

0.1. 安装 Storm

第一节 简介

Storm 是一款实时流处理工具，以实时性为特点，其延迟比 Spark Streaming 还要低，为毫秒级。多与 Kafka 等工具结合起来使用。其安装配置需要搭配 Zookeeper 进行。

第二节 安装配置

首先需要修改`storm-env.sh`文件和`storm_env.ini`文件。

storm-env.sh

```
#!/bin/bash
export JAVA_HOME=/opt/java
export STORM_CONF_DIR=/home/zhangyu/storm/conf
```

storm_env.ini

```
# Environment variables in the following section will be used
# in storm python script. They override the environment variables
# set in the shell.
[environment]

# The java implementation to use. If JAVA_HOME is not found we expect
# java to be in path
JAVA_HOME:/opt/java

# JVM options to be used in "storm jar" command
#STORM_JAR_JVM_OPTS:
```

在其中主要配置的是 Java 运行环境。更多的配置更主要需要修改`storm.yaml`文件。

storm.yaml

```
##### These MUST be filled in for a storm configuration
storm.zookeeper.servers:
  - "master"
  - "slave1"
  - "slave2"
```

```
nimbus.seeds: ["slave1", "slave2"]
ui.port: 9090
supervisor.slots.ports:
- 6700
- 6701
- 6702
- 6703
storm.local.dir: "/home/zhangyu/storm/data"
storm.health.check.dir: "healthchecks"
storm.health.check.timeout.ms: 5000
## Locations of the drpc servers
drpc.servers:
- "master"
- "slave1"
- "slave2"
```

- `storm.zookeeper.servers`配置的是 ZK 服务的集群。这里就填入配置好的 ZK 集群地址，ZK 集群的配置可以见上面。
- `nimbus.seeds`是有机会成为活跃nimbus的机器。
- `ui.port`原来的 UI 端口是 8080，这里使用时总是出现端口占用的情况，因此指定为 9090。
- `supervisor.slots.ports`这个指定的是 supervisor 运行时 slots 可用的端口。这里采用的是官网上推荐的默认配置，指定了 4 个，就会有 4 个工作进程在机器上运行。
- `storm.local.dir`，本地存储数据目录，需要提前创建。
- `storm.health.check.dir`，存储健康检测信息目录。
- `storm.health.check.timeout.ms`，健康检测时长。
- `drpc.servers`。DRPC（Distribution Remote Process Call）分布式远程过程调用服务，指定服务地址。

第三节 测试和运用

启动安装配置好后可以启动 Storm。启动顺序如下：

start-storm.sh 启动 storm 的顺序

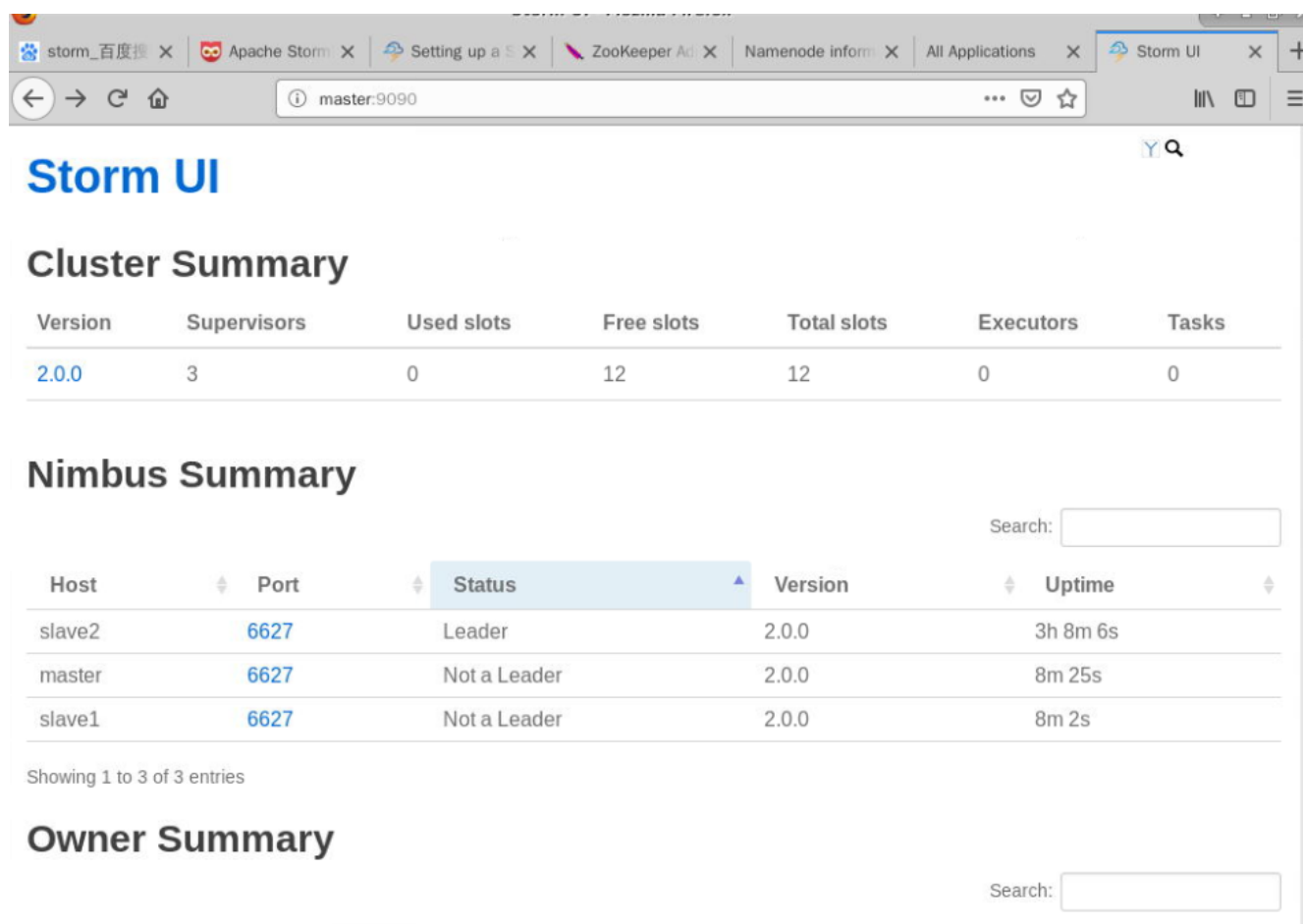
```
echo "start storm nimbus"
```

```

storm nimbus &
echo "start storm health check"
storm node-health-check &
echo "start storm supervisor"
storm supervisor &
echo "start storm web ui"
storm ui &
echo "start storm log viewer"
storm logviewer &

