Install MySQL 8.4 on Debian 13

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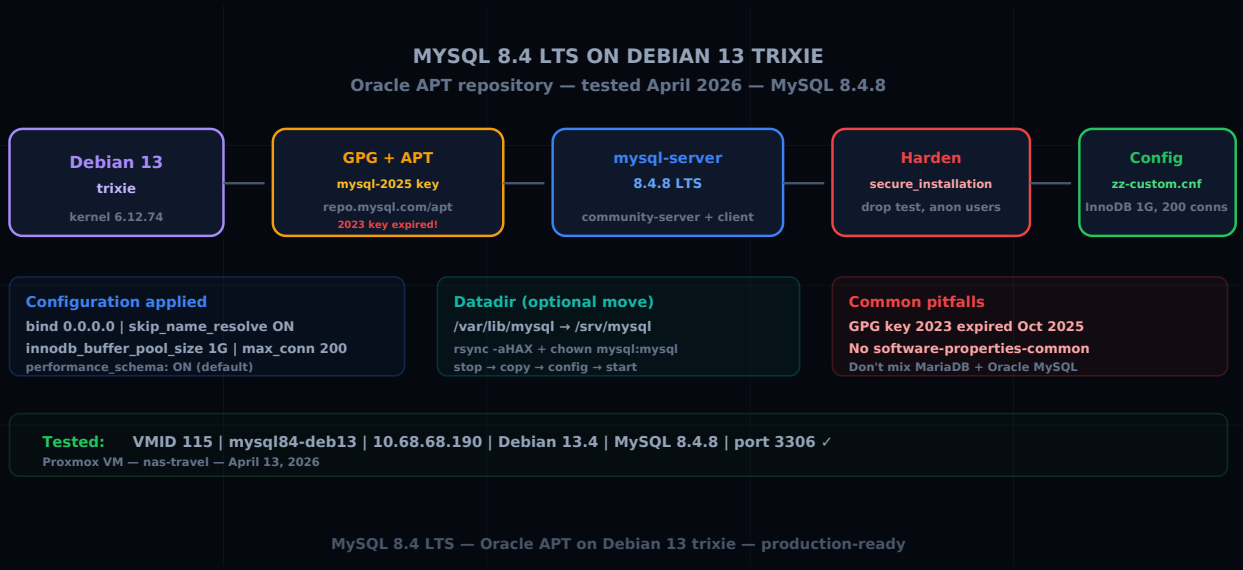
MYSQL DEBIAN INSTALLATION MYSQL-8.4 DEBIAN-13



Goal

This documentation explains from A to Z how to install MySQL 8.4 on Debian 13 using the official Oracle APT method, then how to:

- verify that MySQL is working
- harden the instance
- adjust the base configuration
- move the datadir if needed
- manage the service with `systemd`

Important note about Debian 13

As of April 13, 2026, the MySQL APT repository does publish packages for Debian 13 `trixie`, including `mysql-8.4-lts`.

- Debian 13 can be used directly with the Oracle MySQL repository
- the recommended method remains the MySQL APT repository

- there is no need to use native Debian packages if the goal is Oracle MySQL 8.4

Recommended architecture

For a clean installation:

- minimal Debian 13 OS
- proper hostname
- static IP
- consistent timezone
- separate data disk if the machine is intended for production

Reasonable minimum configuration:

Component	Minimum
vCPU	2
RAM	4 GB
System disk	20 GB
Data disk	50 GB+ (separate datadir)

1. Prepare Debian 13

```
apt-get update
apt-get -y upgrade
apt-get install -y \
  curl wget gnupg lsb-release ca-certificates \
  apt-transport-https net-tools dnsutils sudo
```

Warning: the `software-properties-common` package does not exist on Debian 13 (it's an Ubuntu package). Do not include it.

```
timedatectl set-timezone Europe/Paris
cat /etc/os-release
```

Verify that `VERSION_CODENAME=trixie`.

