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
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

预置条件
[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 pgsql]$ vim /data/pg_data/postgresql.conf
     listen_addresses = '*'   # what IP address(es) to listen on;

```
# - Connection Settings -

listen_addresses = '*'              # what IP address(es) to listen on;
```

[postgres@master pgsql]$ 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