```

注意上面的命令加了&，指定其进程在后台运行。需要在不同的节点上都启动，但是活跃的 Nimbus 只有一个，这个由 ZK 完成选取。启动后可以在 Web 浏览器 9090（依据上面配置）查看 Storm UI，启动了 LogViewer，可以在 8000 端口查看各个 Nimbus 和 Supervisor 的日志信息。



The screenshot shows the Storm UI web interface in a browser window. The address bar shows 'master:9090'. The interface has a search bar in the top right corner. Below the search bar, there are three main sections: 'Cluster Summary', 'Nimbus Summary', and 'Owner Summary'. Each section has a search bar on the right side.

Cluster Summary

Version	Supervisors	Used slots	Free slots	Total slots	Executors	Tasks
2.0.0	3	0	12	12	0	0

Nimbus Summary

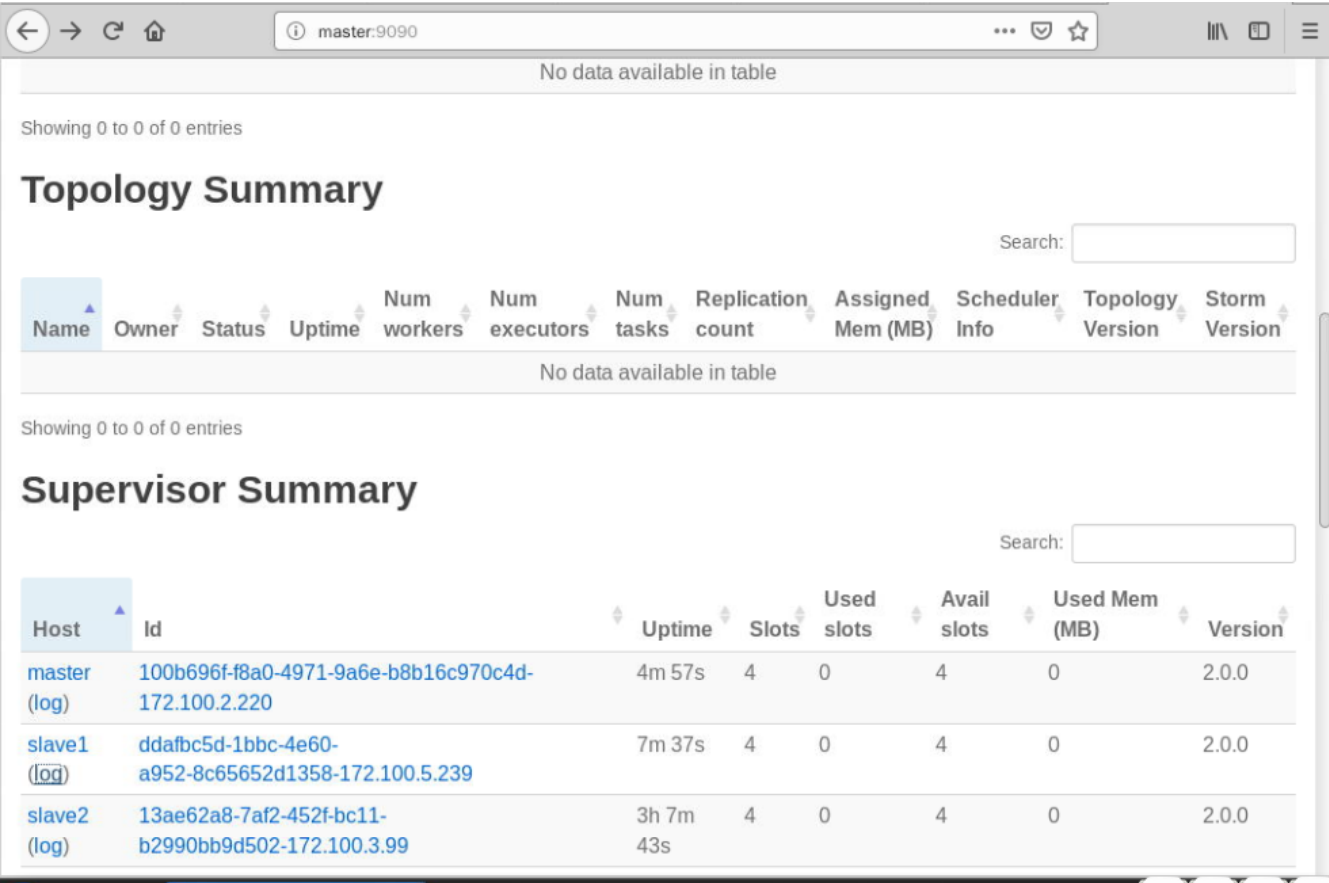
Search:

