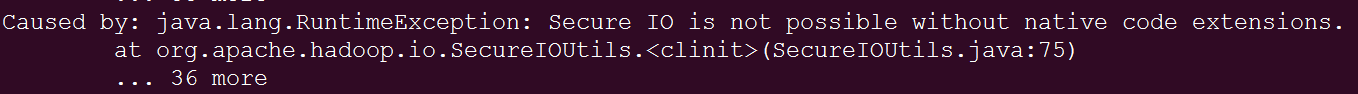
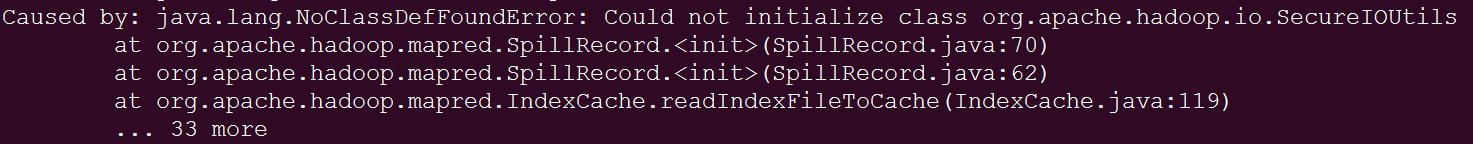
# Hadoop编译

编译方法见相关编译文档



# 出现的问题





启用kerberos要用编译包含native的版本

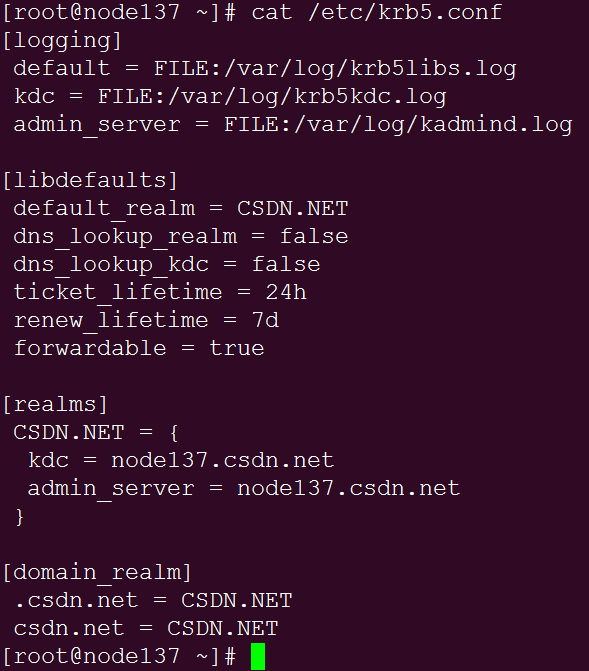
<http://hadoop.apache.org/docs/stable/hadoop-project-dist/hadoop-common/NativeLibraries.html>

