

Joget Workflow

Clustering and Performance Testing on Amazon Web Services (AWS)



July 2014

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DISCLAIMER: This report is prepared with the intention to provide information on expected baseline performance from Joget Workflow. Although best efforts have been made to conduct an unbiased test, there are many factors involved and the results cannot be guaranteed in different environments. The reader of this report uses all information in this report at his/her own risk, and Joget Inc shall in no case be liable for any loss resulting from the use of this report.

1. Executive Summary

1.1) Introduction

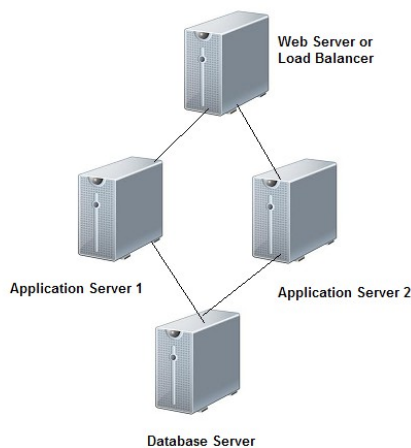
Joget Workflow is an open source web-based workflow software to develop workflow and business process management applications. It is also a rapid application development platform that offers full-fledged agile development capabilities (consisting of processes, forms, lists, CRUD and UI), not just back-end EAI/orchestration/integration or the task-based interface.

This document is intended to describe and analyze the results of performance tests on a clustered deployment of Joget Workflow on Amazon Web Services (AWS).

1.2) Test Environment

The tests were conducted on Amazon Web Services (AWS), specifically using the Elastic Compute Cloud (EC2) and Relational Database Service (RDS). AWS offered great flexibility in allowing servers and clients to be created and scaled up as required.

The architecture of the clustered deployment is similar to the following diagram:



The test was conducted using the following product versions:

Joget: Joget Workflow Enterprise Edition 4.0.5.1

OS: Ubuntu 14.04 LTS

Java: OpenJDK 7u55

Web Application Server: Apache Tomcat 7.0.52

Database: MySQL 5.6.17

Web Server/Load Balancer: Apache HTTP 2.4.7 with mod_proxy_balancer

Load Testing Tool: Apache JMeter 2.11

The products were deployed on a combination of AWS instances i.e. t2.micro (1 vCPU, 1GB RAM), c3.large (2 vCPU, 3.75GB RAM), db.m3.large (2 vCPU, 7.5GB RAM) and c3.8xlarge (32 vCPU, 60GB RAM)

To establish the baseline performance, a basic test app was used which consists of:

1. 1 process with 3 activities and 1 deadline
2. 1 form
3. 1 datalist
4. 1 userview containing menu pages to run the process and display the datalist and an inbox

Using a think time of 10 seconds with random deviation of 3 seconds, the test script used covers the following app usage:

1. View Login Page
2. Submit Login Form
3. View New Request Form
4. Submit New Request Form
5. Logout

Tests were carried out for the following:

1. 100 concurrent users on 1 node (c3.large)
2. 250 concurrent users on 1 node (c3.large)
3. 500 concurrent users on 1 node (c3.large)
4. 750 concurrent users on 1 node (c3.large)
5. 1000 concurrent users on 1 node (c3.large)
6. 2000 concurrent users on 2 nodes (c3.large)
7. 3000 concurrent users on 3 nodes (c3.large)
8. 5000 concurrent users on 1 node (c3.8xlarge)

The final test on a single c3.8xlarge node was conducted to evaluate the performance on EC2's most powerful instance.

For each test, the JMeter summary results were collected. Once all the results were collected, the throughput (requests per second) and average response times were compared and analyzed.

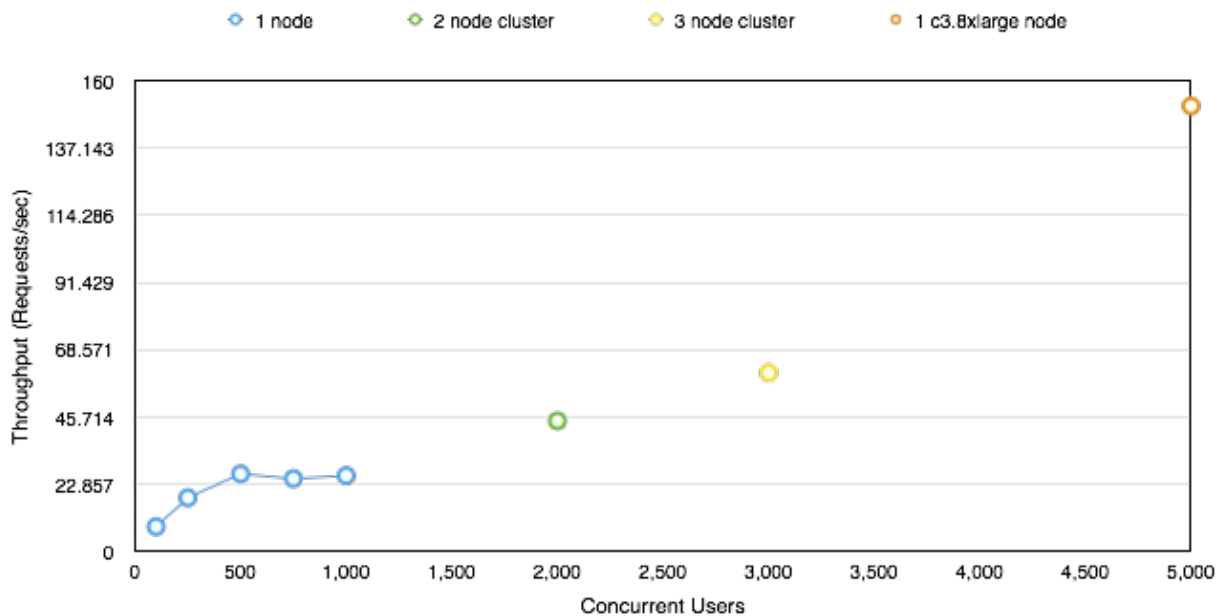
1.3) Summary of Results

Throughput

The results are summarized in the table and graph below:

Throughput (Requests/sec)

Concurrent Users	1 node	2 node cluster	3 node cluster	1 c3.8xlarge node
100	8.5			
250	18.3			
500	26.4			
750	24.8			
1000	25.8			
2000		44.4		
3000			60.7	
5000				151.3



In terms of throughput, a single c3.large node (2 vCPU, 3.75GB RAM) maxes out at about 25 requests per second at 500 concurrent users. When the concurrent users increased to 750 and 1000, the throughput remains about the same.

When scaling out (adding nodes to the cluster), the throughput seems to improve linearly as can be seen by the throughput graph i.e. 44 requests per second for a 2 node cluster at 2000 concurrent users, and 61 requests per second for a 3 node cluster to handle 3000 concurrent users.

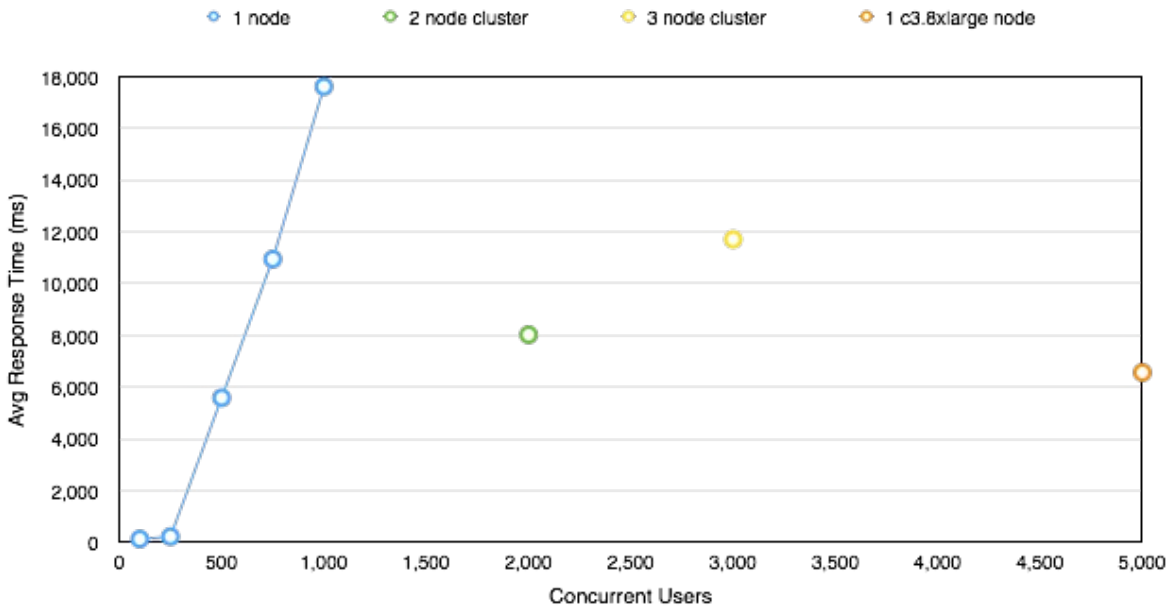
The non-clustered c3.8xlarge (32 vCPU, 60GB RAM) node performs very well, handling 5000 concurrent users at a rate of 151 requests per second.

Average Response Time

The results are summarized in the table and graph below:

Avg Response Times (ms)

Concurrent Users	1 node	2 node cluster	3 node cluster	1 c3.8xlarge node
100	133			
250	226			
500	5588			
750	10946			
1000	17611			
2000		8026		
3000			11709	
5000				6565



For a single c3.large node (2 vCPU, 3.75GB RAM), the average response time becomes slow (17.6 seconds) once it reaches 1000 concurrent users. As before, scaling out by adding nodes does allow more concurrent users to be handled.

The non-clustered c3.8xlarge (32 vCPU, 60GB RAM) node once again performs admirably, handling 5000 concurrents users with an average response time of 6.5 seconds.

1.4) Conclusion and Recommendations

From the results it can be seen that for a basic baseline app, a single modestly spec-ed c3.large server (2 vCPU, 3.75GB RAM) can handle 500 concurrent users with acceptable response times. The tests also show that scaling out horizontally (adding nodes to a cluster), supports an almost linear increase in concurrent users.

Performing vertical scaling can also improve performance tremendously, as demonstrated in the use of the c3.x8large instance (32 vCPU, 60GB RAM).

For large deployments that support large numbers of concurrent users, it is important that the environment is tuned and optimized e.g. Java VM tuning, app server tuning, database optimization, etc. There's an article in the Knowledge Base for this at <http://dev.joget.org/community/display/KBv4/Joget+Workflow+Deployment+Best+Practices>.

It is important to note that as Joget is a platform and not directly an end-user app, the scalability and performance would depend on potentially many factors:

1. Total number of users
2. Maximum expected concurrent users
3. Number of apps running on the platform
4. Complexity of each of the apps
5. Amount of data generated in each app
6. Network infrastructure
7. etc

The recommended deployment architecture would very much depend on the environment and usage. Perhaps some things to be considered:

1. How many total and concurrent users are there? Will this grow in future?
2. In the current environment, is the current infrastructure sufficient for the load? Would it be possible to increase the server resources?
3. If the needs outgrow one server node, it might be time to consider implementing clustering and/or load balancing.
4. Another possible approach could be to partition the apps. Are there specific apps that incur the highest load? Maybe it might be appropriate to separate apps into different servers.

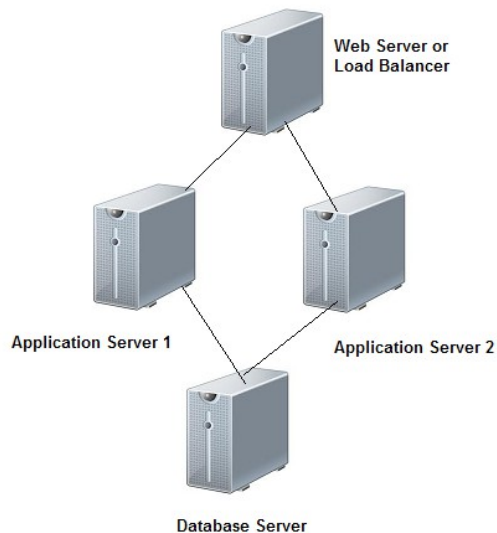
In summary, this report demonstrates the baseline performance of the Joget Workflow platform for a basic app and shows how horizontal and vertical scaling can be used to support larger deployments. Although these results can serve as a base guideline, it is recommended that performance testing and optimisations are performed based on each deployment's unique requirements, environments and usage patterns.

