# 软件清单

### 服务器地址

172.16.61.8

### 软件清单

|  |  |  |
| --- | --- | --- |
| 软件名称 | 版本信息 | 备注 |
| **OS** | CentOS7 |  |
|  | | |
| Docker | docker-engine-1.7.1 |  |
| Python | 3.6.4 | /usr/local/python3 |
| JDK | 1.8.0\_191 |  |
| Scala | scala-2.11.8 | /home/chijy/scala |
|  | | |
| Mqtt | emqttd-centos7-v2.3.5 | */home/chijy/emq* |
| Kafka | kafka\_2.12-1.1.0 | *Docker集群安装* |
| Spark | spark-2.2.0-bin-hadoop2.7 | */home/chijy/spark* |
| Redis | 3.2.9 | *应用目录：/usr/local/bin/redis-server*  *配置文件：/etc/redis/6377.conf* |
| Mysql | 5.7.25-1.el7 | *配置文件：/etc/my.cnf*  *data目录： /home/data/mysql* |
| InfluxDB | 1.2.0 | *配置文件：/etc/influxdb/influxdb.conf* |
| MongoDB | 4.0.8 |  |
| Neo4J | 3.4.5 |  |
| ElasticSearch | 6.2.4 |  |

### 环境变量【/etc/profile】

# [emq]

export EMQ\_HOME=/data01/apps/emqttd

export PATH=$EMQ\_HOME/bin:$PATH

#[kafka]

export KAFKA\_HOME=/data01/apps/kafka

export PATH=$KAFKA\_HOME/bin:$PATH

#[spark]

export SPARK\_HOME=/data01/apps/spark

export PATH=$SPARK\_HOME/bin:$PATH

#[scala]

export SCALA\_HOME=/data01/apps/scala

export PATH=$SCALA\_HOME/bin:$PATH

# [python]

export PATH=$PATH:/usr/local/bin

export PATH=$PATH:/usr/local/python3/bin

export PYTHONPATH=/data01/chijy:/data/chijy/src/new\_biop:

#[chijy]

export PATH=$PATH:/data01/chijy/bin:/usr/local/bin

# 系统软件部署

## Emq（2.3.5）

### 安装

#### 安装依赖

* *# 安装依赖包.*

yum -y install make gcc gcc-c++ kernel-devel m4 ncurses-devel openssl-devel

#### （centos7）下载/安装

* *下载、解压*

wget <http://emqtt.com/static/brokers/emqttd-centos7-v2.3.5.zip>

unzip emqttd-centos7-v2.3.5.zip

* *移入/home/chijy/目录下*

#### （centos6）下载/安装

* *# 下载、解压（注意是centos6）*

wget [http://emqtt.com/static/brokers/[emqttd-centos6.8-v2.3.11.zip](http://www.emqtt.com/downloads/2318/centos6)](http://emqtt.com/static/brokers/emqttd-centos6-v2.3.5.zip)

*# yum install -y unzip zip*

unzip [emqttd-centos6.8-v2.3.11.zip](http://www.emqtt.com/downloads/2318/centos6)

*# 移入/data01/apps/目录下*

*mv emqttd /data01/apps/*

#### 环境变量修改

* *修改 /etc/profile*

#[emq]

export EMQ\_HOME=/home/chijy/emq/emqttd

export PATH=$EMQ\_HOME/bin:$PATH

source /etc/profile

### 端口说明

#### 默认端口

| **端口** | **用途** |
| --- | --- |
| 1883 | MQTT协议端口 |
| 8883 | MQTT(SSL)端口 |
| 8083 | MQTT(WebSocket), HTTP API端口 |
| 18083 | Dashboard管理控制台端口 |

### 命令行

#### 启停命令

* 启动

emqttd start

* 状态检查

emqttd\_ctl status

netstat -nltp | grep beam

#### 管理界面

* 访问地址

http://172.16.22.182:18083

用户名和密码 admin  public

* 参考：https://www.jianshu.com/p/4132095d22b2

#### Ref

# CentOS 7 安装 mosquitto（转载）

<https://blog.csdn.net/qq_34301871/article/details/93617204>

#### python开发包

pip install paho-mqtt

## Kafka（2.11-2.0.x）

### 【Docker】安装

#### 参考

* *使用docker安装kafka.*

[*https://blog.csdn.net/lblblblblzdx/article/details/80548294*](https://blog.csdn.net/lblblblblzdx/article/details/80548294)

