HDP2.2安装

# 初始化系统环境

**说明：**

**（1）除了1.13和1.14外，其他步骤在每台机器上都要执行！**

**（2）该部分的内容全部配置完成后，重启机器再进行余下的操作！**

## 1.1、操作系统

CentOS v6.x 64-bit

（1）yum and rpm

（2）scp, curl, unzip, tar, and wget

（3）OpenSSL (v1.01, build 16 or later)

（4）python v2.6

操作系统建议以base 方式安装后，安装Development tools

## 1.2、HOSTS-root

配置机器名称，如node01、node02，……：

hostname -f

hostname <fully.qualified.domain.name>

vi /etc/sysconfig/network

NETWORKING=yes

HOSTNAME=<fully.qualified.domain.name>

vi /etc/hosts

1.2.3.4 <fully.qualified.domain.name>

所有节点的IP HOSTNAME都要配置在这儿。

## 1.3、SSH-hadoop

设置ssh免密码登录：

1、每台机器执行：

ssh-keygen -t rsa -P ''

cat ~/.ssh/id\_rsa.pub >> ~/.ssh/authorized\_keys

chmod 700 ~/.ssh

chmod 600 ~/.ssh/authorized\_keys

2、将主机id\_rsa.pub文件添加到各个从机authorized\_keys中：

scp id\_rsa.pub remoteuser@remoteip：/opt/myfiles

cat /opt/myfiles/id\_rsa.pub >> ~/.ssh/authorized\_keys

## 1.4、JDK-root

Oracle JDK 1.7 64-bit

查找已存在的jdk并卸载：

rpm -qa | grep java

rpm -e --nodeps java-1.6.0-openjdk-devel-1.6.0.0-11.1.13.4.el6.x86\_64

rpm -e --nodeps java-1.6.0-openjdk-1.6.0.0-11.1.13.4.el6.x86\_64

安装jdk：

rpm -ivh jdk-7u80-linux-x64.rpm

配置环境变量：

echo "JAVA\_HOME=/usr/java/latest/" >> /etc/environment

## 1.5、ulimit ---未做

**软限制和硬限制**

ulimit -Sn

ulimit -Hn

If the output is not greater than 10000, run the following command to set it to a suitable default:

ulimit -n 10000

/[etc](http://cpro.baidu.com/cpro/ui/uijs.php?adclass=0&app_id=0&c=news&cf=1001&ch=0&di=128&fv=17&is_app=0&jk=1c8e62053d4667a6&k=etc&k0=etc&kdi0=0&luki=4&n=10&p=baidu&q=csai_cpr&rb=0&rs=1&seller_id=1&sid=a667463d5628e1c&ssp2=1&stid=0&t=tpclicked3_hc&td=1730417&tu=u1730417&u=http%3A%2F%2Fwww%2Eshangxueba%2Ecom%2Fjingyan%2F121578%2Ehtml&urlid=0" \t "_blank)/security/limits.conf

最后增加如下两行记录

\* soft nofile 10000  
\* hard nofile 10000

## 1.6、NTP-root

网络时间同步

chkconfig --list ntpd

chkconfig ntpd on

service ntpd start

## 1.7、iptables—root

chkconfig iptables off

/etc/init.d/iptables stop（service iptables stop）

## 1.8、SELinux-root

setenforce 0 （临时生效）

修改 /etc/selinux/config 下的 SELINUX=disabled （重启后永久生效）

## 1.9、PackageKit-root

vi /etc/yum/pluginconf.d/refresh-packagekit.conf（如果无，跳过该步骤）

enabled=0

## 1.10、UMASK

vi /etc/profile

umask 022

## 1.11、THP –大页内存配置

Add the following to the kernel boot line in /etc/grub.conf (this is the preferred method) and reboot the server: transparent\_hugepage=never

