1.环境说明

1.1 centos 6.3 64位

1.2 jdk1.8

1.3 ambari2.2 + hdp2.3.4

2.服务器部署说明

hdp1 8g ：ambari-server,mysql,NN,DN,ZK

hdp2 5g :SN，DN，ZK

hdp3 5g :DN,ZK

3.安装软件上传目录 /opt

4.更改hostname 和ip映射

|  |
| --- |
| # hostname hdp1  # vi /etc/sysconfig/network  HOSTNAME = hdp1  //对应更改hdp2,hdp3  # vi /etc/hosts  192.168.91.135 hdp1  192.168.91.136 hdp2  192.168.91.137 hdp3  //hostname生效，重启  # reboot |

5. ssh 免密码配置

|  |
| --- |
| 安装GP  # unzip greenplum-db-4.3.9.1-build-1-rhel5-x86\_64.zip  # ./greenplum-db-4.3.9.1-build-1-rhel5-x86\_64.bin  # cd /usr/local/  # cd greenplum-db  # source greenplum\_path.sh  # vi all\_host  hdp1  hdp2  hdp3  # gpssh-exkeys -f all\_host //比ssh-keygen命令高效  //gp命令参考资料 http://gpdb.docs.pivotal.io/4390/utility\_guide/admin\_utilities/util\_ref.html  # ssh hdp1/hdp2/hdp3 进行免密码登录验证 |

6.更改文件句柄数

|  |
| --- |
| # gpssh -f all\_host -e 'ulimit -Sn'  # gpssh -f all\_host -e 'ulimit -n 10000' //设置为10000  # ulimit –Sn //这个时候不能使用gpssh –e命令 |

7.ntpd时间同步

|  |
| --- |
| # gpssh -f all\_host -e 'date' //查看时间是否一致  [hdp1] date  [hdp1] Thu Oct 13 16:08:02 PDT 2016  [hdp3] date  [hdp3] Thu Oct 13 16:08:03 PDT 2016  [hdp2] date  [hdp2] Thu Oct 13 16:08:03 PDT 2016  # chkconfig ntpd on  # chkconfig --list ntpd |

8.防火墙关闭

|  |
| --- |
| # gpssh -f all\_host -e 'chkconfig iptables --list'  # gpssh -f all\_host -e 'chkconfig iptables off'  # gpssh -f all\_host -e 'setenforce 0' //关闭防火墙 |

9.设置Selinux,PackageKit,umask的值

|  |
| --- |
| # vi /etc/selinux/config  **SELINUX=disabled**  # vi slaves  hdp2  hdp3  **# gpscp -f slaves /etc/selinux/config =:/etc/selinux/config**  **# gpssh -f all\_host -e 'cat /etc/selinux/config'**  **# vi /etc/yum/pluginconf.d/refresh-packagekit.conf**  **# gpscp -f slaves \**  **/etc/yum/pluginconf.d/refresh-packagekit.conf \**  **=:/etc/yum/pluginconf.d/refresh-packagekit.conf**  **# gpssh -f all\_host -e 'echo umask 0022 >> /etc/profile'**  [hdp1] echo umask 0022 >> /etc/profile  [hdp3] echo umask 0022 >> /etc/profile  [hdp2] echo umask 0022 >> /etc/profile |

10.安装jdk

|  |
| --- |
| # gpscp -f all\_host /opt/jdk-8u101-linux-x64.tar.gz =:/usr/local/  # cd .. // hdp1的/usr/local目录  # gpssh -f all\_host -e 'tar -zxvf /usr/local/jdk-8u101-linux-x64.tar.gz' //该命令没有执行成功  # tar -zxvf /usr/local/jdk-8u101-linux-x64.tar.gz //xshell全局会话执行  配置jdk环境变量  # vi /etc/profile  # gpscp -f /usr/local/greenplum-db/slaves /etc/profile =:/etc/profile  export JAVA\_HOME=/usr/local/jdk1.8.0\_101  export PATH=.:$JAVA\_HOME/bin:$PATH  # gpssh -f /usr/local/greenplum-db/all\_host -e 'source /etc/profile'  # gpssh -f /usr/local/greenplum-db/all\_host -e 'java -version'  [hdp1] java -version  [hdp1] java version "1.8.0\_101"  [hdp1] Java(TM) SE Runtime Environment (build 1.8.0\_101-b13)  [hdp1] Java HotSpot(TM) 64-Bit Server VM (build 25.101-b13, mixed mode)  [hdp2] java -version  [hdp2] java version "1.8.0\_101"  [hdp2] Java(TM) SE Runtime Environment (build 1.8.0\_101-b13)  [hdp2] Java HotSpot(TM) 64-Bit Server VM (build 25.101-b13, mixed mode)  [hdp3] java -version  [hdp3] java version "1.8.0\_101"  [hdp3] Java(TM) SE Runtime Environment (build 1.8.0\_101-b13)  [hdp3] Java HotSpot(TM) 64-Bit Server VM (build 25.101-b13, mixed mode) |

11. hdp的本地yum源配置

|  |
| --- |
| # tar -zxvf /opt/ambari-2.2.1.1-centos6.tar.gz -C /var/www/html/  # tar -zxvf /opt/HDP-UTILS-1.1.0.20-centos6.tar.gz -C /var/www/html/  //磁盘空间不够报错  //手动挂载  # fdisk –l  # fdisk /dev/sdb //分区，根据提示命令  # mkfs -t ext3 /dev/sbd1 //格式化  # mount /dev/sdb1 /opt //挂载  # tar -zxvf /opt/HDP-2.4.0.0-centos6-rpm.tar.gz -C /var/www/html/  # vi ambari.repo  # cp ambari.repo /etc/yum.repos.d/  **# source greenplum\_path.sh**  # gpscp -f /usr/local/greenplum-db/slaves /etc/yum.repos.d/ambari.repo =:/etc/yum.repos.d/ |