* *用 Docker 部署 Kafka*

[*https://www.cnblogs.com/alaska1131/articles/9755646.html*](https://www.cnblogs.com/alaska1131/articles/9755646.html)

* *# 其它*

*[Docker 安装kafka] https://blog.csdn.net/xcbeyond/article/details/82769818*

*[Docker快速搭建Kafka 1.x集群] https://www.jianshu.com/p/8ccd712e2599*

*[kafka的Docker镜像使用说明(wurstmeister/kafka)]* [*https://blog.csdn.net/boling\_cavalry/article/details/85395080*](https://blog.csdn.net/boling_cavalry/article/details/85395080)

#### 下载&安装

* *# 下载*

docker pull registry.docker-cn.com/wurstmeister/kafka:2.11-2.0.0

docker pull registry.docker-cn.com/mesoscloud/zookeeper:3.4.8

#### 启动/验证/管理界面

##### 启动zookeeper容器

docker run -d --name zk -p 2181:2181 -t registry.docker-cn.com/mesoscloud/zookeeper:3.4.8

##### 启动kafka容器（9092,9093,9094）

docker run -d --name kafka1 -p 9092:9092 \

-e KAFKA\_BROKER\_ID=1 \

-e KAFKA\_ZOOKEEPER\_CONNECT=172.16.61.8:2181 \

-e KAFKA\_ADVERTISED\_LISTENERS=PLAINTEXT://172.16.61.8:9092 \

-e KAFKA\_LISTENERS=PLAINTEXT://0.0.0.0:9092 \

-t registry.docker-cn.com/wurstmeister/kafka:2.11-2.0.0

docker run -d --name kafka2 -p 9093:9093 \

-e KAFKA\_BROKER\_ID=2 \

-e KAFKA\_ZOOKEEPER\_CONNECT=172.16.61.8:2181 \

-e KAFKA\_ADVERTISED\_LISTENERS=PLAINTEXT://172.16.61.8:9093 \

-e KAFKA\_LISTENERS=PLAINTEXT://0.0.0.0:9093 \

-t registry.docker-cn.com/wurstmeister/kafka:2.11-2.0.0

docker run -d --name kafka3 -p 9094:9094 \

-e KAFKA\_BROKER\_ID=3 \

-e KAFKA\_ZOOKEEPER\_CONNECT=172.16.61.8:2181 \

-e KAFKA\_ADVERTISED\_LISTENERS=PLAINTEXT://172.16.61.8:9094 \

-e KAFKA\_LISTENERS=PLAINTEXT://0.0.0.0:9094 \

-t registry.docker-cn.com/wurstmeister/kafka:2.11-2.0.0

# 检查：

docker ps

netstat -nltp

##### 验证&命令行

docker exec -ti kafka1 /bin/bash

bin/kafka-topics.sh --create --zookeeper 172.16.61.8:2181 --replication-factor 2 --partitions 2 --topic partopic

bin/kafka-topics.sh --describe --zookeeper 172.16.61.8:2181 --topic partopic

* *下载kafka*

http://mirrors.shu.edu.cn/apache/kafka/2.0.1/kafka\_2.11-2.0.1.tgz

* *生产者*

#kafka-console-producer.sh --broker-list 127.0.0.1:19092 --topic test

kafka-console-producer.sh --broker-list 172.16.61.8:9092 --topic test

* *消费者*

#kafka-console-consumer.sh --bootstrap-server 127.0.0.1:19092 --topic test

kafka-console-consumer.sh --bootstrap-server 172.16.61.8:9092 --topic test

* *查询 top\_list*

kafka-topics.sh --list --zookeeper 172.16.61.8:2181

##### 安装管理工具

* *[docker运行kafka manager]*

[*https://www.jianshu.com/p/627b4b1b35e2*](https://www.jianshu.com/p/627b4b1b35e2)

* *[docker——kafka-manager安装]*

[*https://blog.csdn.net/wild46cat/article/details/78081070*](https://blog.csdn.net/wild46cat/article/details/78081070)

