Percona Distribution for MongoDB includes both Percona Server for MongoDB and Percona Backup for MongoDB. With this, you get a single solution with the best and most critical enterprise components from the open-source community — designed and tested to work together.

Our distributions are backed by world-class support and engineering teams, giving you peace of mind and 24x7 support, when you need it. This release includes all features of MongoDB 5.0 Community Edition with enterprise-level enhancements previously only available in MongoDB’s proprietary Enterprise Edition.

**Percona Server for MongoDB** is an enhanced, source-available, and highly-scalable database that is a complete replacement for MongoDB Community Edition, supporting MongoDB protocols and drivers.

**Percona Backup for MongoDB** is a distributed, low-impact solution for creating consistent backups across a MongoDB sharded cluster (or a single replica set), and for restoring those backups to a specific point in time. This is a fully-supported open source backup tool for those who don’t want the lock-in and costs commonly associated with proprietary software like MongoDB Enterprise and MongoDB Ops Manager.

New Features in Percona Server for MongoDB 5.0

**Live Resharding**

As part of the 5.0 release, MongoDB offers the ability to change your shard key live, not just modify as was the case with v4.4 “Refinable Shard Keys”. This has been a consistent request by the MongoDB community. With Live Resharding, users can change the shard key for a collection. This enables changing the data distribution across your shards and cluster. Doing so can alleviate or even eliminate various problems caused by bad shard keys.

**Time Series Collections**

New in MongoDB 5.0, Time Series Collections are a way to natively handle time series data or measurements taken at intervals. These specialized collections allow for efficient storage of sequential type data over a period of time in a highly optimized way. This is designed to improve query efficiency, allow more detailed data analysis in real-time, and also optimize disk usage.
Window Functions and New Time Operators

To go along with time series collections, MongoDB has also introduced Window Functions - including moving averages, integral, and derivative. These functions are meant to be used for intervals or windows of time. They can also be used with both new time series and existing regular collections thus providing new analysis methods.

Versioned API

This feature allows specifying which API version your application communicating with MongoDB runs against. Versioned API detaches the application's lifecycle from that of the database. As a result, your applications can take advantage of new features without risking backward compatibility problems.

New features for Percona Backup for MongoDB 1.6

- Point-in-time recovery enhancements: ability to restore from any previous snapshot and configurable span of oplog events.
- JSON output for PBM commands to simplify interfacing PBM with applications.
- 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.
- Added Extended logging for pbm-agents in order to improve overall user experience with Percona Backup for MongoDB and assist with troubleshooting as needed.

Upgrading Precautions

When planning upgrades to MongoDB v5.0.x, please take special care in your upgrade planning and execution. With every major new version of MongoDB, there are often specific steps that need to be taken to successfully upgrade. This is especially true when upgrading from any MongoDB v4.x to the latest MongoDB v5.0.x versions.

Additional Changes

MongoDB v5.0 (and Percona Server for MongoDB v5.0) is a major release that includes many enhancements, improvements, and other changes in addition to the major new features listed above. Some things to keep in mind are: a new shell mongosh, longer shutdown times, changes to the update operator, changes to write concern majority behavior, exclusive locks during renameCollection, and many more.