Postgres installation types:

* Follow below link to install virtual box and linux installation.

<https://databaseinternalmechanism.com/2017/01/02/installing-oracle-linux-6-on-virtualbox-vm/>

Or

<https://oracle-base.com/articles/linux/oracle-linux-6-installation>

**Postgresql Installation Types On Linux:**

**1. Source code/Configuration Installation**

**2. YUM/Packages installation**

**3. RPM instalation**

**4. GUI Instalation(Windows only)**

**1. PostgreSQL 11 Source code Installation.**

**Pre-requisites:**

**===========**

* #make –version
* #rpm-qa gcc
* #rpm –qa readline
* #rpm –qa zlib

1. **Make sure the GNU make** version 3.80.(#make –version)

* Make version should be 3.80 or above

1. **A GNU C compiler(GCC).** Recent versions of GCC are recommended.

* Verify weather gcc installed or not(#rpm-qa gcc)

1. **GNU Readline library-:**

* It allows psql (the PostgreSQL command line SQL interpreter) to remember each command you type, and allows you to use arrow keys to recall and edit previous commands. This is very helpful and is strongly recommended.
* If you don’t want to use it then you must specify the --without-readline option to configure
* Verify weather readline installed or not(#rpm –qa readline)

1. **The zlib compression library:-**

* zlib is a software library used for data compression
* If you don’t want to use it then you must specify the --without-zlib option to configure.
* Verify weather zlib installed or not(#rpm -qa zlib)

How to install PostgreSQL server

**Step 1: Download the source code**.

* Download PostgreSQL 11binaries from the official PostgreSQL from the source code.

**Step 2: Extract the tar archive**

* #gunzip postgresql-9.6.8.tar.gz
* #tar xvf postgresql-9.6.8.tar
* This will create a directory called **postgresql-9.6.8** containing the PostgreSQL source code.
* Go to the directory and open the file INSTALL which gives you insights on how to install postgresql in Linux.

Short Version

./configure

make

su

make install

adduser postgres

mkdir /usr/local/pgsql/data

chown postgres /usr/local/pgsql/data

su - postgres

/usr/local/pgsql/bin/initdb -D /usr/local/pgsql/data

/usr/local/pgsql/bin/postgres -D /usr/local/pgsql/data >logfile 2>&1 &

/usr/local/pgsql/bin/createdb test

/usr/local/pgsql/bin/psql test

* **Configure:**
* Configure check your system to see if all libraries you need are present.
* All files will be installed under /usr/local/pgsql by default.
* You can customize the build and installation process by supplying below command.

./configure --prefix=***PREFIX***

#where PREFIX=fullpath where binaries will be installed.

For more customization follow below link.

<https://www.postgresql.org/docs/9.6/install-procedure.html>

**make: it will make read tosystem.**

**make install :it will installpostgresql**

groupadd oinstall

groupadd dba

useradd -n -g oinstall -G dba postgres

passwd postgres

**Step2:Create required DATA directory for database files and assign required permissions.**

#mkdir /u01/pgsql/data

#chown postgres:oinstall /u01/pgsql/data

#chmod –R /u01/pgsql/data

**Step 3: initialize the database cluster**

create a new PostgreSQL database cluster using initdb command.

syntax: initdb [option…] [--pgdata | -D] directory

su – postgres

$/usr/local/pgsql/bin/initdb -D /u02/pgsql/data

**Step 4: Start the database cluster:**

/usr/local/pgsql/bin/pg\_ctl -D /u02/pgsql/data -l logfile start

Connecting to cluster:

1.psql

2.pgAdmin

Su – postgres

$psql

Configure postgres db into pgadmin which is running linux host

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**PostgreSQL** uses many types of client authentication methods including peer, ident, password, and md5 (read the PostgreSQL 12 documentation for a detailed explanation of each method).

**md5** is the most secure and recommended because it requires the client to supply a double-MD5-hashed password for authentication. So, ensure that the entries below have **md5** as the under method:

host all all 127.0.0.1/32 md5

# IPv6 local connections:

host all all ::1/128 md5

2.YUM installation:

**Step 1: Integrate PostgreSQL Yum Repository with your CentOS 7 or RHEL 7 system**

#yum install -y <https://download.postgresql.org/pub/repos/yum/12/redhat/rhel-7-x86_64/pgdg-redhat-repo-latest.noarch>

**If not working download and install manually.**

**root@machine3 ~]#** wget https://download.postgresql.org/pub/repos/yum/reporpms/EL-6-x86\_64/pgdg-redhat-repo-latest.noarch.rpm

**--2021-05-09 09:28:23-- https://download.postgresql.org/pub/repos/yum/reporpms/EL-6-x86\_64/pgdg-redhat-repo-latest.noarch.rpm**

**Resolving download.postgresql.org... 2604:1380:2000:7501::69, 2001:4800:3e1:1::246, 2a02:c0:301:0:ffff::27, ...**

**Connecting to download.postgresql.org|2604:1380:2000:7501::69|:443... connected.**

**HTTP request sent, awaiting response... 200 OK**

**Length: 6636 (6.5K) [application/x-redhat-package-manager]**

**Saving to: “pgdg-redhat-repo-latest.noarch.rpm”**

**100%[==============================================================================================================================>] 6,636 --.-K/s in 0s**

**2021-05-09 09:28:24 (118 MB/s) - “pgdg-redhat-repo-latest.noarch.rpm” saved [6636/6636]**

**[root@machine3 ~]# ls -lt**

**total 140**

**drwxr-xr-x. 2 root root 4096 May 8 08:25 Desktop**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Documents**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Downloads**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Music**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Pictures**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Public**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Templates**