* *1、下载*

docker pull registry.docker-cn.com/sheepkiller/kafka-manager

* *2、docker启动*

docker run -d --name kafka\_mgr \

--link zk:zookeeper --link kafka1:kafka -p 9000:9000 \

-e ZK\_HOSTS=zookeeper:2181 registry.docker-cn.com/sheepkiller/kafka-manager

* *3、访问*

172.16.61.8:9000

### 【单机】安装

#### 下载/安装

*# wget kafka\_2.11-2.0.1.tgz*

tar xf kafka\_2.11-2.0.1.tgz

* *移入/home/chijy目录下*

ln -s kafka\_2.11-2.0.1/ kafka

#### 环境变量修改

#[kafka]

export KAFKA\_HOME=/home/chijy/kafka

export PATH=$KAFKA\_HOME/bin:$PATH

#### 配置文件修改

* 参考：*https://www.cnblogs.com/zhanglianghhh/archive/2018/09/23/9692262.html*

### 命令行

#### 启停Zookeeper

* *启动zookeeper*

zookeeper-server-start.sh -daemon /home/chijy/kafka/config/zookeeper.properties

* *停止zookeeper*

zookeeper-server-stop.sh

#### 启停Kafka

* *启动kafka*

kafka-server-start.sh -daemon /home/chijy/kafka/config/server.properties

* *停止kafka*

kafka-server-stop.sh

#### python开发包

pip install kafka-python

## Spark （2.2.0）

### 【Spark】安装

#### 安装参考

* *spark-2.2.0安装和部署*

*https://blog.csdn.net/weixin\_36394852/article/details/76030317*

#### 下载/安装

* *下载、解压*

wget <https://d3kbcqa49mib13.cloudfront.net/spark-2.2.0-bin-hadoop2.7.tgz>

tar -zxvf spark-2.2.0-bin-hadoop2.7.tgz

ln -s spark-2.2.0-bin-hadoop2.7/ spark

#### 环境变量修改

#[spark]

export SPARK\_HOME=/home/chijy/spark

export PATH=$SPARK\_HOME/bin:$PATH

## Redis（3.2.3）

### 【Redis】安装

#### 安装参考

* *参考*

*https://www.cnblogs.com/wangzhongqiu/p/6689543.html*

#### 下载/安装

* *下载、解压*

wget http://download.redis.io/releases/redis-3.2.3.tar.gz

tar -zxvf redis-3.2.3.tar.gz

* *编译*

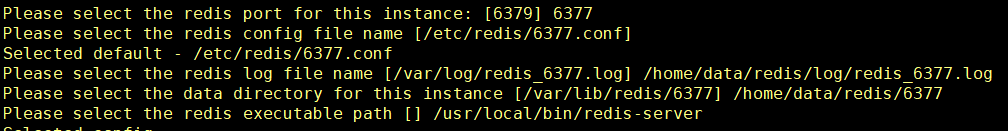
cd redis-3.2.3

make && make install

* *执行初始化脚本*

cd utils/

./install\_server.sh



#### 路径

* **配置文件路径**

/etc/redis/6377.conf

* **数据路径**

cd /home/data/redis/6377

* **日志路径**

cd /home/data/redis/log

### 配置修改

* *Redis3.2开启远程访问*

[*https://blog.csdn.net/u010956470/article/details/64440983*](https://blog.csdn.net/u010956470/article/details/64440983)

* [*linux安装redis及外网访问*](https://www.cnblogs.com/xiezhi/p/7066805.html)

[*https://www.cnblogs.com/xiezhi/p/7066805.html*](https://www.cnblogs.com/xiezhi/p/7066805.html)

### 命令行

#### 启停

* 启动server

redis-server /etc/redis/6377.conf

* 关闭server

redis-cli -h 127.0.0.1 -p 6377 shutdown

#### 查看

* *cli登录， 端口是6377，密码是bonc*

redis-cli -h 127.0.0.1 -p 6377 -a bonc

redis-cli -h 172.16.61.8 -p 6377 -a bonc

* *keys \*是查看redis所有的键值对。*
* *set ilanni testredis添加一个键值ilanni，内容为testredis。*
* *get ilanni查看ilanni这个键值的内容。*