Once modified the line will read similar to the following example:

title Oracle Linux Server (2.6.32-300.25.1.el6uek.x86\_64) root (hd0,0) kernel /vmlinuz-2.6.32-300.25.1.el6uek.x86\_64 ro

root=LABEL=/ transparent\_hugepage=never

initrd /initramfs-2.6.32-300.25.1.el6uek.x86\_64.img

## 1.12、yum-plugin-priorities

rpm -ivh yum-plugin-priorities-1.1.30-30.el6.noarch.rpm

vi /etc/yum/pluginconf.d/priorities.conf

[main]

enabled=1

gpgcheck=0

## 1.13、MySQL

查找已安装的mysql并卸载

rpm -qa |grep mysql

rpm -qa |grep mariadb

创建mysql用户及组（可跳过）

groupadd mysql

useradd -r -g mysql mysql

安装mysql

tar –xvf MySQL-5.6.25-1.el6.x86\_64.rpm-bundle.tar –C /opt/mysql

rpm –ivh MySQL-shared-compat-5.6.25-1.el6.x86\_64.rpm\

rpm –ivh MySQL-shared-5.6.25-1.el6.x86\_64.rpm

rpm –ivh MySQL-devel-5.6.25-1.el6.x86\_64.rpm

rpm –ivh MySQL-server-5.6.25-1.el6.x86\_64.rpm

rpm –ivh MySQL-client-5.6.25-1.el6.x86\_64.rpm

rpm –ivh MySQL-embedded-5.6.25-1.el6.x86\_64.rpm

初使化MYSQL及配置密码

1. root@localhost rpm]# service mysql start
2. [root@localhost rpm]# cat /root/.mysql\_secret
3. # The random **password** **set** **for** the root user **at** Wed **Dec** 11 23:32:50 2013 (**local** **time**): qKTaFZnl
4. [root@localhost ~]# mysql -uroot –pqKTaFZnl
5. mysql> **SET** **PASSWORD** = **PASSWORD**('123456');
6. mysql> exit
7. [root@localhost ~]# mysql -uroot -p123456

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

FLUSH PRIVILEGES;

初始化ambari库

CREATE USER 'ambari'@'%' IDENTIFIED BY 'ambari';

GRANT ALL PRIVILEGES ON \*.\* TO 'ambari'@'%';

CREATE USER 'ambari'@'localhost' IDENTIFIED BY 'ambari';

GRANT ALL PRIVILEGES ON \*.\* TO 'ambari'@'localhost';

CREATE USER 'ambari'@'AmbariServerHost' IDENTIFIED BY 'ambari';

GRANT ALL PRIVILEGES ON \*.\* TO 'ambari'@'AmbariServerHost';

FLUSH PRIVILEGES;

CREATE DATABASE `ambari` DEFAULT CHARACTER SET utf8 COLLATE utf8\_general\_ci;

初始化hive库

CREATE USER 'hive'@'%' IDENTIFIED BY 'hive';

GRANT ALL PRIVILEGES ON \*.\* TO 'hive'@'%';

CREATE USER 'hive'@'localhost' IDENTIFIED BY 'hive';

GRANT ALL PRIVILEGES ON \*.\* TO 'hive'@'localhost';

CREATE USER 'hive'@'HiveMetastoreHost' IDENTIFIED BY 'hive';

GRANT ALL PRIVILEGES ON \*.\* TO 'hive'@'HiveMetastoreHost';

FLUSH PRIVILEGES;

Ambari sets up the Hive Metastore database schema automatically.  You do not need to pre-load the Hive Metastore database schema into your MySQL database for a HDP 2.2 Stack.

## 1.14、Base OS Repositories

安装apache并启动

rpm -ivh httpd-tools-2.2.15-45.el6.centos.x86\_64.rpm

rpm -ivh apr-util-ldap-1.3.9-3.el6\_0.1.x86\_64.rpm

rpm -ivh httpd-2.2.15-45.el6.centos.x86\_64.rpm

service httpd start

chkconfig httpd on

cd /var/www/html/

mkdir centos

挂载ISO文件

mount -o loop /opt/my/CentOS-6.6-x86\_64-bin-DVD1.iso /var/www/html/centos

或挂载光盘

mount /dev/cdrom /var/www/html/centos

然后将CentOS-Base.repo中的所有需要网上更新的网址#屏蔽掉启用baseurl为<http://IP/centos>，如下：

#mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=os&infra=$infra

baseurl=http://172.16.227.185/centos

gpgcheck=0

备份所有机器CentOS-Base.repo

mv CentOS-Base.repo CentOS-Base.repo.bak

将上面修改后的文件分发到各个机器的/etc/yum.repos.d/

# 二、本地YUM库

## 2.1、软件下载

1、Ambari 2.0.1 Tarball Links:

