老师，我没有使用Ambari安装spark，而是自己独立下载安装包安装的。
共有4个节点h1,h2,h3,h4

具体版本

```
[ian@h1 ~]$ java -version
openjdk version "1.8.0_171"
OpenJDK Runtime Environment (build 1.8.0_171-b10)
OpenJDK 64-Bit Server VM (build 25.171-b10, mixed mode)
```

```
[ian@h1 ~]$ hadoop version
Hadoop 2.7.6
Subversion https://shv@git-wip-us.apache.org/repos/asf/hadoop.git -r 085099c66cf28be31604560c376fa282e69282b8
Compiled by kshvachk on 2018-04-18T01:33Z
Compiled with protoc 2.5.0
From source with checksum 71e2695531cb3360ab74598755d036
This command was run using /home/ian/installed/hadoop/share/hadoop/common/hadoop-common-2.7.6.jar
```

每个节点上的进程

```
[ian@h1 ~]$ jps
39681 Jps
389920 QuorumPeerMain
37574 HMaster
36296 NameNode
37870 HRegionServer
16272 SparkSubmit
15733 SparkSubmit
19672 SparkSubmit
38520 Master
22523 Main
36987 ResourceManager
36637 SecondaryNameNode
14271 SparkSubmit
```

```
[ian@h2 ~]$ jps
337460 NodeManager
337844 HRegionServer
286591 QuorumPeerMain
338569 Worker
339113 Jps
337272 DataNode
338120 HMaster
```

```
[ian@h3 ~]$ jps
282180 NodeManager
281687 DataNode
282599 HRegionServer
284023 Worker
313431 Jps
70301 QuorumPeerMain
```

```
[ian@h4 ~]$ jps
214769 HRegionServer
70292 QuorumPeerMain
213864 DataNode
216232 Worker
214351 NodeManager
245772 Jps
```

spark Master节点UI截图

Spark Master at spark://h1:7077

URL: spark://h1:7077
REST URL: spark://h1:6066 *(cluster mode)*
Alive Workers: 3
Cores in use: 6 Total, 0 Used
Memory in use: 72.0 GB Total, 0.0 B Used
Applications: 0 Running, 0 Completed
Drivers: 0 Running, 0 Completed
Status: ALIVE

Workers (3)

Worker Id	Address	State	Cores	Memory
worker-20180725181157-10.1.192.119-40841	10.1.192.119:40841	ALIVE	2 (0 Used)	24.0 GB (0.0 B Used)
worker-20180725181158-10.1.192.117-36212	10.1.192.117:36212	ALIVE	2 (0 Used)	24.0 GB (0.0 B Used)
worker-20180725181158-10.1.192.120-36316	10.1.192.120:36316	ALIVE	2 (0 Used)	24.0 GB (0.0 B Used)

Running Applications (0)

Application ID	Name	Cores	Memory per Executor	Submitted Time	User	State	Duration

Completed Applications (0)

Application ID	Name	Cores	Memory per Executor	Submitted Time	User	State	Duration