# Kerberos安装

## 在KDC节点上安装 krb5-server

yum install -y krb5-server krb5-workstation openldap

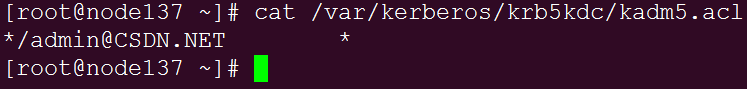
### 配置krb5.conf



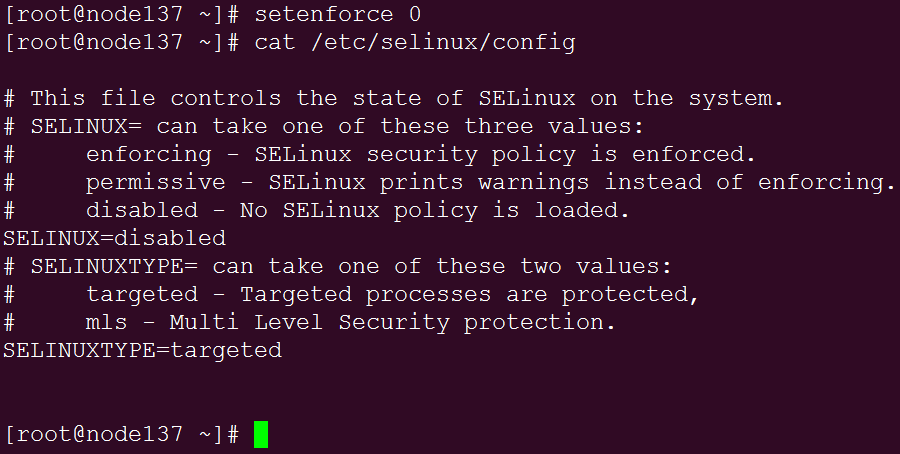
### 配置kdc.conf



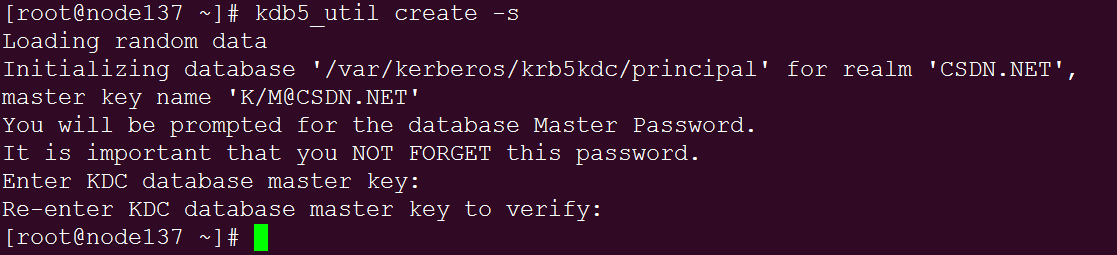
### 配置kadm5.acl



### 关闭SElinux



### 初始化数据库

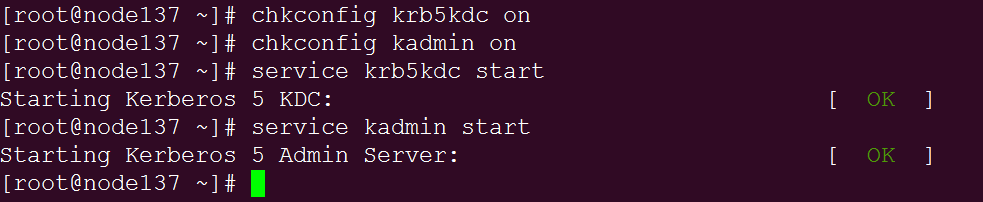


密码：csdn.net

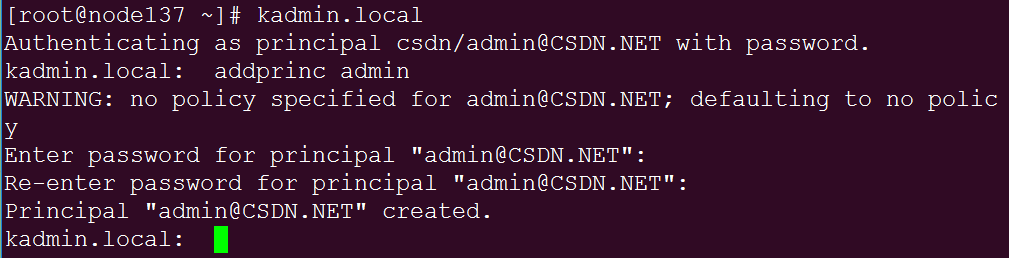
### 启动服务

chkconfig krb5kdc on

chkconfig kadmin on



### 创建管理员用户admin

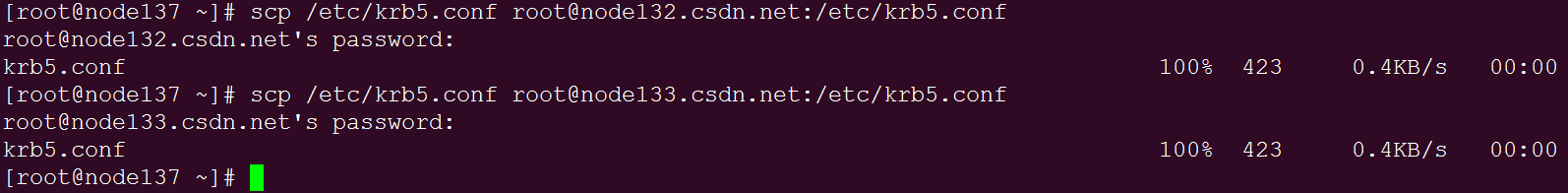


密码：csdn.net

