconsistency is observed when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 or Percona Distribution for MongoDB 5.0.11 as soon as possible.
>
> Please follow closely the upstream recommendations outlined in SERVER-68511 to work around this issue and for the remediation steps, if your cluster is affected.

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

• *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.

• *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.10-9 and Percona Backup for MongoDB 1.8.1.

2.13.1   Release Highlights

This release of Percona Distribution for MongoDB includes bug fixes and improvements provided by MongoDB and included in Percona Server for MongoDB. It specifically includes multiple fixes related to sharding and the resharding operation.

- Fixed the issue with bad projection created during dependency analysis due to string order assumption. It resulted in the `PathCollision` error. The issue is fixed by improving dependency analysis for projections by folding dependencies into ancestor dependencies where possible.

- Fixed the deadlock situation in cross shard transactions that could occur when the FCV (Feature Compatibility Version) was set after the "prepared" state of the transactions. That ended up with both the the setFCV thread and the `TransactionCoordinator` hung.

- This is a v6.0 backport fix to v5.0 that disables opportunistic read targeting (except for specified hedged reads) in order to prevent possible performance problems associated with uneven read distribution across the secondaries.

- Backported the check for user errors in case deadline on the migration destination manager is hit while waiting for a range to be cleared up. This prevents the balancer from getting blocked.

- Fixed the situation where the shards may skip certain steps in the resharding process but respond to the resharding coordinator as if they had. This can cause the resharding coordinator to continue to wait for updated states in the `config.reshardingOperations` document on the primary config server and stall indefinitely.

- Fixed the potential for the range deleter to wait unnecessarily during concurrent migrations between batches.

- Fixed the issue where 2 very different measurements (one in the past and one in future) could be incorrectly included in the same buckettime-series bucket.

- Resolved potential problem when adding or removing shards and incorrectly gossiping a new topology time without it being majorly committed.

Percona Backup for MongoDB 1.8.1 improvements include the following:

- Fixed the restore failure on a different cluster. Now the UUID of users and system collections are not preserved when replaying the oplog.

- The Point-in-Time recovery chunks display is now consistent in both `pbm status` and `pbm list` outputs

2.13.2   Packaging Notes

Debian 9 ("Stretch") is no longer supported.

> ✎ **See also**
>
> Percona Blog: OS Platform End of Life (EOL) Announcement for Debian Linux 9

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Last update: January 3, 2023

Created: December 9, 2022

2.14   Percona Distribution for MongoDB 5.0.9 (2022-06-20)

Release date:	**June 20, 2022**
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> We don't recommend this version for the production use due to the critical issue with sharding metadata inconsistency: SERVER-68511. The metadata inconsistency is observed when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 or Percona Distribution for MongoDB 5.0.11 as soon as possible.
>
> Please follow closely the upstream recommendations outlined in SERVER-68511 to work around this issue and for the remediation steps, if your cluster is affected.

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

- *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
- *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.9-8 and Percona Backup for MongoDB 1.8.0.

2.14.1   Release Highlights

- This release of Percona Distribution for MongoDB provides the following improvements to the data-at-rest encryption using the Keys Management Interoperability Protocol (KMIP) (tech preview [1] feature):
  - the support of multiple KMIP servers as the failover to your setup
  - the ability to set KMIP client certificate passwords through a flag to simplify the migration from MongoDB Enterprise to *Percona Server for MongoDB*
- Added support for Ubuntu 22.04 for *Percona Server for MongoDB* and *Percona Backup for MongoDB*.
- Added improvements to initial syncs from a secondary sync source.

