

Installing PostgreSQL 9.6 on CentOS 7

Document author: arho.virkki@tyks.fi

Download the latest PostgreSQL YUM repository package from

```
https://yum.postgresql.org/
```

Adapt the following line to point to the latest release:

```
sudo rpm -Uvh
    https://download.postgresql.org/pub/repos/yum/9.6/redhat/rhel-7-x86_64/pgdg-centos96-9.6-3.noarch.rpm
sudo yum update
```

Install postgresql

```
sudo yum install postgresql96 postgresql96-server postgresql96-contrib \
postgresql96-devel postgresql96-libs
```

Initialize the database

```
sudo /usr/pgsql-9.6/bin/postgresql96-setup initdb
```

Start the service and turn it on also after reboot (see `sudo chkconfig --list` for all services)

```
sudo systemctl enable postgresql-9.6
sudo systemctl start postgresql-9.6
```

Try how the database works (postgres user can connect to the db using psql)

```
sudo su - postgres
psql
```

To install PostgreSQL Adminpack, enter the command in postgresql prompt:

```
CREATE EXTENSION adminpack;
```

Configure PostgreSQL-MD5 Authentication

By default, Posgresql uses ident authentication, so that the local system users can be granted access to databases own by them. If you want to set MD5 authentication to require users to enter passwords.

Open host-based authentication file:

```
sudo vim /var/lib/pgsql/9.6/data/pg_hba.conf
```

Add the following lines to the end of the file

```
# Connections from vssh
host    all             all             10.150.0.0/16      md5
host    all             all             10.145.0.0/16      md5
```

Then, edit the file PostgreSQL conf file:

```
sudo vim /var/lib/pgsql/9.6/data/postgresql.conf
```

Change the line:

```
#listen_addresses = 'localhost'
#port = 5432
```

to

```
listen_addresses = '*'
port = 5432
```

and also change the line:

```
#password_encryption = on
```

to

```
password_encryption = on
```

Now, restart postgresql service to apply the changes:

```
sudo systemctl restart postgresql-9.6
```

Moving PostgreSQL installation directory

Since CentOS systemctl script contain hard-coded paths to */var/lib/pgsql*, it is easiest to move the whole directy and create a symbolic link to point to the new location.

```
sudo systemctl stop postgresql-9.6

sudo mv /var/lib/pgsql /srv/
ln -s /srv/pgsql /var/lib/pgsql

sudo systemctl start postgresql-9.6
```

Adjust PostgreSQL configuration parameters

Check the PostgreSQL settings with

```
SHOW all;
SHOW effective_cache_size ;
```

Read about the recommended values (set in *postgresql.conf*) from <https://www.postgresql.org/docs/9.6/static/runtime-config-resource.html>

```
sudo vim /var/lib/pgsql/9.6/data/postgresql.conf
```

```
shared_buffers = 8192MB
temp_buffers   = 32MB
maintenance_work_mem = 1024MB
```