

# 二、HBase 安裝說明

# 安裝

需先安裝過 Hadoop...

```
$ wget
```

```
http://ftp.twaren.net/Unix/Web/apache/hadoop/hbase/hbase-0.20.6/hbase-0.20.6.tar.gz
```

```
$ sudo tar -zxvf hbase-*.tar.gz -C /opt/
```

```
$ sudo ln -sf /opt/hbase-0.20.6 /opt/hbase
```

```
$ sudo chown -R $USER:$USER /opt/hbase
```

# 系統環境設定

```
$ vim /opt/hbase/conf/hbase-env.sh
```

## # 基本設定

```
export JAVA_HOME=/usr/lib/jvm/java-6-sun
export HADOOP_HOME=/opt/hadoop
export HBASE_HOME=/opt/hbase
export HBASE_LOG_DIR=/var/hadoop/hbase-logs
export HBASE_PID_DIR=/var/hadoop/hbase-pids
export HBASE_CLASSPATH=$HBASE_CLASSPATH:/opt/hadoop/conf
```

## # 叢集選項

```
export HBASE_MANAGES_ZK=true
```

# 服務參數設定

```
<configuration>
  <property>
    <name> name </name>
    <value> value </value>
  </property>
</configuration>
```

Name	value
hbase.rootdir	hdfs://localhost:9000/hbase
hbase.tmp.dir	/var/hadoop/hbase- $\{user.name\}$
hbase.cluster.distributed	true
hbase.zookeeper.property .clientPort	2222
hbase.zookeeper.quorum	Host1, Host2
hbase.zookeeper.property .dataDir	/var/hadoop/hbase-data

# 停止與啟動服務

需先啟動 Hadoop...

- 全部啟動/關閉

```
$ bin/start-hbase.sh
```

```
$ bin/stop-hbase.sh
```

- 個別啟動/關閉

```
$ bin/hbase-daemon.sh start/stop zookeeper
```

```
$ bin/hbase-daemon.sh start/stop master
```

```
$ bin/hbase-daemon.sh start/stop regionserver
```

```
$ bin/hbase-daemon.sh start/stop thrift
```

```
$ bin/hbase-daemon.sh start/stop rest
```

# 測試

```
$ hbase shell
```

```
> create 'test', 'data'
```

```
0 row(s) in 4.3066 seconds
```

```
> list
```

```
test
```

```
1 row(s) in 0.1485 seconds
```

```
> put 'test', 'row1', 'data:1',  
      'value1'
```

```
0 row(s) in 0.0454 seconds
```

```
> put 'test', 'row2', 'data:2',  
      'value2'
```

```
0 row(s) in 0.0035 seconds
```

```
> put 'test', 'row3', 'data:3',  
      'value3'
```

```
0 row(s) in 0.0090 seconds
```

```
> scan 'test'
```

```
ROW COLUMN+CELL
```

```
row1 column=data:1, timestamp=1240148026198,  
      value=value1
```

```
row2 column=data:2, timestamp=1240148040035,  
      value=value2
```

```
row3 column=data:3, timestamp=1240148047497,  
      value=value3
```

```
3 row(s) in 0.0825 seconds
```

```
> disable 'test'
```

```
09/04/19 06:40:13 INFO client.HBaseAdmin: Disabled test
```

```
0 row(s) in 6.0426 seconds
```

```
> drop 'test'
```

```
09/04/19 06:40:17 INFO client.HBaseAdmin: Deleted test
```

```
0 row(s) in 0.0210 seconds
```

```
> list
```

```
0 row(s) in 2.0645 seconds
```

# 連線到 HBase 的方法

- Java client
  - ◆ *get(byte [] row, byte [] column, long timestamp, int versions);*
- Non-Java clients
  - ◆ Thrift server hosting HBase client instance
- Sample ruby, c++, & java (via thrift) clients
  - ◆ REST server hosts HBase client
- TableInput/OutputFormat for MapReduce
  - ◆ HBase as MR source or sink
- HBase Shell
  - ◆ JRuby IRB with “DSL” to add get, scan, and admin
  - ◆ *./bin/hbase shell YOUR\_SCRIPT*