2. Test Environment Setup

2.1) Test Environment

The tests were conducted on Amazon Web Services (AWS), specifically using the Elastic Compute Cloud (EC2) and Relational Database Service (RDS). AWS offered great flexibility in allowing servers and clients to be created and scaled up as required.

The architecture of the clustered deployment is similar to the following diagram:



Application Server

Joget: Joget Workflow Enterprise Edition 4.0.5.1

OS: Ubuntu 14.04 LTS

Java: OpenJDK 7u55

Web Application Server: Apache Tomcat 7.0.52

EC2 Instance: c3.large

- 2 vCPU (virtual CPUs)
- 3.75GB RAM
- Java VM Options: `-XX:MaxPermSize=256M -Xms2048M -Xmx2048M`

Database Server

Database: MySQL 5.6.17

RDS Instance: db.m3.large

- 2 vCPU
- 7.5GB RAM
- Moderate network performance
- 1000 PIOPS

Web Server/Load Balancer

OS: Ubuntu 14.04 LTS

Web Server/Load Balancer: Apache HTTP 2.4.7 with mod_proxy_balancer

EC2 Instance: t2.micro:

- 1 vCPU
- 1GB RAM

Load Test Client

Load Testing Tool: Apache JMeter 2.11

OS: Ubuntu 14.04 LTS

Java: OpenJDK 7u55

EC2 Instance: t2.micro:

- 1 vCPU
- 1GB RAM

Test App

A basic test app was used which consists of:

1. 1 process with 3 activities and 1 deadline
2. 1 form
3. 1 datalist
4. 1 userview containing menu pages to run the process and display the datalist and inbox

The image shows two screenshots from a testing environment. The top screenshot is the 'Workflow Designer' for 'Test Performance'. It displays a process named 'Workflow Process 1' with two participants: 'Participant 1' and 'Participant 2'. Participant 1 has a flow from 'Activity 1' to 'Activity 2', and Participant 2 has 'Activity 3'. Below the diagram, there is a 'Show Additional Info' section with buttons for 'Map Participants to Users', 'Map Activities to Forms', 'Map Tools to Plugins', and 'Variable List'. A list of participants is shown below, with 'Participant 1' (ID: participant1) and 'Participant 2' (ID: participant2) listed, each with an 'Add/Edit: Mapping' button.

The bottom screenshot is the 'Test App' user interface. It features a sidebar with 'New Category', 'Run Process', 'List (30960)', and 'Inbox'. The main area displays a table of test results:

ID	TextField 1	TextField 2	TextField 3	TextField 4
10000_testPerformance_process1	abc	Test	Test Description	Low
10001_testPerformance_process1	abc	Test	Test Description	Low
10002_testPerformance_process1	abc	Test	Test Description	Low
10003_testPerformance_process1	abc	Test	Test Description	Low
10004_testPerformance_process1	abc	Test	Test Description	Low
10005_testPerformance_process1	abc	Test	Test Description	Low
10006_testPerformance_process1	abc	Test	Test Description	Low
10007_testPerformance_process1	abc	Test	Test Description	Low
10008_testPerformance_process1	abc	Test	Test Description	Low
10009_testPerformance_process1	abc	Test	Test Description	Low

At the bottom of the table, it indicates '30960 items found, displaying 1 to 10.' and provides pagination controls (1, 2, 3, 4, 5, 6, 7, 8) and export options (CSV, Excel, XML, PDF). The footer of the application states 'Powered by Joget'.

Test Script

The test script used covers the following app usage:

1. View Login Page
2. Submit Login Form
3. View New Request Form
4. Submit New Request Form
5. Logout

A think time of 10 seconds was used, with random deviation of 3 seconds.

Test Methodology

The load tests were executed by using the jmeter-ec2 (<https://github.com/oliverlloyd/jmeter-ec2>) tool, which provides an automated way of launching, running and collecting JMeter results.

Tests were carried out for the following:

1. 100 concurrent users on 1 node (c3.large)
2. 250 concurrent users on 1 node (c3.large)
3. 500 concurrent users on 1 node (c3.large)
4. 750 concurrent users on 1 node (c3.large)
5. 1000 concurrent users on 1 node (c3.large)
6. 2000 concurrent users on 2 nodes (c3.large)
7. 3000 concurrent users on 3 nodes (c3.large)
8. 5000 concurrent users on 1 node (c3.8xlarge)

The final test on a single c3.8xlarge node was conducted to evaluate the performance on EC2's most powerful instance which provides the following specifications:

- 32 vCPU
- 60GB RAM

For each test, the JMeter summary results were collected. Once all the results were collected, the throughput (requests per second) and average response times were compared and analyzed.

2.2) Setting Up the Joget Server Cluster

The following are brief descriptions of the steps used to setup the server instances:

Launch EC2 Instance

Login to the AWS Management Console and launch the appropriate EC2 instance running on Ubuntu 14.04. Once started, SSH into the server.

Launch RDS Instance

Login to the AWS Management Console and launch the appropriate RDS instance running MySQL.

Install Java

```
sudo apt-get install openjdk-7-jre
```

Install Joget

Download Linux tar.gz bundle
Extract into /opt/joget
Run setup.sh and configure to use the RDS database

Configure Tomcat Service

Create a startup script in /etc/init.d/joget with the appropriate JVM settings

```
#!/bin/sh

export JOGET_HOME="/opt/joget"
export JAVA_OPTS="-XX:MaxPermSize=256m -Xms2048M -Xmx2048M -Dwflow.home=./wflow/ "
$JOGET_HOME/apache-tomcat-7.0.52/bin/catalina.sh $*
```

Add to startup

```
sudo update-rc.d joget defaults
```

Install Apache

For the load balancer, install Apache HTTPD

```
sudo apt-get install apache2
```

Configure Load Balancer

For the load balancer, configure a new site with the proxy and balancer modules.

```
sudo a2enmod headers proxy proxy_balancer proxy_http lbmethod_byrequests slotmem_shm ssl
```

Create a new file in /etc/apache2/sites-available, named jwsite

```
sudo vim /etc/apache2/sites-available/jwsite.conf
```

Add the contents

```
<VirtualHost *>
DocumentRoot "/var/www/jwsite" ServerName localhost
ServerAdmin support@mycompany.com DirectoryIndex index.html index.htm
  <Proxy balancer://cluster>
    BalancerMember http://server1:8080 route=node01
    BalancerMember http://server2:8080 route=node02
    Order deny,allow
    Allow from all
  </Proxy>
  ProxyPreserveHost On
  ProxyTimeout 60
  ProxyPass /jw balancer://cluster/jw stickysession=JSESSIONID timeout=60
  ProxyPassReverse /jw balancer://cluster/jw
</VirtualHost>
```

Note that EC2 does not support session replication, so sticky sessions need to be configured for the clustering to work properly.

Enable the new site and restart Apache

```
sudo a2ensite jwsite
sudo /etc/init.d/apache2 reload
```

Configure Shared Database

To install a local MySQL (instead of RDS)

```
sudo apt-get install mysql-server
```

Configure database permissions

```
mysql -u root
```

Run the following MySQL commands to grant permissions to user **joget** and password **joget**

```
grant all privileges on jwdb.* to 'joget'@'%' identified by 'joget';
flush privileges;
quit
```

Configure MySQL to listen to database connections from remote hosts. Edit the my.cnf file with your favourite editor

```
sudo vim /etc/mysql/my.cnf
```

Comment away the bind-address directive by adding a # in front of the line

```
#bind-address = 127.0.0.1
```

Restart MySQL

```
sudo service mysql restart
```

Test remote connections. In the application server, test a remote connection to the database server **database_host**

```
mysql -h database_host -u joget -p
```

Configure Shared File Directory

Install NFS (for sharing file system)

```
sudo apt-get install portmap nfs-kernel-server nfs-common
```

Detailed instructions can be found at <http://theredblacktree.wordpress.com/2013/05/23/how-to-setup-a-amazon-aws-ec2-nfs-share/>

Create new directory **/opt/joget/shared/wflow** to mount the shared directory and set the directory permissions

```
sudo mkdir -p /opt/joget/shared/wflow
sudo chmod 777 /opt/joget/shared/wflow
```

Mount the shared directory.

```
sudo mount -t nfs joget-server:/export/wflow /opt/joget/shared/wflow
```

Test read-write permissions to confirm that the directory sharing works.

```
echo test123 > /opt/joget/shared/wflow/test.txt
```

Optimize Java

Set appropriate Java heap settings e.g.

```
export JAVA_OPTS="-XX:MaxPermSize=256m -Xms2048M -Xmx2048M -Dwflow.home=/opt/joget/wflow/ "
```

Optimize Tomcat

Edit server.xml and add connectors, especially maxThreads

```
<Connector URIEncoding="UTF-8" port="8080" protocol="HTTP/1.1"
    connectionTimeout="20000" maxThreads="2000"
    redirectPort="8443" />
<Connector port="9090" protocol="HTTP/1.1"
    connectionTimeout="20000" maxThreads="2000"
    scheme="https"
    proxyPort="443"
    redirectPort="443" />
```

Configure Linux ulimit Configuration:

```
ulimit -n 4096
```

Optimize MySQL

Create /etc/mysql/conf.d/custom.cnf containing the following and restart MySQL

```
[mysqld]
query_cache_limit=1M
query_cache_size=32M
max_allowed_packet=16M
lower_case_table_names=1
collation_server=utf8_unicode_ci
character_set_server=utf8
key_buffer_size=16M
read_buffer_size=16M
read_rnd_buffer_size=16M
max_connections=300
```

2.3) Adding a New Joget Node

When adding a new node to the server cluster, the following steps are taken (in this sample the new node hostname will be joget-server3):

Launch New Joget Node

Launch new instance of AMI

Choose appropriate security groups (default and nfs)

Configure New Joget Node

SSH into node

Edit /etc/hosts to add node hostname, and modify joget-server IP if necessary e.g.

```
127.0.0.1 joget-server3
172.30.0.61 joget-server
```

Edit /etc/hostname to modify node hostname e.g.

```
joget-server3
```

Modify hostname e.g.

```
sudo hostname joget-server3
```

Remount NFS share (if joget-server shared directory IP was modified)

Edit startup script /etc/init.d/joget to configure JVM settings e.g.

```
-XX:MaxPermSize=246M -Xms2048M -Xmx2048M
```

Configure Tomcat for clustering by editing server.xml. Add **jvmRoute="node03"** to the **Engine** tag.

```
<Engine name="Catalina" defaultHost="localhost" jvmRoute="node03">
```

For higher loads, increase max active transactions *com.atomikos.icatch.max_actives=2000* in *jw/WEB/classes/jta.properties*

Modify footer (if required):

Edit */jw/WEB-INF/tags/common/footer.tag* and add in *joget-server3*

Restart Tomcat

Add to Load Balancer

In the load balancer, edit */etc/apache2/sites-enabled/joget.conf* to add the *BalancerMember* node e.g.

```
<Proxy balancer://cluster>
BalancerMember http://172.30.0.222:8080 route=node02
BalancerMember http://172.30.0.54:8080 route=node03
Order deny,allow
Allow from all
</Proxy>
ProxyPreserveHost On
ProxyPass /jw balancer://cluster/jw stickysession=JSESSIONID
ProxyPassReverse /jw balancer://cluster/jw
ProxyPass /jwdesigner balancer://cluster/jwdesigner stickysession=JSESSIONID
ProxyPassReverse /jwdesigner balancer://cluster/jwdesigner
```

then reload/restart Apache

2.4) Using the EC2 Elastic Load Balancer

It is possible to use the EC2 Elastic Load Balancer (ELB) instead of Apache HTTPD. To do so:

In the AWS Management Console,

Create a New Load Balancer

For Health Check, can use */jw/web/json/workflow/currentUsername*

Under Description, Port Configuration, Edit Stickiness and select Enable Application Generated Cookie Stickiness with JSESSIONID

2.5) Setup Load Testing Clients

Setup Amazon API Tools

<http://docs.aws.amazon.com/AWSEC2/latest/CommandLineReference/set-up-ec2-cli-linux.html>

