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millicom java & cloudera upgrade

V1.0

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# REVISION

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# Introduction:

This document describes the activities/tasks performed for the Millicom/Tigo

which involves the upgrading of cluster from 5.8.4 to 5.13.1

# Pre-Requisite:

## Upgrading Java from 1.7 to 1.8 (oracle JDK) or higher

### 1.1 Steps for upgrading java 1.8

* Upgrade to Cloudera manager 5.3 or higher if you have not done so.
* Upgrade to CDH 5.3 or higher if you have not done so.
* Stop the Cloudera Management Service.
* Stop all clusters.
* Stop all Cloudera Manager Agents.
* Stop the Cloudera Manager Server.
* On the Cloudera Manager Server host and each cluster host do the following
* wget --no-check-certificate --no-cookies --header "Cookie: oraclelicense=accept-securebackup-cookie" http://download.oracle.com/otn-pub/java/jdk/8u131-b11/d54c1d3a095b4ff2b6607d096fa80163/jdk-8u131-linux-x64.tar.gz
* Untar the file in location /opt/
* JAVA\_HOME environment variable should be set in .bashrc of the designated Bedrock user.
* export JAVA\_HOME=/opt/jdk1.8.0\_131
* export PATH=/opt/jdk1.8.0\_131/bin:${PATH}
* Run the following commands
* source .bashrc
* echo $JAVA\_HOME
* Java -version
* On the Cloudera Manager Server host, configure the location of the JDK in /etc/default/cloudera-scm-server.
* Start the Cloudera Manager Server.
* Start all Cloudera Manager Agents.
* Start all clusters.
* Start the Cloudera Management Service.
* Delete your previous Java version files.

$ cd /tmp

$ wget http://download.oracle.com/otn-pub/java/jdk/8u74-b02/jdk-8u74-linux-x64.tar.gz\?AuthParam\=1458001079\_a6c78c74b34d63befd53037da604746c

$ tar xzf jdk-8u74-linux-x64.tar.gz?AuthParam=1458001079\_a6c78c74b34d63befd53037da604746c

$ sudo mv jdk1.8.0\_74 /opt

$ cd /opt/jdk1.8.0\_74/

$ sudo update-alternatives --install /usr/bin/java java /opt/jdk1.8.0\_91/bin/java 2

$ sudo update-alternatives --config java // select version

$ sudo update-alternatives --install /usr/bin/jar jar /opt/jdk1.8.0\_91/bin/jar 2

$ sudo update-alternatives --install /usr/bin/javac javac /opt/jdk1.8.0\_91/bin/javac 2

$ sudo update-alternatives --set jar /opt/jdk1.8.0\_91/bin/jar

$ sudo update-alternatives --set javac /opt/jdk1.8.0\_74/bin/javac

$ java -version // you should have the updated java

# 

## 2. Upgrading Cloudera Manager from CM 5.8.4 to 5.13.1

## 2.1. Required information before performing the upgrade

* Find out the current version of your Cloudera Manager and Jdk deployed. Go to Support > About
* The version of CDH can be found on the Home page of Cloudera Manager.
* Take a note of your Operating system type and Version.
* Review the [CDH 5 and Cloudera Manager 5 Requirements and Supported Versions](https://www.cloudera.com/documentation/enterprise/latest/topics/rn_consolidated_pcm.html#xd_583c10bfdbd326ba--5a52cca-1476e7473cd--7f8d) for the new versions you are upgrading to
* <https://www.cloudera.com/documentation/enterprise/latest/topics/rn_consolidated_pcm.html#xd_583c10bfdbd326ba--5a52cca-1476e7473cd--7f8d>
* Read the [Cloudera Manager 5 Release Notes](http://www.cloudera.com/documentation/enterprise/release-notes/topics/rg_release_notes_cm.html).
* Back up Cloudera Manager Databases
* Stop the Cloudera Management Service
  + Select Clusters -> Cloudera Management Service
  + Select Actions -> Stop
* To locate the information of Databases for Cloudera manager server go to /etc/cloudera-scm-server/db.properties file.
* For remaining services Databases information go to Clusters > Cloudera Management Service > Configuration and select the Database category.
* Obtain the required passwords from your Database Administrator
* Stop Cloudera Manager Server and Agent on the host that is running that is running the above services
* Service cloudera-scm-server stop
* Service cloudera-scm-agent stop
* Back up the following directories
* /etc/cloudera-scm-server
* /etc/cloudera-scm-agent
* Commands for backing up the Databases:
  + mysqldump -hhostname -uamon -p amon > /root/backup/database-backup.amon
  + mysqldump -hhostname -urman -p rman > /root/backup/database-backup.rman
  + mysqldump -hhostname -unavms -p navms > /root/backup/databackup.navms
  + mysqldump -hhostname -unav -p nav > /root/backup/databackup.nav
* Back up the current repo from /etc/yum.repos.d/
* Update the Cloudera manager.repo file with the latest repo in  /etc/yum.repos.d/  on Cloudera manager server also all of your agents to enable them to find the packages that you are hosting.
* Run the following command to clean the cache directories and upgrade the software:
  + sudo yum clean all
  + sudo yum upgrade cloudera-manager-server cloudera-manager-daemons cloudera-manager
* verify that you now have the following packages, corresponding to the version of Cloudera Manager you installed, by running the following command:
  + rpm -qa 'cloudera-manager-\*'

cloudera-manager-server-5.13.0-0.cm5130.p0.38.el6.x86\_64

cloudera-manager-agent-5.13.0-0.cm5130.p0.38.el6.x86\_64

cloudera-manager-daemons-5.13.0-0.cm5130.p0.38.el6.x86\_64

* + service cloudera-scm-server start
  + Service coudera-Scm-agent start
* Login to the Cloudera Manager console
* Upgrade Agents when prompted to and give the internal repo URL link and start the upgrade
* The Host inspector verifies the current Agent versions with CM version and everything is matched then it prompts to Continue and Finish.
* To verify the upgrade go to Hosts tab and click inspect all hosts and Verify the last heartbeat for each host has occurred within one minute.

## Upgrading CDH from 5.8.4 to 5.13.1

### Steps for upgrading java 1.8

* Go to CM UI and stop all the services
* For performing the CDH upgrade you will need to take the following backups
  + mysqldump -hhostname -uhive -p metastore > /root/backup/metasotre-backup.sql -hive
* mysqldump -hhostname -uhue -pLiverp00l2015 hue > /root/backup/hue-backup.sql -hue
* oozie server uses derby database go to /var/lib/oozie/data/seg0 whole directory -oozie
* mysqldump -hhostname -usentry -p sentry > /root/backup/sentry-backup.sql -sentry
* Namenode directory backup & Journal nodes directories
* krb5.conf, sssd.conf, nscd.conf
* On Home tab you will find Upgrade cluster and then the wizard will prompt to perform steps accordingly and on the Home tab you will be able to see the new CDH parcels as 5.10.1
* Smoke test the cluster by running some sample Map reduce jobs, Hive queries and Spark jobs to see if all the services are running as expected

# References:

1. https://www.cloudera.com/documentation/enterprise/latest/topics/cm\_ag\_ug\_cm5.html#concept\_gs4\_bsg\_xw
2. <https://www.cloudera.com/documentation/enterprise/latest/topics/cdh_cm_upgrading_to_jdk8.html#xd_583c10bfdbd326ba-590cb1d1-149e9ca9886--7c46>
3. <https://www.cloudera.com/documentation/enterprise/latest/topics/cdh_ig_jdk_installation.html>
4. <http://www.oracle.com/technetwork/java/javase/downloads/java-archive-javase8-2177648.html>