

Postgres - Install on Redhat

9

To install the `pgvector`` extension** (the popular open-source vector similarity search extension for PostgreSQL, which provides the `vector`` data type and operators) on **Red Hat Enterprise Linux (RHEL) 9 with **PostgreSQL 16**, follow these steps.

`vector.control`` is the control file that comes bundled with the `pgvector`` extension — it's not a separate extension. The extension name is simply `vector``.

Recommended Method: Install via PGDG Repository (Easiest & Recommended)

The official PostgreSQL Yum Repository (PGDG) provides pre-built RPM packages for `pgvector`` on RHEL 9.

1. **Add the official PostgreSQL repository** (if not already added):

```
```bash
sudo dnf install -y https://download.postgresql.org/pub/repos/yum/reporpms/EL-9-x86_64/pgdg-redhat-repo-latest.noarch.rpm
```
```

2. **Disable the built-in RHEL PostgreSQL module** (to avoid conflicts):

```
```bash
sudo dnf -qy module disable postgresql
```
```

3. **Install PostgreSQL 16** (if not already installed):

```
```bash
sudo dnf install -y postgresql16-server postgresql16-devel
```
```

- Initialize the database (only if this is a fresh install):

```
```bash
sudo /usr/pgsql-16/bin/postgresql-16-setup initdb
sudo systemctl enable --now postgresql-16
```
```

4. **Install pgvector for PostgreSQL 16**:

```
```bash
sudo dnf install -y pgvector_16
```

```
```
```

This installs the extension files (including ``vector.control``, ``vector--*.sql``, and ``vector.so``) into the correct PostgreSQL 16 directories.

Alternative: Compile from Source (if you prefer or need a specific version)

If the RPM is not available or you want the latest development version:

1. Install dependencies:

```
```bash
sudo dnf install -y git make gcc postgresql16-devel
```
```

2. Clone and build:

```
```bash
cd /tmp
git clone --branch v0.8.1 https://github.com/pgvector/pgvector.git
cd pgvector
make
sudo make install
```
```

(Use the latest tag from <https://github.com/pgvector/pgvector/releases> instead of ``v0.8.1`` if desired.)

Enable the Extension in Your Database

1. Connect to your PostgreSQL 16 database (as superuser):

```
```bash
sudo -u postgres psql
```
```

Or connect to a specific database:

```
```bash
psql -U postgres -d your_database_name
```
```

2. Create the extension (run this in every database where you want to use vectors):

```
```sql
CREATE EXTENSION IF NOT EXISTS vector;
```
```

3. Verify it's installed:

```
```sql
\dx
```
```

You should see `vector` listed.

Or check the version:

```
```sql
SELECT vector_version();
```
```

Troubleshooting Tips

- If you get `could not load library "/usr/pgsql-16/lib/vector.so"`, verify the file exists and has correct permissions.
- If using a custom PostgreSQL install, ensure `pg\_config` points to the right version.
- For multiple PostgreSQL versions, always use the `\_16` suffix in package names (e.g., `pgvector\_16`).

This should get you up and running with vector support on PostgreSQL 16 on RHEL 9. Let me know if you run into any errors!

Revision #2

Created 23 January 2026 22:45:15 by Steve Ling

Updated 23 January 2026 22:46:06 by Steve Ling