Host	Port	Status	Version	Uptime
slave2	6627	Leader	2.0.0	3h 8m 6s
master	6627	Not a Leader	2.0.0	8m 25s
slave1	6627	Not a Leader	2.0.0	8m 2s

Showing 1 to 3 of 3 entries

Owner Summary

Search:



Storm UI 上查看很多集群相关有用的信息

← → ↺ 🏠 master:8000/api/v1/daemonlog?file=supervisor.log 📄 ... 🛡️ ☆ 🏠 📄 ☰

Note: the drop-list shows at most 1024 files for each worker directory.

supervisor.log

search this file:

supervisor.log ▾

[Download Full File](#)

```
parableReporter], blacklist.scheduler.resume.time.secs=1800, drpc.childopts=-Xmx768m, nimbus.task.launch.secs=120, logviewer
2019-07-13 06:02:04.162 o.a.s.d.s.Slot main [INFO] SLOT master:6700 Starting in state empty - assignment null
2019-07-13 06:02:04.162 o.a.s.d.s.Slot main [INFO] SLOT master:6701 Starting in state empty - assignment null
2019-07-13 06:02:04.163 o.a.s.d.s.Slot main [INFO] SLOT master:6702 Starting in state empty - assignment null
2019-07-13 06:02:04.163 o.a.s.d.s.Slot main [INFO] SLOT master:6703 Starting in state empty - assignment null
2019-07-13 06:02:04.179 o.a.s.d.s.Supervisor main [INFO] Starting supervisor with id 100b696f-f8a0-4971-9a6e-b8b16c970c4d-17
2019-07-13 06:02:04.184 o.a.s.d.m.ClientMetricsUtils main [INFO] Using statistics reporter plugin:org.apache.storm.daemon.me
2019-07-13 06:02:04.186 o.a.s.d.m.r.JmxPreparableReporter main [INFO] Preparing...
2019-07-13 06:02:04.215 o.a.s.m.StormMetricsRegistry main [INFO] Started statistics report plugin...
2019-07-13 06:02:05.015 o.a.s.u.NimbusClient Thread-4 [INFO] Found leader nimbus : slave2:6627
2019-07-13 06:02:19.446 o.a.s.u.Utils Thread-5 [INFO] Halting after 1 seconds
2019-07-13 06:02:19.448 o.a.s.d.s.Supervisor Thread-6 [INFO] Shutting down supervisor 100b696f-f8a0-4971-9a6e-b8b16c970c4d-1
2019-07-13 06:02:19.449 o.a.s.e.EventManagerImp Thread-4 [INFO] Event manager interrupted
2019-07-13 06:02:19.451 o.a.s.s.o.a.c.f.i.CuratorFrameworkImpl Curator-Framework-0 [INFO] backgroundOperationsLoop exiting
2019-07-13 06:02:19.455 o.a.s.s.o.a.z.ZooKeeper Thread-6 [INFO] Session: 0x302240b9e77000d closed
2019-07-13 06:02:19.455 o.a.s.s.o.a.z.ClientCnxn main-EventThread [INFO] EventThread shut down for session: 0x302240b9e77000
2019-07-13 06:02:30.336 o.a.s.v.ConfigValidation main [WARN] task.heartbeat.frequency.secs is a deprecated config please see
2019-07-13 06:02:30.500 o.a.s.v.ConfigValidation main [WARN] task.heartbeat.frequency.secs is a deprecated config please see
2019-07-13 06:02:30.593 o.a.s.s.o.a.c.u.Compatibility main [INFO] Running in ZooKeeper 3.4.x compatibility mode
2019-07-13 06:02:30.594 o.a.s.s.o.a.c.u.Compatibility main [INFO] Using emulated InjectSessionExpiration
2019-07-13 06:02:30.634 o.a.s.z.ClientZookeeper main [INFO] Starting ZK Curator
```

点击 log 查看各个节点的 log 信息，需要启动 logviewer 服务