The bug fixes, provided by MongoDB and included in Percona Server for MongoDB and Percona Distribution for MongoDB are the following:

- Detect namespace changes when refreshing Collection after yielding to maintain data consistency and avoid stale catalogs.
- Fixed the issue with releasing the critical state too early when sharding an empty collection. This could result in unwanted writes to that collection.
- Fixed the wrong key/value returning during search near when the key doesn't exist

Percona Backup for MongoDB 1.8.0 improvements include the following:

- Ability to restore data to a replica set with a different name and configuration. This extends the list of environments compatible for the restore.
- When you use EBS-snapshots or other tools for physical backups, you no longer have to create a mandatory base backup snapshot in Percona Backup for MongoDB as the starting point for Point-in-Time Recovery oplog slicing. This reduces time and effort on managing excessive backups and makes Point-in-time recovery from physical or storage-level backups more straightforward.
- The ability to wait for the backup operation to finish before doing further actions through the session lock. This simplifies the automation of operations with *Percona Backup for MongoDB*.
- Ability to define backup compression level and method in *Percona Backup for MongoDB* configuration.
- To simplify the *Percona Backup for MongoDB* configuration, the example configuration file is now included in the *Percona Backup for MongoDB* package.

---

1. Tech Preview Features are not yet ready for enterprise use and are not included in support via SLA. They are included in this release so that users can provide feedback prior to the full release of the feature in a future GA release (or removal of the feature if it is deemed not useful). This functionality can change (APIs, CLIs, etc.) from tech preview to GA. ↵

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Last update: January 3, 2023

Created: December 9, 2022

2.15   Percona Distribution for MongoDB 5.0.8 (2022-05-10)

Release date:	May 10, 2022
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> We don't recommend this version for the production use due to the critical issue with sharding metadata inconsistency: SERVER-68511. The metadata inconsistency is observed when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 or Percona Distribution for MongoDB 5.0.11 as soon as possible.
>
> Please follow closely the upstream recommendations outlined in SERVER-68511 to work around this issue and for the remediation steps, if your cluster is affected.

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

- *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
- *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.8-7 and Percona Backup for MongoDB 1.7.0.

2.15.1   Release Highlights

This release of Percona Distribution for MongoDB includes the support of master key rotation for data encrypted using the Keys Management Interoperability Protocol (KMIP) (tech preview [1] feature). Thus, users can comply with regulatory standards for data security.

The most notable bug fixes, provided by MongoDB and included in Percona Server for MongoDB are the following:

- Fixed a bug that causes replication to stall on secondary replica set members in a sharded cluster handling cross-shard transactions. It is caused by WiredTger to erroneously return a write conflict when deciding if an update to a record is allowed. If MongoDB decides to retry the operation that caused the conflict in WiredTiger, it will enter an indefinite retry loop, and oplog application will stall on secondary nodes.

If this bug is hit, the secondary nodes will experience indefinite growth in replication lag. Restart the secondary nodes to resume replication.

This bug affects MongoDB 4.4.10 through 4.4.13 and 5.0.4 to 5.0.7.

Update to the latest version to avoid the secondary replication stall and lag issues.

- Fixed the issue with a commitQuorum incorrectly allowing non-voting buildIndexes:false nodes to be included in the commitQuorum count. It also fixed an error message relating to data-bearing nodes and quorum regarding to non-voting nodes.
- Fixed the order of backup blocks returned to the user to match the order retrieved from WiredTiger.
- Fixed the issue reporting an incorrect number of documents deleted from a capped collection when utilizing a collection scan to perform the delete action.

1. Tech Preview Features are not yet ready for enterprise use and are not included in support via SLA. They are included in this release so that users can provide feedback prior to the full release of the feature in a future GA release (or removal of the feature if it is deemed not useful). This functionality can change (APIs, CLIs, etc.) from tech preview to GA. ↩

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Last update: January 3, 2023

Created: December 9, 2022

2.16   Percona Distribution for MongoDB 5.0.7 (2022-04-20)

Release date:	**April 20, 2022**
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> We don't recommend this version for the production use due to the critical issue with sharding metadata inconsistency: SERVER-68511. The metadata inconsistency is observed when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 or Percona Distribution for MongoDB 5.0.11 as soon as possible.
>
> Please follow closely the upstream recommendations outlined in SERVER-68511 to work around this issue and for the remediation steps, if your cluster is affected.

Percona Distribution for MongoDB is a freely available MongoDB database alternative, giving you a single solution that combines enterprise components from the open source community, designed and tested to work together. The aim of Percona Distribution for MongoDB is to enable you to run and operate your MongoDB efficiently with the data being consistently backed up.