Download and install Jmeter-EC2

<https://github.com/oliverlloyd/jmeter-ec2>

Set environment variables

```
export JAVA_HOME=$(/usr/libexec/java_home)
```

```
export EC2_HOME=/Users/user/Work/ec2-api-tools-1.7.1.0/
```

```
export PATH=$PATH:$EC2_HOME/bin
```

```
export AWS_ACCESS_KEY=YOUR_ACCESS_KEY
```

```
export AWS_SECRET_KEY=YOUR_SECRET_KEY
```

Modify jmeter-ec2 to support VPC

<http://www.http503.com/2012/run-jmeter-on-amazon-ec2-cloud/#comment-11198>

Configure jmeter-ec2

Run jmeter-ec2

3. Performance Test Results

3.1) 100 users 1 node

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 100 users in 1 t2.micro instance

Concurrent Users: 100 users

Ramp-up Time: 10s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	1000	172	140	268	1	811	0.001	1.8535681186	31.572410435
Submit Login Form	1000	103	93	136	67	582	0	1.8511730884	0.9418566202
View New Request Form	1000	140	127	195	0	470	0.001	1.8559142419	43.3062509048
Submit New Request Form	1000	228	215	289	1	750	0.001	1.8316427271	36.4436819802
Logout	1000	21	18	32	13	130	0	1.8165436261	14.030315956
TOTAL	5000	133	122	236	0	811	0.0006	8.5343164866	116.9144085399

3.2) 250 users 1 node

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 250 users in 1 t2.micro instance

Concurrent Users: 250 users

Ramp-up Time: 25s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	500	250	204	448	112	878	0	5.3769800729	91.8523671147
Submit Login Form	500	178	137	320	71	897	0	5.0183168565	2.5532647288
View New Request Form	500	286	220	515	103	1075	0	4.9595302333	115.8369966697
Submit New Request Form	500	385	304	650	172	1252	0	4.7476617766	94.5452333476
Logout	500	31	23	58	14	179	0	4.683138827	36.1708447095
TOTAL	2500	226	183	477	14	1252	0	18.2933075764	250.9309435642

3.3) 500 users 1 node

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 500 users in 1 t2.micro instance

Concurrent Users: 500 users

Ramp-up Time: 50s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	2000	5584	5403	10470	97	21905	0	6.0522429612	103.1570532461
Submit Login Form	2000	7535	7397	13217	68	23520	0	5.925030588	2.9740876194
View New Request Form	2000	5641	5367	9826	0	20678	0.0005	5.9372374628	138.5104708517
Submit New Request Form	2000	8999	9078	15274	147	25625	0	5.8007163885	115.427211999
Logout	2000	178	142	313	13	3977	0	5.8619567798	45.1324875507
TOTAL	10000	5588	5304	12089	0	25625	0.0001	26.4495686075	362.2189175415

3.4) 750 users 1 node

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 750 users in 1 t2.micro instance

Concurrent Users: 750 users

Ramp-up Time: 75s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	1500	10200	9075	21440	96	50997	0	5.996090549	102.4283339138
Submit Login Form	1500	14048	12700	28531	1	60366	0.0013333333	5.879885695	3.0023247598
View New Request Form	1500	10260	9374	20466	0	40166	0.0006666667	5.8636352975	136.8182943711
Submit New Request Form	1500	20032	18871	40482	171	69614	0	5.7795227655	115.0511686436
Logout	1500	190	124	323	13	5869	0	5.5929245775	43.197695785
TOTAL	7500	10946	8399	27227	0	69614	0.0004	24.7992090706	340.0309259053

3.5) 1000 users 1 node

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 1000 users in 1 t2.micro instance

Concurrent Users: 1000 users

Ramp-up Time: 100s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	2000	16312	14522	34526	0	66606	0.0005	5.9284554002	101.1151476713
Submit Login Form	2000	24607	24775	45645	1	81382	0.0005	5.7480514106	2.8891957335
View New Request Form	2000	16770	14503	32369	0	64573	0.001	5.6631875818	132.0377328013
Submit New Request Form	2000	30157	27947	56251	150	96358	0	5.6848059349	113.1060064194
Logout	2000	210	149	359	0	9745	0.0005	5.6312647821	43.3399377877
TOTAL	10000	17611	14086	40961	0	96358	0.0005	25.7967986173	353.2414030153

3.6) 2000 users 2 node cluster

Load Balancer: Apache proxy balancer t2.micro

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 2000 users in 2 t2.micro instances

Concurrent Users: 200 users

Ramp-up Time: 10s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	4000	9751	3532	17882	1	127334	0.03	10.0218978468	168.3476589708
Submit Login Form	4000	8461	3250	17253	0	169892	0.02475	9.8812276437	6.5850324799
View New Request Form	4000	7359	3172	10519	1	169863	0.015	9.8571453214	225.4821198122
Submit New Request Form	4000	8120	3651	11318	0	127336	0.0205	9.761406814	189.4801881191
Logout	4000	6439	2225	9357	0	127332	0.01825	9.6914719892	75.0354623642
TOTAL	20000	8026	3085	11494	0	169892	0.0217	44.4407904239	599.8881845409

3.7) 3000 users 3 node cluster

Load Balancer: Apache proxy balancer t2.micro

Application Server: 1 c3.large node

Database: RDS MySQL db.m3.large with 1000 PIOPS

Client: 3000 users in 2 t2.micro instances

Concurrent Users: 200 users

Ramp-up Time: 10s ramp-up

Think Time: 10s random delay 3s deviation

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	6000	13990	2661	33649	95	127336	0.06383333333	13.2525223968	216.9224115891
Submit Login Form	6000	12376	2213	33034	0	135797	0.056	13.1442892445	9.3483494401
View New Request Form	6000	11830	2544	33080	0	127336	0.04733333333	12.9570603022	284.0397980662
Submit New Request Form	6000	11073	2822	18193	0	167794	0.03983333333	12.8979834003	243.0425204191
Logout	6000	9275	1843	16869	0	135793	0.0415	12.8862104662	98.0514292183
TOTAL	30000	11709	2541	32859	0	167794	0.0497	60.7001151279	794.6093168291

3.8) 5000 users 1 c3.8xlarge node

Application Server: 1 c3.8xlarge node

Java VM Options: -XX:MaxPermSize=512M -Xms4096M -Xmx4096M -XX:
+UseConcMarkSweepGC

Database: Local MySQL 5.5.37

Client: 5000 users in 5 t2.micro instances

Concurrent Users: 5000 users

Ramp-up Time: 100s ramp-up

Think Time: 10s random delay 3s deviation

NOTE: Upon running of the test initially using the RDS MySQL db.m3.large instance, it was discovered that the RDS m3.large does not provide enough maximum concurrent connections, i.e. only around 640 connections. So since the EC2 c3.8xlarge instance has a lot of redundant resources, the database was switched to a local MySQL with max_connections=5000

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
View Login Page	10000	2002	134	6704	36	69197	0.0014	34.6241205473	587.6687296962
Submit Login Form	10000	3379	312	8443	0	72542	0.0034	34.0720146101	19.9480665303
View New Request Form	10000	3987	314	9072	0	127280	0.0043	33.7902906979	779.6744023026
Submit New Request Form	10000	22722	20350	49675	0	127271	0.0033	33.4950025456	654.5103369503
Logout	10000	737	17	1460	8	127292	0.0005	33.4110697556	258.7229059716
TOTAL	50000	6565	272	25959	0	127292	0.00258	151.2973749905	2055.1135321318

Appendix: Sample Test Output

100 users 1 node

jmeter-ec2 output

```
-----
jmeter-ec2 Automation Script - Running joget4-ec2.jmx over 1 AWS Instance(s)
-----

requesting 1 instance(s)...success

waiting for instance status checks to pass (this can take several
minutes).....all hosts ready

assigning tags...
TAG instance i-2c334800 ProductKey joget4-ec2
TAG instance i-2c334800 Description PerformanceTest
TAG instance i-2c334800 Name jmeter-ec2-joget4-ec2
complete

copying install.sh to 1 server(s)...connecting to host 54.86.55.130.complete

running install.sh on 1 server(s)...
..sudo: unable to resolve host ip-172-30-0-10
..sudo: unable to resolve host ip-172-30-0-10
Extracting templates from packages: 100%
...
Current default time zone: 'Etc/UTC'
Local time is now: Mon Jul 21 09:59:30 UTC 2014.
Universal Time is now: Mon Jul 21 09:59:30 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

..... * Setting up X socket directories...
...done.
.
Creating config file /etc/gconf/2/path with new version
.
(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
...complete

editing thread counts...

- joget4-ec2.jmx has 1 threadgroup(s) - [inc. those disabled]
- There are 100 threads in the test plan, this test is set to execute 100 percent of these, so will
run using 100 threads

...thread counts updated

copying test files to 1 server(s)...jmx files..done....data
dir..done....jmeter.properties..done....jmeter execution file...done....project specific jar
file(s)...done....all files uploaded

starting jmeter on:
54.86.55.130

JMeter started at Mon Jul 21 18:00:33 MYT 2014
===== START OF JMETER-EC2 TEST
=====
> [updates: every 15 seconds | running total: every 45 seconds]
>
> waiting for the test to start...to stop the test while it is running, press CTRL-C
> 18:01:03: Generate Summary Results + 118 in 15.2s = 7.8/s Avg: 362 Min: 81 Max: 811
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
```

```

> 18:01:18: Generate Summary Results + 158 in 15.4s = 10.3/s Avg: 196 Min: 78 Max: 614
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:01:33: Generate Summary Results + 142 in 15.1s = 9.4/s Avg: 197 Min: 18 Max: 677
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:01:49: Generate Summary Results + 151 in 15.1s = 10.0/s Avg: 112 Min: 17 Max: 402
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:01:49: Generate Summary Results = 573 in 63.5s = 9.0/s Avg: 209 Min: 17 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:01:49: [RUNNING TOTALS] total count: 573, current avg: 112 (ms), average tps: 9.0 (p/sec),
recent tps: 10.0 (p/sec), total errors: 0
>
> 18:02:04: Generate Summary Results + 140 in 15s = 9.4/s Avg: 147 Min: 18 Max: 435
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:02:19: Generate Summary Results + 150 in 15.1s = 9.9/s Avg: 156 Min: 16 Max: 356
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:02:34: Generate Summary Results + 141 in 15s = 9.5/s Avg: 126 Min: 15 Max: 428
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:02:34: Generate Summary Results = 1004 in 108s = 9.3/s Avg: 181 Min: 15 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:02:34: [RUNNING TOTALS] total count: 1004, current avg: 126 (ms), average tps: 9.3 (p/sec),
recent tps: 9.5 (p/sec), total errors: 0
>
> 18:02:49: Generate Summary Results + 152 in 15s = 10.1/s Avg: 108 Min: 16 Max: 250
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:03:04: Generate Summary Results + 137 in 15.3s = 8.9/s Avg: 134 Min: 16 Max: 285
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:03:19: Generate Summary Results + 146 in 15.3s = 9.5/s Avg: 130 Min: 16 Max: 360
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:03:19: Generate Summary Results = 1439 in 154s = 9.4/s Avg: 164 Min: 15 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:03:19: [RUNNING TOTALS] total count: 1439, current avg: 130 (ms), average tps: 9.4 (p/sec),
recent tps: 9.5 (p/sec), total errors: 0
>
> 18:03:34: Generate Summary Results + 152 in 15s = 10.3/s Avg: 114 Min: 16 Max: 293
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:03:49: Generate Summary Results + 148 in 15.2s = 9.7/s Avg: 112 Min: 15 Max: 226
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:04:04: Generate Summary Results + 159 in 15.3s = 10.4/s Avg: 143 Min: 14 Max: 711
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:04:04: Generate Summary Results = 1898 in 198s = 9.6/s Avg: 154 Min: 14 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:04:05: [RUNNING TOTALS] total count: 1898, current avg: 143 (ms), average tps: 9.6 (p/sec),
recent tps: 10.4 (p/sec), total errors: 0
>
> 18:04:20: Generate Summary Results + 148 in 15.1s = 9.8/s Avg: 105 Min: 14 Max: 272
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:04:35: Generate Summary Results + 151 in 15.1s = 10.0/s Avg: 96 Min: 13 Max: 226
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:04:50: Generate Summary Results + 148 in 15s = 9.8/s Avg: 154 Min: 14 Max: 490
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:04:50: Generate Summary Results = 2345 in 243s = 9.6/s Avg: 147 Min: 13 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:04:50: [RUNNING TOTALS] total count: 2345, current avg: 154 (ms), average tps: 9.6 (p/sec),
recent tps: 9.8 (p/sec), total errors: 0
>
> 18:05:05: Generate Summary Results + 152 in 15.1s = 10.1/s Avg: 114 Min: 15 Max: 333
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:05:20: Generate Summary Results + 148 in 15s = 9.9/s Avg: 120 Min: 15 Max: 270
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:05:35: Generate Summary Results + 149 in 15.1s = 9.9/s Avg: 132 Min: 16 Max: 301
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:05:35: Generate Summary Results = 2794 in 288s = 9.7/s Avg: 143 Min: 13 Max: 811
Err: 0 (0.00%) | host: 54.86.55.130
>
> 18:05:35: [RUNNING TOTALS] total count: 2794, current avg: 132 (ms), average tps: 9.7 (p/sec),
recent tps: 9.9 (p/sec), total errors: 0
>
> 18:05:50: Generate Summary Results + 148 in 15.1s = 9.8/s Avg: 128 Min: 15 Max: 307
Err: 0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:06:05: Generate Summary Results + 142 in 15s = 9.7/s Avg: 119 Min: 0 Max: 280
Err: 1 (0.70%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:06:20: Generate Summary Results + 149 in 15.1s = 9.9/s Avg: 117 Min: 15 Max: 250

