**Migration tool Installation**

**How to login to centos – ssh** [**user@10.0.7.19**](mailto:user@10.0.7.19)

**Password – Quadrant@123**

**Postgres Installation-**

**Step 1**- Adding of postgresql Yum Repository to centos7/8-

Centos 8 - sudo yum -y install <https://download.postgresql.org/pub/repos/yum/reporpms/EL-8-x86_64/pgdg-redhat-repo-latest.noarch.rpm>

Centos 7 - sudo yum -y install <https://download.postgresql.org/pub/repos/yum/reporpms/EL-7-x86_64/pgdg-redhat-repo-latest.noarch.rpm>

Yum Repository will integrate with normal system and patch management, and provide automatic updates for all supported versions of PostgreSQL throughout the support lifetime of PostgreSQL.

**Step 2** – Install PostgreSQL 12

Note – If some already Postgresql module is available then we need to disable that by running command

**sudo dnf -qy module disable postgresql**

Then install both server and client –

Centos 8 -

**sudo dnf -y install postgresql12 postgresql12-server**

Centos 7-

**sudo yum -y install epel-release yum-utils**

**sudo yum-config-manager --enable pgdg12**

**sudo yum install postgresql12-server postgresql12**

**Step 3 –**

We need to initialize and start database service.

**sudo /usr/pgsql-12/bin/postgresql-12-setup initdb**

And then enable the database server service –

**sudo systemctl enable --now postgresql-12**

**Step 4** – Set PostgreSQL 12 admin user’s password

First login as a postgres user –

**sudo su – postgres**

Then change the password –

**psql -c "alter user postgres with password 'StrongPassword'**"

Here gives your password in place of ‘StrongPassword’

**How to install oracle client –**

Link - https://qiita.com/tkprof/items/2a4eb868f45fb5759110

Update yum repository

* cd /etc/yum.repos.d
* wget <http://yum.oracle.com/public-yum-ol7.repo>

Import GPG key –

* get <http://yum.oracle.com/RPM-GPG-KEY-oracle-ol7>
* rpm --import RPM-GPG-KEY-oracle-ol7

Enable oracle instant client repository

* yum install -y yum-utils
* yum-config-manager --enable ol7\_oracle\_instantclient

Then run the following command –

* yum install oracle-instantclient18.3-basic
* yum install oracle-instantclient18.3-devel
* yum install oracle-instantclient18.3-jdbc
* yum install oracle-instantclient18.3-sqlplus

After client installation is done set the environment path variable for oracle and postgres-

Run the command - **nano ~/.bash\_profile**

And then give the path –

export ORACLE\_HOME=/usr/lib/oracle/18.3/client64

export LD\_LIBRARY\_PATH=$ORACLE\_HOME/lib

export PATH=$PATH:$ORACLE\_HOME/bin:/usr/pgsql-12/bin/

After giving this save and come out and then run – “**source ~/.bash\_profile**”

**----------------------------------------------------------------------------------------------------------**

**How to install oracle\_fdw in Centos**

Link - https://github.com/laurenz/oracle\_fdw

First clone the code from GitHub by running the command –

**git clone** [**https://github.com/laurenz/oracle\_fdw.git**](https://github.com/laurenz/oracle_fdw.git)

After running the command, code file will be downloaded in folder oracle\_fdw. After that go inside the folder which is created and run – “make” and the “make install”

**---------------------------------------------------------------------------**

**Note** – If it gave error as **- -bash: make: command not found**

Then run the command – “**sudo yum install make**”

-----------------------------------------------------------------

After installing make and running it **I got an error** –

**Makefile:23: /usr/pgsql-12/lib/pgxs/src/makefiles/pgxs.mk: No such file or directory**

**make: \*\*\* No rule to make target '/usr/pgsql-12/lib/pgxs/src/makefiles/pgxs.mk'. Stop**

So resolve this error I ran command –

**sudo yum install postgresql12-devel**

After this again when I ran “make install” command again **I got an error** –

**gcc: error: /usr/lib/rpm/redhat/redhat-hardened-cc1: No such file or directory**

**make: \*\*\* [<builtin>: oracle\_fdw.o] Error 1**

To resolve this error, I ran –

**sudo dnf install redhat-rpm-config**

Now we are running - CREATE EXTENSION oracle\_fdw;

In this I got an error –

**ERROR: could not load library "/usr/pgsql-12/lib/oracle\_fdw.so": libclntsh.so.18.1: cannot open shared object file: No such file or directory**

For this check one time is this command giving proper result or not –

**sqlplus -v**

If it is giving some error, then run the command –

**sudo dnf install libnsl**

Then what we need to do is we need to create file named as **postgresql-12.service.**

**Note –** Here we are having postgres 12 version that’s why we are creating file with name **postgresql-12.service.** If we are having version 13 or 13.2 then file name will be **postgresql-13.service**

File path where we need to create postgresql-12.service file is - **/etc/systemd/system/**

In above given path we need to create the file and add the content –

**.include /usr/lib/systemd/system/postgresql-12.service**

**[Service]**

**Environment=LD\_LIBRARY\_PATH=/usr/lib/oracle/18.3/client64/lib**

Note – Please take care of the oracle version which you are using and provide that version.

