# Rabbitmq性能测试

## 测试环境

设备：172.16.185.190/191/193 32核125G

## 测试工具

rabbitmq-perf-test

下载地址：

<https://github.com/rabbitmq/rabbitmq-perf-test/releases/download/v2.17.0.RC3/rabbitmq-perf-test-2.17.0.RC3-bin.tar.gz>

参数说明：

-h:amqp://user@password@ip:port

-x:生产者数

-y:消费者数

u:队列名

-d:test ID

-s:消息大小，字节

-c:最大未确认的消息发布数

-C:生产者要生成的消息的数量

-r:生产者速度限制

-R:消费者速度限制

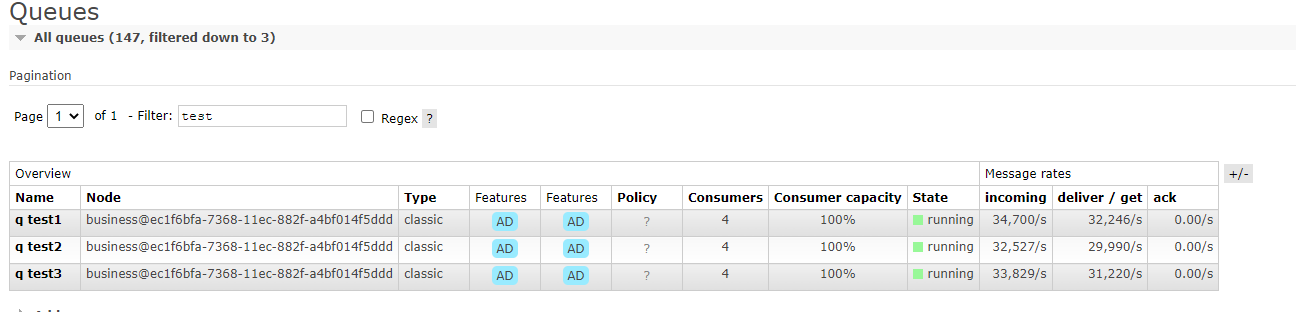
## 测试方法

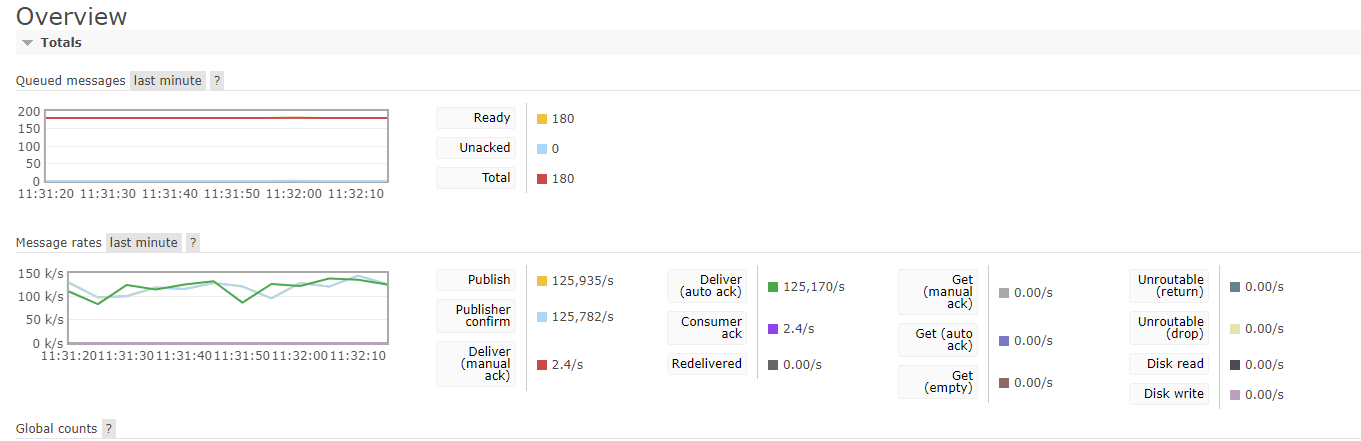
同时启动多个测试进程**直到消息发送速率到达峰值**，单条测试指令如下

|  |
| --- |
| rabbitmq-perf-test-2.17.0.RC3/bin/runjava com.rabbitmq.perf.PerfTest -h amqp://dev:KedaRmq\\!Dev\_56@172.16.185.190:6678 -x 4 -y 4 -u "q test1" -a -d test -c 10000 |

