原 HADOOP重新编译

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Hadoop2.4.0 重新编译 64 位本地库

环境：虚拟机 VirtualBox，操作系统 64 位 CentOS 6.4
下载重新编译需要的软件包
apache-ant-1.9.4-bin.tar.gz
findbugs-3.0.0.tar.gz
protobuf-2.5.0.tar.gz
apache-maven-3.0.5-bin.tar.gz
下载 hadoop2.4.0 的源码包
hadoop-2.4.0-src.tar.gz
压解源码包
[grid@hadoopMaster01 ~]$ tar -zxvf hadoop-2.4.0-src.tar.gz
安装编译所需软件
安装 MAVEN
压解 apache-maven-3.0.5-bin.tar.gz 到/opt/目录
[root@hadoopMaster01 grid]# tar -zxvf apache-maven-3.0.5-bin.tar.gz -C /opt/
修改/etc/profile 配置，增加 MAVEN 环境配置M2_HOME PATH
保存后使用 source /etc/profile 使修改配置即时生效
[root@hadoopMaster01 apache-maven-3.0.5]# source /etc/profile
使用 mvn -v 命令进行验证，如图所示表示安装配置成功
安装 ANT
压解 apache-ant-1.9.4-bin.tar.gz 到/opt/目录
[root@hadoopMaster01 grid]# tar -zxvf apache-ant-1.9.4-bin.tar.gz -C /opt/
修改/etc/profile 配置，增加 ANT 环境配置 ANT_HOME PATH
保存后使用 source /etc/profile 使修改配置即时生效
[root@hadoopMaster01 apache-ant-1.9.4]# source /etc/profile
使用 ant-version 命令进行验证，如图所示表示安装配置成功
安装 FINDBUGS检测代码质量
压解 findbugs-3.0.0.tar.gz 到/opt/目录
[root@hadoopMaster01 grid]# tar -zxvf findbugs-3.0.0.tar.gz -C /opt/
修改/etc/profile 配置，增加 FINDBUGS 环境配置
保存后使用 source /etc/profile 使修改配置即时生效
[root@hadoopMaster01 apache-ant-1.9.4]# source /etc/profile
使用 findbugs-version 命令进行验证，如图所示表示安装配置成功
安装 PROTOBUF跨平台序列化框架
编译 Hadoop 2.4.0，需要 protobuf 的编译器protoc，一定要是 protobuf 2.5.0 以上
直接压解 protobuf-2.5.0.tar.gz
[root@hadoopMaster01 grid]# tar -zxvf protobuf-2.5.0.tar.gz
安装 protobuf，依次执行如下命令
[root@hadoopMaster01 grid]# cd protobuf-2.5.0
[root@hadoopMaster01 protobuf-2.5.0]# ls
aclocal.m4 config.guess configure COPYING.txt examples

install-sh ltmain.sh Makefile.in protobuf.pc.in src
autogen.sh config.h.in configure.ac depcomp generate_descriptor_proto.sh
INSTALL.txt m4 missing python vsprojects
CHANGES.txt config.sub CONTRIBUTORS.txt editors gtest
java Makefile.am protobuf-lite.pc.in README.txt
[root@hadoopMaster01 protobuf-2.5.0]# ./configure
[root@hadoopMaster01 protobuf-2.5.0]# make
[root@hadoopMaster01 protobuf-2.5.0]# make check
[root@hadoopMaster01 protobuf-2.5.0]# make install
使用 protoc --version 命令进行验证，如图所示表示安装配置成功
安装 依赖包
安装 cmake,openssl-devel,ncurses-devel 依赖包(root 用户且能够连上互联网)
[root@hadoopMaster01 ~]# yum install cmake
如下图表示安装成功
[root@hadoopMaster01 ~]# yum install openssl-devel
如下图表示安装成功
[root@hadoopMaster01 ~]# yum install ncurses-devel
如下图表示依赖包系统中已经安装并且为最新版本
编译 64 位本地库
进入已压解的 hadoop 源码目录
[grid@hadoopMaster01 ~]$ cd hadoop-2.4.0-src
[grid@hadoopMaster01 hadoop-2.4.0-src]$ pwd
/home/grid/hadoop-2.4.0-src
执行 mvn cleaninstall -DskipTests 命令，等待完成(会自动联网下载很多东西)
[grid@hadoopMaster01 hadoop-2.4.0-src]$ mvn clean install -DskipTests
执行 mvn package -Pdist,native -DskipTests -Dtar 命令，开始编译，等待完成
grid@hadoopMaster01 hadoop-2.4.0-src]$ mvn package -Pdist,native -DskipTests -Dtar
出现如下信息
[INFO] --
[INFO] Reactor Summary:
[INFO]
[INFO] Apache Hadoop Main ..... SUCCESS[6.304s]
[INFO] Apache Hadoop Project POM ..... SUCCESS [26.555s]
[INFO] Apache Hadoop Annotations ..... SUCCESS[2.757s]
[INFO] Apache Hadoop Assemblies ..... SUCCESS [0.216s]
[INFO] Apache Hadoop Project Dist POM ..... SUCCESS [19.592s]
[INFO] Apache Hadoop Maven Plugins ..... SUCCESS [2.715s]
[INFO] Apache Hadoop MiniKDC ..... SUCCESS [2.360s]
[INFO] Apache Hadoop Auth ..... SUCCESS [2.950s]
[INFO] Apache Hadoop Auth Examples ..... SUCCESS[2.119s]
[INFO] Apache Hadoop Common ..... SUCCESS [1:22.302s]
[INFO] Apache Hadoop NFS ..... SUCCESS [5.095s]
[INFO] Apache Hadoop Common Project..... SUCCESS [0.026s]
[INFO] Apache Hadoop HDFS ..... SUCCESS [2:06.178s]
[INFO] Apache Hadoop HttpFS ..... SUCCESS [1:09.142s]
[INFO] Apache Hadoop HDFS BookKeeper Journal ..... SUCCESS [14.457s]
[INFO] Apache Hadoop HDFS-NFS .....SUCCESS [2.859s]