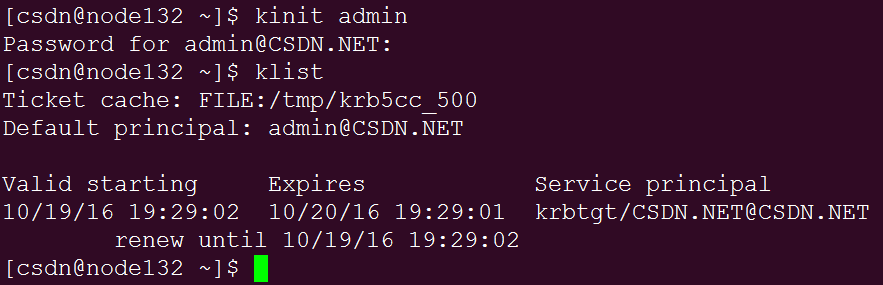
## 在Client节点上安装krb5‐devel、krb5‐workstation

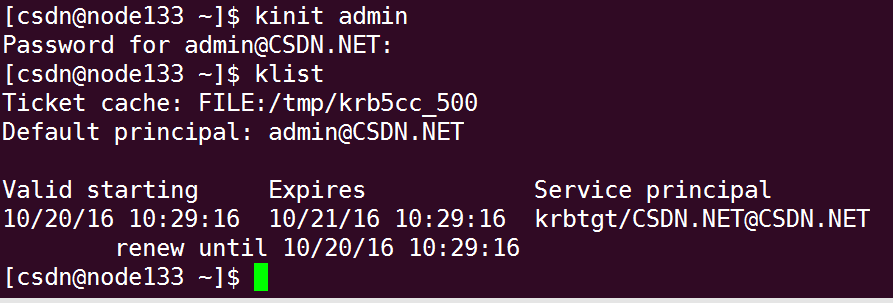
yum install krb5-devel krb5-workstation –y

### 将server节点的krb5.conf 同步到客户端



### 验证客户端





# HDFS Enable Kerberos

<http://hadoop.apache.org/docs/stable/hadoop-project-dist/hadoop-common/SecureMode.html>

## 创建HDFS用户

kadmin.local -q "addprinc -randkey hdfs/node137.csdn.net@CSDN.NET"

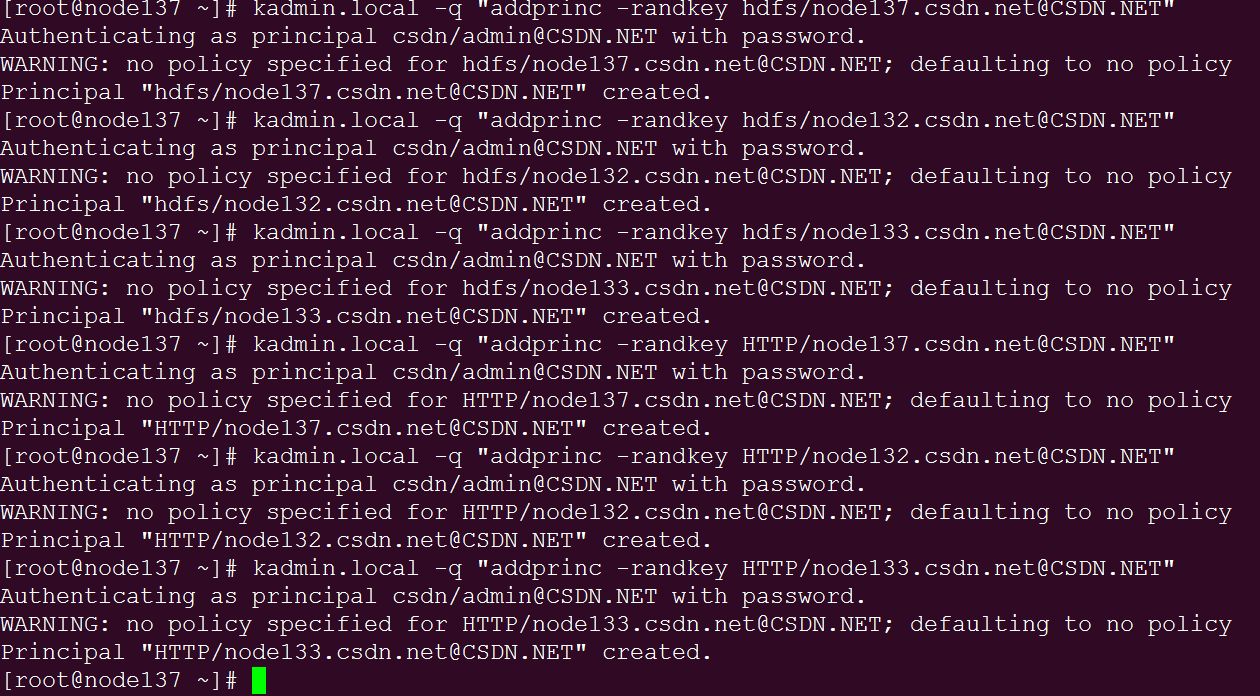
kadmin.local -q "addprinc -randkey hdfs/node132.csdn.net@CSDN.NET"