http://public-repo-1.hortonworks.com/ambari/centos6/2.x/

updates/2.0.1/ambari-2.0.1-centos6.tar.gz

2、Ambari 2.0.1 Repository File Links:

http://public-repo-1.hortonworks.com/ambari/centos6/2.x/

updates/2.0.1/ambari.repo

3、HDP 2.2 Tarball links:

http://public-repo-1.hortonworks.com/HDP/centos6/

HDP-2.2.6.0-centos6-rpm.tar.gz

http://public-repo-1.hortonworks.com/HDP-UTILS-1.1.0.20/

repos/centos6/HDP-UTILS-1.1.0.20-centos6.tar.gz

4、HDP 2.2 Repository File Links:

http://public-repo-1.hortonworks.com/HDP/centos6/2.x/

updates/2.2.6.0/hdp.repo

## 2.2、搭建本地库

cd /var/www/html/

tar –xvf ambari-2.0.1-centos6.tar.gz

mkdir hdp

tar –xvf HDP-2.2.6.0-centos6-rpm.tar.gz –C ./hdp

tar –xvf HDP-UTILS-1.1.0.20-centos6.tar.gz –C ./hdp

URLs for a Local Repository

Ambari Base URL http://<web.server>/ambari-2.0.1/centos6

HDP Base URL http://<web.server>/hdp/HDP/centos6/2.x/updates/2.2.6.0

HDP-UTILS Base URL http://<web.server>/hdp/HDP-UTILS-1.1.0.20/repos/centos6

必须保证以上URL可以访问！

## 2.3、ambari.repo

[Updates-ambari-2.0.1]

name=ambari-2.0.1 - Updates

baseurl= http://<web.server>/ambari-2.0.1/centos6

gpgcheck=0

gpgkey=http://public-repo-1.hortonworks.com/ambari/centos6/RPM-GPG-KEY/RPM-GPG-KEY-Jenkins

enabled=1

priority=1

复制ambari.repo 文件到/etc/yum.repos.d/

yum clean all

# 三、安装Ambari

## 3.1、install ambari

首先安装PostgreSQL，否则ambari-server将无法通过依赖检查。

(如果配置了1.14节的内容，不需要手动安装PostgreSQL)

rpm -ivh postgresql-libs-8.4.20-3.el6\_6.x86\_64.rpm

rpm -ivh postgresql-8.4.20-3.el6\_6.x86\_64.rpm

rpm -ivh postgresql-server-8.4.20-3.el6\_6.x86\_64.rpm

yum install ambari-server

This also installs the default PostgreSQL Ambari database.

Enter y when prompted to to confirm transaction and dependency checks.

## 3.2、setup ambari

copy mysql jdbc driver to /usr/share/java/

ambari-server setup

Select a JDK version to download. Enter 3 input JAVA HOME PATH

select y use an existing PostgreSQL, MySQL or Oracle database with Ambari

Select n at Enter advanced database configuration to use the default,

embedded PostgreSQL database for Ambari. The default PostgreSQL database name is ambari. The default user name and password are ambari/bigdata

ambari库建表：

mysql -uroot -ppassword

USE ambari;

SOURCE /var/lib/ambari-server/resources/Ambari-DDL-MySQL-CREATE.sql;

## 3.3、start ambari

1、Run the following command on the Ambari Server host:

ambari-server start

2、To check the Ambari Server processes:

ambari-server status

3、To stop the Ambari Server:

ambari-server stop

# 四、安装HDP

## 4.1、登录ambari

http://<your.ambari.server>:8080

username/password: admin/admin

## 4.2、安装HDP

choose “Launch Install Wizard”-> Name Your Cluster -> select the HDP 2.2；

choose “Advanced Repository Options”，configuring a local repository location。

## 4.3、Hive

指定Hive库时如果测试连接不成功，执行如下命令：

ambari-server setup --jdbc-db=mysql --jdbc-driver=/usr/share/java/mysql-connector-java-5.1.35-bin.jar