```

```

Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:06:20: Generate Summary Results = 3233 in 333s = 9.7/s Avg: 140 Min: 0 Max: 811
Err:      1 (0.03%) | host: 54.86.55.130
>
> 18:06:20: [RUNNING TOTALS] total count: 3233, current avg: 117 (ms), average tps: 9.7 (p/sec),
recent tps: 9.9 (p/sec), total errors: 1
>
> 18:06:35: Generate Summary Results + 146 in 15.3s = 9.6/s Avg: 121 Min: 16 Max: 281
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:06:50: Generate Summary Results + 151 in 15s = 10.3/s Avg: 131 Min: 15 Max: 366
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:07:06: Generate Summary Results + 151 in 15s = 10.1/s Avg: 106 Min: 16 Max: 259
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:07:06: Generate Summary Results = 3681 in 378s = 9.7/s Avg: 138 Min: 0 Max: 811
Err:      1 (0.03%) | host: 54.86.55.130
>
> 18:07:06: [RUNNING TOTALS] total count: 3681, current avg: 106 (ms), average tps: 9.7 (p/sec),
recent tps: 10.1 (p/sec), total errors: 1
>
> 18:07:21: Generate Summary Results + 147 in 15.3s = 9.6/s Avg: 135 Min: 15 Max: 366
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:07:36: Generate Summary Results + 154 in 15s = 10.2/s Avg: 141 Min: 16 Max: 391
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:07:51: Generate Summary Results + 143 in 15s = 9.5/s Avg: 114 Min: 15 Max: 300
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:07:51: Generate Summary Results = 4125 in 423s = 9.7/s Avg: 137 Min: 0 Max: 811
Err:      1 (0.02%) | host: 54.86.55.130
>
> 18:07:51: [RUNNING TOTALS] total count: 4125, current avg: 114 (ms), average tps: 9.7 (p/sec),
recent tps: 9.5 (p/sec), total errors: 1
>
> 18:08:06: Generate Summary Results + 148 in 15.2s = 9.7/s Avg: 116 Min: 1 Max: 306
Err:      1 (0.68%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:08:21: Generate Summary Results + 147 in 15s = 9.8/s Avg: 128 Min: 16 Max: 312
Err:      0 (0.00%) Active: 100 Started: 100 Finished: 0 | host: 54.86.55.130
> 18:08:36: Generate Summary Results + 150 in 15.1s = 9.9/s Avg: 106 Min: 14 Max: 279
Err:      0 (0.00%) Active: 97 Started: 100 Finished: 3 | host: 54.86.55.130
> 18:08:36: Generate Summary Results = 4570 in 468s = 9.8/s Avg: 135 Min: 0 Max: 811
Err:      2 (0.04%) | host: 54.86.55.130
>
> 18:08:36: [RUNNING TOTALS] total count: 4570, current avg: 106 (ms), average tps: 9.8 (p/sec),
recent tps: 9.9 (p/sec), total errors: 2
>
> 18:08:51: Generate Summary Results + 131 in 15s = 8.8/s Avg: 99 Min: 1 Max: 274
Err:      1 (0.76%) Active: 84 Started: 100 Finished: 16 | host: 54.86.55.130
> 18:09:06: Generate Summary Results + 123 in 15s = 8.2/s Avg: 148 Min: 14 Max: 750
Err:      0 (0.00%) Active: 66 Started: 100 Finished: 34 | host: 54.86.55.130
> 18:09:21: Generate Summary Results + 94 in 15.4s = 6.1/s Avg: 111 Min: 15 Max: 269
Err:      0 (0.00%) Active: 41 Started: 100 Finished: 59 | host: 54.86.55.130
> 18:09:21: Generate Summary Results = 4918 in 514s = 9.6/s Avg: 134 Min: 0 Max: 811
Err:      3 (0.06%) | host: 54.86.55.130
>
> 18:09:21: [RUNNING TOTALS] total count: 4918, current avg: 111 (ms), average tps: 9.6 (p/sec),
recent tps: 6.1 (p/sec), total errors: 3
>
> 18:09:36: Generate Summary Results + 54 in 15s = 3.6/s Avg: 88 Min: 15 Max: 223
Err:      0 (0.00%) Active: 15 Started: 100 Finished: 85 | host: 54.86.55.130
> 18:09:52: Generate Summary Results + 21 in 15.2s = 1.4/s Avg: 87 Min: 15 Max: 210
Err:      0 (0.00%) Active: 5 Started: 100 Finished: 95 | host: 54.86.55.130
> 18:10:07: Generate Summary Results + 21 in 15.2s = 1.4/s Avg: 87 Min: 15 Max: 210
Err:      0 (0.00%) Active: 5 Started: 100 Finished: 95 | host: 54.86.55.130
> 18:10:07: Generate Summary Results = 4993 in 544s = 9.2/s Avg: 133 Min: 0 Max: 811
Err:      3 (0.06%) | host: 54.86.55.130
>
> 18:10:07: [RUNNING TOTALS] total count: 4993, current avg: 87 (ms), average tps: 9.2 (p/sec),
recent tps: 1.4 (p/sec), total errors: 3
>
> 18:10:22: Generate Summary Results + 21 in 15.2s = 1.4/s Avg: 87 Min: 15 Max: 210
Err:      0 (0.00%) Active: 5 Started: 100 Finished: 95 | host: 54.86.55.130
>
>
> 18:10:37: [FINAL RESULTS] total count: 5000, overall avg: 133 (ms), overall tps: 8.5 (p/sec),
recent tps: .2 (p/sec), errors: 3
>
===== END OF JMETER-EC2 TEST
=====

```

downloading results from 54.86.55.130.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-1405936474-0.jtl complete

terminating instance(s)...
INSTANCE i-2c334800 running shutting-down

processing results...

jmeter-ec2 Automation Script - COMPLETE

Test Results: /Users/user/Work/jmeter-ec2/joget4-ec2/results/joget4-ec2-1405936474-complete.jtl

2000 users 2 node cluster

jmeter-ec2 output

requesting 2 instance(s)...success

waiting for instance status checks to pass (this can take several minutes).....all hosts ready

assigning tags...

TAG	instance	i-24364608	ProductKey	joget4-ec2
TAG	instance	i-25364609	ProductKey	joget4-ec2
TAG	instance	i-24364608	Description	PerformanceTest
TAG	instance	i-25364609	Description	PerformanceTest
TAG	instance	i-24364608	Name	jmeter-ec2-joget4-ec2
TAG	instance	i-25364609	Name	jmeter-ec2-joget4-ec2

complete

copying install.sh to 2 server(s)...connecting to host 54.88.166.54connecting to host 54.88.167.208.complete

running install.sh on 2 server(s)...

```
..sudo: unable to resolve host ip-172-30-0-33
sudo: unable to resolve host ip-172-30-0-34
..sudo: unable to resolve host ip-172-30-0-34
sudo: unable to resolve host ip-172-30-0-33
Extracting templates from packages: 100%
Extracting templates from packages: 100%
..
Current default time zone: 'Etc/UTC'
Local time is now:      Fri Jul 18 09:59:32 UTC 2014.
Universal Time is now:  Fri Jul 18 09:59:32 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.
```

```
Current default time zone: 'Etc/UTC'
Local time is now:      Fri Jul 18 09:59:33 UTC 2014.
Universal Time is now:  Fri Jul 18 09:59:33 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.
```

```
..... * Setting up X socket directories...
...done.
* Setting up X socket directories...
...done.
```

Creating config file /etc/gconf/2/path with new version

Creating config file /etc/gconf/2/path with new version

```
(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
```

```
(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
```

....complete

editing thread counts...

```
- joget4-ec2.jmx has 1 threadgroup(s) - [inc. those disabled]
- There are 2000 threads in the test plan, this test is set to execute 100 percent of these, so
will run using 2000 threads
```


...thread counts updated

copying test files to 2 server(s)...jmx files..done....data
dir..done....jmeter.properties..done....jmeter execution file...done....project specific jar
file(s)...done....all files uploaded

starting jmeter on:
54.88.166.54
54.88.167.208

JMeter started at Fri Jul 18 18:00:38 MYT 2014

===== START OF JMETER-EC2 TEST
=====

> [updates: every 15 seconds | running total: every 45 seconds]

>

> waiting for the test to start...to stop the test while it is running, press CTRL-C

> 18:01:08: Generate Summary Results + 29 in 13s = 2.3/s Avg: 348 Min: 116 Max: 1729

Err: 0 (0.00%) Active: 79 Started: 79 Finished: 0 | host: 54.88.167.208

> 18:01:23: Generate Summary Results + 135 in 15s = 9.1/s Avg: 192 Min: 0 Max: 495

Err: 1 (0.74%) Active: 152 Started: 152 Finished: 0 | host: 54.88.166.54

> 18:01:23: Generate Summary Results + 138 in 15s = 9.2/s Avg: 204 Min: 70 Max: 625

Err: 0 (0.00%) Active: 153 Started: 153 Finished: 0 | host: 54.88.167.208

> 18:01:38: Generate Summary Results + 237 in 16s = 15.3/s Avg: 277 Min: 31 Max: 866

Err: 0 (0.00%) Active: 226 Started: 226 Finished: 0 | host: 54.88.166.54

> 18:01:39: Generate Summary Results + 231 in 15s = 15.7/s Avg: 289 Min: 37 Max: 1000

Err: 0 (0.00%) Active: 226 Started: 226 Finished: 0 | host: 54.88.167.208

> 18:01:54: Generate Summary Results + 339 in 16s = 21.7/s Avg: 547 Min: 15 Max: 2133

Err: 1 (0.29%) Active: 301 Started: 301 Finished: 0 | host: 54.88.166.54

> 18:01:54: Generate Summary Results + 332 in 16s = 21.4/s Avg: 536 Min: 0 Max: 2081

Err: 3 (0.90%) Active: 301 Started: 301 Finished: 0 | host: 54.88.167.208

> 18:01:54: Generate Summary Results = 739 in 54s = 13.8/s Avg: 393 Min: 0 Max: 2133

Err: 2 (0.27%) | host: 54.88.166.54

> 18:01:54: Generate Summary Results = 731 in 57.4s = 12.7/s Avg: 389 Min: 0 Max: 2081

Err: 3 (0.41%) | host: 54.88.167.208

>

> 18:01:54: [RUNNING TOTALS] total count: 1470, current avg: 541 (ms), average tps: 26.5 (p/sec),

recent tps: 43.1 (p/sec), total errors: 5

>

> 18:02:09: Generate Summary Results + 378 in 17.2s = 22.0/s Avg: 1440 Min: 18 Max: 5586

Err: 0 (0.00%) Active: 376 Started: 376 Finished: 0 | host: 54.88.166.54

> 18:02:09: Generate Summary Results + 382 in 17s = 22.5/s Avg: 1454 Min: 0 Max: 4669