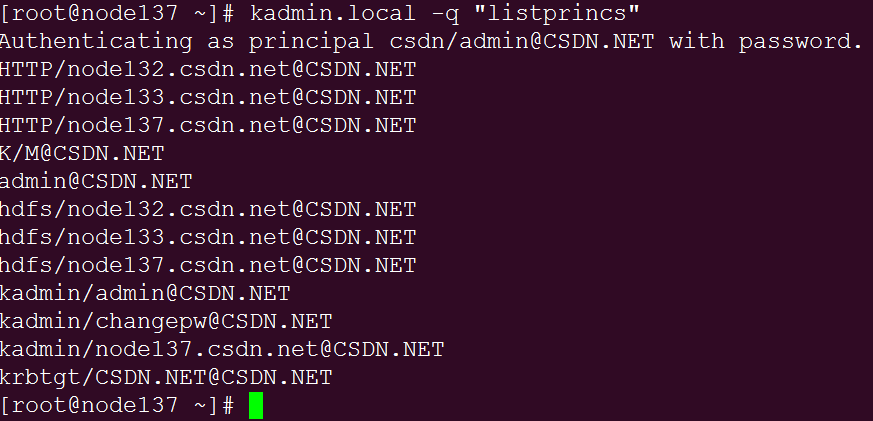
kadmin.local -q "addprinc -randkey hdfs/node133.csdn.net@CSDN.NET"

kadmin.local -q "addprinc -randkey HTTP/node137.csdn.net@CSDN.NET"

kadmin.local -q "addprinc -randkey HTTP/node132.csdn.net@CSDN.NET"

kadmin.local -q "addprinc -randkey HTTP/node133.csdn.net@CSDN.NET"





## 生成keytab文件

[root@node137 kerberos]# bash generate\_hdfs\_ktb.sh CSDN.NET

kadmin.local -q "xst -k hdfs.service.keytab hdfs/node132.csdn.net@CSDN.NET"

scp hdfs.service.keytab root@node132.csdn.net:/etc/security/keytabs/

kadmin.local -q "xst -k hdfs.service.keytab hdfs/node133.csdn.net@CSDN.NET"

scp hdfs.service.keytab root@node133.csdn.net:/etc/security/keytabs/

kadmin.local -q "xst -k hdfs.service.keytab hdfs/node137.csdn.net@CSDN.NET"