Percona Distribution for MongoDB includes the following components:

- *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
- *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.7-6 and Percona Backup for MongoDB 1.7.0.

> 🔥 **Important**
>
> To make physical backups and restores, the `pbm-agent` must have the read/write access to the `dataDir`. If you use the filesystem-based backup storage, the `pbm-agent` must also have the read/write access to the backup directory. Therefore, starting from version 1.7.0, the user running the `pbm-agent` is changed from `pbm` to `mongod` in Percona Backup for MongoDB packages.
>
> To upgrade Percona Backup for MongoDB to version 1.7.0, do the following:
>
> 1. Stop the `pbm-agent` process
> 2. Upgrade new version packages
> 3. Reload the `systemd` process to update the unit file with the following command:
>
> ```
> $ sudo  systemctl daemon-reload
> ```
>
> 1. If you have a filesystem-based backup storage, grant read/write permissions to the backup directory to the `mongod` user.
> 2. Restart the `pbm-agent` process.
>
> If MongoDB runs under a different user than mongod (the default configuration for Percona Server for MongoDB), use the same user to run the `pbm-agent`. For filesystem-based storage, grant the read/write permissions to the backup directory for this user.

2.16.1   Release Highlights

This release of Percona Distribution for MongoDB includes the support of Keys Management Interoperability Protocol (KMIP). Thus, users can store encryption keys in their favorite KMIP-compatible key manager to set up encryption at rest. This is a tech preview [1] feature.

The most notable bug fixes, provided by MongoDB and included in Percona Server for MongoDB are the following:

• Fixed the issue where having a large number of split points causes the chunk splitter to not function correctly and huge chunks would not be split without manual intervention. This can be caused when having small shard key ranges and a very high number of documents and where more than 8192 split points would be needed.

• Recover the `RecoverableCriticalSection` service after the `initialSync` and `startupRecovery` stages have completed. This prevents a started up shard to miss an in-memory critical section of a resharded collection.

• Fixed an issue that occurred during the attempt to perform the collation-encoding of a document with a missing sort attribute. In this case an invariant is violated and `mongod` crashes.

• Fixed an issue when the rename collection (sharding step) participants can get stuck.

• Fixed an issue with idle cursors remaining open when the client attempts to run an aggregation with `$out` or `$merge` in a transaction on a sharded cluster.

• Check if the host has cgroups v2 enabled and read the memory limits according to that.

• Report an error when the WiredTiger version file is empty or missing during a startup.

Percona Backup for MongoDB 1.7.0 improvements include the following:

- Support for physical backups in *Percona Server for MongoDB* starting from versions 4.2.15-16 and 4.4.6-8 and higher. Physical backups drastically speed up backup and restore performance for large databases (several terabytes). This is a technical preview [1] feature.
- Oplog replay from the arbitrary start time. This reduces Recovery Point Objective (RPO) when database is recovered from physical or storage-level backups.
- Ability to configure compression method and level for point-in-time recovery chunks and compression level for backups.
- Ability to configure the number of S3 multipart upload chunks to comply with various S3-compatible storage provider requirements.
- Ability to configure the number of upload retries. This facilitates data upload in case of unstable network connection.

---

1. Tech Preview Features are not yet ready for enterprise use and are not included in support via SLA. They are included in this release so that users can provide feedback prior to the full release of the feature in a future GA release (or removal of the feature if it is deemed not useful). This functionality can change (APIs, CLIs, etc.) from tech preview to GA. ↩↩

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Last update: January 3, 2023

