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patroni

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# Patroni

## 1

patroni                      patroni                      zookeeper

patroni    postgresql

patroni	patroni-1.4.3
zookeeper	zookeeper-3.3.6
postgresql	postgresql-10.1

Python,pip

Python	Python 2.7.5
pip	pip 9.0.1 (python 2.7)

IP		
198.168.191.140	test2	CentOS Linux release 7.4.1708 (Core)
198.168.191.143	test3	CentOS Linux release 7.4.1708 (Core)
198.168.191.142	test1	CentOS Linux release 7.4.1708 (Core)

patroni

: <https://pan.baidu.com/s/1nKT5nb180WIEDufj3pKS5Q>

: wsl

## 2

**2.1       openssl-devel   python-devel   libnl   jq**

**libnfnetlink-devel   haproxy   watchdog   root**

```

:
tar -xvf package.tar.gz
cd ./package/package

        openssl-devel python-devel libnl jq libnftnl-devel watchdog
yum      6      :
yum install ./*
```

## 2.2 Python2.7 root

test3 test1

patroni python2.7

python :

```
python --version
```

centos7.4 python 2.7.5

python2.7.1

```
Python-2.7.1 : https://www.python.org/ftp/python/2.7.1/Python-2.7.1.tar.bz2
```

2.7.1 2.6.6

:

```
tar -jxvf Python-2.7.1.tar.bz2
```

```
cd Python-2.7.1
```

```
./configure
make all
make install
make clean
make distclean
```

:

```
/usr/local/bin/python2.7 -V
```

python python2.7

```
mv /usr/bin/python /usr/bin/python2.6.6
ln -s /usr/local/bin/python2.7 /usr/bin/python
```

Python

```
python -V
```

	Python	Python2.7	yum	Python 2.7
yum		yum	Python	

```
vi /usr/bin/yum

#!/usr/bin/python

#!/usr/bin/python2.6.6
&
```

## 2.3 pip root

test3,test1

```
setuptools
cd /home/postgres/package/setuptools
python ./setup.py install

pip
cd /home/postgres/package/pip
chmod +x setup.py
python ./setup.py install
pip --version
pip 9.0.1 from /usr/lib/python2.7/site-packages/pip-9.0.1-py2.7.egg
(python 2.7)
```

## 2.4 root

```
useradd postgres
passwd postgres
```

## 2.5

```
mkdir -p /home/postgres/logfile/
mkdir -p /home/postgres/etcd
```

# 3 zookeeper

## 3.1 root

```
tar -xzf zookeeper-3.3.6.tar.gz
```

3.2 root

ZooKeeper

```
192.168.0.2 zookeeper-3.3.4.tar.gz conf
zoo_sample.cfg zoo.cfg conf/zoo.cfg
tickTime=2000
dataDir=/root/zookeeper
dataLogDir=/home/postgres/logfile
clientPort=2181
initLimit=5
syncLimit=2
server.1=192.168.0.2:2888:3888
server.2=192.168.0.3:2888:3888
server.3=192.168.0.4:2888:3888
initLimit Zookeeper
Zookeeper Zookeeper Leader
Follower 10
tickTime Zookeeper
5*2000=10
syncLimit Leader Follower
tickTime 2*2000=4
server.A=B C D A B
ip C Leader D
Leader Leader
B
Zookeeper
```

```
192.168.0.2 ZooKeeper
```

