Benchmark

- Java Tools
  - Load testing and performance measurements in RabbitMQ - CloudAMQP
- amqpc

Java Tools

Install: RabbitMQ PerfTest

Usage

- --time: Seconds, ??????
- --uri: MQ Server ????
- --producers: Producer ??
- --consumers: Consumer ??
- --size: bytes, Message ? size
- --rate: msg/s, Producer/Consumer ? Msg Rate
- --consumer-rate: msg/s, Consumer ? Msg Rate

```
#> alternatives --list
libnssckbi.so.x86_64    auto    /usr/lib64/pkcs11/p11-kit-trust.so
ld      auto    /usr/bin/ld.bfd
mta     auto    /usr/sbin/sendmail.postfix
ksh     auto    /bin/ksh93
java    manual  /usr/lib/jvm/java-11-openjdk-11.0.8.10-1.el7.x86_64/bin/java
jre_openjdk     auto    /usr/lib/jvm/java-11-openjdk-11.0.8.10-1.el7.x86_64
jre_11  auto    /usr/lib/jvm/java-11-openjdk-11.0.8.10-1.el7.x86_64
jre_11_openjdk  auto    /usr/lib/jvm/jre-11-openjdk-11.0.8.10-1.el7.x86_64

#> export JAVA_HOME=/usr/lib/jvm/java-11-openjdk-11.0.8.10-1.el7.x86_64
#> cd rabbitmq-perf-test-2.18.0
#> bin/runjava com.rabbitmq.perf.PerfTest --help
```

Scenario #1

- Condition:
  - Queue: 200

    - Producer: 200
    - Consumer: 200
    - Message Size: 20KB
    - Message Rate: 20/s
    - Ack Mode: Manual
- Throughput:
    - Publish: 4000/s
    - Consumer: 4000/s
- Resource:
    - CPU (2 Core): 110 %
    - Memory (4 GB): 8.8 %

```
bin/runjava com.rabbitmq.perf.PerfTest --uri amqp://<username>:<password>@<rabbitmq-server-ip>:<port>/<vhost> \
--queue-pattern 'perf-test-%d' \
--queue-pattern-from 1 \
--queue-pattern-to 200 \
--producers 200 \
--consumers 200 \
--size 20000 \
--rate 20
```

Scenario #2 for the Cluster with 3 nodes

Queue Type: Classic

```
bin/runjava com.rabbitmq.perf.PerfTest \
--uris "amqp://<username>:<password>@<rabbitmq-server1-ip>:<port>/<vhost>,amqp://<username>:<password>@<rabbitmq-server2-ip>:<port>/<vhost>,amqp://<username>:<password>@<rabbitmq-server3-ip>:<port>/<vhost>" \
--queue-pattern 'perf-test-%d' \
--queue-pattern-from 1 \
--queue-pattern-to 200 \
--producers 200 \
--consumers 200 \
--size 20000 --rate 20
```

Queue Type: Quorum

```
bin/runjava com.rabbitmq.perf.PerfTest \
--uris "amqp://<username>:<password>@<rabbitmq-server1-ip>:<port>/<vhost>,amqp://<username>:<password>@<rabbitmq-server2-
```

```
ip>:<port>/<vhost>,amqp://<username>:<password>@<rabbitmq-server3-ip>:<port>/<vhost>" \
--queue-args x-queue-type=quorum \
--auto-delete false \
--flag persistent \
--queue-pattern 'perf-test-quorum-%d' \
--queue-pattern-from 1 \
--queue-pattern-to 200 \
--producers 200 \
--consumers 200 \
--size 20000 \
--rate 6
```

???????

- ??????: How to Run Benchmarks | RabbitMQ - Blog
- 13 Common RabbitMQ Mistakes and How to Avoid Them - CloudAMQP
- Cluster Sizing and Other Considerations | RabbitMQ - Blog

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