Created: December 9, 2022

2.17   Percona Distribution for MongoDB 5.0.6 (2022-02-10)

Release date:	**February 10, 2022**
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> Inconsistent data is observed after the upgrade from MongoDB 4.4.3 and 4.4.4 to versions 4.4.8+ and 5.0.2+. This issue is fixed upstream in versions 4.4.11 and 5.0.6. *Percona Server for MongoDB* and Percona Distribution for MongoDB also include the fix in versions 4.4.12-12 and 5.0.6-5.
>
> See the upgrade recommendations below:
>
> - Clusters on versions 4.4.0 and 4.4.1 are safe to upgrade to 4.4.8+ or 5.0.2+ but should upgrade to recommended versions 4.4.11+ or 5.0.5+
> - Clusters on versions 4.4.2, 4.4.3, or 4.4.4 should **downgrade** to 4.4.1 and then upgrade to versions 4.4.11+ or 5.0.5+.
> - Clusters running versions 4.4.5 - 4.4.7 can and should upgrade to versions 4.4.11+ or 5.0.5+.
>
> Note that clusters running versions 4.4.2 - 4.4.8 are affected by the bug WT-7995. See WT-7995 for specific explanation and instructions on running the validate command to check for data inconsistencies. These data inconsistencies can lead to data loss if not identified and repaired at this point between versions 4.4.8 and 4.4.9.
>
> If the validate command output reports any failures, resync the impacted node from an unaffected node. **The validate command must be run against all collections in the database. This process can be resource intensive and can negatively impact performance.**
>
> Another critical issue that affects the production use of this version is SERVER-68511. It causes inconsistency in sharding metadata when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 or Percona Distribution for MongoDB 5.0.11 as soon as possible.
>
> Follow the upstream recommendations in SERVER-68511 to check your clusters and remediate any negative impact if the clusters are affected with this issue.

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Percona Distribution for MongoDB includes the following components:

- *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
- *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on Percona Server for MongoDB 5.0.6-5 and Percona Backup for MondocsB 1.6.1.

> ⚠️ **Warning**
>
> Inconsistent data is observed after the upgrade from MongoDB 4.4.3 and 4.4.4 to versions 4.4.8+ and 5.0.2+. This issue is fixed upstream in versions 4.4.11 and 5.0.6. *Percona Server for MongoDB* also includes the fix in versions 4.4.12-12 and 5.0.6-5
>
> See the upgrade recommendations below:
>
> - Clusters on versions 4.4.0 and 4.4.1 are safe to upgrade to 4.4.8+ or 5.0.2+ but should upgrade to recommended versions 4.4.11+ or 5.0.5+
> - Clusters on versions 4.4.2, 4.4.3, or 4.4.4 should **downgrade** to 4.4.1 and then upgrade to versions 4.4.11+ or 5.0.5+.
> - Clusters running versions 4.4.5 - 4.4.7 can and should upgrade to versions 4.4.11+ or 5.0.5+.
>
> Note that clusters running versions 4.4.2 - 4.4.8 are affected by the bug WT-7995. See WT-7995 for specific explanation and instructions on running the validate command to check for data inconsistencies. These data inconsistencies can lead to data loss if not identified and repaired at this point between versions 4.4.8 and 4.4.9.
>
> If the validate command output reports any failures, resync the impacted node from an unaffected node. **The validate command must be run against all collections in the database. This process can be resource intensive and can negatively impact performance.**

2.17.1 Release Highlights

This release of Percona Distribution for MongoDB includes bug fixes, provided by MongoDB and included in Percona Server for MongoDB. The most notable from them are the following:

- Fixed an issue with inconsistent data observed during the direct upgrade from from 4.4.3 and 4.4.4 to 4.4.8+ and 5.0.2+. Data inconsistency was caused by the incorrect checkpoint metadata to sometimes be recorded by MongoDB versions 4.4.3 and 4.4.4. WiredTiger used this metadata during node startup that could lead to data corruption and could cause the DuplicateKey error. The fix requires the upgrade to versions 4.4.11+ or 5.0.5+. For details, refer to WT-8395.
- Fixed an issue unavailability of a shard in sharded clusters. Affects MongoDB versions 5.0.0 - 5.0.5. Requires the following steps:

```
* Restarting the shards as replica sets

* Checking that range deletion tasks are consistent with migration coordinators

* Majority-deleting all migration coordinators with a definitive decision

* Restarting the nodes as shards.
```

For details, refer to SERVER-62245.

- Fixed time-series bucket OID collisions by adding the difference between the actual timestamp and the rounded timestamp to the instance portion of the OID.

