

源码安装PostgreSQL-11.2

2019年8月24日 23:29

环境信息:

主机名称	系统类型	IP地址
master	Centos7	10.1.2.101

命令精简版:

安装

```
curl -O https://ftp.postgresql.org/pub/source/v11.2/postgresql-11.2.tar.gz
yum install -y readline-devel gcc zlib-devel
tar zxvf postgresql-11.2.tar.gz
cd postgresql-11.2
./configure
make
make install
groupadd postgres
useradd -g postgres postgres
passwd postgres
chown -R postgres:postgres /usr/local/pgsql/
mkdir -p /data/pg_data
chown -R postgres:postgres /data/pg_data/
```

服务化

```
vim /usr/lib/systemd/system/postgresql.service
[Unit]
Description=PostgreSQL 11 database server
Documentation=https://www.postgresql.org/docs/11/static/
After=syslog.target
After=network.target

[Service]
Type=notify
User=postgres
Group=postgres
Environment=PGDATA=/data/pg_data
OOMScoreAdjust=-1000
Environment=PG_OOM_ADJUST_FILE=/proc/self/oom_score_adj
Environment=PG_OOM_ADJUST_VALUE=0
ExecStart=/usr/local/pgsql/bin/postgres -D ${PGDATA}
ExecReload=/bin/kill -HUP $MAINPID
KillMode=mixed
KillSignal=SIGINT
TimeoutSec=0

[Install]
WantedBy=multi-user.target
```

防火墙

```
firewall-cmd --zone=public --add-port=5432/tcp --permanent
firewall-cmd --reload
```

sudo权限

```
chmod u+w /etc/sudoers
vim /etc/sudoers
postgres ALL=(ALL) ALL
chmod u-w /etc/sudoers
```

启动数据库

```
su - postgres
vi ~/.bash_profile
export PG_HOME=/usr/local/pgsql
export PGDATA=/data/pg_data
export PATH=${PG_HOME}/bin:$PATH
export PGPORT=5432
export PGUSER=postgres
export PGDATABASE=postgres
source ~/.bash_profile
${PG_HOME}/bin/initdb -D ${PGDATA} -E utf8
vim /data/pg_data/postgresql.conf
listen_addresses = '*' # what IP address(es) to listen on;
vim /data/pg_data/pg_hba.conf
host all all 0.0.0.0/0 md5
sudo service postgresql start
```

新开ssh窗口

```
su - postgres
psql
ALTER USER postgres WITH encrypted PASSWORD 'postgres';
\q
```

具体安装过程:

下载postgresql-11.2(linux不能上网的话,下载了上传到linux里面)

```
[root@master ~]# curl -O https://ftp.postgresql.org/pub/source/v11.2/postgresql-11.2.tar.gz
```

前置条件

```
[root@master ~]# yum install -y readline-devel gcc zlib-devel
```

```
[root@master ~]# tar zxvf postgresql-11.2.tar.gz
```

```
postgresql-11.2/Makefile
postgresql-11.2/README
postgresql-11.2/COPYRIGHT
postgresql-11.2/GNUMakefile.in
postgresql-11.2/.gitattributes
postgresql-11.2/aclocal.m4
postgresql-11.2/configure.in
postgresql-11.2/INSTALL
```

```
[root@master ~]# cd postgresql-11.2
```

```
[root@master postgresql-11.2]# ./configure # checking for DocBook XML V4.2...(这步会久点,耐心等待)
```

```
config.status: linking src/backend/port/posix_sema.c to src/backend/port/pg_sema.c
config.status: linking src/backend/port/sysv_shmem.c to src/backend/port/pg_shmem.c
config.status: linking src/backend/port/dynloader/linux.h to src/include/dynloader.h
config.status: linking src/include/port/linux.h to src/include/pg_config_os.h
config.status: linking src/makefiles/Makefile.linux to src/Makefile.port
```

```
[root@master postgresql-11.2]# make
```

```
make[1]: Entering directory '/root/postgresql-11.2/config'
make[1]: Nothing to be done for 'all'.
make[1]: Leaving directory '/root/postgresql-11.2/config'
All of PostgreSQL successfully made. Ready to install.
```

```
[root@master postgresql-11.2]# make install
```

```
/usr/bin/mkdir -p '/usr/local/pgsql/lib/pgxs/config'
/usr/bin/install -c -m 755 ./install-sh '/usr/local/pgsql/lib/pgxs/config/install-sh'
/usr/bin/install -c -m 755 ./missing '/usr/local/pgsql/lib/pgxs/config/missing'
make[1]: Leaving directory '/root/postgresql-11.2/config'
PostgreSQL installation complete.
```