key \*

set ilanni testredis

get ilann

#### python开发包

pip install redis

## Mysql（5.7.25）

### 【Mysql】安装

#### 安装参考

* *安装参考*

*<https://blog.csdn.net/qq_36582604/article/details/80526287>*

*完全卸载*

<https://www.cnblogs.com/wanghuaijun/p/6398240.html>

免安装配置

<https://www.cnblogs.com/jpfss/p/9734598.html>

#### (centos7)下载/安装

* *下载并安装MySQL官方的*[*Yum*](https://www.baidu.com/s?wd=Yum&tn=24004469_oem_dg&rsv_dl=gh_pl_sl_csd)*Repository*

wget -i -c <http://dev.mysql.com/get/mysql57-community-release-el7-10.noarch.rpm>

* *安装MySQL*[*服务器*](https://www.baidu.com/s?wd=%E6%9C%8D%E5%8A%A1%E5%99%A8&tn=24004469_oem_dg&rsv_dl=gh_pl_sl_csd)

yum -y install mysql57-community-release-el7-10.noarch.rpm

#### (centos6)下载/安装

* *（centos6）下载[Yum](https://www.baidu.com/s?wd=Yum&tn=24004469_oem_dg&rsv_dl=gh_pl_sl_csd" \t "_blank) Repository*

wget -i -c <http://dev.mysql.com/get/mysql57-community-release-el6-10.noarch.rpm>

* *安装MySQL*[*服务器*](https://www.baidu.com/s?wd=%E6%9C%8D%E5%8A%A1%E5%99%A8&tn=24004469_oem_dg&rsv_dl=gh_pl_sl_csd)

yum -y install mysql57-community-release-el6-10.noarch.rpm

yum -y install mysql-community-server

#### 配置修改1

* 修改root密码

grep "password" /var/log/mysqld.log

mysql -u root -p

ALTER USER 'root'@'localhost' IDENTIFIED BY 'Bonc1234!';

* 打开远程访问

*##grant all privileges on \*.\* to 'root'@'172.16.61.8' identified by 'Bonc1234!' with grant option;*

GRANT ALL PRIVILEGES ON \*.\* TO 'root'@'%' IDENTIFIED BY 'Bonc1234!' WITH GRANT OPTION;

flush privileges;

exit;

* 为firewalld添加开放端口

*firewall-cmd --zone=public --add-port=3306/tcp --permanent*

#### 配置修改2

* 配置文件路径：/etc/my.cnf
* 【参数配置】字符集修改：vi /etc/my.cnf

[client]

default-character-set=utf8

port=3306

socket=/data02/data/mysql/mysql.sock

* 【参数配置】数据路径修改，

参考：<https://www.cnblogs.com/rusking/p/4427771.html>

#datadir=/var/lib/mysql

datadir=/data02/data/mysql

#socket=/var/lib/mysql/mysql.sock

socket=/data02/data/mysql/mysql.sock

innodb\_file\_per\_table = 1

innodb\_status\_file = 1

innodb\_buffer\_pool\_size = 6G

innodb\_flush\_log\_at\_trx\_commit = 2

innodb\_log\_buffer\_size = 16M

innodb\_log\_file\_size = 64M

innodb\_support\_xa = 0

default-storage-engine = innodb

bulk\_insert\_buffer\_size = 8M

join\_buffer\_size = 16M

max\_heap\_table\_size = 32M

tmp\_table\_size = 32M

max\_tmp\_tables = 48

read\_buffer\_size = 32M

read\_rnd\_buffer\_size = 16M

key\_buffer\_size = 32M

thread\_cache\_size = 32

innodb\_thread\_concurrency = 8

innodb\_flush\_method = O\_DIRECT

innodb\_rollback\_on\_timeout = 1

query\_cache\_size = 256M

query\_cache\_limit = 256M

collation\_server = utf8\_bin

character\_set\_server = utf8

####################################

#### 修改数据路径

mkdir /data01/data/mysql

# mv /var/lib/mysql/\* /data01/data/mysql/

#### 安装问题

* *问题1*

mysql 问题之 ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password)

参考：https://blog.csdn.net/u014636209/article/details/82563396

### 命令行

#### 启停

* 启动

systemctl start mysqld.service

* 检查

systemctl status mysqld.service

* 重启

systemctl restart mysql.service

* 停止

mysqladmin -p -u root shutdown

* 启动

service mysqld start

* 重启

service mysqld restart

* 停止

mysqladmin -p -u root shutdown

#### SQL命令

* cache查询

SHOW VARIABLES LIKE '%query\_cache%';

