# Spark Clusters Install

## Install Scala ( Master )

　　# 安裝Scala

**cd /tmp; wget** [**https://downloads.lightbend.com/scala/2.11.8/scala-**](https://downloads.lightbend.com/scala/2.11.8/scala-)

**2.11.8.tgz**

**tar zxvf /tmp/scala-2.11.8.tgz**

**mv /tmp/scala-2.11.8 /opt**

　　# 建立軟連結

**ln -s /opt/scala-2.11.8 /opt/scala**

　　# 變更環境變數

**vi /etc/profile**

**export SCALA\_HOME=/opt/scala**

**export PATH=$SCALA\_HOME/bin:$PATH**

　　# 重啟

**source /etc/profile**

　　# 查看 Scala 版本，確認是否安裝成功

**scala -version**

　　# 複製檔案至 Slaver1, Slaver2

**scp -rp /opt/scala-2.11.8/ root@slaver1:/opt/scala-2.11.8**

**scp -rp /opt/scala-2.11.8/ root@slaver2:/opt/scala-2.11.8**

**scp -rp /etc/profile root@slaver1:/etc/profile**

**scp -rp /etc/profile root@slaver2:/etc/profile**

　　# 建立軟連結 ( 在 Slaver1, Slaver2 做 )

**ln -s /opt/scala-2.11.8 /opt/scala**

## Install spark-2.3.1-bin-hadoop2.7 ( Master )

　　# 安裝 spark-2.3.1-bin-hadoop2.7

**cd /tmp; wget** [**https://archive.apache.org/dist/spark/spark-**](https://archive.apache.org/dist/spark/spark-)

**2.3.1/spark-2.3.1-bin-hadoop2.7.tgz**

**tar zxvf /tmp/spark-2.3.1-bin-hadoop2.7.tgz**

**mv /tmp/spark-2.3.1-bin-hadoop2.7 /opt**

　　# 變更環境變數

**vi /etc/profile**

**export SPARK\_HOME=/opt/spark-2.3.1-bin-hadoop2.7**

**export PATH=$SPARK\_HOME/bin:$PATH**

**export PYSPARK\_PYTHON=python3**

**export PYSPARK\_DRIVER\_PYTHON=ipython3**

　　# 重啟

**source /etc/profile**

　　# 建立 Slaver 資訊

**/opt/spark-2.3.1-bin-hadoop2.7/conf/slaves**

**加入**

**master**

**slaver1**

**slaver2**

　　# 複製檔案至 Saver1, Slaver2

**scp -rp /opt/spark-2.3.1-bin-hadoop2.7/ root@slaver1:/opt/spark-**

**2.3.1-bin-hadoop2.7**

**scp -rp /opt/spark-2.3.1-bin-hadoop2.7/ root@slaver2:/opt/spark-**

**2.3.1-bin-hadoop2.7**

**scp -rp /etc/profile root@slaver1:/etc/profile**

**scp -rp /etc/profile root@slaver2:/etc/profile**

　　# 查看 Spark 版本，確認是否安裝成功

**which spark-submit**

## Other settings ( Every server )

　　# 建立軟連結 ( !!!在每台電腦做!!! )

**ln -s /usr/bin/python3 /usr/bin/python**

**ln -s /usr/bin/pip3 /usr/bin/pip**

## Start Spark Clusters

　　# Start the spark cluster

**cd /opt/spark-2.3.1-bin-hadoop2.7/sbin**

**./start-all.sh**

## Reboot

　　# 啟動 Zookeeper, Journalnode ( !!!在每台電腦做!!! )

**/opt/zookeeper/bin/zkServer.sh start**

**hadoop-daemon.sh start journalnode**

　　# 啟動HDFS ( 在 Master 做 )

**start-all.sh**

　　# 啟動 Spark

**cd /opt/spark-2.3.1-bin-hadoop2.7/sbin**

**./start-all.sh**

## Success