Err: 2 (0.52%) Active: 375 Started: 375 Finished: 0 | host: 54.88.167.208

> 18:02:24: Generate Summary Results + 393 in 20.1s = 19.5/s Avg: 3362 Min: 70 Max: 7088

Err: 0 (0.00%) Active: 450 Started: 450 Finished: 0 | host: 54.88.166.54

> 18:02:24: Generate Summary Results + 393 in 20.5s = 19.2/s Avg: 3417 Min: 0 Max: 7149

Err: 3 (0.76%) Active: 450 Started: 450 Finished: 0 | host: 54.88.167.208

> 18:02:39: Generate Summary Results + 446 in 22s = 20.6/s Avg: 4022 Min: 0 Max: 18190

Err: 2 (0.45%) Active: 519 Started: 525 Finished: 6 | host: 54.88.166.54

> 18:02:39: Generate Summary Results + 449 in 22s = 20.8/s Avg: 4033 Min: 0 Max: 19170

Err: 1 (0.22%) Active: 520 Started: 525 Finished: 5 | host: 54.88.167.208

> 18:02:39: Generate Summary Results = 1956 in 99s = 19.8/s Avg: 2019 Min: 0 Max: 18190

Err: 4 (0.20%) | host: 54.88.166.54

> 18:02:39: Generate Summary Results = 1955 in 102s = 19.1/s Avg: 2043 Min: 0 Max: 19170

Err: 9 (0.46%) | host: 54.88.167.208

>

> 18:02:39: [RUNNING TOTALS] total count: 3911, current avg: 4027 (ms), average tps: 38.9 (p/sec),

recent tps: 41.4 (p/sec), total errors: 13

>

> 18:02:54: Generate Summary Results + 418 in 38.1s = 11.0/s Avg: 4933 Min: 0 Max: 35343

Err: 2 (0.48%) Active: 576 Started: 600 Finished: 24 | host: 54.88.166.54

> 18:02:54: Generate Summary Results + 455 in 38.1s = 11.9/s Avg: 4957 Min: 16 Max: 35400

Err: 0 (0.00%) Active: 577 Started: 599 Finished: 22 | host: 54.88.167.208

> 18:03:10: Generate Summary Results + 437 in 47s = 9.4/s Avg: 6272 Min: 0 Max: 35895

Err: 1 (0.23%) Active: 622 Started: 674 Finished: 52 | host: 54.88.166.54

> 18:03:10: Generate Summary Results + 433 in 49s = 8.9/s Avg: 5697 Min: 0 Max: 35855

Err: 1 (0.23%) Active: 628 Started: 674 Finished: 46 | host: 54.88.167.208

> 18:03:25: Generate Summary Results + 444 in 55s = 8.1/s Avg: 6669 Min: 28 Max: 43856

Err: 0 (0.00%) Active: 666 Started: 749 Finished: 83 | host: 54.88.166.54

> 18:03:25: Generate Summary Results + 451 in 48.1s = 9.4/s Avg: 6160 Min: 48 Max: 35847

Err: 0 (0.00%) Active: 666 Started: 748 Finished: 82 | host: 54.88.167.208

> 18:03:25: Generate Summary Results = 3255 in 144s = 22.6/s Avg: 3599 Min: 0 Max: 43856

Err: 7 (0.22%) | host: 54.88.166.54

> 18:03:25: Generate Summary Results = 3294 in 147s = 22.3/s Avg: 3489 Min: 0 Max: 35855

Err: 10 (0.30%) | host: 54.88.167.208

```

>
> 18:03:25: [RUNNING TOTALS] total count: 6549, current avg: 6414 (ms), average tps: 44.9 (p/sec),
recent tps: 17.5 (p/sec), total errors: 17
>
> 18:03:40: Generate Summary Results + 432 in 78.3s = 5.5/s Avg: 7353 Min: 18 Max: 69276
Err: 0 (0.00%) Active: 720 Started: 823 Finished: 103 | host: 54.88.166.54
> 18:03:40: Generate Summary Results + 437 in 78.2s = 5.6/s Avg: 7182 Min: 27 Max: 68314
Err: 0 (0.00%) Active: 701 Started: 823 Finished: 122 | host: 54.88.167.208
> 18:03:55: Generate Summary Results + 459 in 93.3s = 4.9/s Avg: 9163 Min: 25 Max: 93054
Err: 0 (0.00%) Active: 763 Started: 898 Finished: 135 | host: 54.88.166.54
> 18:03:55: Generate Summary Results + 459 in 80.3s = 5.7/s Avg: 8724 Min: 60 Max: 67728
Err: 0 (0.00%) Active: 748 Started: 897 Finished: 149 | host: 54.88.167.208
> 18:04:10: Generate Summary Results + 475 in 80s = 5.9/s Avg: 8728 Min: 27 Max: 67832
Err: 0 (0.00%) Active: 804 Started: 973 Finished: 169 | host: 54.88.166.54
> 18:04:10: Generate Summary Results + 465 in 79.2s = 5.9/s Avg: 7973 Min: 17 Max: 67419
Err: 0 (0.00%) Active: 800 Started: 972 Finished: 172 | host: 54.88.167.208
> 18:04:10: Generate Summary Results = 4621 in 189s = 24.5/s Avg: 5030 Min: 0 Max: 93054
Err: 7 (0.15%) | host: 54.88.166.54
> 18:04:10: Generate Summary Results = 4655 in 192s = 24.2/s Avg: 4800 Min: 0 Max: 68314
Err: 10 (0.21%) | host: 54.88.167.208
>
> 18:04:10: [RUNNING TOTALS] total count: 9276, current avg: 8350 (ms), average tps: 48.7 (p/sec),
recent tps: 11.8 (p/sec), total errors: 17
>
> 18:04:25: Generate Summary Results + 449 in 79s = 5.7/s Avg: 8484 Min: 1 Max: 69559
Err: 1 (0.22%) Active: 806 Started: 1000 Finished: 194 | host: 54.88.166.54
> 18:04:26: Generate Summary Results + 460 in 82s = 5.6/s Avg: 8740 Min: 0 Max: 67018
Err: 2 (0.43%) Active: 800 Started: 1000 Finished: 200 | host: 54.88.167.208
> 18:04:41: Generate Summary Results + 502 in 141s = 3.5/s Avg: 11892 Min: 24 Max: 127301
Err: 9 (1.79%) Active: 768 Started: 1000 Finished: 232 | host: 54.88.166.54
> 18:04:41: Generate Summary Results + 497 in 139s = 3.6/s Avg: 11069 Min: 19 Max: 127313
Err: 10 (2.01%) Active: 767 Started: 1000 Finished: 233 | host: 54.88.167.208
> 18:04:56: Generate Summary Results + 483 in 141s = 3.4/s Avg: 12329 Min: 113 Max: 127332
Err: 14 (2.90%) Active: 735 Started: 1000 Finished: 265 | host: 54.88.166.54
> 18:04:56: Generate Summary Results + 489 in 138s = 3.6/s Avg: 14021 Min: 17 Max: 127318
Err: 21 (4.29%) Active: 725 Started: 1000 Finished: 275 | host: 54.88.167.208
> 18:04:56: Generate Summary Results = 6055 in 234s = 25.9/s Avg: 6437 Min: 0 Max: 127332
Err: 31 (0.51%) | host: 54.88.166.54
> 18:04:56: Generate Summary Results = 6101 in 237s = 25.7/s Avg: 6347 Min: 0 Max: 127318
Err: 43 (0.70%) | host: 54.88.167.208
>
> 18:04:56: [RUNNING TOTALS] total count: 12156, current avg: 13175 (ms), average tps: 51.6 (p/sec),
recent tps: 7.0 (p/sec), total errors: 74
>
> 18:05:11: Generate Summary Results + 498 in 141s = 3.5/s Avg: 14375 Min: 38 Max: 127331
Err: 22 (4.42%) Active: 685 Started: 1000 Finished: 315 | host: 54.88.166.54
> 18:05:11: Generate Summary Results + 528 in 141s = 3.7/s Avg: 15058 Min: 20 Max: 127331
Err: 25 (4.73%) Active: 674 Started: 1000 Finished: 326 | host: 54.88.167.208
> 18:05:26: Generate Summary Results + 519 in 183s = 2.8/s Avg: 16504 Min: 32 Max: 169892
Err: 36 (6.94%) Active: 638 Started: 1000 Finished: 362 | host: 54.88.166.54
> 18:05:26: Generate Summary Results + 506 in 142s = 3.6/s Avg: 12991 Min: 45 Max: 127334
Err: 25 (4.94%) Active: 620 Started: 1000 Finished: 380 | host: 54.88.167.208
> 18:05:41: Generate Summary Results + 504 in 142s = 3.6/s Avg: 14823 Min: 16 Max: 127336
Err: 32 (6.35%) Active: 580 Started: 1000 Finished: 420 | host: 54.88.166.54
> 18:05:41: Generate Summary Results + 490 in 141s = 3.5/s Avg: 13341 Min: 0 Max: 127326
Err: 27 (5.51%) Active: 573 Started: 1000 Finished: 427 | host: 54.88.167.208
> 18:05:42: Generate Summary Results = 7576 in 279s = 27.2/s Avg: 8206 Min: 0 Max: 169892
Err: 121 (1.60%) | host: 54.88.166.54
> 18:05:42: Generate Summary Results = 7625 in 282s = 27.0/s Avg: 7841 Min: 0 Max: 127334
Err: 120 (1.57%) | host: 54.88.167.208
>
> 18:05:42: [RUNNING TOTALS] total count: 15201, current avg: 14082 (ms), average tps: 54.2 (p/sec),
recent tps: 7.1 (p/sec), total errors: 241
>
> 18:05:57: Generate Summary Results + 530 in 142s = 3.7/s Avg: 13174 Min: 25 Max: 127326
Err: 30 (5.66%) Active: 500 Started: 1000 Finished: 500 | host: 54.88.166.54
> 18:05:57: Generate Summary Results + 523 in 142s = 3.7/s Avg: 14174 Min: 0 Max: 127336
Err: 37 (7.07%) Active: 489 Started: 1000 Finished: 511 | host: 54.88.167.208
> 18:06:12: Generate Summary Results + 500 in 142s = 3.5/s Avg: 9437 Min: 17 Max: 127294
Err: 16 (3.20%) Active: 404 Started: 1000 Finished: 596 | host: 54.88.166.54
> 18:06:12: Generate Summary Results + 510 in 141s = 3.6/s Avg: 11484 Min: 0 Max: 127306
Err: 21 (4.12%) Active: 399 Started: 1000 Finished: 601 | host: 54.88.167.208
> 18:06:27: Generate Summary Results + 498 in 142s = 3.5/s Avg: 6682 Min: 14 Max: 127319
Err: 18 (3.61%) Active: 275 Started: 1000 Finished: 725 | host: 54.88.166.54
> 18:06:27: Generate Summary Results + 487 in 141s = 3.4/s Avg: 5664 Min: 0 Max: 127323
Err: 14 (2.87%) Active: 283 Started: 1000 Finished: 717 | host: 54.88.167.208
> 18:06:27: Generate Summary Results = 9104 in 324s = 28.1/s Avg: 8480 Min: 0 Max: 169892