## 测试结果

### 3.1单机





持续300s，得到各个进程均值：

id: test, sending rate avg: 40674 msg/s

id: test, receiving rate avg: 40552 msg/s

id: test, sending rate avg: 40988 msg/s

id: test, receiving rate avg: 40855 msg/s

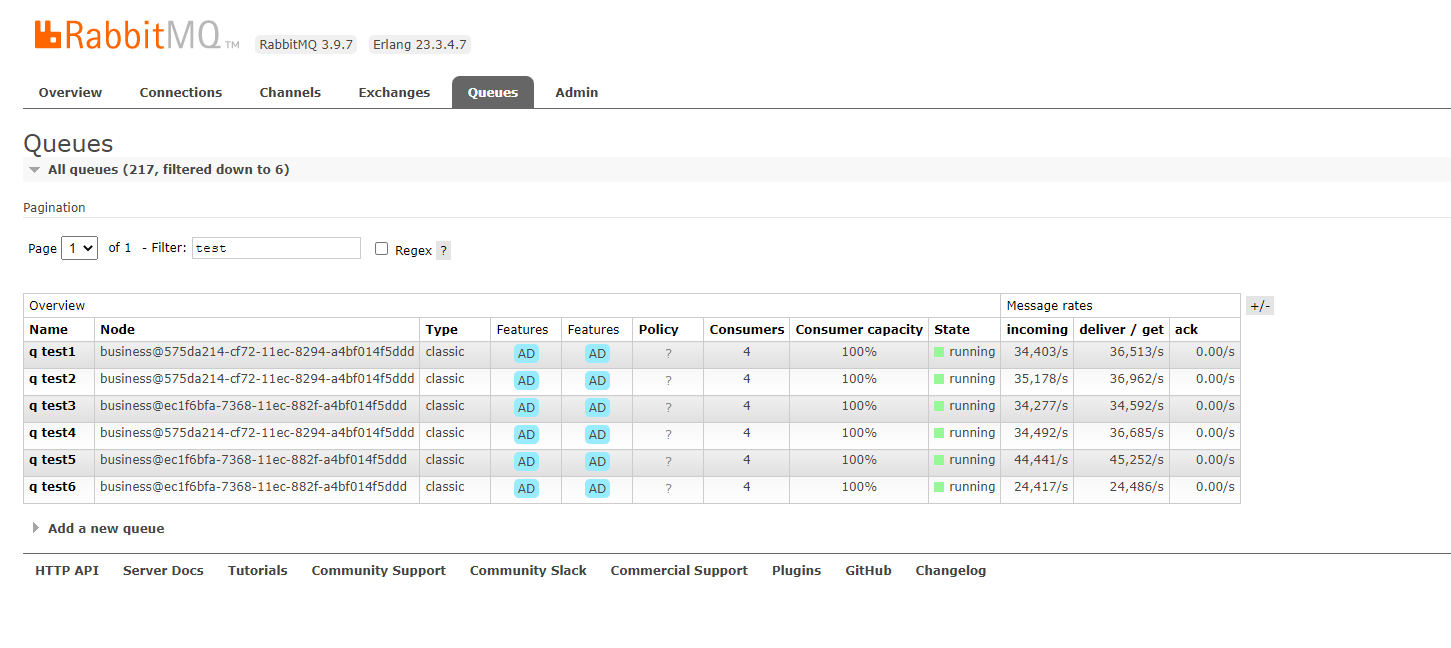
id: test, sending rate avg: 40723 msg/s

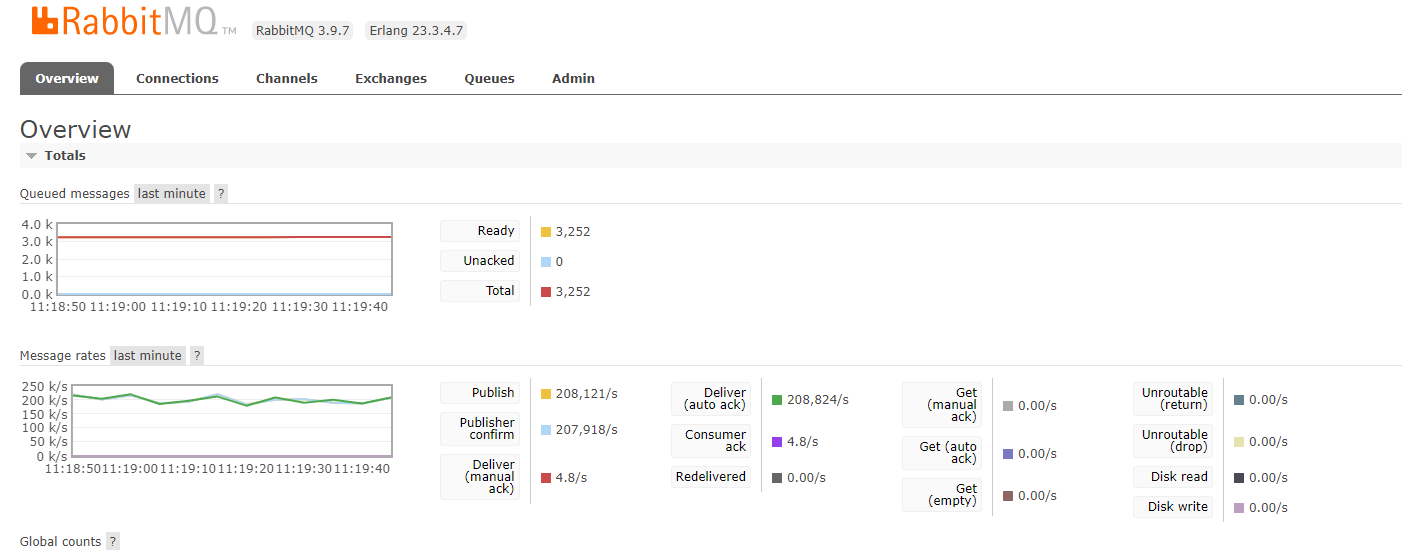
id: test, receiving rate avg: 40591 msg/s

