成果：

前置条件

CentOS7/RHEL7以上

本教程使用5台服务器，8核心32G UCloud云主机

配置好主机名，在/etc/hosts配置好域名ip映射

主机名	Server	Agent	MySQL
cdh001	√	√	
cdh002		√	
cdh003		√	
cdh004		√	
cdh005		√	√

```
1  hostnamectl set-hostname cdh001
2  vi /etc/hosts
3
4  安装一些依赖以及删除部分依赖
```

```
5  yum -y install gcc python-devel cyrus-sasl* chrony iotop yum-utils yum-pl
ugin-downloadonly psmisc ntp ntpdate httpd createrepo wget git rsync mod_ss
l cyrus-sasl-plain cyrus-sasl-devel cyrus-sasl-gssapi libxslt krb5-devel cy
rus-sasl-gssapi cyrus-sasl-devel libxml2-devel libxslt-devel openldap-devel
python-devel python-simplejson sqlite-devel
6  yum -y remove mariadb-libs
7
8  systemctl start ntpd
9  systemctl enable ntpd
10
11  修改一些系统参数
12  sysctl vm.swappiness=10
13  echo 'vm.swappiness=10'>> /etc/sysctl.conf
14  echo never > /sys/kernel/mm/transparent_hugepage/defrag
15  echo never > /sys/kernel/mm/transparent_hugepage/enabled
16  echo 'echo never > /sys/kernel/mm/transparent_hugepage/defrag' >> /etc/r
c.local
17  echo 'echo never > /sys/kernel/mm/transparent_hugepage/enabled' >> /etc/
rc.local
18
```

1、Java部分、全部节点都要安装

```
1  1、去浏览器下载
2  https://www.oracle.com/java/technologies/javase/javase8-archive-download
s.html
3
4  2、百度网盘下载
5  https://pan.baidu.com/s/1cG-x8Rg4TTqfnSpzc1DkVg
6
7  无论选取那种下载方式，我们需要得到jdk-8u202-linux-x64.tar.gz这个安装包
8
9  mkdir /usr/java
10  tar -zxf jdk-8u202-linux-x64.tar.gz -C /usr/java/
11  cat << EOF >> /etc/profile
12
13  export JAVA_HOME=/usr/java/jdk1.8.0_202
14  export PATH=\$PATH:\$JAVA_HOME/bin
15  EOF
16
17  source /etc/profile
18
19  jps
```

```
20
```

2、MySQL环节、我们选择cdh005主机来安装MySQL

```
1   下载这6个MySQL的rpm包
2   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-common
    -5.7.17-1.el7.x86_64.rpm
3   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-libs-
    5.7.17-1.el7.x86_64.rpm
4   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-libs-c
    ompat-5.7.17-1.el7.x86_64.rpm
5   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-devel-
    5.7.17-1.el7.x86_64.rpm
6   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-client
    -5.7.17-1.el7.x86_64.rpm
7   https://downloads.mysql.com/archives/get/p/23/file/mysql-community-server
    -5.7.17-1.el7.x86_64.rpm
8
9   安装
10  yum -y localinstall mysql-community-common-5.7.17-1.el7.x86_64.rpm
11  yum -y localinstall mysql-community-libs-5.7.17-1.el7.x86_64.rpm
12  yum -y localinstall mysql-community-libs-compat-5.7.17-1.el7.x86_64.rpm
13  yum -y localinstall mysql-community-devel-5.7.17-1.el7.x86_64.rpm
14  yum -y localinstall mysql-community-client-5.7.17-1.el7.x86_64.rpm
15  yum -y localinstall mysql-community-server-5.7.17-1.el7.x86_64.rpm
16
17   启动
18  systemctl start mysqld
19  开机自启动
20  systemctl enable mysqld
21
22  查看临时密码
23  cat /var/log/mysqld.log | grep password
24
25  mysql -uroot -p'临时密码'
26  ## 首次登录设置密码
27  set password=password('EMAIL_apache_hadoop@163.com');
28  quit;
29  ## 登陆设置允许外网访问当前的MySQL
30  mysql -uroot -p'EMAIL_apache_hadoop@163.com'
31  use mysql;
32  update user set host='%' where host='localhost';
33  delete from user where host != '%';
```

```
34  flush privileges;
35  quit;
36  mysql -uroot -p'EMAIL_apache_hadoop@163.com'
37  ## 创建ClouderaManager需要用到的几个数据库
38  create database cmf default character set = 'utf8';
39  create database amon default character set = 'utf8';
40  create database hive default character set = 'latin1';
41  create database hue default character set = 'utf8';
42  create database oozie default character set = 'utf8';
43  quit;
44
45  整理mysql的驱动包
46  mv mysql-connector-java-5.1.27.jar mysql-connector-java.jar
47  mkdir /usr/share/java
48  mv mysql-connector-java.jar /usr/share/java/
```

3、下载CM组件

```
1  https://archive.cloudera.com/cm6/6.2.1/redhat7/yum/RPMS/x86_64/cloudera-m
anager-daemons-6.2.1-1426065.el7.x86_64.rpm
2  https://archive.cloudera.com/cm6/6.2.1/redhat7/yum/RPMS/x86_64/cloudera-m
anager-agent-6.2.1-1426065.el7.x86_64.rpm
3  https://archive.cloudera.com/cm6/6.2.1/redhat7/yum/RPMS/x86_64/cloudera-m
anager-server-6.2.1-1426065.el7.x86_64.rpm
4
5  全部节点都安装daemons和agent
6  yum -y localinstall cloudera-manager-daemons-6.2.1-1426065.el7.x86_64.rpm
7  yum -y localinstall cloudera-manager-agent-6.2.1-1426065.el7.x86_64.rpm
8
9  cdh001上安装server
10 yum -y localinstall cloudera-manager-server-6.2.1-1426065.el7.x86_64.rpm
11
12 到此为止，我们的CM服务安装完毕
13
```

