

How to work with Percona Distributions

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FerretDB



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What is the software distribution?





What is the software distribution?

A software distribution or distro is a collection of software that is assembled and configured so that it can be easily installed as a coherent system. A distribution typically includes an operating system, along with a variety of additional software that's been pre-selected and pre-configured to work well together.



Pros and Cons of using distributions

Pros:

Ease of use: Distributions often make it easier for users to get started because they bundle together a variety of software that's been pre-configured to work well together.

Software Management: Most distributions come with package managers that simplify the process of installing, updating, and removing software.



Pros and Cons of using distributions

Pros:

Community Support: Popular distributions often have large, active communities that can provide support and help troubleshoot issues.

Security and Stability: Distributions often include security patches, bug fixes, and system improvements. Stable releases of distributions are thoroughly tested and can provide a more reliable experience.



Pros and Cons of using distributions

Cons:

Learning Curve: Each distribution has its own ways of doing things, its own directory layout, and its own set of tools. If you're switching between distributions, there can be a learning curve.

Hardware Compatibility: Some distributions may not work as well with certain types of hardware, which can lead to problems getting things like wireless networking or sound working properly.



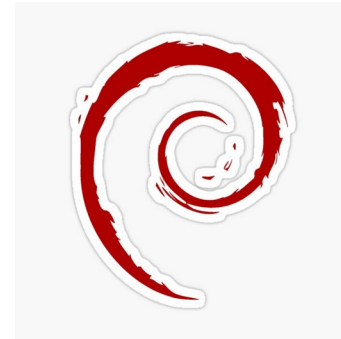
Pros and Cons of using distributions

Cons:

Software Availability: Not all software is available or up-to-date on all distributions. If you need to use a specific piece of software, you may need to check whether it's available and compatible with your distribution.

Dependent on Distribution Support: If a distribution is discontinued or the maintainers stop supporting it, users might need to switch to a different distribution or manage updates and security patches on their own.

Popular distributions





Percona Distributions

- **Percona Distribution for MySQL (PS and PXC)** - a single solution with the best and most critical enterprise components from the MySQL open source community, designed and tested to work together. With Percona Server for MySQL or Percona XtraDB Cluster as the base server, the distribution brings you the enterprise-grade features for free. The set of carefully selected components helps you operate your MySQL database to meet your application and business needs.
- **Percona Distribution for PostgreSQL** - collection of tools to assist you in managing your PostgreSQL database system: it installs PostgreSQL and complements it by a selection of extensions that enable solving essential practical tasks efficiently
- **Percona Distribution for MongoDB** - a collection of solutions to run and operate your MongoDB efficiently with the data being consistently backed up.

Is it easy to install mysql in some of the popular distributions?

```
vagrant@ubuntu-focal:~$ apt-cache policy mysql-server
mysql-server:
  Installed: 8.0.33-0ubuntu0.20.04.2
  Candidate: 8.0.33-0ubuntu0.20.04.2
  Version table:
*** 8.0.33-0ubuntu0.20.04.2 500
     500 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages
     500 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages
     100 /var/lib/dpkg/status
 8.0.19-0ubuntu5 500
     500 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages
```

```
[vagrant@localhost ~]$ sudo yum info mysql-server
Last metadata expiration check: 0:01:16 ago on Sat 01 Jul 2023 12:09:08 PM UTC.
Available Packages
Name       : mysql-server
Version    : 8.0.32
Release    : 1.el9_2
Architecture: x86_64
Size       : 17 M
Source     : mysql-8.0.32-1.el9_2.src.rpm
Repository : ol9_appstream
Summary    : The MySQL server and related files
URL        : http://www.mysql.com
License    : GPLv2 with exceptions and LGPLv2 and BSD
Description: MySQL is a multi-user, multi-threaded SQL database server. MySQL is a
            client/server implementation consisting of a server daemon (mysqld)
            and many different client programs and libraries. This package contains
            the MySQL server and some accompanying files and directories.
```

```
vagrant@bullseye:~$ apt-cache search mysql-server
mariadb-server-10.5 - MariaDB database server binaries
mariadb-server-core-10.5 - MariaDB database core server files
default-mysql-server - MySQL database server binaries and system database setup (metapackage)
default-mysql-server-core - MySQL database server binaries (metapackage)
```



PDPS and PDPXC

Percona Server for MySQL or Percona XtraDB Cluster

Percona XtraBackup

Percona Toolkit

Orchestrator — The replication topology manager for Percona Server

HAProxy — The default high-availability and load-balancing solution for PXC

ProxySQL — A high performance, high availability, protocol aware proxy for PXC

MySQL Shell — An advanced client and code editor for MySQL Server

MySQL Router — A lightweight middleware for transparent routing between applications and back-end servers



MongoDB

Percona Server for MongoDB

Percona Backup for MongoDB - an open source and distributed solution for consistent backups and restore of MongoDB sharded clusters and replica sets. There is no notable performance nor operating degradation associated with PBM.



PostgreSQL

pg_repack rebuilds PostgreSQL database objects.

pgAudit provides detailed session or object audit logging via the standard PostgreSQL logging facility.

pgAudit set_user – The **set_user** part of **pgAudit** extension provides an additional layer of logging and control when unprivileged users must escalate themselves to superuser or object owner roles in order to perform needed maintenance tasks.

pgBackRest is a backup and restore solution for PostgreSQL.

Patroni is an HA (High Availability) solution for PostgreSQL.

pg_stat_monitor collects and aggregates statistics for PostgreSQL and provides histogram information.

PgBouncer – a lightweight connection pooler for PostgreSQL.

pgBadger – a fast PostgreSQL Log Analyzer.

wal2json – a PostgreSQL logical decoding JSON output plugin.

HAProxy – a high-availability and load-balancing solution.



Repo Types

Strict version
Rolling updates

A vertical decorative image on the left side of the slide showing a church tower with a cross on top, set against a blue sky and a body of water.

How to work with our repos?

percona-release !



How to work with our repos?

percona-release setup <name>

or

Percona-release enable <name> <type>



How else I can use Percona Distributions?

Kubernetes Operators!

A background image of a cityscape, likely Zagreb, featuring a prominent church spire (St. Mark's Church) rising above a cluster of buildings on a hill. The image is overlaid with a dark blue gradient.

Thank you!