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Last update: July 12, 2023

Created: December 9, 2022

2.18   Percona Distribution for MongoDB 5.0.5 (2021-12-28)

Release date:	**December 28, 2021**
Installation:	Installing Percona Distribution for MongoDB

> ⚠️ **Warning**
>
> We don't recommend this version for the production use due to the critical issue with sharding metadata inconsistency: SERVER-68511. The metadata inconsistency is observed when running the `movePrimary` command on the database that has the Feature Compatibility Version (FCV) set to 4.4 or earlier. Affects MongoDB versions 5.0.0 through 5.0.10 and MongoDB 6.0.0. Upgrade to the fixed version of MongoDB 5.0.11 / Percona Server for MongoDB 5.0.11-10 as soon as possible.
>
> Please follow closely the upstream recommendations outlined in SERVER-68511 to work around this issue and for the remediation steps, if your cluster is affected.

We are pleased to announce the release of the Percona Distribution for MongoDB for the recent major version 5.0.x.

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Percona Distribution for MongoDB includes the following components:

• *Percona Server for MongoDB* is a fully compatible source-available, drop-in replacement for MongoDB.
• *Percona Backup for MongoDB* is a distributed, low-impact solution for achieving consistent backups of MongoDB sharded clusters and replica sets.

This release of Percona Distribution for MongoDB is based on the production release of Percona Server for MongoDB 5.0.5-4 and Percona Backup for MongoDB 1.6.1.

2.18.1   Release Highlights

This release of Percona Distribution for MongoDB includes bug fixes, provided by MongoDB and included in Percona Server for MongoDB. The most notable from them are the following:

• Added histograms to track latency for tasks scheduled on the reactor thread.
• Fixed an issue when resharding a collection that could cause data inconsistency (lost writes) due to incorrect actions by the ReshardingCoordinator and attempts to commit anyway. Also could cause fassert() to config server primary.
• Fixed an issue with stalls on the config server. Updates to config server during resharding may wait too long for oplog slot thus stalling replication on config server indefinitely.
• Fixed a resharding issue relating to RecipientStateMachine that caused the server to crash

Percona Backup for MongoDB 1.6.1 improvements include the following:

- Improved backup and point-in-time recovery routines alignment by using sequential `delete-pitr` / `install-backup` operations instead of in-memory backup intent. This fixes the inability of a backup to start.
- Added support for automated access to S3 buckets using an EC2 instance profile. When Percona Backup for MongoDB is deployed using an EC2 instance, EC2 environment variables and metadata are used for S3 authentication, saving you from explicitly specifying S3 credentials in the Percona Backup for MongoDB configuration file. This comes handy for architectures deployed using the services like Amazon EC2, kiam, kube2iam or irsa.
- Extended logging for `pbm-agents` . This improves user experience with Percona Backup for MongoDB.

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3. Installation and Upgrade

3.1 Install Percona Distribution for MongoDB

We recommend to install Percona Distribution for MongoDB from Percona repositories using the package manager of your operating system. Find the list of supported Linux distributions on the Percona Software and Platform Lifecycle page.

Alternatively, you can download Percona Distribution for MongoDB from Percona website and install it manually from binary tarballs.

Choose how you wish to install Percona Distribution for MongoDB:

On Debian/Ubuntu   On RHEL/derivatives   From tarballs   On Kubernetes

Run the following commands as root or by using the **sudo** command.

1. Install **percona-release**

   Install the **percona-release** repository management tool to subscribe to Percona repositories:

   - Install `curl`

   ```
   $ sudo apt update
   $ sudo apt install curl
   ```

   - Download the **percona-release** package

   ```
   $ curl -O https://repo.percona.com/apt/percona-release_latest.generic_all.deb
   ```

   - Install the package and dependancies

   ```
   $ sudo apt install gnupg2 lsb-release ./percona-release_latest.generic_all.deb
   ```

   - Refresh the local cache

   ```
   $ supo apt update
   ```

2. Enable the repository

   Percona provides two repositories for Percona Distribution for MongoDB. To enable a repo, we recommend using the `setup` command:

   ```
   $ sudo percona-release setup pdmdb-5.0
   ```

3. Install Percona Distribution for MongoDB packages

   ```
   $ sudo apt install percona-server-mongodb percona-backup-mongodb
   ```

Run the following commands as root or by using the **sudo** command.

