#Release 0.9.5.1

1. Add netty sync mode

2. Add block operation in netty async mode

**增加netty异步模式，增加netty异步模式阻塞操作**

#Release 0.9.5

##Big feature:

1. Redesign scheduler arithmetic, basing worker not task .

**重新设计调度算法，基于worker而不是task**

#Release 0.9.4.1

##Bug fix:

1. Improve speed between tasks who is running in one worker

2. Fix wrong timeout seconds

6. Check whether tuple's rootId is duplicated

8. Add result function in ReconnectRunnable

9. Add operation to start Timetick

10. Halt process when master nimbus lost ZK node

13. Share one task hearbeat thread for all tasks

14. Quickly haltprocess when initialization failed.

#Release 0.9.4

## Big features

1. Add transaction programming mode

2. Rewrite netty code, 1. use share boss/worker thread pool;2 async send batch tuples;3 single thread to do reconnect job;4 receive batch tuples

3. Add metrics and statics

4. Merge Alimama storm branch into this version, submit jar with -conf, -D, -lib

## Enhancement

2. add LocalFristGrouping api

3. enable cgroup for normal user

##Bug fix:

2. Add lock between ZK watch and timer thread when refresh connection

3. Enable nimbus monitor thread only when topology is running in cluster mode

4. Fix exception when failed to read old assignment of ZK

5. classloader fix when both parent and current classloader load the same class

#Release 0.9.3.1

## Enhancement

3. add "spout.single.thread" setting

#Release 0.9.3

## New feature

1. Support Aliyun Apsara/Hadoop Yarn

## Enhancement

1. Redesign Logview

4. Add nodeport information for dead task in nimbus

5. Add interface to get values when spout doing ack

6. Add timeout statics in bolt

7. jstorm script return status

9. Skip sleep operation when max\_pending is 1 and waiting ack

12. Add supervisor.use.ip setting

13. Redirect supervisor out/err to /dev/null, redirect worker out/err to one file

## Bug Fix

1. Fix kryo fail to deserialize object when enable classloader

2. Fix fail to reassign dead task when worker number is less than topology apply

3. Set samller jvm heap memory for jstorm-client

4. Fix fail to set topology status as active when do rebalance operation twice at one time,

5. Fix local mode bug under linux

6. Fix average latency isn't accurate

7. GC tuning.

8. Add default kill function for AysncLoopRunnable

#Release 0.9.2

## New feature

1. Support LocalCluster/LocalDrpc mode, support debugging topology under local mode

2. Support CGroups, assigning CPU in hardware level.

3. Support simple logview

## Bug fix or enhancement

1. Change SpoutExecutor's RotatingMap to TimeCacheMap, when putting too much timeout tuple is easy to cause deadlock in spout acker thread

2. Tunning gc parameter, improve performance and avoid full GC

3. Improve Topology's own gc priority, make it higher than JStorm system setting.

4. Tuning Nimbus HA, switch nimbus faster, when occur nimbus failure.

5. Fix bugs found by FindBugs tool.

6. Revert Trident interface to 0.8.1, due to 0.8.1's trident interface's performance is better.

7. Setting nimbus.task.timeout.secs as 60 to avoid nimbus doing assignment when task is under full gc.

8. Setting default rpc framework as netty

9. Tunning nimbus shutdown flow

10. Tunning worker shutdown flow

11. Add task heartbeat log

12. Optimize Drpc/LocalDrpc source code.

13. Move classloader to client jar.

14 Fix classloader fail to load anonymous class

15. Web Ui display slave nimbus

16. Add thrift max read buffer size

17. Setting CPU slot base double

18. Move Zk utility to jstorm-client-extension.jar

19. Fix localOrShuffle null pointer

20. Redirecting worker's System.out/System.err to file is configurable.

21. Add new RPC frameworker JeroMq

22. Fix Zk watcher miss problem

23. Update sl4j 1.5.6 to 1.7.5

24. Shutdown worker when occur exception in Smart thread

25. Skip downloading useless topology in Supervisor

26. Redownload the topology when failed to deserialize topology in Supervisor.

27. Fix topology codeDir as resourceDir

28. Catch error when normalize topology

29. Add log when found one task is dead

30. Add maven repository, JStorm is able to build outside of Alibaba

31. Fix localOrShuffle null pointer exception

32. Add statics counting for internal tuples in one worker

33. Add thrift.close after download topology binary in Supervisor

# Release 0.9.1

## new features

1. Application classloader. when Application jar is conflict with jstorm jar,

please enable application classloader.

2. Group Quato, Different group with different resource quato.

## Bug fix or enhancement

1. Fix Rotation Map competition issue.

2. Set default acker number as 0

3. Set default spout/bolt number as 1

4. Add log directory in log4j configuration file

5. Add transaction example

6. Fix UI showing wrong worker numbe in topology page

7. Fix UI showing wrong latency in topology page

8. Replace hardcode Integer convert with JStormUtils.parseInt

9. Support string parse in Utils.getInt

10. Remove useless dependency in pom.xml

11. Support supervisor using IP or special hostname

12. Add more details when no resource has been assigned to one new topology

13. Replace normal thread with Smart thread

14. Add gc details

15. Code format

16. Unify stormId and topologyId as topologyId

17. Every nimbus will regist ip to ZK

# Release 0.9.0

## Stability

1. provide nimbus HA. when the master nimbus shuts down, it will select another

online nimbus to be the master. There is only one master nimbus online

any time and the slave nimbuses just synchronouse the master's data.

2. RPC through netty is stable, the sending speed is match with receiving speed.

## Powerful scheduler

1. Assigning resource on four dimensions:cpu, mem, disk, net

2. Application can use old assignment.

3. Application can use user-define resource.

4. Task can apply extra cpu slot or memory slot.

4. Application can force tasks run on different supervisor or the same supervisor