scp hdfs.service.keytab root@node137.csdn.net:/etc/security/keytabs/

## 安装JSVC

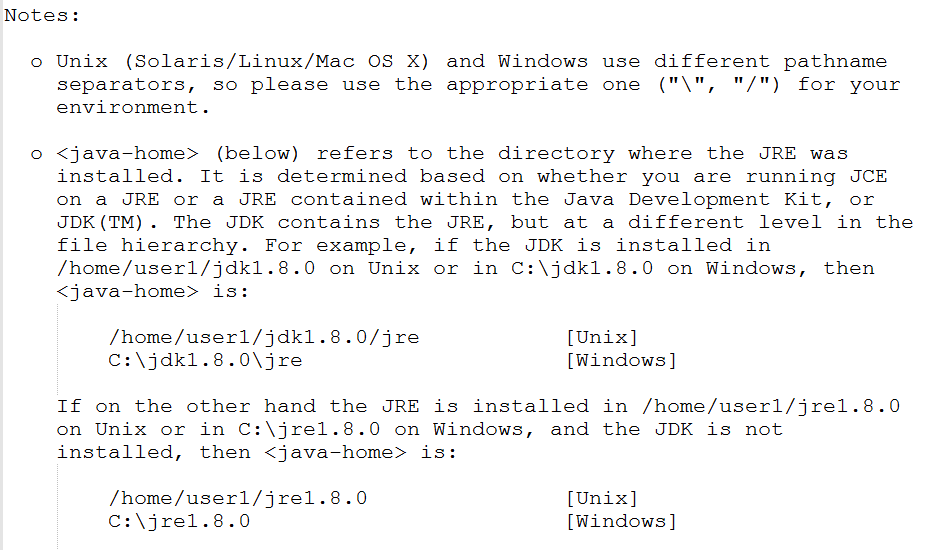
wget <https://archive.cloudera.com/cdh5/redhat/6/x86_64/cdh/cloudera-cdh5.repo>

yum -y install bigtop-utils bigtop-jsvc

## 安装JCE

将jce解压出的jar文件复制到$JAVA\_HOME/jre/lib/security/路径下

#unzip -o -j -q jce\_policy-8.zip -d $JAVA\_HOME/jre/lib/security/



## 配置hadoop-env.sh

export HADOOP\_SECURE\_DN\_USER=hdfs

export HADOOP\_SECURE\_DN\_PID\_DIR=/var/run/hadoop-hdfs

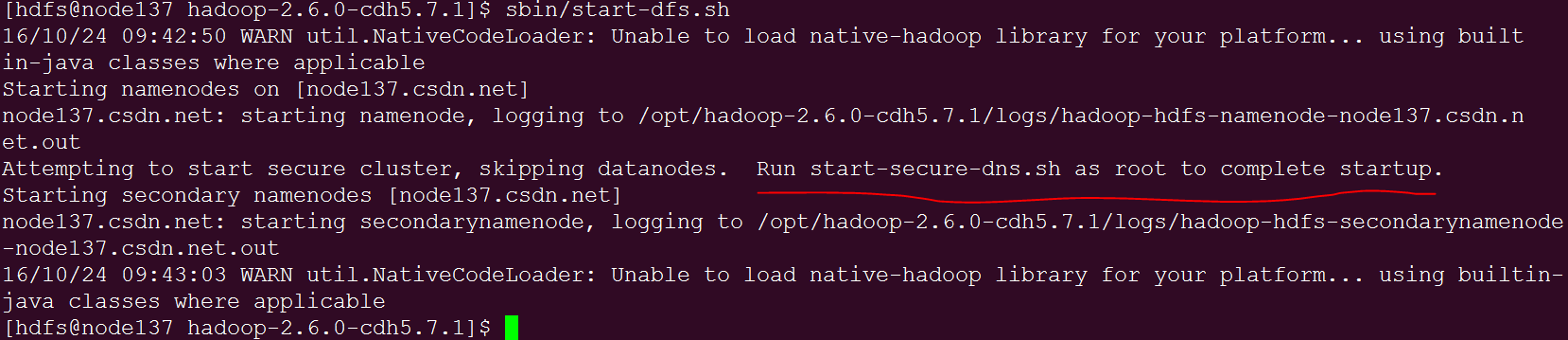
export HADOOP\_SECURE\_DN\_LOG\_DIR=/var/log/hadoop-hdfs