2. Add the Oracle MySQL APT repository

Option A — Using `mysql-apt-config` (official method)

```
cd /tmp
wget https://dev.mysql.com/get/mysql-apt-config_0.8.36-1_all.deb
dpkg -i mysql-apt-config_0.8.36-1_all.deb
apt-get update
```

Option B — Manual APT file (recommended)

Important: the `RPM-GPG-KEY-mysql-2023` GPG key expired in October 2025. Use `RPM-GPG-KEY-mysql-2025`.

```
mkdir -p /etc/apt/keyrings
wget -O /etc/apt/keyrings/mysql.gpg https://repo.mysql.com/RPM-GPG-KEY-mysql-2025

cat >/etc/apt/sources.list.d/mysql.list <<'EOF'
deb [signed-by=/etc/apt/keyrings/mysql.gpg] http://repo.mysql.com/apt/debian/ trixie mysql-8.4-lts mysql-tools
EOF

apt-get update
```

3. Install MySQL 8.4

```
DEBIAN_FRONTEND=noninteractive apt-get install -y mysql-server
```

This installs the server (`mysql-community-server`), client (`mysql-community-client`), plugins and common files.

```
dpkg -l | grep -E 'mysql-(server|client|community)'
```

4. Verify the service

```
systemctl status mysql --no-pager
systemctl is-active mysql
systemctl is-enabled mysql
mysql --version
mysql -Nse "SELECT VERSION();"
```

5. First connection

With `DEBIAN_FRONTEND=noninteractive`, MySQL 8.4 on Debian 13 configures root authentication via Unix socket (no password):

```
mysql
```

or:

```
sudo mysql
```

6. Harden the instance

Using the official tool:

```
mysql_secure_installation
```

Or manually:

```
DELETE FROM mysql.user WHERE User='';
DROP DATABASE IF EXISTS test;
DELETE FROM mysql.db WHERE Db='test' OR Db='test\\_%';
FLUSH PRIVILEGES;
```

7. Important file locations

File	Path
Configuration	`/etc/mysql/`
Server binary	`/usr/sbin/mysqld`

File	Path
Client	`/usr/bin/mysql`
Datadir	`/var/lib/mysql`
systemd service	`mysql.service`
Custom config	`/etc/mysql/mysql.conf.d/zz-*.cnf`

8. Recommended base configuration

Add a dedicated file rather than modifying existing ones:

```
cat >/etc/mysql/mysql.conf.d/zz-custom.cnf <<'EOF'
[mysqld]
bind-address = 0.0.0.0
mysqlx-bind-address = 0.0.0.0
skip_name_resolve = ON
max_connections = 200
innodb_buffer_pool_size = 1G
log_error_verbosity = 2
EOF

systemctl restart mysql
```

Verify:

```
mysql -Nse "SHOW VARIABLES LIKE 'bind_address';"
mysql -Nse "SHOW VARIABLES LIKE 'innodb_buffer_pool_size';"
```

9. Open port 3306

If the server needs to accept remote connections:

```
CREATE USER 'admin'@'10.68.68.%' IDENTIFIED BY 'StrongPasswordHere';
GRANT ALL PRIVILEGES ON *.* TO 'admin'@'10.68.68.%' WITH GRANT OPTION;
FLUSH PRIVILEGES;
```

```
ss -lntp | grep 3306
```

10. Move the datadir to `/srv/mysql`

```
systemctl stop mysql
mkdir -p /srv/mysql
rsync -aHAX /var/lib/mysql/ /srv/mysql/
chown -R mysql:mysql /srv/mysql
chmod 750 /srv/mysql

cat >/etc/mysql/mysql.conf.d/zz-datadir.cnf <<'EOF'
[mysqld]
datadir = /srv/mysql
EOF

systemctl start mysql
mysql -Nse "SELECT @@datadir;"
```

Expected result: `/srv/mysql/`

11. Enable `performance_schema`

Already enabled by default on MySQL 8.4.8:

```
mysql -Nse "SELECT @@performance_schema;"
```