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[INFO] Apache Hadoop HDFS Project ..... SUCCESS [0.030s]
[INFO] hadoop-yarn ..... SUCCESS [0.029s]
[INFO] hadoop-yarn-api ..... SUCCESS [59.010s]
[INFO] hadoop-yarn-common ..... SUCCESS [20.743s]
[INFO] hadoop-yarn-server ..... SUCCESS[0.026s]
[INFO] hadoop-yarn-server-common ..... SUCCESS [7.344s]
[INFO] hadoop-yarn-server-nodemanager ..... SUCCESS [11.726s]
[INFO] hadoop-yarn-server-web-proxy ..... SUCCESS [2.508s]
[INFO] hadoop-yarn-server-applicationhistoryservice ..... SUCCESS [4.041s]
[INFO] hadoop-yarn-server-resourcemanager ..... SUCCESS [10.370s]
[INFO] hadoop-yarn-server-tests ..... SUCCESS [0.374s]
[INFO] hadoop-yarn-client ..... SUCCESS [4.791s]
[INFO] hadoop-yarn-applications ..... SUCCESS [0.025s]
[INFO] hadoop-yarn-applications-distributedshell ..... SUCCESS [2.242s]
[INFO] hadoop-yarn-applications-unmanaged-am-launcher .... SUCCESS [1.553s]
[INFO] hadoop-yarn-site ..... SUCCESS [0.024s]
[INFO] hadoop-yarn-project ..... SUCCESS [3.261s]
[INFO] hadoop-mapreduce-client ..... SUCCESS [0.082s]
[INFO] hadoop-mapreduce-client-core ..... SUCCESS [18.549s]
[INFO] hadoop-mapreduce-client-common ..... SUCCESS [13.772s]
[INFO] hadoop-mapreduce-client-shuffle ..... SUCCESS [2.441s]
[INFO] hadoop-mapreduce-client-app ..... SUCCESS [6.866s]
[INFO] hadoop-mapreduce-client-hs ..... SUCCESS [6.280s]
[INFO] hadoop-mapreduce-client-jobclient .....SUCCESS [3.510s]
[INFO] hadoop-mapreduce-client-hs-plugins ..... SUCCESS [1.725s]
[INFO] Apache Hadoop MapReduce Examples ..... SUCCESS [4.641s]
[INFO] hadoop-mapreduce ..... SUCCESS[3.002s]
[INFO] Apache Hadoop MapReduce Streaming ..... SUCCESS [3.497s]
[INFO] Apache Hadoop Distributed Copy ..... SUCCESS [5.847s]
[INFO] Apache Hadoop Archives ..... SUCCESS [1.791s]
[INFO] Apache Hadoop Rumen ..... SUCCESS [4.693s]
[INFO] Apache Hadoop Gridmix ..... SUCCESS [3.235s]
[INFO] Apache Hadoop Data Join..... SUCCESS [2.349s]
[INFO] Apache Hadoop Extras ..... SUCCESS [2.488s]
[INFO] Apache Hadoop Pipes ..... SUCCESS [5.863s]
[INFO] Apache Hadoop OpenStack support ..... SUCCESS [3.776s]
[INFO] Apache Hadoop Client ..... SUCCESS [5.235s]
[INFO] Apache Hadoop Mini-Cluster ..... SUCCESS [0.070s]
[INFO] Apache Hadoop Scheduler Load Simulator ..... SUCCESS [3.935s]
[INFO] Apache Hadoop Tools Dist ..... SUCCESS [4.392s]
[INFO] Apache Hadoop Tools ..... SUCCESS [0.022s]
[INFO] Apache Hadoop Distribution ..... SUCCESS [21.274s]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 10:25.147s
[INFO] Finished at: Mon Jul 28 16:09:56 CST 2014
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[INFO] Final Memory: 75M/241M
[INFO] --
表示编译成功
进入/home/grid/hadoop-2.4.0-src/hadoop-dist/target/hadoop-2.4.0/lib/native 检查，使用 file *命令，如下图已经成功将编译 64 本地库
将 64 位的 native 文件夹替换原 32 位的文件夹即可

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