myid

```
dataDir myid
conf/zoo.cfg server.X X myid
```

ZooKeeper

```
bin ./zkServer.sh start
tailf zookeeper.out
ARN [WorkerSender Thread:QuorumCnxManager@384] - Cannot open channel to 2
at election address slave-02/192.168.0.178:3888
```

```

java.net.ConnectException: Connection refused
at sun.nio.ch.SocketChannelImpl.checkConnect(Native Method)
at
sun.nio.ch.SocketChannelImpl.finishConnect(SocketChannelImpl.java:567
)
at sun.nio.ch.SocketAdaptor.connect(SocketAdaptor.java:100)
at
org.apache.zookeeper.server.quorum.QuorumCnxManager.connectOne(Quorum
CnxManager.java:371)
at
org.apache.zookeeper.server.quorum.QuorumCnxManagerToSend(QuorumCnxM
anager.java:340)
at
org.apache.zookeeper.server.quorum.FastLeaderElection$Messenger$Worke
rSender.process(FastLeaderElection.java:360)
at
org.apache.zookeeper.server.quorum.FastLeaderElection$Messenger$Worke
rSender.run(FastLeaderElection.java:333)
at java.lang.Thread.run(Thread.java:662)
2012-01-08 06:51:19,420 - WARN [WorkerSender
Thread:QuorumCnxManager@384] - Cannot open channel to 3 at election address
slave-03/192.168.0.177:3888
java.net.ConnectException: Connection refused
at sun.nio.ch.SocketChannelImpl.checkConnect(Native Method)
at
sun.nio.ch.SocketChannelImpl.finishConnect(SocketChannelImpl.java:567
)
at sun.nio.ch.SocketAdaptor.connect(SocketAdaptor.java:100)
at
org.apache.zookeeper.server.quorum.QuorumCnxManager.connectOne(Quorum
CnxManager.java:371)
at
org.apache.zookeeper.server.quorum.QuorumCnxManagerToSend(QuorumCnxM
anager.java:340)
at
org.apache.zookeeper.server.quorum.FastLeaderElection$Messenger$Worke
rSender.process(FastLeaderElection.java:360)
at
org.apache.zookeeper.server.quorum.FastLeaderElection$Messenger$Worke
rSender.run(FastLeaderElection.java:333)
at java.lang.Thread.run(Thread.java:662)
    ZooKeeper

    Leader

```



```

      ZooKeeper
Follower      ZooKeeper      Leader
./bin/zkServer.sh status
      ZooKeeper
ensemble      ZooKeeper      ZooKeeper

./bin/zkCli.sh -server 192.168.0.2:2181

```

## 4 patroni

### 4.1 python root

test3,test1

```

cd /home/postgres/package/python_package
source /home/postgres/.bash_profile #source
pip install ./*

```

### 4.2 patroni

test3,test1

```

unzip patroni-1.4.3.zip

```

### 4.3 patroni

/home/postgres/patroni-1.4.3/postgres0.xml

/home/postgres/patroni-1.4.3/postgres1.xml

/home/postgres/patroni-1.4.3/postgres2.xml

:

```

scope: batman ##          Etc:/<namespace>/<scope>/config
#namespace: /service/ ##          Etc:/<namespace>/<scope>/config
name: postgresql0 ##patroni

restapi: ##haproxy          ,8008,8009,8010%
listen: 192.168.191.143:8008
connect_address: 192.168.191.143:8008
# certfile: /etc/ssl/certs/ssl-cert-snakeoil.pem
# keyfile: /etc/ssl/private/ssl-cert-snakeoil.key
# authentication:
# username: username

```

```

# password: password

etcd: ## etcd
  host: 192.168.191.143:2379

bootstrap:
  # this section will be written into Etcd: /<namespace>/<scope>/config
  # after initializing new cluster
  # and all other cluster members will use it as a `global configuration`
  dcs:
    ttl: 30 ## dcs leader key
    30 seconds
    loop_wait: 10 ## Patroni HA loop 10 seconds
    retry_timeout: 10 ## dcs leader key , Patroni
    10 seconds
    maximum_lag_on_failover: 1048576 ## HA loop,
wal_position dcs .
wal_position maximum_lag_on_failover
patroni 1048576bit
# master_start_timeout: 300 ## 300 seconds
# synchronous_mode: false ## false
postgresql:
  use_pg_rewind: true ##pg_rewind
# use_slots: true
  parameters: ##pg
# wal_level: hot_standby
# hot_standby: "on"
# wal_keep_segments: 8
# max_wal_senders: 5
# max_replication_slots: 5
# wal_log_hints: "on"
# archive_mode: "on" ##
# archive_timeout: 1800s ##

# archive_command: mkdir -p ../wal_archive && test ! -
# f ../wal_archive/%f && cp %p ../wal_archive/%f ##

# recovery_conf:
# restore_command: cp ../wal_archive/%f %p ##
recovery_conf