**drwxr-xr-x. 2 root root 4096 May 8 08:24 Videos**

**-rw-------. 1 root root 2577 May 8 08:02 anaconda-ks.cfg**

**-rw-r--r--. 1 root root 77393 May 8 08:02 install.log**

**-rw-r--r--. 1 root root 12503 May 8 07:54 install.log.syslog**

**-rw-r--r--. 1 root root 6636 May 1 2020 pgdg-redhat-repo-latest.noarch.rpm**

**Installl rpm:**

**[root@machine3 ~]# rpm -ivh pgdg-redhat-repo-latest.noarch.rpm**

**warning: pgdg-redhat-repo-latest.noarch.rpm: Header V4 DSA/SHA1 Signature, key ID 442df0f8: NOKEY**

**Preparing... ########################################### [100%]**

**1:pgdg-redhat-repo ########################################### [100%]**

**Step 2: Follow the below steps.**

# Install PostgreSQL:

sudo yum install -y postgresql12-server

# Optionally initialize the database and enable automatic start:

sudo service postgresql-12 initdb

sudo chkconfig postgresql-12 on

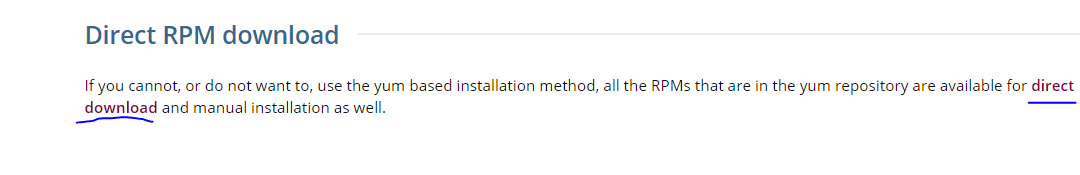
sudo service postgresql-12 start

**3. RPM installation:**

**============**

**Step1:Download & install belowrpm’s.**

* **Go to postgresql.org site**🡪**Packages**🡪**Choose O/S**🡪**direct RPM download(u can see bottom)**

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**Or**

**use the below link to download rpms for postgres installation.**

<https://yum.postgresql.org/rpmchart/>

* **You need to install the rpm following sequence: Sequence would be following**

**1.postgresql10-libs - The shared libraries required for any PostgreSQL clients  
2.postgresql10 - PostgreSQL client programs and libraries**

**3.postgresql10-server - The programs needed to create and run a PostgreSQL server  
4.postgresql10-contrib - Contributed source and binaries distributed with PostgreSQL**

**Examples: For client installation:**

postgresql12-12.6-2PGDG.rhel6

postgresql12-libs-12.6-2PGDG.rhel6

For server installation: postgresql12-server-12.6-2PGDG.rhel6

For contrib. modules: postgresql12-contrib-12.6-2PGDG.rhel6

**Download the rpms u sing wget command;**

#wget <https://yum.postgresql.org/12/redhat/rhel-6-i386/postgresql12-12.6-2PGDG.rhel6.i686.rpm>

#wget <https://yum.postgresql.org/12/redhat/rhel-6-i386/postgresql12-libs-12.6-2PGDG.rhel6.i686.rpm>

#wget <https://yum.postgresql.org/12/redhat/rhel-6-i386/postgresql12-server-12.6-2PGDG.rhel6.i686.rpm>

#wget <https://yum.postgresql.org/12/redhat/rhel-6-i386/postgresql12-contrib-12.6-2PGDG.rhel6.i686.rpm>

Step1: Install the rpm’s: Client installation:

=============================

**#rpm –ivh postgresql12-12.6-2PGDG.rhel6.i686.rpm**

**#rpm –ivh postgresql12-libs-12.6-2PGDG.rhel6.i686.rpm**

Step2: Install rpm’s for server Installation:-

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**#rpm –ivh postgresql12-server-12.6-2PGDG.rhel6.i686.rpm**

For contrib. modules:

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**#rpm –ivh postgresql12-contrib-12.6-2PGDG.rhel6.i686.rpm**

Step3: Initialize the server

#**sudo service postgresql-12 initdb**

**Step4: start the postgres services:**

**#sudo service postgresql-12 start**

**/usr/pgsql-12/bin/pg\_ctl -D /var/lib/pgsql/12/data/ start**

**Un-installation for postgresql:**

Check weather postgresinstalled or not?

[root@machine1 ~]# yum list installed |grep postgresql

postgresql12.x86\_64 12.6-2PGDG.rhel6 installed

postgresql12-contrib.x86\_64 12.6-2PGDG.rhel6 installed

postgresql12-libs.x86\_64 12.6-2PGDG.rhel6 installed

postgresql12-server.x86\_64 12.6-2PGDG.rhel6 installed

#**/usr/pgsql-12/bin/pg\_ctl -D /var/lib/pgsql/12/data/ stop.**

**Step1: remove server:**

**[root@machine1 ~]# yum remove postgresql12-server**

**Removed:**

**postgresql12-server.x86\_64 0:12.6-2PGDG.rhel6**

**Dependency Removed:**

**postgresql12-contrib.x86\_64 0:12.6-2PGDG.rhel6**

step2:check installed components:

root@machine1 ~]# yum list installed |grep postgresql

postgresql12.x86\_64 12.6-2PGDG.rhel6 installed

postgresql12-libs.x86\_64 12.6-2PGDG.rhel6 installed

step3: remove client s/w

[root@machine1 ~]# yum remove postgresql12-libs

Removed:

postgresql12-libs.x86\_64 0:12.6-2PGDG.rhel6

Dependency Removed:

postgresql12.x86\_64 0:12.6-2PGDG.rhel6