12. 安装ambari-server 在hdp1

|  |
| --- |
| # service httpd start  # vi /etc/yum.repos.d/ambari.repo  **#VERSION\_NUMBER=2.2.1.1-70**  **[Updates-ambari-2.2.1.1]**  **name=ambari-2.2.1.1 - Updates**  **baseurl=http://hdp1/AMBARI-2.2.1.1/centos6/2.2.1.1-70**  **gpgcheck=1**  **gpgkey=http://hdp1/AMBARI-2.2.1.1/centos6/2.2.1.1-70/RPM-GPG-KEY/RPM-GPG-KEY-Jenkins**  **enabled=1**  **priority=1**  **//hdp1是启动http服务的主机**  # yum install ambari-server  …  Complete!  //ambari-server的设置  # service ambari-server setup  Customize user account for ambari-server daemon [y/n] (n)? y  nter user account for ambari-server daemon (root):root  Checking JDK...  [1] Oracle JDK 1.8 + Java Cryptography Extension (JCE) Policy Files 8  [2] Oracle JDK 1.7 + Java Cryptography Extension (JCE) Policy Files 7  [3] Custom JDK  ==============================================================================  Enter choice (1):3  Path to JAVA\_HOME: /usr/local/jdk1.8.0\_101  Enter advanced database configuration [y/n] (n)? y  Configuring database...  ==============================================================================  Choose one of the following options:  [1] - PostgreSQL (Embedded)  [2] - Oracle  [3] - MySQL  [4] - PostgreSQL  [5] - Microsoft SQL Server (Tech Preview)  [6] - SQL Anywhere  ==============================================================================  Enter choice (1): 3  Hostname (localhost): hdp1  Port (3306): 3306  Database name (ambari): ambari  Username (ambari): ambari  Enter Database Password (bigdata):  Configuring ambari database...  Press <enter> to continue.  Proceed with configuring remote database connection properties [y/n] (y)? y  Ambari Server 'setup' completed successfully. |

12.1安装mysql服务

|  |
| --- |
| # rpm -qa | grep mysql\* //是否安装mysql  # yum install mysql\* //只安装server就可以  # yum install mysql-server  # service mysqld status  # service mysqld start  # mysqladmin -u root password 123456  # mysql -uroot -p123456  mysql> GRANT ALL PRIVILEGES ON \*.\* TO 'root'@'%' IDENTIFIED BY '123456' WITH GRANT OPTION;  Query OK, 0 rows affected (0.00 sec)  mysql> FLUSH PRIVILEGES;  Query OK, 0 rows affected (0.00 sec)  mysql> exit;  Bye  # vi /etc/my.cnf  default-character-set=utf8  # service mysqld restart  //创建ambari数据库执行脚本  **mysql> create database ambari;**  **Query OK, 1 row affected (0.00 sec)**  **mysql> GRANT ALL PRIVILEGES ON ambari.\* TO 'ambari'@'%' IDENTIFIED BY 'bigdata' WITH GRANT OPTION;**  **Query OK, 0 rows affected (0.00 sec)**  **mysql> GRANT ALL PRIVILEGES ON ambari.\* TO 'ambari'@'hdp1' IDENTIFIED BY 'bigdata' WITH GRANT OPTION;**  **Query OK, 0 rows affected (0.00 sec)**  **mysql> FLUSH PRIVILEGES;**  **Query OK, 0 rows affected (0.00 sec)**  # yum install mysql-connector-java  mysql> use ambari;  Database changed  mysql> source /var/lib/ambari-server/resources/Ambari-DDL-MySQL-CREATE.sql; |

13.启动ambari-server

|  |
| --- |
| # service ambari-server start  Waiting for server start....................  Ambari Server 'start' completed successfully.  Web访问：  <http://192.168.91.135:8080/> admin/admin |

14.HDP集群安装

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| --- |
| //根据向导操作  第一种节点安装方法 ssh  # chmod 700 .ssh/  # chmod 600 .ssh/authorized\_keys  //因为.ssh目录的安全问题，对权限要求比较严格  第二种方法server-agent方式安装  # gpscp -f /usr/local/greenplum-db/slaves /etc/yum.repos.d/ambari.repo =:/etc/yum.repos.d/  # yum install ambari-agent  # vi /etc/ambari-agent/conf/ambari-agent.ini  hostname=hdp1  # gpscp -f /usr/local/greenplum-db/slaves \  /etc/ambari-agent/conf/ambari-agent.ini =:/etc/ambari-agent/conf/ambari-agent.ini  # service ambari-agent start |

15.hive的元数据库创建

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| --- |
| mysql> create database hive;  Query OK, 1 row affected (0.00 sec)  mysql> GRANT ALL PRIVILEGES ON hive.\* TO 'hive'@'%' IDENTIFIED BY 'hive' WITH GRANT OPTION;  Query OK, 0 rows affected (0.00 sec)  mysql> GRANT ALL PRIVILEGES ON hive.\* TO 'hive'@'hdp1' IDENTIFIED BY 'hive' WITH GRANT OPTION;  Query OK, 0 rows affected (0.00 sec)  mysql> FLUSH PRIVILEGES;  Query OK, 0 rows affected (0.00 sec) |