即，sending rate avg：122385 msg/s receiving rate avg: 121998 msg/s

### 3.2 双节点

需要注意，这里使用的测试指令创建的queue只存在单一节点上，尽量让测试的queue均匀分布，才能让性能达到最佳，发挥集群作用





持续300s，得到各个进程均值：

id: test, sending rate avg: 24965 msg/s

id: test, receiving rate avg: 24836 msg/s

id: test, sending rate avg: 29448 msg/s

id: test, receiving rate avg: 29317 msg/s

id: test, sending rate avg: 29244 msg/s

id: test, receiving rate avg: 29111 msg/s

id: test, sending rate avg: 38014 msg/s

id: test, receiving rate avg: 37885 msg/s

id: test, sending rate avg: 38111 msg/s

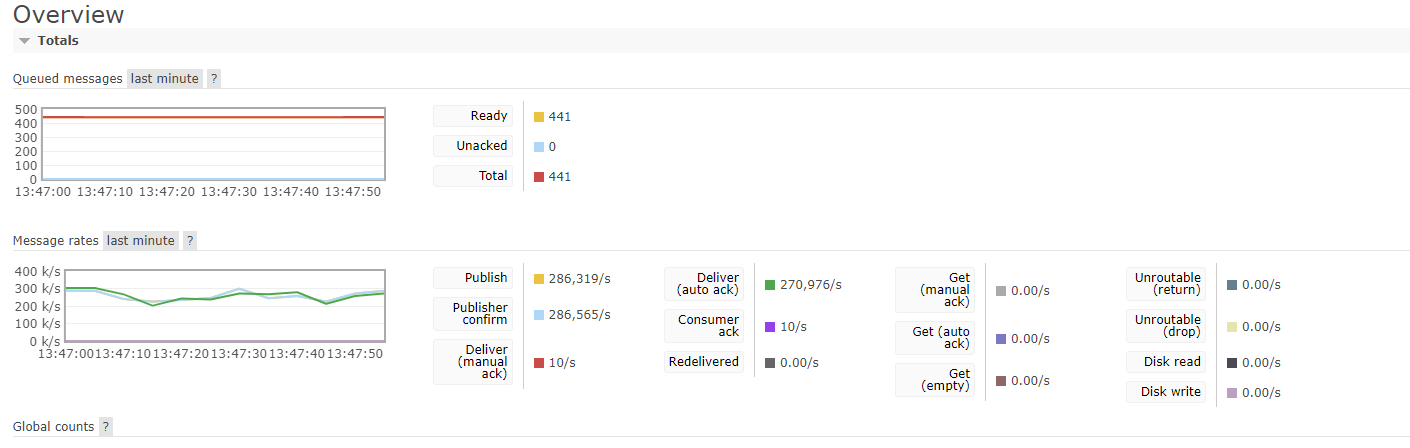
id: test, receiving rate avg: 37980 msg/s

