CDH 6.2.0 离线安装

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 文档版本 | 更新时间 | 内容 | 修订人 | 备注 |
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|  |  |  |  |  |

# 机器环境

## 操作系统

使用Centos7.2，支持的操作系统包括RHEL/CentOS7.2, 7.1

## 服务器主机和IP

|  |  |
| --- | --- |
| ip地址 | 主机名 |
| 192.168.101.21 | bigdata-node01 |
| 192.168.101.22 | bigdata-node02 |
| 192.168.101.23 | bigdata-node03 |

## 相关依赖包

yum install -y openssl-devel

yum install -y dos2unix

yum install -y unzip

yum install -y sysstat

yum install -y lrzsz

yum install -y vim-enhanced

yum install -y telnet

yum install -y bc

yum install psmisc -y

yum install perl -y

yum install python -y

yum install iproute -y

## 相关服务

|  |  |  |  |
| --- | --- | --- | --- |
| 序列 | 服务 | 版本 | 说明 |
| 1 | Mysql | 5.7.30 |  |
| 2 | JDK | 1.8.0\_251 |  |
| 3 | Python | 2.7.5 |  |
| 4 | Perl | 5.16.3 |  |
| 5 | python-psycopg2 | 2.5.1 | 是Python连接PostgreSQL的包，非必须 |
| 6 | iproute | iproute-3.10 |  |

# 系统初始化

## 修改文件描述符限制

Vim /etc/security/limits.d/20-nproc.conf

\* soft nproc 102400

## 禁用Huge Page(官方推荐)

echo never > /sys/kernel/mm/transparent\_hugepage/defrag

echo never > /sys/kernel/mm/transparent\_hugepage/enabled

## 内核优化(非必须)

Vim /etc/sysctl.conf

net.core.rmem\_default = 126976

net.core.wmem\_default = 126976

net.core.wmem\_max = 16777216

net.core.rmem\_max = 16777216

net.ipv4.tcp\_mem = 4096 87380 16777216

net.ipv4.tcp\_wmem = 4096 65536 16777216

net.ipv4.tcp\_rmem = 4096 87380 16777216

net.core.netdev\_max\_backlog = 2500

net.core.somaxconn = 262144

net.ipv4.tcp\_no\_metrics\_save = 1

net.ipv4.tcp\_moderate\_rcvbuf = 1

net.ipv4.tcp\_fin\_timeout = 5

net.ipv4.tcp\_keepalive\_time = 1800

net.ipv4.tcp\_syncookies = 1

net.ipv4.tcp\_sack = 0

net.ipv4.tcp\_tw\_reuse = 1

net.ipv4.tcp\_tw\_recycle = 1

net.ipv4.ip\_local\_port\_range = 10250 65000

net.ipv4.tcp\_max\_syn\_backlog = 81920

net.ipv4.tcp\_max\_tw\_buckets = 1600000

net.ipv4.tcp\_synack\_retries = 2

net.ipv4.tcp\_syn\_retries = 2

net.ipv4.tcp\_retries2 = 2

net.ipv4.tcp\_window\_scaling = 1

net.ipv4.tcp\_timestamps = 1

vm.dirty\_writeback\_centisecs = 100

vm.dirty\_ratio = 10

vm.dirty\_background\_ratio = 5

vm.swappiness=10

## Filesystem Mount Options

mount [-fnrsvw] [-t vfstype] [-o options] device dir

## 关闭防火墙

|  |
| --- |
| systemctl stop firewalld.service  systemctl disable firewalld.service |

## 关闭selinux

|  |
| --- |
| vim /etc/sysconfig/selinux |
|  |

## 修改主机名

|  |
| --- |
| vim /etc/hostname |
| 其他两台机器同步修改。 |

## 配置hosts

|  |
| --- |
| vim /etc/hosts |
| 192.168.101.21 bigdata-node01  192.168.101.22 bigdata-node02  192.168.101.23 bigdata-node03 |