SHOW STATUS LIKE 'Qcache%';

## InfluxDB（1.2.0）

### 【InfluxDB】安装

#### 安装参考

* *参考*

*https://blog.csdn.net/qq\_36142114/article/details/80153844*

#### 下载/安装

* *下载、安装*

wget <https://repos.influxdata.com/rhel/6Server/x86_64/stable/influxdb-1.2.0.x86_64.rpm>

rpm -ivh influxdb-1.2.0.x86\_64.rpm

#### 配置修改

配置文件路径：/etc/influxdb/influxdb.conf

* InfluxDB 1.1开始WEB管理默认是禁用的，所以装完并没有启用8083端口了，需要到配置文件里启用

vi /etc/influxdb/influxdb.conf

[admin]

enabled = true ​​​​

* 【注意】端口占用，如mqtt也适用8083端口.

vi /etc/influxdb/influxdb.conf

[meta]

#dir = "/var/lib/influxdb/meta"

dir = "/data02/data/influxdb/meta"

[data]

#dir = "/var/lib/influxdb/data"

dir = "/data02/data/influxdb/data"

#wal-dir = "/var/lib/influxdb/wal"

wal-dir = "/data02/data/influxdb/wal"

### 命令行

#### 启停

* 启动

service influxdb start

*# systemctl start influxdb （启动influxdb）*

*# systemctl enable influxdb （设为开机启动）*

* 检查

service influxdb status

* 重启

service influxdb restart

#### 基本操作

* [InfluxDB基本概念和操作](https://www.cnblogs.com/shhnwangjian/p/6897216.html)

<https://www.cnblogs.com/shhnwangjian/p/6897216.html?utm_source=itdadao&utm_medium=referral>

* ***influx*** ***-precision rfc3339(进入数据库)***
* *create database test\_db (创建数据库test\_db )*
* *show databases （列出所有数据库）*
* *drop database test\_db （删除数据库）*
* *use test\_db ( 转入test\_db数据库下 )*
* *create measurement test\_table*

*( 创建test\_table表，measurements==table(关系型数据库中) )*

* *show measurements  （列出所有表）*
* *drop measyrement test\_table （删除表test\_able）*

## Python（3.6.4）

### 【Python】安装

#### 安装参考

* *参考文档*

[*https://www.cnblogs.com/ESHLkangi/p/8545979.html*](https://www.cnblogs.com/ESHLkangi/p/8545979.html)

[*https://www.cnblogs.com/shaosks/p/9172606.html*](https://www.cnblogs.com/shaosks/p/9172606.html)

#### 下载/安装

* *安装依赖包.*

yum -y install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel readline-devel tk-devel gdbm-devel db4-devel libpcap-devel xz-devel

* *下载，解压*

wget <https://www.python.org/ftp/python/3.6.4/Python-3.6.4.tgz>

tar -xvf Python-3.6.4.tgz

* *编译.*

cd Python-3.6.4/

mkdir /usr/local/python3

./configure --prefix=/usr/local/python3

make

make install

* *PYTHON新版本, 创建软链接*

mv /usr/bin/python /usr/bin/python\_bak

ln -s /usr/local/python3/bin/python3 /usr/bin/python

python –V

#### pip安装

* *# PIP创建软链接*

mv /usr/bin/pip /usr/bin/pip\_bak

ln -s /usr/local/python3/bin/pip3.6 /usr/bin/pip

* *# 升级PIP*

pip install --upgrade pip

#### 安装问题

* *# 因为yum源使用的Python2，使用Python3，会导致其无法正常工作。*

vi /usr/bin/yum

修改 #!/usr/bin/python2

#### 环境变量修改

* *修改/etc/profile，修改后source /etc/profile*

#[python]

export PATH=$PATH:/usr/local/python3/bin

#### pip加速

* *参考*

*https://blog.csdn.net/selous/article/details/53309724*

### Anacoda安装

#### 安装参考

* *Centos 7下安装Anaconda3*

[*https://blog.csdn.net/qq\_32590631/article/details/82904487*](https://blog.csdn.net/qq_32590631/article/details/82904487)