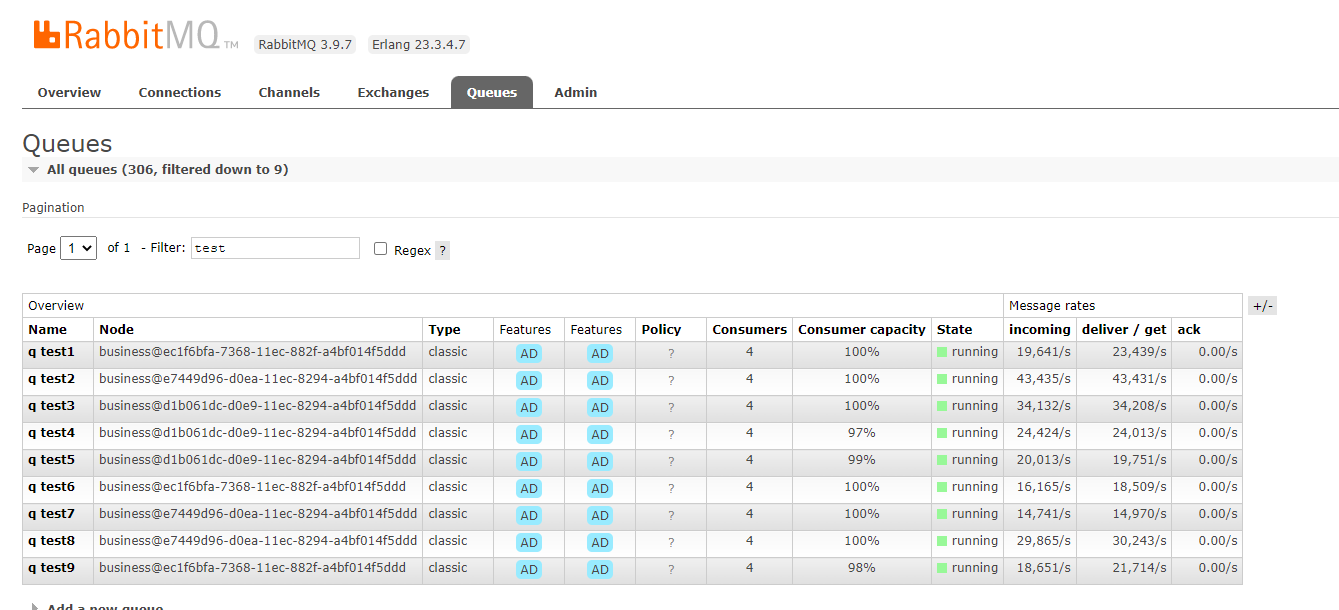
id: test, sending rate avg: 29588 msg/s

id: test, receiving rate avg: 29456 msg/s

即，sending rate avg：189370 msg/s receiving rate avg: 188585 msg/s

### 3.3 三节点





持续300s，得到各个进程均值：

id: test, sending rate avg: 31140 msg/s

id: test, receiving rate avg: 31008 msg/s

id: test, sending rate avg: 17118 msg/s

id: test, receiving rate avg: 16987 msg/s

id: test, sending rate avg: 43372 msg/s

id: test, receiving rate avg: 43241 msg/s

id: test, sending rate avg: 39804 msg/s

id: test, receiving rate avg: 39671 msg/s

id: test, sending rate avg: 27293 msg/s

id: test, receiving rate avg: 27160 msg/s

id: test, sending rate avg: 28547 msg/s

id: test, receiving rate avg: 28412 msg/s

id: test, sending rate avg: 29516 msg/s

id: test, receiving rate avg: 29385 msg/s

id: test, sending rate avg: 20621 msg/s

id: test, receiving rate avg: 20490 msg/s

id: test, sending rate avg: 22489 msg/s

id: test, receiving rate avg: 22355 msg/s

即，sending rate avg：259900 msg/s receiving rate avg: 258709 msg/s

### 3.4 综合对照

以单机性能为基准，分别为1、1.55、2.12

## 补充topic模式下测试结果

首先时测试指令调整，按prefetch\_count为0和1分为两组

|  |
| --- |
| rabbitmq-perf-test-2.17.0.RC3/bin/runjava com.rabbitmq.perf.PerfTest -h amqp://dev:KedaRmq\\!Dev\_56@172.16.185.190:6678 -x 4 -y 4 -u "q test1" -t topic -q 0 -d test -c 10000 |

|  |
| --- |
| rabbitmq-perf-test-2.17.0.RC3/bin/runjava com.rabbitmq.perf.PerfTest -h amqp://dev:KedaRmq\\!Dev\_56@172.16.185.190:6678 -x 4 -y 4 -u "q test1" -t topic -q 100 -d test -c 10000 |