```

```

# some desired options for 'initdb'
initdb: # Note: It needs to be a list (some options need values, others
are switches) ##initdb
- encoding: UTF8
- data-checksums

pg_hba: # Add following lines to pg_hba.conf after running 'initdb'
## pg_hba
- host replication replicator 0.0.0.0/0 md5
- host all all 0.0.0.0/0 md5
# - hostssl all all 0.0.0.0/0 md5

# Additional script to be launched after initial cluster creation (will
be passed the connection URL as parameter)
# post_init: /usr/local/bin/setup_cluster.sh ##

# Some additional users users which needs to be created after initializing
new cluster
##
users:
  admin:
    password: admin
    options:
      - createrole
      - createdb

postgresql:
  listen: 0.0.0.0:5432 ##
  connect_address: 192.168.191.143:5432 ##      ip::
  data_dir: data/postgresql0 ##data      ,
# bin_dir:
pgpass: /tmp/pgpass0 ##pgpass
authentication: ##
  replication:
    username: replicator
    password: rep-pass
  superuser:
    username: postgres
    password: zalando
  parameters:
    unix_socket_directories: '.' ##      Unix      S

watchdog: ## watchdog

```

```

mode: automatic # Allowed values: off, automatic, required
device: /dev/watchdog
safety_margin: 5

tags:
  nofailover: false ##
  noloadbalance: false
  clonefrom: false
  nosync: false
  replicatefrom: postgres0 ##

```

test3      /home/postgres/patroni-1.4.2/postgres0.yml      test2

/home/postgres/patroni-1.4.2/postgres1.yml

:

test3      postgres0.yml

vi /home/postgres/patroni-1.4.2/postgres0.yml

postgres0.yml

```

restapi:
  listen: 192.168.191.143:8008
  connect_address: 192.168.191.143:8008
zookeeper: ##      etcd      zookeeper
  hosts: 192.168.1.140:2181,192.168.1.142:2181,192.168.1.143:2181
  parameters:
    wal_level: logical
pg_hba: # Add following lines to pg_hba.conf after running 'initdb'
- host replication replicator 127.0.0.1/32 md5
- host all all 0.0.0.0/0 trust
- host replication ruser 192.168.191.142/32 trust
- host replication ruser 192.168.191.143/32 trust
##
postgresql:
  listen: 0.0.0.0:5432
  connect_address: 192.168.191.143:5432
  data_dir: /home/postgres/pg10/data
  pgpass: /home/postgres/.pgpass
  username: ruser
  password: 23456
  superuser:
    username: postgres
    password: 23456

```

```
unix_socket_directories: '/tmp'
```

test2 postgres1.yml

```
vi /home/postgres/patroni-1.4.2/postgres0.yml
```

postgres1.yml

```
restapi:
  listen: 192.168.191.142:8009
  connect_address: 192.168.191.142:8009
zookeeper: ## etcd zookeeper
  hosts: 192.168.1.140:2181,192.168.1.142:2181,192.168.1.143:2181
  parameters:
    wal_level: logical
  pg_hba: # Add following lines to pg_hba.conf after running 'initdb'
    - host replication replicator 127.0.0.1/32 md5
    - host all all 0.0.0.0/0 trust
    - host replication ruser 192.168.191.142/32 trust
    - host replication ruser 192.168.191.143/32 trust
##
postgresql:
  listen: 0.0.0.0:5432
  connect_address: 192.168.191.142:5432
  data_dir: /home/postgres/pg10/data
  pgpass: /home/postgres/.pgpass
    username: ruser
    password: 23456
  superuser:
    username: postgres
    password: 23456
  unix_socket_directories: '/tmp'
```

## 5

Patroni

## 6

## 7

### 7.1

test3 test1

```
pg_ctl -D /home/postgres/pg10/data/ stop
```

## 7.2 pg\_hba

test3 test1 ,

pg_hba.conf		replication user		:
host	replication	ruser	192.168.191.142/32	trust
host	replication	ruser	192.168.191.143/32	trust

## 7.3

zookeeper → Patroni

## 7.4 pg\_hba

test3 test1

pg_hba.conf		replication user		:
host	replication	ruser	192.168.191.142/32	trust
host	replication	ruser	192.168.191.143/32	trust

## 7.5 zookeeper root

```
zookeeper      :  
/root/zookeeper-3.3.6/bin/start  
zookeeper      :  
/root/zookeeper-3.3.6/bin/status
```

## 7.6 Patroni

Patroni :

```
/home/postgres/patroni-1.4.3/patroni.py /home/postgres/patroni-  
1.4.3/postgresmq.yml
```

```
nohup /home/postgres/patroni-1.4.3/patroni.py  
/home/postgres/patroni-1.4.3/postgresmq.yml >  
/home/postgres/logfile/patroni_log 2>&1 &
```