## SSH免密码登录

Hadoop主节点需要能远程登录集群内的所有节点(包括自己)，以执行命令，所以需要配置免密码SSH登录。可选的ssh秘钥对生成方式有rsa和dsa两种，这里选择rsa。

安装ssh

|  |
| --- |
| yum install iproute -y |

在所有的节点上执行

|  |
| --- |
| ssh-keygen -t rsa |

将自己的公钥发送给自己与其他三台机器。

|  |
| --- |
| ssh-copy-id -i bigdata-node01  ssh-copy-id -i bigdata-node02  ssh-copy-id -i bigdata-node03 |

# 依赖模块和服务安装

## ntp服务安装(在所有节点操作)

<https://blog.csdn.net/qq_38591756/article/details/85243965>

## Jdk1.8 安装

必须安装在 /usr/java/ 目录下

## Mysql 服务安装

必须安装5.7的版本

依赖： yum -y install yum-utils

下载：

<https://dev.mysql.com/downloads/repo/yum/>

安装：

<https://dev.mysql.com/doc/mysql-yum-repo-quick-guide/en/>

# Cloudera manager安装

## 本地yum源制作(在主节点执行)

### 开启http

<https://www.cnblogs.com/webttt/p/10290429.html>

### 制作yum源

**在主节点**

|  |
| --- |
| wget --recursive --no-parent --no-host-directories https://archive.cloudera.com/cm6/6.2.0/redhat7/ -P /var/www/html/cloudera-repos  wget https://archive.cloudera.com/cm6/6.2.0/allkeys.asc -P /var/www/html/cloudera-repos/cm6/6.2.0/  chmod -R ugo+rX /var/www/html/cloudera-repos/cm6 |

**在所有节点**

vi /etc/yum.repos.d/cloudera-repo.repo

|  |
| --- |
| [cloudera-repo]  name=cloudera-repo  baseurl=http://192.168.101.21/cloudera-repos/cm6/6.2.0/redhat7/yum  enabled=1  gpgcheck=0 |

### yum 安装

主节点

yum install -y cloudera-manager-daemons cloudera-manager-server

## 初始化cm数据库

### jar包下载和复制

下载地址： https://dev.mysql.com/downloads/connector/j/

cp mysql-connector-java-5.1.49-bin.jar /usr/share/java/mysql-connector-java.jar

### 权限

|  |
| --- |
| CREATE DATABASE scm DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE DATABASE hive DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE DATABASE rmon DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE DATABASE oozie DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE DATABASE hue DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE DATABASE activity DEFAULT CHARACTER SET utf8 DEFAULT COLLATE utf8\_general\_ci;  CREATE USER 'cdh'@'%' IDENTIFIED BY ‘MyNewPass4!’;  GRANT ALL ON \*.\* TO 'cdh'@'%';  flush privileges ; |

### 初始化

在主节点执行如下命令，在这个之前需要有admin的数据库账号；

|  |
| --- |
| cd /opt/cloudera/cm/schema/  ./scm\_prepare\_database.sh -h 192.168.101.21 -P 3306 mysql scm cdh MyNewPass4! |

## CDH启动

|  |
| --- |
| systemctl start cloudera-scm-server  systemctl enable cloudera-scm-server |

登录界面：

<http://192.168.101.21:7180/cmf/home>

admin /admin

# CDH组件安装

傻瓜式安装，略....

# 添加用户并给hdfs赋予权限

|  |
| --- |
| passwd hdfs  usermod -s /bin/bash hdfs  passwd spark  usermod -s /bin/bash spark  su - hdfs -c "hdfs dfs -chmod -R 775 /" |

# 安装报错

## Jdk目录必须在/usr/java 目录下

|  |
| --- |
| Unable to find a compatible version of Java on this host, either because JAVA\_HOME has not been set or because a compatible version of Java is not installed. |

# 参考资料

官网：

<https://docs.cloudera.com/documentation/enterprise/6/6.2/topics/cdh_ig_jdk_installation.html>

博客：

<https://www.jianshu.com/p/610cce9f9026>