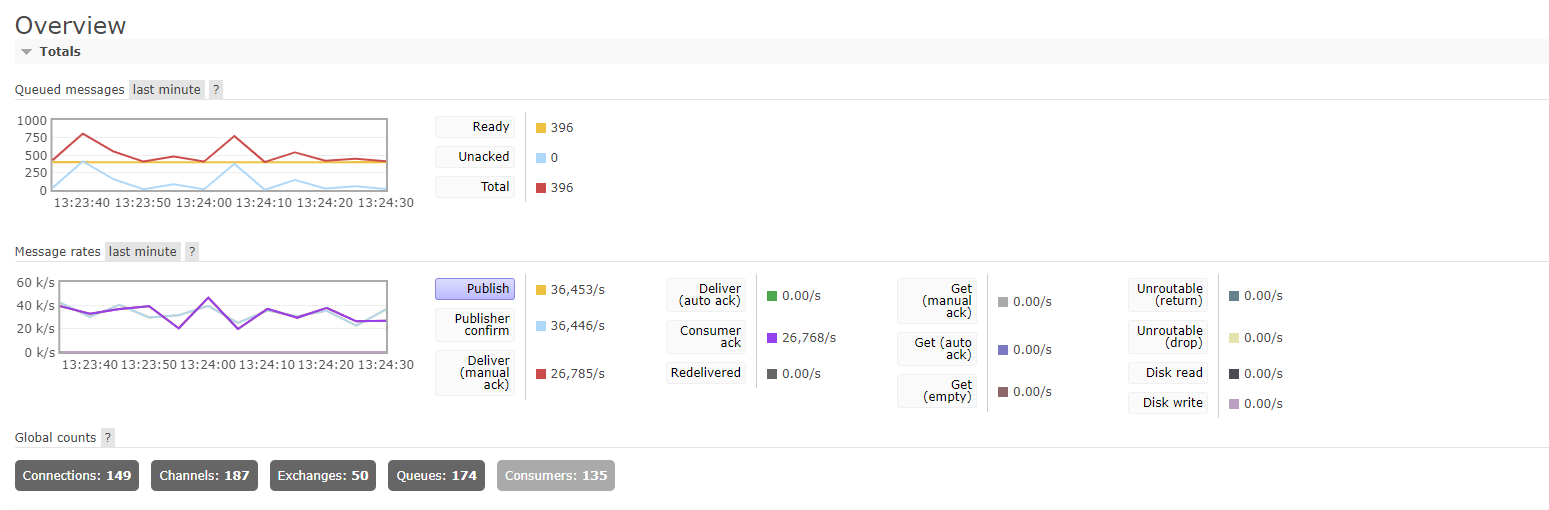
-q代表consumer prefetch count

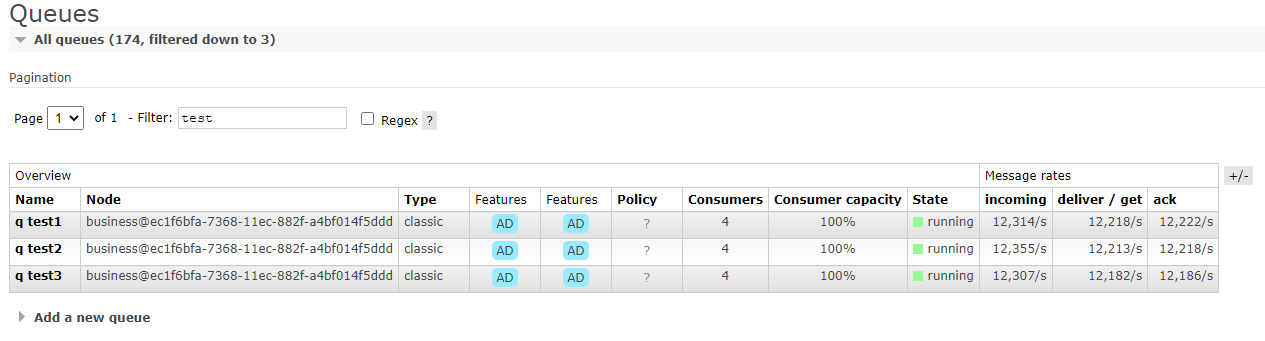
-t 指定exchange type

### 单机

#### prefetch count 0

1）三测试进程





id: test, sending rate avg: 10847 msg/s

id: test, receiving rate avg: 10714 msg/s

id: test, sending rate avg: 10821 msg/s

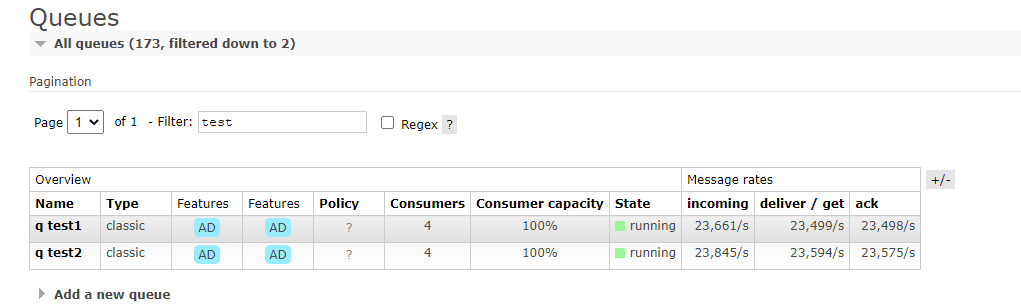
id: test, receiving rate avg: 10687 msg/s