```

```

Err: 185 (2.03%) | host: 54.88.166.54
> 18:06:27: Generate Summary Results = 9145 in 327s = 27.9/s Avg: 8290 Min: 0 Max: 127336
Err: 192 (2.10%) | host: 54.88.167.208
>
> 18:06:27: [RUNNING TOTALS] total count: 18249, current avg: 6173 (ms), average tps: 56.0 (p/sec),
recent tps: 6.9 (p/sec), total errors: 377
>
> 18:06:42: Generate Summary Results + 345 in 142s = 2.4/s Avg: 7478 Min: 13 Max: 127330
Err: 19 (5.51%) Active: 181 Started: 1000 Finished: 819 | host: 54.88.166.54
> 18:06:42: Generate Summary Results + 380 in 142s = 2.7/s Avg: 7048 Min: 0 Max: 127306
Err: 19 (5.00%) Active: 167 Started: 1000 Finished: 833 | host: 54.88.167.208
> 18:06:57: Generate Summary Results + 241 in 141s = 1.7/s Avg: 3727 Min: 0 Max: 127309
Err: 9 (3.73%) Active: 107 Started: 1000 Finished: 893 | host: 54.88.166.54
> 18:06:57: Generate Summary Results + 224 in 142s = 1.6/s Avg: 1829 Min: 13 Max: 127308
Err: 3 (1.34%) Active: 105 Started: 1000 Finished: 895 | host: 54.88.167.208
> 18:07:12: Generate Summary Results + 140 in 140s = 1.0/s Avg: 4637 Min: 12 Max: 127246
Err: 5 (3.57%) Active: 59 Started: 1000 Finished: 941 | host: 54.88.166.54
> 18:07:12: Generate Summary Results + 140 in 141s = 1.0/s Avg: 1908 Min: 13 Max: 127263
Err: 2 (1.43%) Active: 47 Started: 1000 Finished: 953 | host: 54.88.167.208
> 18:07:13: Generate Summary Results = 9830 in 369s = 26.7/s Avg: 8273 Min: 0 Max: 169892
Err: 218 (2.22%) | host: 54.88.166.54
> 18:07:13: Generate Summary Results = 9889 in 373s = 26.5/s Avg: 8005 Min: 0 Max: 127336
Err: 216 (2.18%) | host: 54.88.167.208
>
> 18:07:13: [RUNNING TOTALS] total count: 19719, current avg: 3272 (ms), average tps: 53.2 (p/sec),
recent tps: 2.0 (p/sec), total errors: 434
>
> 18:07:28: Generate Summary Results + 83 in 15.1s = 5.5/s Avg: 87 Min: 13 Max: 253
Err: 0 (0.00%) Active: 34 Started: 1000 Finished: 966 | host: 54.88.166.54
> 18:07:28: Generate Summary Results + 61 in 15s = 4.1/s Avg: 85 Min: 13 Max: 237
Err: 0 (0.00%) Active: 25 Started: 1000 Finished: 975 | host: 54.88.167.208
> 18:07:43: Generate Summary Results + 49 in 15s = 3.4/s Avg: 88 Min: 14 Max: 216
Err: 0 (0.00%) Active: 19 Started: 1000 Finished: 981 | host: 54.88.166.54
> 18:07:43: Generate Summary Results + 35 in 16s = 2.2/s Avg: 80 Min: 14 Max: 200
Err: 0 (0.00%) Active: 9 Started: 1000 Finished: 991 | host: 54.88.167.208
> 18:07:58: Generate Summary Results + 22 in 15.4s = 1.4/s Avg: 67 Min: 13 Max: 178
Err: 0 (0.00%) Active: 10 Started: 1000 Finished: 990 | host: 54.88.166.54
> 18:07:58: Generate Summary Results + 12 in 14s = 0.9/s Avg: 66 Min: 13 Max: 176
Err: 0 (0.00%) Active: 3 Started: 1000 Finished: 997 | host: 54.88.167.208
> 18:07:58: Generate Summary Results = 9984 in 415s = 24.1/s Avg: 8147 Min: 0 Max: 169892
Err: 218 (2.18%) | host: 54.88.166.54
> 18:07:58: Generate Summary Results = 9997 in 419s = 23.8/s Avg: 7920 Min: 0 Max: 127336
Err: 216 (2.16%) | host: 54.88.167.208
>
> 18:07:58: [RUNNING TOTALS] total count: 19981, current avg: 66 (ms), average tps: 47.9 (p/sec),
recent tps: 2.3 (p/sec), total errors: 434
>
> 18:08:13: Generate Summary Results + 12 in 13.4s = 0.9/s Avg: 68 Min: 12 Max: 157
Err: 0 (0.00%) Active: 4 Started: 1000 Finished: 996 | host: 54.88.166.54
> 18:08:13: Generate Summary Results + 3 in 14s = 0.2/s Avg: 53 Min: 14 Max: 130
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.88.167.208
>
>
> 18:08:28: [FINAL RESULTS] total count: 20000, overall avg: 8026 (ms), overall tps: 45.2 (p/sec),
recent tps: .4 (p/sec), errors: 434
>
===== END OF JMETER-EC2 TEST
=====

```

```

downloading results from 54.88.166.54.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405677291-0.jtl complete
downloading results from 54.88.167.208.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405677291-1.jtl complete

```

```

terminating instance(s)...
INSTANCE i-25364609 running shutting-down
INSTANCE i-24364608 running shutting-down

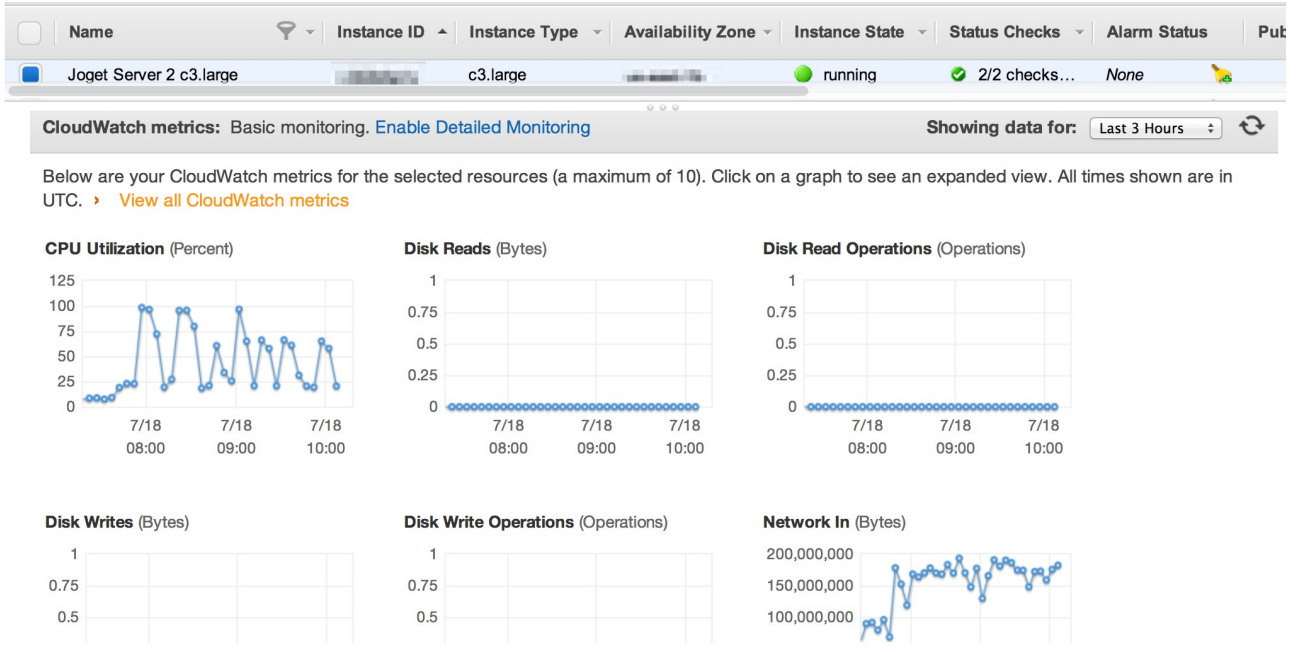
```

processing results...

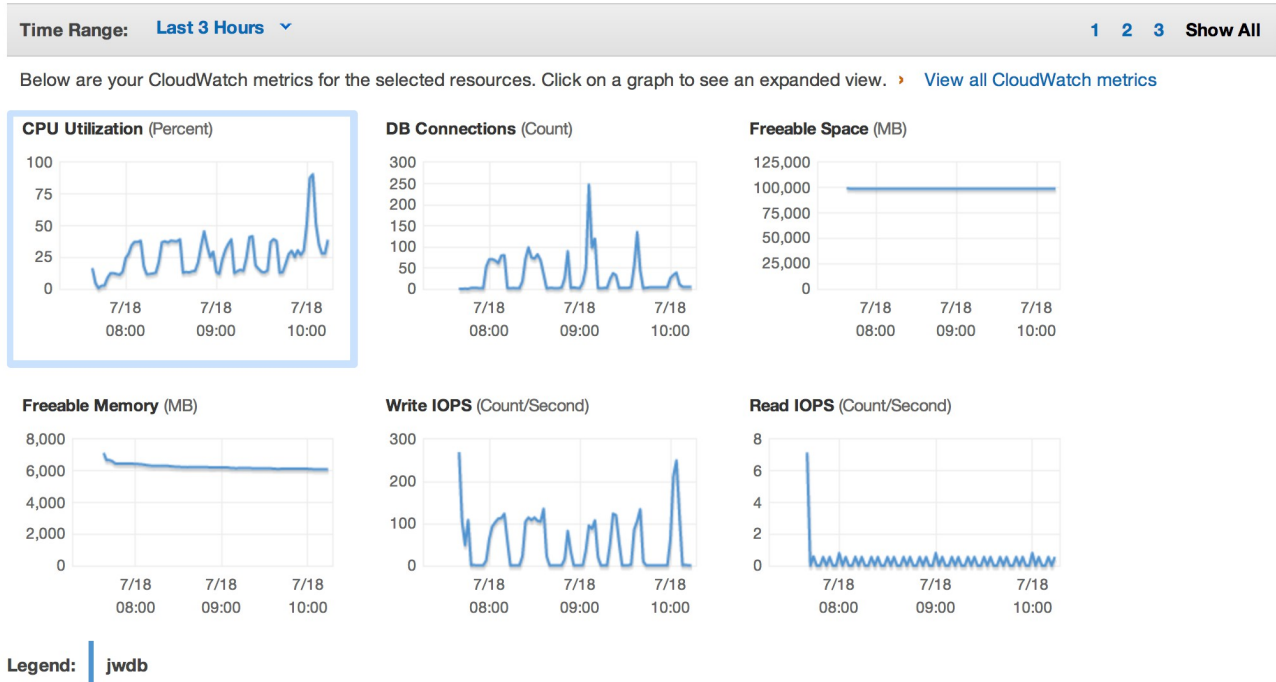
jmeter-ec2 Automation Script - COMPLETE

Test Results: /Users/user/Work/jmeter-ec2/joget4-ec2/results/joget4-ec2-1405677291-complete.jtl

EC2 monitoring



RDS monitoring



3000 users 3 node cluster

jmeter-ec2 output

```
-----  
jmeter-ec2 Automation Script - Running joget4-ec2.jmx over 3 AWS Instance(s)  
-----
```

requesting 3 instance(s)...success

waiting for instance status checks to pass (this can take several minutes).....all hosts ready

assigning tags...

TAG	instance	i-3c116110	ProductKey	joget4-ec2
TAG	instance	i-3e116112	ProductKey	joget4-ec2
TAG	instance	i-3f116113	ProductKey	joget4-ec2
TAG	instance	i-3c116110	Description	PerformanceTest
TAG	instance	i-3e116112	Description	PerformanceTest
TAG	instance	i-3f116113	Description	PerformanceTest
TAG	instance	i-3c116110	Name	jmeter-ec2-joget4-ec2
TAG	instance	i-3e116112	Name	jmeter-ec2-joget4-ec2
TAG	instance	i-3f116113	Name	jmeter-ec2-joget4-ec2

complete

copying install.sh to 3 server(s)...connecting to host 54.209.110.133connecting to host 54.209.150.121connecting to host 54.210.8.195.complete

running install.sh on 3 server(s)...

```
..sudo: unable to resolve host ip-172-30-0-45  
sudo: unable to resolve host ip-172-30-0-44  
sudo: unable to resolve host ip-172-30-0-46  
..sudo: unable to resolve host ip-172-30-0-46  
sudo: unable to resolve host ip-172-30-0-44  
sudo: unable to resolve host ip-172-30-0-45  
Extracting templates from packages: 100%  
Extracting templates from packages: 100%  
Extracting templates from packages: 100%  
..  
Current default time zone: 'Etc/UTC'  
Local time is now:      Fri Jul 18 10:48:05 UTC 2014.  
Universal Time is now:  Fri Jul 18 10:48:05 UTC 2014.  
Run 'dpkg-reconfigure tzdata' if you wish to change it.
```

```
.  
Current default time zone: 'Etc/UTC'  
Local time is now:      Fri Jul 18 10:48:08 UTC 2014.  
Universal Time is now:  Fri Jul 18 10:48:08 UTC 2014.  
Run 'dpkg-reconfigure tzdata' if you wish to change it.
```

```
....  
Current default time zone: 'Etc/UTC'  
Local time is now:      Fri Jul 18 10:48:22 UTC 2014.  
Universal Time is now:  Fri Jul 18 10:48:22 UTC 2014.  
Run 'dpkg-reconfigure tzdata' if you wish to change it.
```

```
.. * Setting up X socket directories...  
...done.
```

Creating config file /etc/gconf/2/path with new version

```
. * Setting up X socket directories...  
...done.
```

```
.(gconftool-2:6956): GConf-WARNING **: Client failed to connect to the D-BUS daemon:  
Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
```

Creating config file /etc/gconf/2/path with new version

```
.(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:  
Unable to autolaunch a dbus-daemon without a $DISPLAY for X11
```

```
... * Setting up X socket directories...  
...done.
```

Creating config file /etc/gconf/2/path with new version

.