1. Install **percona-release**

   Install the **percona-release** repository management tool to subscribe to Percona repositories:

   ```
   $ sudo yum install -y https://repo.percona.com/yum/percona-release-latest.noarch.rpm
   ```

2. Enable the repository

   Percona provides two repositories for Percona Distribution for MongoDB. To enable a repo, we recommend using the `setup` command:

   ```
   $ sudo percona-release setup pdmdb-5.0
   ```

3. Install Percona Distribution for MongoDB packages

   ```
   $ sudo yum install percona-server-mongodb percona-backup-mongodb
   ```

You can find binary tarballs on the Percona software downloads page

1. Select *Generic Linux* from the dropdown.
2. Download binary tarballs. Replace the <version> variable with the desired version:

To set up monitoring of your Percona Distribution for MongoDB in PMM, see Set up PMM to monitor MongoDB

3.1.1   Uninstall Percona Distribution for MongoDB

To uninstall Percona Distribution for MongoDB, remove the packages using the package manager of your operation system. Optionally, disable *Percona* repository.

> ✏️ **See also**
>
>   • Uninstall Percona Server for MongoDB
>
>   • Uninstall Percona Backup for MongoDB

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3.2   Repository overview

Percona provides two repositories for Percona Distribution for MongoDB:

Major release repository

Major Release repository (for example, `pdmdb-5.0`) includes the latest version packages. Whenever a package is updated, the package manager of your operating system detects that and prompts you to update. As long as you update all Distribution packages at the same time, you can ensure that the packages you're using have been tested and verified by *Percona*.

We recommend to install Percona Distribution for MongoDB from the *Major Release repository*

Minor release repository

Minor Release repository includes a particular minor release of the database and all of the packages that were tested and verified to work with that minor release (for example, `pdmdb-5.0.9`). You may choose to install Percona Distribution for MongoDB from the Minor Release repository if you have decided to standardize on a particular release which has passed rigorous testing procedures and which has been verified to work with your applications. This allows you to deploy to a new host and ensure that you'll be using the same version of all the Distribution packages, even if newer releases exist in other repositories.

The disadvantage of using a Minor Release repository is that you are locked in this particular release. When potentially critical fixes are released in a later minor version of the database, you will not be prompted for an upgrade by the package manager of your operating system. You would need to change the configured repository in order to install the upgrade.

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3.3 Minor upgrade of Percona Distribution for MongoDB

To receive bug fixes and feature enhancements that come with minor releases, keep your Percona Distribution for MongoDB upgraded to the latest version.

This document describes the upgrade from Percona repositories as the recommended method.

Before the upgrade, we recommend to back up your data in order to be on the safe side if anything goes wrong.

3.3.1 Prerequisites

1. Update **percona-release** repository management tool to the latest version. This is required to install new version packages of Percona Distribution for MongoDB.

2. Enable the repository

   If you installed Percona Distribution for MongoDB from the Major release repository, this step is optional. This repository automatically includes new version packages and you receive a prompt for an upgrade from the package manager of your operating system.

   If you installed Percona Distribution for MongoDB from the Minor release repository, you must enable the new version repository (for example, `pdmdb-5.0.1`) to upgrade. We recommend to use the `setup` subcommand:

   ```
   $ sudo percona-release setup pdmdb-5.0.1
   ```

3.3.2 Procedure

Run the following commands as root or by using the **sudo** command.

Stop the service

Stop Percona Server for MongoDB:

```
$ sudo systemctl mongod stop
```

Stop **pbm-agent**:

```
$ sudo systmectl pbm-agent stop
```

Install new version packages

Install a new version of Percona Distribution for MongoDB using the package manager of your operating system.

Restart the service

Start Percona Server for MongoDB:

```
$ sudo systemctl mongod start
```

Start **pbm-agent**:

```
$ sudo systmectl pbm-agent start
```

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4.   Reference

4.1   Copyright and licensing information

4.1.1   Documentation licensing

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