id: test, sending rate avg: 10808 msg/s

id: test, receiving rate avg: 10675 msg/s

**sending rate avg: 32476 msg/s , receiving rate avg: 32076msg/s**

1. 调整为两测试进程，rmq服务器发挥出的性能更高



id: test, sending rate avg: 22338 msg/s

id: test, receiving rate avg: 22205 msg/s

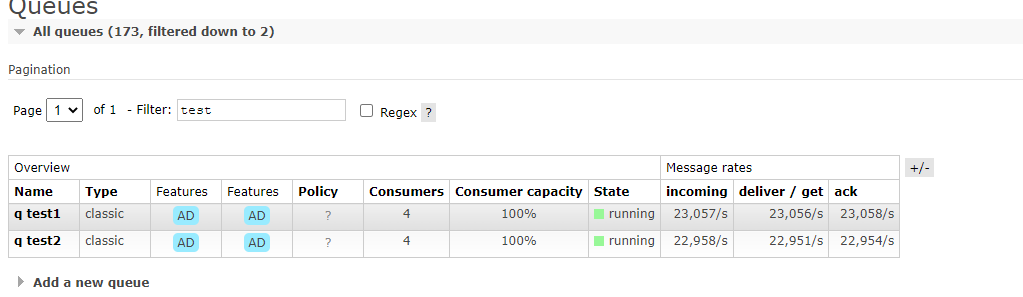
id: test, sending rate avg: 22377 msg/s

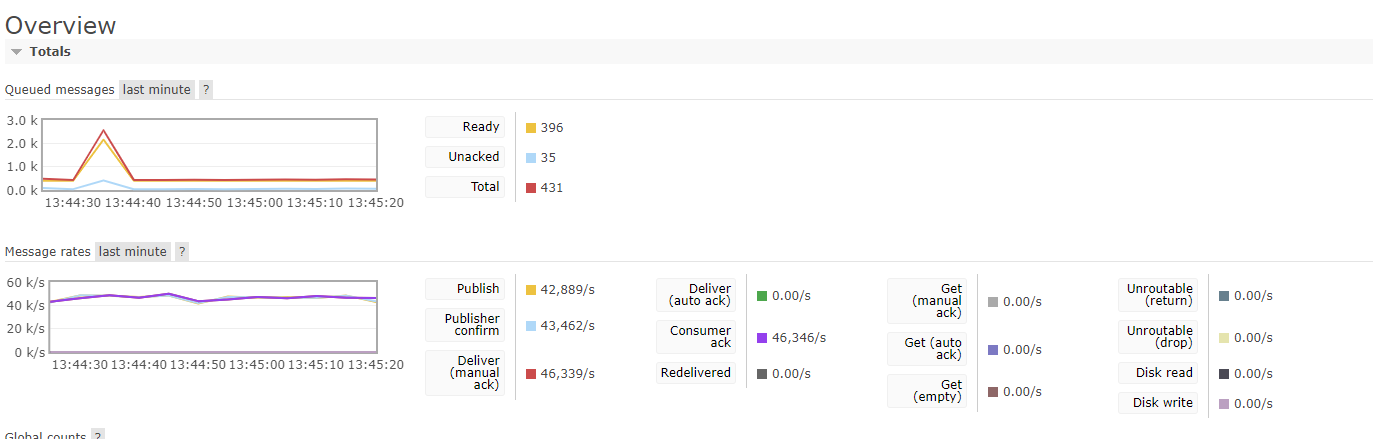
id: test, receiving rate avg: 22244 msg/s