PostgreSQL不允许管理员方式运行,需要创建一个用户,我们创建一个叫postgres的用户,并将需要的文件夹赋权给该用户

后续所有的操作都是用这个用户来进行操作

```
[root@master home]# groupadd postgres
[root@master home]# useradd -g postgres postgres
[root@master home]# passwd postgres
[root@master postgres]# chown -R postgres:postgres /usr/local/pgsql/
```

创建data文件夹,并赋权

```
[root@master postgres]# mkdir -p /data/pg_data
[root@master postgres]# chown -R postgres:postgres /data/pg_data/
```

创建系统启动命令

```
[root@master postgres]# vim /usr/lib/systemd/system/postgresql.service
[Unit]
Description=PostgreSQL 11 database server
Documentation=https://www.postgresql.org/docs/11/static/
After=syslog.target
After=network.target
```

```
[Service]
Type=notify
User=postgres
Group=postgres
Environment=PGDATA=/data/pg_data
OOMScoreAdjust=-1000
Environment=PG_OOM_ADJUST_FILE=/proc/self/oom_score_adj
Environment=PG_OOM_ADJUST_VALUE=0
ExecStart=/usr/local/pgsql/bin/postgres -D ${PGDATA}
ExecReload=/bin/kill -HUP $MAINPID
KillMode=mixed
KillSignal=SIGINT
TimeoutSec=0
```

```
[Install]
WantedBy=multi-user.target
```

开通防火墙

```
[root@master ~]# firewall-cmd --zone=public --add-port=5432/tcp --permanent
[root@master ~]# firewall-cmd --reload
```

允许postgres用户使用sudo命令

```
[root@master postgres]# chmod u+w /etc/sudoers
[root@master postgres]# vim /etc/sudoers
postgres ALL=(ALL) ALL
```

```
##
## Allow root to run any commands anywhere
root    ALL=(ALL)        ALL
postgres ALL=(ALL)        ALL
[root@master postgres]# chmod u-w /etc/sudoers
```

添加环境变量, 在文件末尾

```
[root@master home]# su - postgres
[postgres@master ~]$ vi ~/.bash_profile
export PG_HOME=/usr/local/pgsql
export PGDATA=/data/pg_data
export PATH=${PG_HOME}/bin:$PATH
export PGPORT=5432
export PGUSER=postgres
export PGDATABASE=postgres
[postgres@master ~]$ source ~/.bash_profile
```

初始化数据库

```
[postgres@master ~]$ ${PG_HOME}/bin/initdb -D ${PGDATA} -E utf8
WARNING: enabling "trust" authentication for local connections
You can change this by editing pg_hba.conf or using the option -A, or
--auth-local and --auth-host, the next time you run initdb.

Success. You can now start the database server using:

/usr/local/pgsql/bin/pg_ctl -D /data/pg_data -l logfile start
```

允许远程连接postgresql.conf 文件中修改配置, pg_hba.conf添加一条配置

```
[postgres@master postgres]$ vim /data/pg_data/postgresql.conf
listen_addresses = '*' # what IP address(es) to listen on;
# - Connection Settings -
listen_addresses = '0.0.0.0' # what IP address(es) to listen on;
[postgres@master postgres]$ vim /data/pg_data/pg_hba.conf
host all all 0.0.0.0/0 md5
host all all 0.0.0.0/0 md5
```

启动服务

```
[postgres@master ~]$ sudo service postgresql start
```

新建连接, 设置连接密码

```
[root@master ~]# su - postgres
[postgres@master ~]$ psql
postgres=# ALTER USER postgres WITH encrypted PASSWORD 'postgres';
postgres=# \q
```