

Service file :-

- **What is Type=forking in systemd?**

It tells systemd:

"I (the program) will start myself, then go into the background. Wait until I'm fully ready before you say I'm running."

- **PostgreSQL works with Type=forking because:-**

You start it using `pg_ctl`, which knows how to wait for PostgreSQL to be ready.

It creates a PID file so systemd knows which process to track.

So systemd is happy and says: "Okay, the service is running."

- **MongoDB and MySQL usually don't work with Type=forking because:**

They don't tell systemd properly that they are ready.

They start in background, but the process systemd is watching exits too quickly.

So systemd gets confused and thinks the service stopped, even though it's actually running.

- **Then how should MongoDB and MySQL run?**

They should use:

Type=simple – systemd just starts the service and assumes it's running.

Or Type=notify – the service tells systemd when it's ready (used by MySQL).

- **✔And for MongoDB:**

In the config file, set:

```
processManagement:
  fork: false
```

Summary Table

Database	Works with Type=forking?	Why / Why not?
PostgreSQL	✔ Yes	<code>pg_ctl</code> waits and gives systemd the right info
MongoDB	✗ No	Forks early and confuses systemd

Database	Works with Type=forking?	Why / Why not?
MySQL	✗ No	Uses different method (notify) to signal ready

- **Service file for postgresql:-**

vi /etc/systemd/system/postgresql-16.service

[Unit]

Description=PostgreSQL Database Server

After=network.target

[Service]

Type=forking

User=postgres

ExecStart=/usr/lib/pgsql-16.8/bin/pg_ctl -D /data/pgdata start

ExecStop=/usr/lib/pgsql-16.8/bin/pg_ctl -D /data/pgdata stop

ExecReload=/usr/lib/pgsql-16.8/bin/pg_ctl -D /data/pgdata reload

TimeoutSec=-10

[Install]

WantedBy=multi-user.target

[Unit]

Description=PostgreSQL Database Server

After=network.target

[Service]

Type=forking

User=postgres

Group=postgres

ExecStart=/usr/lib/postgresql/14/bin/pg_ctl start -D

/pg_data/db/postgresql/14/main -o "-c

config_file=/etc/postgresql/14/main/postgresql.conf"

ExecStop=/usr/lib/postgresql/14/bin/pg_ctl stop -D

/pg_data/db/postgresql/14/main

ExecReload=/usr/lib/postgresql/14/bin/pg_ctl reload -D

/pg_data/db/postgresql/14/main

TimeoutSec=0

PIDFile=/pg_data/db/postgresql/14/main/postmaster.pid

Restart=always

RestartSec=5

[Install]
WantedBy=multi-user.target

- **Service file for mysql :-**

vi /etc/systemd/system/mysqld.service

[Unit]
Description=MySQL Server
After=network.target

[Service]
User=mysql
Group=mysql
Type=simple
ExecStart=/usr/bin/mysqld --defaults-file=/etc/mysql/my.cnf --
datadir=/var/lib/mysql --socket=/var/run/mysqld/mysqld.sock

[Install]
WantedBy=multi-user.target

- **Service file for mongodb:-**

vi /etc/systemd/system/mongod.service

[Unit]
Description=MongoDB Database Server
After=network.target

[Service]
User=mongo
ExecStart=/usr/local/mongodb/bin/mongod --config
/etc/mongodb_primary/mongodb.conf
Restart=always

[Install]
WantedBy=multi-user.target