**sending rate avg :44715msg/s， receiving rate avg: 44449msg/s**

#### prefetch count 100

使用两测试进程





id: test, sending rate avg: 22989 msg/s

id: test, receiving rate avg: 22855 msg/s

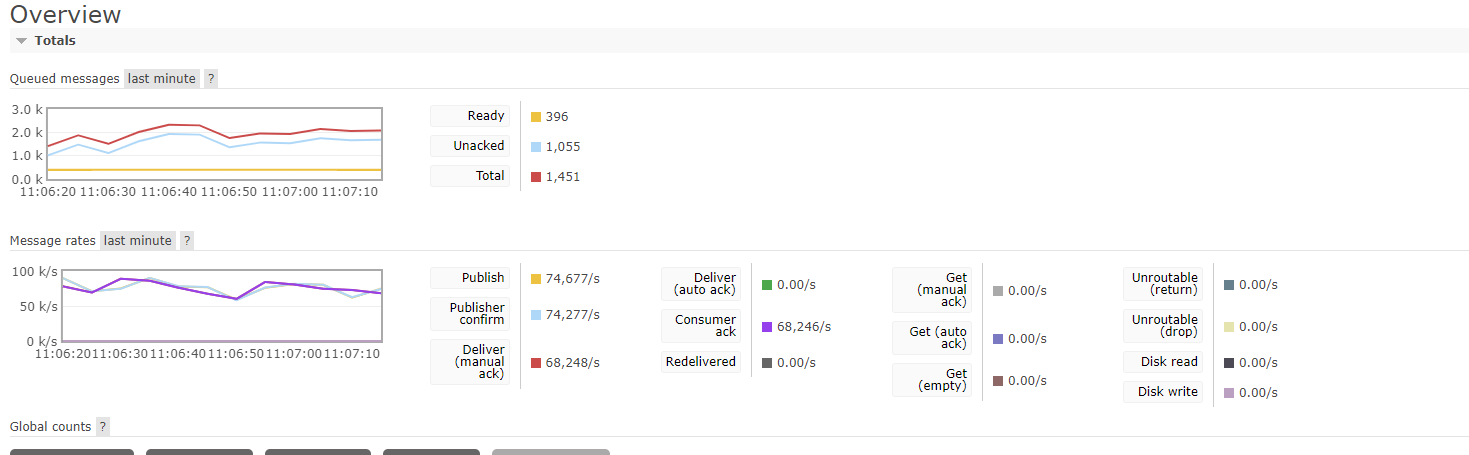
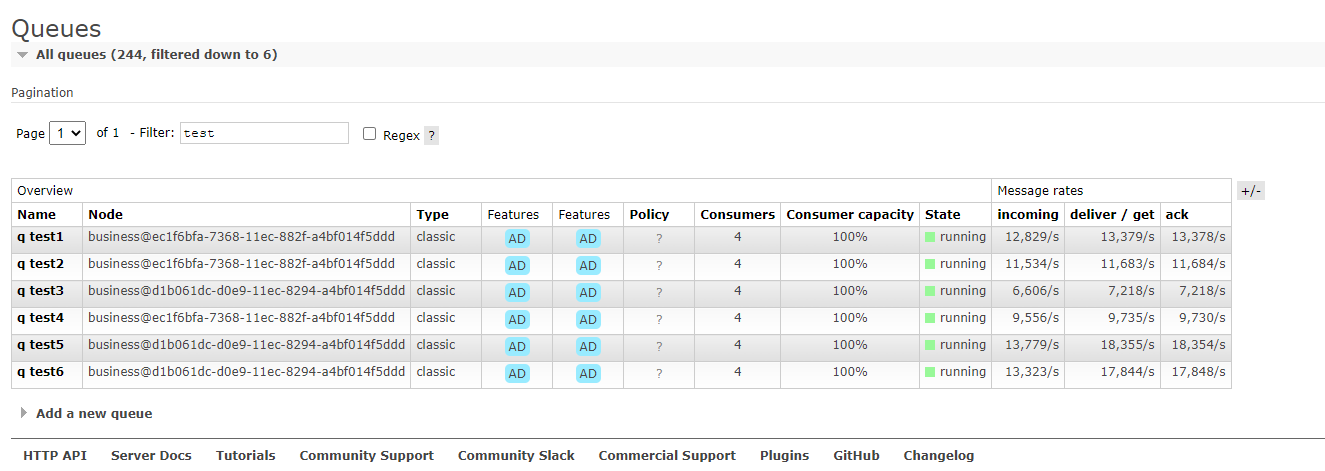
id: test, sending rate avg: 23028 msg/s

id: test, receiving rate avg: 22895 msg/s

**即：sending rate avg: 46017msg/s， receiving rate avg: 45750 msg/s**

### 双节点

#### prefetch count 0



id: test, sending rate avg: 7904 msg/s

id: test, receiving rate avg: 7773 msg/s

id: test, sending rate avg: 13134 msg/s

id: test, receiving rate avg: 13004 msg/s

id: test, sending rate avg: 7893 msg/s

id: test, receiving rate avg: 7762 msg/s

id: test, sending rate avg: 13227 msg/s

id: test, receiving rate avg: 13096 msg/s

id: test, sending rate avg: 7396 msg/s

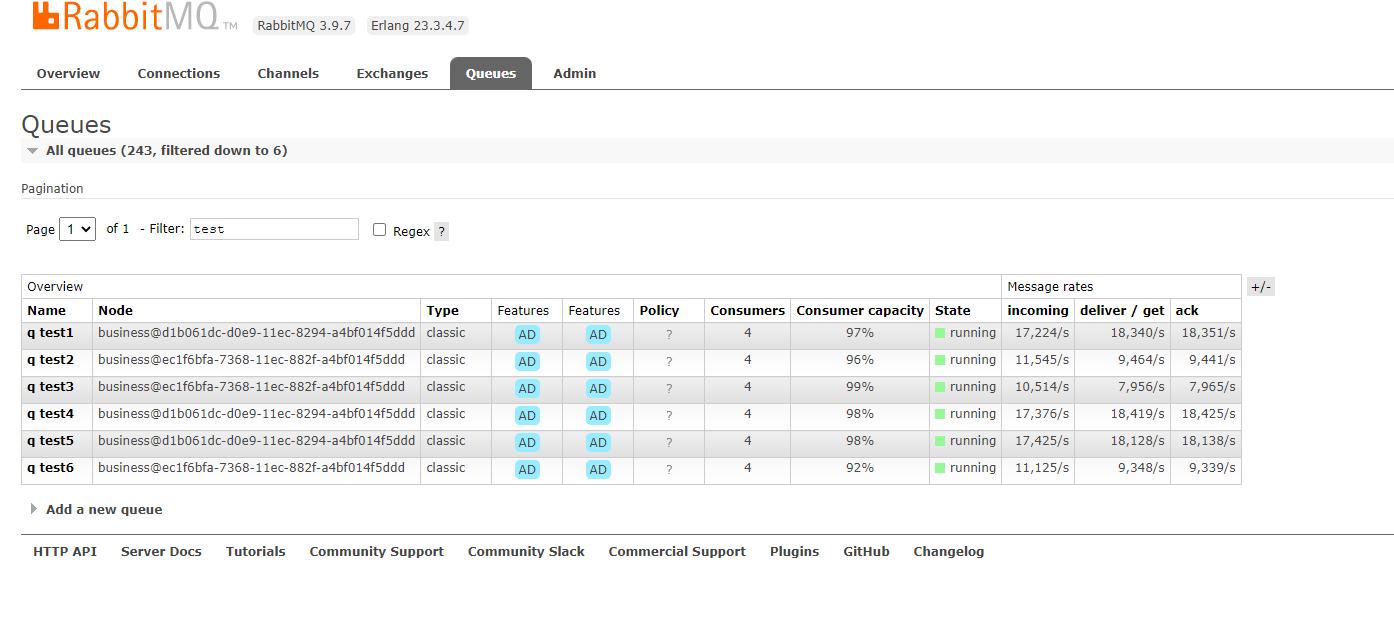
id: test, receiving rate avg: 7263 msg/s