4、下载CDH的parcel包

```
1  https://archive.cloudera.com/cdh6/6.2.1/parcels/CDH-6.2.1-1.cdh6.2.1.p0.1
425774-el7.parcel
2  https://archive.cloudera.com/cdh6/6.2.1/parcels/CDH-6.2.1-1.cdh6.2.1.p0.1
425774-el7.parcel.sha1
3  https://archive.cloudera.com/cdh6/6.2.1/parcels/manifest.json
```

```
4  https://archive.cloudera.com/phoenix/6.2.0/parcels/PHOENIX-5.0.0-cdh6.2.
0.p0.1308267-el7.parcel.sha

5  https://archive.cloudera.com/phoenix/6.2.0/parcels/PHOENIX-5.0.0-cdh6.2.
0.p0.1308267-el7.parcel

6  https://archive.cloudera.com/phoenix/6.2.0/csd/PHOENIX-1.0.jar

7

8  然后把PHOENIX-1.0.jar放到/opt/cloudera/csd目录

9  [root@cdh001 csd]# pwd

10  /opt/cloudera/csd

11  [root@cdh001 csd]# ll

12  total 8

13  -rw-r--r-- 1 root root 5306 May 6 13:41 PHOENIX-1.0.jar

14

15  把凡是带sha1的都改成sha

16  把上面下载的包都放在/opt/cloudera/parcel-repo下

17

18  [root@cdh001 parcel-repo]# pwd

19  /opt/cloudera/parcel-repo

20  [root@cdh001 parcel-repo]# ll

21  total 2522808

22  -rw-r--r-- 1 root root 2093332003 May 2 13:39 CDH-6.2.1-1.cdh6.2.1.p0.14
25774-el7.parcel

23  -rw-r--r-- 1 root root 40 May 6 13:39 CDH-6.2.1-1.cdh6.2.1.p0.1425774-el
7.parcel.sha

24  -rw-r--r-- 1 root root 33875 May 6 13:39 manifest.json

25  -rw-r--r-- 1 root root 402216960 May 6 13:42 PHOENIX-5.0.0-cdh6.2.0.p0.1
308267-el7.parcel

26  -rw-r--r-- 1 root root 41 May 6 13:41 PHOENIX-5.0.0-cdh6.2.0.p0.1308267-
el7.parcel.sha

27
```

5、修改server和agent的配置文件

```
1  # cdh001上修改server

2  vi /etc/cloudera-scm-server/db.properties

3  # 12行去掉注释把localhost改成cdh005

4  # 15行去掉注释

5  # 18行去掉注释，把cmf改成root

6  # 21行去掉注释，密码那里填写EMAIL_apache_hadoop@163.com

7

8  # 全部节点修改agent

9  vi /etc/cloudera-scm-agent/config.ini

10  # 15行把localhost修改为cdh001
```

```
11
```

6、启动CM，开始安装CDH集群

```
1   # 在cdh001上启动server
2   systemctl start cloudera-scm-server
3   # 另开一个窗口，查看相关日志。有异常就解决异常
4   tail -200f /var/log/cloudera-scm-server/cloudera-scm-server.log
5   # 这个异常可以忽略 ERROR ParcelUpdateService:com.cloudera.parcel.component
    s.ParcelDownloaderImpl: Unable to retrieve remote parcel repository manifes
    t
6
7
8   # 在全部节点上启动agent
9   systemctl start cloudera-scm-agent
10
11  # 当在 cdh001上 netstat -tunlp | grep 7180 有内容时，说明我们可以访问web页面
    了
12
```

7、测试部分

```
1   1、Kafka测试
2   创建一个topic
3   kafka-topics --zookeeper cdh003:2181,cdh004:2181,cdh005:2181 --create --r
    eplication-factor 3 --partitions 10 --topic t1
4
5   开启kafka控制台消费者
6   kafka-console-consumer --bootstrap-server cdh003:9092,cdh004:9092,cdh005:
    9092 --topic t1
7
8   去别的节点开启一个Kafka控制台生产者
9   kafka-console-producer --broker-list cdh003:9092,cdh004:9092,cdh005:9092
    --topic t1
10  一边消费数据一边写入数据
11
12
13  2、Hive测试
14  通过Hive建立一张表
15  create table if not exists t1(id int,name string,score double) row forma
    t delimited fields terminated by ',' stored as parquet;
16
17  写个带有聚合函数的让它跑一下MapReduce
```

```
18  select count(*) from t1;
19
20  3、Phoenix测试
21  create table if not exists t1(
22  id Integer,
23  name varchar,
24  clazz varchar,
25  score double
26  constraint pk primary key(id)
27  );
28  select * from t1;
29  upsert into t1 values(1001,'zhangsan','606',87.5);
30  select count(*) from t1;
31  select * from t1;
32
33  4、Impala测试
34  create table t2
35  (
36   name string,
37   dt string,
38   primary key(name,dt)
39  )
40  partition by hash partitions 16
41  stored as kudu tblproperties (
42  'kudu.master_addresses' = 'cdh001:7051'
43  );
44
45  select * from t2;
46  insert into t2 values('zhangsan','2020-05-06');
47  select count(*) from t2;
48  select * from t2;
49
50
51
```