(gconftool-2:6953): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a \$DISPLAY for X11
....complete

editing thread counts...

- joget4-ec2.jmx has 1 threadgroup(s) - [inc. those disabled]
- There are 3000 threads in the test plan, this test is set to execute 100 percent of these, so will run using 3000 threads

...thread counts updated

copying test files to 3 server(s)...jmx files..done....data
dir..done....jmeter.properties..done....jmeter execution file...done....project specific jar
file(s)...done....all files uploaded

starting jmeter on:
54.209.110.133
54.209.150.121
54.210.8.195

JMeter started at Fri Jul 18 18:49:32 MYT 2014

===== START OF JMETER-EC2 TEST

> [updates: every 15 seconds | running total: every 45 seconds]

>

> waiting for the test to start...to stop the test while it is running, press CTRL-C

> 18:50:02: Generate Summary Results + 80 in 15.1s = 5.3/s Avg: 113 Min: 69 Max: 159

Err: 0 (0.00%) Active: 111 Started: 111 Finished: 0 | host: 54.209.110.133

> 18:50:02: Generate Summary Results + 77 in 12s = 6.4/s Avg: 129 Min: 4 Max: 371

Err: 1 (1.30%) Active: 110 Started: 110 Finished: 0 | host: 54.209.150.121

> 18:50:02: Generate Summary Results + 69 in 14s = 5.0/s Avg: 117 Min: 72 Max: 164

Err: 0 (0.00%) Active: 108 Started: 108 Finished: 0 | host: 54.210.8.195

> 18:50:17: Generate Summary Results + 178 in 15s = 12.1/s Avg: 136 Min: 67 Max: 322

Err: 0 (0.00%) Active: 183 Started: 183 Finished: 0 | host: 54.209.110.133

> 18:50:17: Generate Summary Results + 182 in 15s = 12.2/s Avg: 139 Min: 67 Max: 325

Err: 0 (0.00%) Active: 183 Started: 183 Finished: 0 | host: 54.209.150.121

> 18:50:17: Generate Summary Results + 175 in 15.1s = 11.6/s Avg: 141 Min: 63 Max: 375

Err: 0 (0.00%) Active: 182 Started: 182 Finished: 0 | host: 54.210.8.195

> 18:50:32: Generate Summary Results + 270 in 15.2s = 17.7/s Avg: 478 Min: 14 Max: 2538

Err: 7 (2.59%) Active: 258 Started: 258 Finished: 0 | host: 54.209.110.133

> 18:50:32: Generate Summary Results + 268 in 15.1s = 17.7/s Avg: 511 Min: 14 Max: 2836

Err: 6 (2.24%) Active: 258 Started: 258 Finished: 0 | host: 54.209.150.121

> 18:50:33: Generate Summary Results + 281 in 15.3s = 18.4/s Avg: 472 Min: 14 Max: 2163

Err: 7 (2.49%) Active: 257 Started: 257 Finished: 0 | host: 54.210.8.195

> 18:50:48: Generate Summary Results + 363 in 16.4s = 22.2/s Avg: 1151 Min: 16 Max: 2152

Err: 9 (2.48%) Active: 332 Started: 332 Finished: 0 | host: 54.209.110.133

> 18:50:48: Generate Summary Results + 353 in 17s = 21.1/s Avg: 1147 Min: 0 Max: 2636

Err: 11 (3.12%) Active: 332 Started: 332 Finished: 0 | host: 54.209.150.121

> 18:50:48: Generate Summary Results + 369 in 18s = 21.0/s Avg: 1118 Min: 0 Max: 2609

Err: 17 (4.61%) Active: 331 Started: 331 Finished: 0 | host: 54.210.8.195

> 18:50:48: Generate Summary Results = 893 in 61.1s = 14.6/s Avg: 650 Min: 14 Max: 2538

Err: 16 (1.79%) | host: 54.209.110.133

> 18:50:48: Generate Summary Results = 882 in 61.5s = 14.3/s Avg: 655 Min: 0 Max: 2836

Err: 18 (2.04%) | host: 54.209.150.121

> 18:50:48: Generate Summary Results = 896 in 62s = 14.5/s Avg: 645 Min: 0 Max: 2609

Err: 24 (2.68%) | host: 54.210.8.195

>

> 18:50:48: [RUNNING TOTALS] total count: 2671, current avg: 1138 (ms), average tps: 43.4 (p/sec),

recent tps: 64.3 (p/sec), total errors: 58

>

> 18:51:03: Generate Summary Results + 370 in 17s = 22.1/s Avg: 2101 Min: 13 Max: 5964

Err: 0 (0.00%) Active: 408 Started: 408 Finished: 0 | host: 54.209.110.133

> 18:51:03: Generate Summary Results + 369 in 17s = 22.0/s Avg: 2173 Min: 0 Max: 5809

Err: 1 (0.27%) Active: 407 Started: 407 Finished: 0 | host: 54.209.150.121

> 18:51:03: Generate Summary Results + 368 in 17s = 21.6/s Avg: 2150 Min: 20 Max: 5882

Err: 0 (0.00%) Active: 407 Started: 407 Finished: 0 | host: 54.210.8.195

> 18:51:18: Generate Summary Results + 376 in 24.4s = 15.4/s Avg: 3405 Min: 1 Max: 22093

Err: 1 (0.27%) Active: 481 Started: 482 Finished: 1 | host: 54.209.110.133

> 18:51:18: Generate Summary Results + 379 in 25s = 15.4/s Avg: 3334 Min: 1 Max: 17524

Err: 1 (0.26%) Active: 480 Started: 482 Finished: 2 | host: 54.209.150.121

> 18:51:18: Generate Summary Results + 395 in 24.3s = 16.2/s Avg: 3522 Min: 19 Max: 18023

Err: 0 (0.00%) Active: 480 Started: 481 Finished: 1 | host: 54.210.8.195

> 18:51:34: Generate Summary Results + 331 in 34s = 9.7/s Avg: 4566 Min: 21 Max: 33822