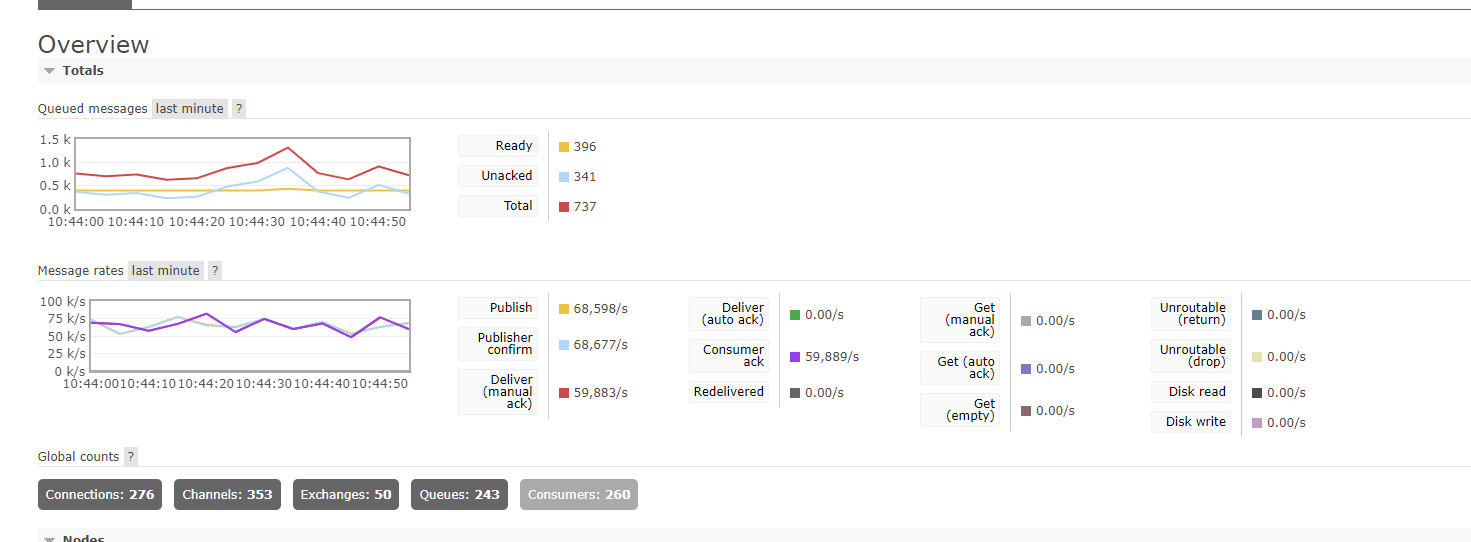
id: test, sending rate avg: 21407 msg/s

id: test, receiving rate avg: 21275 msg/s

**即：sending rate avg: 70961msg/s， receiving rate avg: 70173 msg/s**

#### prefetch count 100





id: test, sending rate avg: 8717 msg/s

id: test, receiving rate avg: 8585 msg/s

id: test, sending rate avg: 8043 msg/s

id: test, receiving rate avg: 7910 msg/s

id: test, sending rate avg: 7368 msg/s

id: test, receiving rate avg: 7235 msg/s

id: test, sending rate avg: 11345 msg/s

id: test, receiving rate avg: 11213 msg/s

id: test, sending rate avg: 17776 msg/s

id: test, receiving rate avg: 17643 msg/s

id: test, sending rate avg: 16872 msg/s

id: test, receiving rate avg: 16737 msg/s

**即：sending rate avg: 70121msg/s， receiving rate avg: 69323 msg/s**