If needed:

```
cat >/etc/mysql/mysql.conf.d/zz-performance.cnf <<'EOF'
[mysqld]
performance_schema = ON
EOF

systemctl restart mysql
```

12. Create a proper admin user

Avoid using `root` for everything:

```
CREATE USER 'dba'@'10.68.68.%' IDENTIFIED BY 'VeryStrongPassword';
GRANT ALL PRIVILEGES ON *.* TO 'dba'@'10.68.68.%' WITH GRANT OPTION;
FLUSH PRIVILEGES;
```

13. Back up the configuration

```
tar czf /root/mysql-config-backup.tar.gz /etc/mysql
dpkg -l | grep mysql > /root/mysql-packages.txt
```

14. Common operating commands

```
systemctl start mysql
systemctl stop mysql
systemctl restart mysql
journalctl -u mysql -n 100 --no-pager
```

15. Final verification

```
systemctl is-active mysql
mysql --version
mysql -Nse "SELECT VERSION();"
mysql -Nse "SELECT @@datadir;"
mysql -Nse "SELECT @@performance_schema;"
ss -lntp | grep 3306
```

16. Common pitfalls

1. **Do not mix MariaDB and Oracle MySQL** — pick one
2. **Expired GPG key** — `RPM-GPG-KEY-mysql-2023` expired → use `RPM-GPG-KEY-mysql-2025`
3. `software-properties-common` **missing** — Ubuntu-specific, not available on Debian 13
4. **Wrong APT source** — use `trixie`, not `bookworm`
5. **Editing** `mysqld.cnf` **directly** — prefer a `zz-*.cnf` file in `/etc/mysql/mysql.conf.d/`
6. **Moving the datadir without stopping MySQL** — always stop the service first

7. **Exposing 3306 without filtering** — restrict hosts, filter at firewall level

Compact procedure

```
apt-get update && apt-get -y upgrade
apt-get install -y wget gnupg ca-certificates curl sudo

mkdir -p /etc/apt/keyrings
wget -O /etc/apt/keyrings/mysql.gpg https://repo.mysql.com/RPM-GPG-KEY-mysql-2025

cat >/etc/apt/sources.list.d/mysql.list <<'EOF'
deb [signed-by=/etc/apt/keyrings/mysql.gpg] http://repo.mysql.com/apt/debian/ trixie mysql-8.4-lts mysql-tools
EOF

apt-get update
DEBIAN_FRONTEND=noninteractive apt-get install -y mysql-server
systemctl enable --now mysql

mysql -e "DELETE FROM mysql.user WHERE User=''; DROP DATABASE IF EXISTS test; DELETE FROM mysql.db WHERE Db='test' OR Db='test\\_%'; FLUSH PRIVILEGES;"
```

Tested installation results

Installation performed on April 13, 2026 on Proxmox VM:

- **VM**: VMID 115, `mysql84-deb13`, IP `10.68.68.190`
- **OS**: Debian 13.4 (trixie), kernel 6.12.74
- **MySQL**: 8.4.8 (MySQL Community Server - GPL)
- **Service**: active, enabled at boot
- **Config**: bind 0.0.0.0, skip_name_resolve ON, innodb_buffer_pool_size 1G, max_connections 200
- **performance_schema**: active
- **Port 3306**: listening on 0.0.0.0

Conclusion

On Debian 13, the proper method for installing MySQL 8.4 is to use the Oracle MySQL APT repository.

Corrections compared to initial documentation:

- **GPG key**: `RPM-GPG-KEY-mysql-2023` expired → use `RPM-GPG-KEY-mysql-2025`
- **Prerequisites**: remove `software-properties-common` (not available on Debian 13)
- **Root connection**: with `DEBIAN_FRONTEND=noninteractive`, root connects via socket without password
- **performance_schema**: already active by default on MySQL 8.4.8

Official references

- MySQL 8.4 — APT Installation
- MySQL 8.4 — Oracle Debian Packages
- MySQL APT Repository
- APT trixie repository index