export JSVC\_HOME=/usr/lib/bigtop-utils

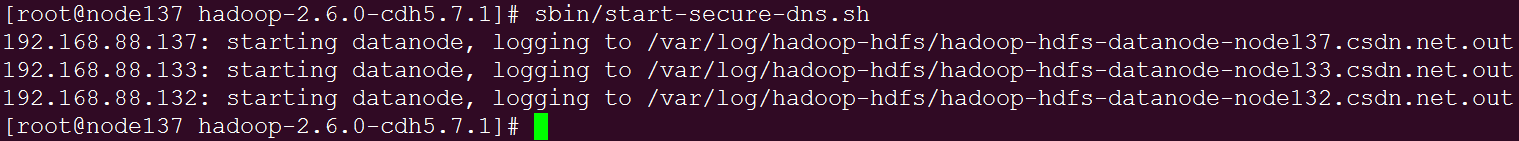
## 配置core-site.xml

## 配置hdfs-site.xml

## 启动NameNode（HDFS用户）



## 启动DataNode（root用户）



# Yarn Enable Kerberos

<http://hadoop.apache.org/docs/stable/hadoop-project-dist/hadoop-common/SecureMode.html#NodeManager>

# 常见问题

## kinit: Ticket expired while renewing credentials

<http://www.cnblogs.com/xiaodf/p/5968178.html>

<http://blog.csdn.net/wulantian/article/details/42173095>

在realms中添加 max\_renewable\_life 和default\_principal\_flags

[realms]

CLOUDERA = {

kdc = quickstart.cloudera

admin\_server = quickstart.cloudera

max\_renewable\_life = 7d 0h 0m 0s

default\_principal\_flags = +renewable

}

## java.lang.IllegalArgumentException:Server has invalid Kerberos principal

<http://www.aichengxu.com/php/2490371.htm>

## javax.security.sasl.SaslException: GSS initiate failed [Caused by GS\*\*\*ception: Failure unspecified at GSS-API level (Mechanism level: Encryption type AES256 CTS mode with HMAC SHA1-96 is not supported/enabled)]

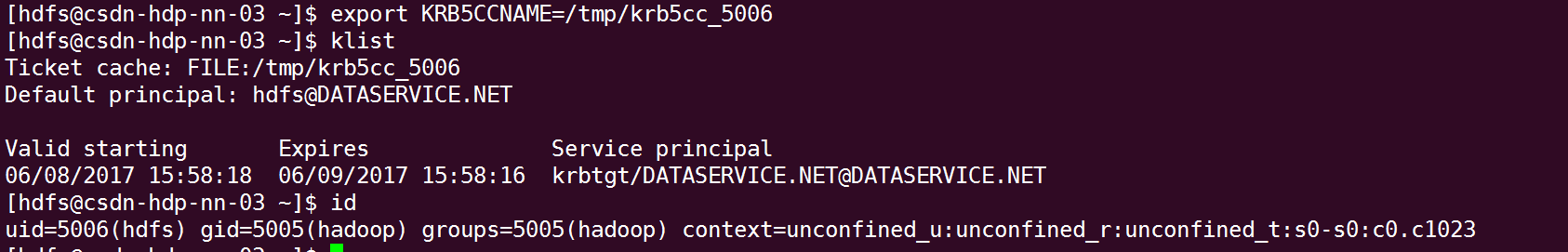
安装JCE 到 JAVA\_HOME/lib/security

http://blog.csdn.net/wulantian/article/details/42173095

## org.apache.hadoop.security.AccessControlException: Access denied for user dn. Superuser privilege is required

<http://www.datastart.cn/tech/2016/06/07/kerberos-1.html>

## javax.security.sasl.SaslException: GSS initiate failed [Caused by GSSException: No valid credentials provided (Mechanism level: Failed to find any Kerberos tgt)]



其中/tmp/krb5cc\_5006就是ticket cache file, 5006表示hadoop帐号的uid，默认会读取

用户也可以通过设置export KRB5CCNAME= /tmp/krb5cc\_5006来指定ticket cache路径

用完之后可以kdestroy销毁掉该ticket cache

如果本地没有ticket cache，会报如下错误

13/09/11 16:21:35 ERROR security.UserGroupInformation: PriviledgedActionException as:hadoop (auth:KERBEROS) cause:java.io.IOException: javax.security.sasl.SaslException: GSS initiate failed [Caused by GSSException: No valid credentials provided (Mechanism level: Failed to find any Kerberos tgt)]