After saving the file run the command - **systemctl daemon-reload**

And then restart the postgres by running the command - **systemctl restart postgresql-12**

Reference link - <https://github.com/laurenz/oracle_fdw/issues/415>

Now login to psql and run the command - **CREATE EXTENSION oracle\_fdw;**

--------------------------------------------------------------------------------------------------------

**How to install db\_migrator**

Link - https://github.com/cybertec-postgresql/db\_migrator

Run the command –

**git clone** [**https://github.com/cybertec-postgresql/db\_migrator.git**](https://github.com/cybertec-postgresql/db_migrator.git)

After cloning go inside the folder which is created and run make install

Then run the command - **CREATE EXTENSION db\_migrator;**

Note – If you get some error then please follow the steps mentioned in oracle\_fdw if error matches.

------------------------------------------------------------------------------------------------------------------------------

**How to install ora\_migrator**

Link - https://github.com/cybertec-postgresql/ora\_migrator

Run the command-

**get clone** <https://github.com/cybertec-postgresql/ora_migrator.git>

After running the command, I got an error –

**make: pg\_config: Command not found**

**make: \*\*\* No rule to make target 'install'. Stop.**

To resolve this error –

**yum install postgresql-devel**

After this again try to run – make install

I again got an error –

**Makefile:8: /usr/lib64/pgsql/pgxs/src/makefiles/pgxs.mk: No such file or directory**

**make: \*\*\* No rule to make target '/usr/lib64/pgsql/pgxs/src/makefiles/pgxs.mk'. Stop.**

Reason for this error is that basically you are having two PostgreSQL version installed in the linux. So, what we need to do is inside ora\_migrator folder there will be one file named as “Makefile”. In this Makefile we need to give the path of pg\_config.

**So, go inside ora\_migrator folder and then run – “nano Makefile”, and then change the PG\_CONFIG path** –

Text

Description automatically generated

**Note** – Check the postgres version which you want to use and give the path for pg\_config

After this save and exit and then run “make install”. After this it worked for me.

---------------------------------------------------------------------------------------------------------------------------

**How to install ora2pg**

**Note** – PostgreSQL and oracle client should already be installed if it is not installed then first install and go to next steps.

**Download and install perl on the server** –

* yum install perl-DBD-Pg perl perl-devel  perl-DBI  perl-CPAN

**Install ora2pg by running the command** –

* git clone <https://github.com/darold/ora2pg.git>

Check for the latest code - <https://github.com/darold/ora2pg>

N**ow after downloading the file go inside the ora2pg folder and then run** –

* perl Makefile.PL
* make && make install

**Now install DBD: :Oracle**

Here first set the oracle home path and library path in **nano ~/.bash\_profile** and then run the step –

* perl -MCPAN -e shell
* cpan> get DBD::Oracle
* cpan> quit
* cd ~/.cpan/build/DBD-Oracle\*
* perl Makefile.PL
* make
* make install

**Create the default configuration file**-

* cp /etc/ora2pg/ora2pg.conf\* /etc/ora2pg/ora2pg.conf

**Now if you want to grant privileges to the non-root user then** –

* chown oracle:oinstall /etc/ora2pg/ora2pg.conf

Here oinstall is the non-root username.

**Link for reference** - <https://dbvisit.atlassian.net/wiki/spaces/ugd9/pages/333414402/Data+Instantiation+for+PostgreSQL+step-by-step+guide>

Github link - <https://github.com/darold/ora2pg>

Other site link - <https://info.crunchydata.com/blog/setup-ora2pg-for-oracle-to-postgres-migration>

-----------------------------------------------------------------------------------------------------------------------------------

Error while running ora2pg –

After installing when I tested ora2pg if its working or not, I got an issue –

Command which I ran –

**ora2pg -c ora2pg.conf -n OT -N OT -t VIEW -o Ot\_views.sql -b /etc/ora2pg/views**

Error I got –

**Can't locate open.pm in @INC (you may need to install the open module) (@INC contains: /usr/local/lib64/perl5 /usr/local/share/perl5 /usr/lib64/perl5/vendor\_perl /usr/share/perl5/vendor\_perl /usr/lib64/perl5 /usr/share/perl5) at /usr/local/share/perl5/Ora2Pg.pm line 1827.**

**BEGIN failed--compilation aborted at /usr/local/share/perl5/Ora2Pg.pm line 1827.**

**Compilation failed in require at /usr/local/bin/ora2pg line 27.**

**BEGIN failed--compilation aborted at /usr/local/bin/ora2pg line 27.**

To resolve this issue, I ran –

**dnf install perl-open.noarch**