* *Anaconda安装及更新失败解决方式*

*https://blog.csdn.net/aiya\_aya/article/details/78993173*

#### 下载/安装

* *下载*

wget [*https://mirrors.tuna.tsinghua.edu.cn/anaconda/archive/Anaconda3-5.0.1-Linux-x86\_64.sh*](https://mirrors.tuna.tsinghua.edu.cn/anaconda/archive/Anaconda3-5.0.1-Linux-x86_64.sh)

<https://mirrors.tuna.tsinghua.edu.cn/anaconda/archive/>

sh Anaconda3-5.0.1-Linux-x86\_64.sh

source ~/.bashrc

## Docker（1.7.1）

### 【Docker】安装

#### 安装参考

* *Centos7 下安装 docker个人总结版.*

[*https://blog.csdn.net/qq\_25838777/article/details/80491923*](https://blog.csdn.net/qq_25838777/article/details/80491923)

* *redhat7 安装 docker*

[*https://blog.csdn.net/lizehua123/article/details/50601032*](https://blog.csdn.net/lizehua123/article/details/50601032)

#### 安装依赖

* *更新Yum包.*

uname -r

yum update

* *卸载旧版本.*

yum -y remove docker docker-common docker-selinux docker-engine

* *设置Yum源.*

yum install -y yum-utils device-mapper-persistent-data lvm2

yum-config-manager --add-repo http://mirrors.aliyun.com/docker-ce/linux/centos/docker-ce.repo

* *选择安装版本.*

yum list docker-ce --showduplicates | sort -r

#### （centos7）下载/安装

* *下载地址.*

[*https://get.docker.com/rpm/1.7.1/centos-7/RPMS/x86\_64/docker-engine-1.7.1-1.el7.centos.x86\_64.rpm*](https://get.docker.com/rpm/1.7.1/centos-7/RPMS/x86_64/docker-engine-1.7.1-1.el7.centos.x86_64.rpm)

* *安装.*

rpm -ivh docker-engine-1.7.1-1.el7.centos.x86\_64.rpm

#### （centos6）下载/安装

* *# 下载地址，【注意】是centos6版本*

https://get.docker.com/rp/1.7.1/centos-6/RPMS/x86\_64/docker-engine-1.7.1-1.el6.x86\_64.rpm

* *# 安装.*

rpm -ivh docker-engine-1.7.1-1.el6.x86\_64.rpm

#### 安装问题

* *问题1*

yum-config-manager: command not found

这个是因为系统默认没有安装这个命令，这个命令在yum-utils 包里，可以通过命令yum -y install yum-utils 安装就可以了。

* *问题2*

*error: Failed dependencies:*

*xz is needed by docker-engine-1.7.1-1.el6.x86\_64*

*解决：* [*https://yq.aliyun.com/articles/290867*](https://yq.aliyun.com/articles/290867)

#### 修改配置

* *修改docker默认的存储位置*

参考：<https://blog.csdn.net/glongljl/article/details/80158297>

service docker stop

mkdir /data01/dockfile

mv /var/lib/docker/\* /data01/dockfile/

ls /var/lib/docker

# rm -rf /var/lib/docker

ln -s /data01/dockfile/ /var/lib/docker

ls -la docker

service docker start

docker info

### 命令行

#### (centos7)启停

* *启动.*

systemctl start docker

* *设置开机启动.*

systemctl enable docker

#### (centos6)启停

* *# 启动. #systemctl start docker #centos7用.*

service docker start

* *# 设置开机启动.*

chkconfig --add docker

#### 查看

docker info

docker version

### 【Docker-Compose】安装

#### 安装参考

* *CentOS7 下安装Docker-Compose.*

[*https://www.cnblogs.com/YatHo/p/7815400.html*](https://www.cnblogs.com/YatHo/p/7815400.html)

* *centos7 下安装docker-compose 下报错*

[*https://blog.csdn.net/hillwooda/article/details/80027976*](https://blog.csdn.net/hillwooda/article/details/80027976)

* *降级 docker-compose*

[*https://blog.csdn.net/kinginblue/article/details/73527832*](https://blog.csdn.net/kinginblue/article/details/73527832)

docker-compose -version