Err: 0 (0.00%) Active: 552 Started: 557 Finished: 5 | host: 54.209.110.133

```

> 18:51:34: Generate Summary Results + 362 in 40s = 9.1/s Avg: 5203 Min: 16 Max: 34329
Err: 0 (0.00%) Active: 551 Started: 557 Finished: 6 | host: 54.209.150.121
> 18:51:34: Generate Summary Results + 373 in 39.4s = 9.5/s Avg: 4086 Min: 13 Max: 33793
Err: 0 (0.00%) Active: 546 Started: 556 Finished: 10 | host: 54.210.8.195
> 18:51:34: Generate Summary Results = 1970 in 106s = 18.6/s Avg: 2106 Min: 1 Max: 33822
Err: 17 (0.86%) | host: 54.209.110.133
> 18:51:34: Generate Summary Results = 1992 in 106s = 18.7/s Avg: 2272 Min: 0 Max: 34329
Err: 20 (1.00%) | host: 54.209.150.121
> 18:51:34: Generate Summary Results = 2032 in 107s = 19.0/s Avg: 2109 Min: 0 Max: 33793
Err: 24 (1.18%) | host: 54.210.8.195
>
> 18:51:34: [RUNNING TOTALS] total count: 5994, current avg: 4618 (ms), average tps: 56.3 (p/sec),
recent tps: 28.3 (p/sec), total errors: 61
>
> 18:51:49: Generate Summary Results + 381 in 49s = 7.9/s Avg: 5923 Min: 0 Max: 36186
Err: 2 (0.52%) Active: 608 Started: 632 Finished: 24 | host: 54.209.110.133
> 18:51:49: Generate Summary Results + 389 in 48.1s = 8.1/s Avg: 5809 Min: 13 Max: 34110
Err: 0 (0.00%) Active: 604 Started: 631 Finished: 27 | host: 54.209.150.121
> 18:51:49: Generate Summary Results + 368 in 48s = 7.7/s Avg: 5365 Min: 1 Max: 34262
Err: 1 (0.27%) Active: 606 Started: 630 Finished: 24 | host: 54.210.8.195
> 18:52:04: Generate Summary Results + 369 in 68s = 5.5/s Avg: 6792 Min: 1 Max: 64774
Err: 1 (0.27%) Active: 654 Started: 706 Finished: 52 | host: 54.209.110.133
> 18:52:04: Generate Summary Results + 358 in 70s = 5.1/s Avg: 6921 Min: 0 Max: 66192
Err: 1 (0.28%) Active: 664 Started: 706 Finished: 42 | host: 54.209.150.121
> 18:52:04: Generate Summary Results + 394 in 48s = 8.2/s Avg: 6623 Min: 15 Max: 35340
Err: 0 (0.00%) Active: 646 Started: 705 Finished: 59 | host: 54.210.8.195
> 18:52:20: Generate Summary Results + 371 in 80.2s = 4.6/s Avg: 7707 Min: 0 Max: 65986
Err: 2 (0.54%) Active: 704 Started: 780 Finished: 76 | host: 54.209.110.133
> 18:52:20: Generate Summary Results + 379 in 78s = 4.9/s Avg: 8819 Min: 1 Max: 65798
Err: 1 (0.26%) Active: 711 Started: 780 Finished: 69 | host: 54.209.150.121
> 18:52:20: Generate Summary Results + 377 in 79s = 4.8/s Avg: 8300 Min: 18 Max: 65546
Err: 0 (0.00%) Active: 695 Started: 779 Finished: 84 | host: 54.210.8.195
> 18:52:20: Generate Summary Results = 3091 in 151s = 20.4/s Avg: 3808 Min: 0 Max: 65986
Err: 22 (0.71%) | host: 54.209.110.133
> 18:52:20: Generate Summary Results = 3118 in 152s = 20.6/s Avg: 4043 Min: 0 Max: 66192
Err: 22 (0.71%) | host: 54.209.150.121
> 18:52:20: Generate Summary Results = 3171 in 152s = 20.9/s Avg: 3783 Min: 0 Max: 65546
Err: 25 (0.79%) | host: 54.210.8.195
>
> 18:52:20: [RUNNING TOTALS] total count: 9380, current avg: 8275 (ms), average tps: 61.9 (p/sec),
recent tps: 14.3 (p/sec), total errors: 69
>
> 18:52:35: Generate Summary Results + 366 in 76.3s = 4.8/s Avg: 9368 Min: 0 Max: 67563
Err: 4 (1.09%) Active: 766 Started: 855 Finished: 89 | host: 54.209.110.133
> 18:52:35: Generate Summary Results + 369 in 78s = 4.8/s Avg: 7852 Min: 13 Max: 66065
Err: 0 (0.00%) Active: 767 Started: 855 Finished: 88 | host: 54.209.150.121
> 18:52:35: Generate Summary Results + 374 in 78s = 4.8/s Avg: 8110 Min: 177 Max: 68444
Err: 0 (0.00%) Active: 753 Started: 853 Finished: 100 | host: 54.210.8.195
> 18:52:50: Generate Summary Results + 374 in 81s = 4.6/s Avg: 9271 Min: 0 Max: 66142
Err: 1 (0.27%) Active: 817 Started: 930 Finished: 113 | host: 54.209.110.133
> 18:52:50: Generate Summary Results + 371 in 78.2s = 4.7/s Avg: 7331 Min: 0 Max: 72151
Err: 1 (0.27%) Active: 816 Started: 930 Finished: 114 | host: 54.209.150.121
> 18:52:50: Generate Summary Results + 368 in 81s = 4.6/s Avg: 7938 Min: 15 Max: 66460
Err: 0 (0.00%) Active: 798 Started: 928 Finished: 130 | host: 54.210.8.195
> 18:53:05: Generate Summary Results + 380 in 130s = 2.9/s Avg: 11007 Min: 15 Max: 127331
Err: 6 (1.58%) Active: 863 Started: 1000 Finished: 137 | host: 54.209.110.133
> 18:53:06: Generate Summary Results + 395 in 129s = 3.1/s Avg: 11016 Min: 0 Max: 127333
Err: 5 (1.27%) Active: 862 Started: 1000 Finished: 138 | host: 54.209.150.121
> 18:53:06: Generate Summary Results + 364 in 129s = 2.8/s Avg: 10828 Min: 18 Max: 127269
Err: 5 (1.37%) Active: 856 Started: 1000 Finished: 144 | host: 54.210.8.195
> 18:53:06: Generate Summary Results = 4211 in 196s = 21.5/s Avg: 5426 Min: 0 Max: 127331
Err: 33 (0.78%) | host: 54.209.110.133
> 18:53:06: Generate Summary Results = 4253 in 197s = 21.6/s Avg: 5308 Min: 0 Max: 127333
Err: 28 (0.66%) | host: 54.209.150.121
> 18:53:06: Generate Summary Results = 4277 in 197s = 21.8/s Avg: 5119 Min: 0 Max: 127269
Err: 30 (0.70%) | host: 54.210.8.195
>
> 18:53:06: [RUNNING TOTALS] total count: 12741, current avg: 10950 (ms), average tps: 64.9 (p/sec),
recent tps: 8.8 (p/sec), total errors: 91
>
> 18:53:21: Generate Summary Results + 404 in 142s = 2.9/s Avg: 17252 Min: 15 Max: 127320
Err: 28 (6.93%) Active: 843 Started: 1000 Finished: 157 | host: 54.209.110.133
> 18:53:21: Generate Summary Results + 354 in 141s = 2.5/s Avg: 14836 Min: 0 Max: 127325
Err: 16 (4.52%) Active: 844 Started: 1000 Finished: 156 | host: 54.209.150.121
> 18:53:21: Generate Summary Results + 381 in 140s = 2.7/s Avg: 14944 Min: 0 Max: 127296
Err: 22 (5.77%) Active: 841 Started: 1000 Finished: 159 | host: 54.210.8.195
> 18:53:36: Generate Summary Results + 429 in 141s = 3.0/s Avg: 18731 Min: 22 Max: 127334

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Err:    30 (6.99%) Active: 821 Started: 1000 Finished: 179 | host: 54.209.110.133
> 18:53:36: Generate Summary Results + 398 in 142s = 2.8/s Avg: 18507 Min: 0 Max: 127320
Err:    28 (7.04%) Active: 813 Started: 1000 Finished: 187 | host: 54.209.150.121
> 18:53:36: Generate Summary Results + 381 in 142s = 2.7/s Avg: 18875 Min: 15 Max: 127426
Err:    27 (7.09%) Active: 828 Started: 1000 Finished: 172 | host: 54.210.8.195
> 18:53:51: Generate Summary Results + 423 in 141s = 3.0/s Avg: 18201 Min: 0 Max: 127331
Err:    35 (8.27%) Active: 797 Started: 1000 Finished: 203 | host: 54.209.110.133
> 18:53:52: Generate Summary Results + 394 in 173s = 2.3/s Avg: 24629 Min: 19 Max: 167786
Err:    49 (12.44%) Active: 790 Started: 1000 Finished: 210 | host: 54.209.150.121
> 18:53:52: Generate Summary Results + 438 in 142s = 3.1/s Avg: 21197 Min: 14 Max: 127326
Err:    42 (9.59%) Active: 801 Started: 1000 Finished: 199 | host: 54.210.8.195
> 18:53:52: Generate Summary Results = 5467 in 241s = 22.7/s Avg: 8333 Min: 0 Max: 127334
Err:   126 (2.30%) | host: 54.209.110.133
> 18:53:52: Generate Summary Results = 5399 in 242s = 22.4/s Avg: 8316 Min: 0 Max: 167786
Err:   121 (2.24%) | host: 54.209.150.121
> 18:53:52: Generate Summary Results = 5477 in 242s = 22.7/s Avg: 8045 Min: 0 Max: 127426
Err:   121 (2.21%) | host: 54.210.8.195
>
> 18:53:52: [RUNNING TOTALS] total count: 16343, current avg: 21342 (ms), average tps: 67.8 (p/sec),
recent tps: 8.4 (p/sec), total errors: 368
>
> 18:54:07: Generate Summary Results + 407 in 142s = 2.9/s Avg: 19634 Min: 14 Max: 127336
Err:    30 (7.37%) Active: 767 Started: 1000 Finished: 233 | host: 54.209.110.133
> 18:54:07: Generate Summary Results + 400 in 142s = 2.8/s Avg: 22814 Min: 14 Max: 127329
Err:    41 (10.25%) Active: 759 Started: 1000 Finished: 241 | host: 54.209.150.121
> 18:54:07: Generate Summary Results + 426 in 142s = 3.0/s Avg: 21728 Min: 29 Max: 127331
Err:    45 (10.56%) Active: 766 Started: 1000 Finished: 234 | host: 54.210.8.195
> 18:54:22: Generate Summary Results + 417 in 142s = 2.9/s Avg: 24365 Min: 0 Max: 127336
Err:    51 (12.23%) Active: 734 Started: 1000 Finished: 266 | host: 54.209.110.133
> 18:54:22: Generate Summary Results + 393 in 142s = 2.8/s Avg: 23157 Min: 18 Max: 127331
Err:    49 (12.47%) Active: 728 Started: 1000 Finished: 272 | host: 54.209.150.121
> 18:54:22: Generate Summary Results + 432 in 142s = 3.0/s Avg: 22119 Min: 18 Max: 127337
Err:    49 (11.34%) Active: 727 Started: 1000 Finished: 273 | host: 54.210.8.195
> 18:54:37: Generate Summary Results + 399 in 142s = 2.8/s Avg: 18319 Min: 14 Max: 127336
Err:    38 (9.52%) Active: 693 Started: 1000 Finished: 307 | host: 54.209.110.133
> 18:54:37: Generate Summary Results + 399 in 150s = 2.7/s Avg: 22658 Min: 27 Max: 135797
Err:    46 (11.53%) Active: 686 Started: 1000 Finished: 314 | host: 54.209.150.121
> 18:54:38: Generate Summary Results + 405 in 142s = 2.9/s Avg: 18300 Min: 16 Max: 127314
Err:    36 (8.89%) Active: 682 Started: 1000 Finished: 318 | host: 54.210.8.195
> 18:54:38: Generate Summary Results = 6690 in 286s = 23.4/s Avg: 10615 Min: 0 Max: 127336
Err:   245 (3.66%) | host: 54.209.110.133
> 18:54:38: Generate Summary Results = 6591 in 286s = 23.0/s Avg: 10949 Min: 0 Max: 167786
Err:   257 (3.90%) | host: 54.209.150.121
> 18:54:38: Generate Summary Results = 6740 in 287s = 23.5/s Avg: 10428 Min: 0 Max: 127426
Err:   251 (3.72%) | host: 54.210.8.195
>
> 18:54:38: [RUNNING TOTALS] total count: 20021, current avg: 19759 (ms), average tps: 69.9 (p/sec),
recent tps: 8.4 (p/sec), total errors: 753
>
> 18:54:53: Generate Summary Results + 448 in 142s = 3.2/s Avg: 23569 Min: 40 Max: 127335
Err:    55 (12.28%) Active: 632 Started: 1000 Finished: 368 | host: 54.209.110.133
> 18:54:53: Generate Summary Results + 444 in 142s = 3.1/s Avg: 23149 Min: 14 Max: 127337
Err:    53 (11.94%) Active: 640 Started: 1000 Finished: 360 | host: 54.209.150.121
> 18:54:53: Generate Summary Results + 438 in 179s = 2.4/s Avg: 21128 Min: 0 Max: 167794
Err:    48 (10.96%) Active: 632 Started: 1000 Finished: 368 | host: 54.210.8.195
> 18:55:08: Generate Summary Results + 402 in 141s = 2.9/s Avg: 19129 Min: 12 Max: 127330
Err:    39 (9.70%) Active: 581 Started: 1000 Finished: 419 | host: 54.209.110.133
> 18:55:08: Generate Summary Results + 417 in 142s = 2.9/s Avg: 13816 Min: 15 Max: 127331
Err:    21 (5.04%) Active: 574 Started: 1000 Finished: 426 | host: 54.209.150.121
> 18:55:08: Generate Summary Results + 413 in 142s = 2.9/s Avg: 15952 Min: 0 Max: 127333
Err:    33 (7.99%) Active: 574 Started: 1000 Finished: 426 | host: 54.210.8.195
> 18:55:23: Generate Summary Results + 411 in 142s = 2.9/s Avg: 15191 Min: 18 Max: 127326
Err:    25 (6.08%) Active: 519 Started: 1000 Finished: 481 | host: 54.209.110.133
> 18:55:23: Generate Summary Results + 417 in 142s = 2.9/s Avg: 20417 Min: 15 Max: 127335
Err:    45 (10.79%) Active: 508 Started: 1000 Finished: 492 | host: 54.209.150.121
> 18:55:23: Generate Summary Results + 432 in 181s = 2.4/s Avg: 22842 Min: 226 Max: 167785
Err:    48 (11.11%) Active: 500 Started: 1000 Finished: 500 | host: 54.210.8.195
> 18:55:24: Generate Summary Results = 7951 in 331s = 24.0/s Avg: 12012 Min: 0 Max: 127336
Err:   364 (4.58%) | host: 54.209.110.133
> 18:55:24: Generate Summary Results = 7869 in 331s = 23.7/s Avg: 12291 Min: 0 Max: 167786
Err:   376 (4.78%) | host: 54.209.150.121
> 18:55:24: Generate Summary Results = 8023 in 332s = 24.2/s Avg: 11965 Min: 0 Max: 167794
Err:   380 (4.74%) | host: 54.210.8.195
>
> 18:55:24: [RUNNING TOTALS] total count: 23843, current avg: 19483 (ms), average tps: 71.9 (p/sec),
recent tps: 8.2 (p/sec), total errors: 1120
>

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> 18:55:39: Generate Summary Results + 435 in 142s = 3.1/s Avg: 16324 Min: 0 Max: 127331
Err: 33 (7.59%) Active: 436 Started: 1000 Finished: 564 | host: 54.209.110.133
> 18:55:39: Generate Summary Results + 432 in 142s = 3.0/s Avg: 16630 Min: 15 Max: 127330
Err: 34 (7.87%) Active: 441 Started: 1000 Finished: 559 | host: 54.209.150.121
> 18:55:39: Generate Summary Results + 425 in 142s = 3.0/s Avg: 15017 Min: 16 Max: 127325
Err: 30 (7.06%) Active: 413 Started: 1000 Finished: 587 | host: 54.210.8.195
> 18:55:54: Generate Summary Results + 423 in 142s = 3.0/s Avg: 12928 Min: 0 Max: 127331
Err: 27 (6.38%) Active: 350 Started: 1000 Finished: 650 | host: 54.209.110.133
> 18:55:54: Generate Summary Results + 458 in 141s = 3.2/s Avg: 10168 Min: 0 Max: 127320
Err: 21 (4.59%) Active: 353 Started: 1000 Finished: 647 | host: 54.209.150.121
> 18:55:54: Generate Summary Results + 405 in 142s = 2.9/s Avg: 10613 Min: 15 Max: 127331
Err: 20 (4.94%) Active: 330 Started: 1000 Finished: 670 | host: 54.210.8.195
> 18:56:09: Generate Summary Results + 420 in 142s = 3.0/s Avg: 11706 Min: 13 Max: 127324
Err: 29 (6.90%) Active: 266 Started: 1000 Finished: 734 | host: 54.209.110.133
> 18:56:09: Generate Summary Results + 424 in 139s = 3.0/s Avg: 12838 Min: 12 Max: 127334
Err: 29 (6.84%) Active: 256 Started: 1000 Finished: 744 | host: 54.209.150.121
> 18:56:09: Generate Summary Results + 399 in 140s = 2.9/s Avg: 11701 Min: 0 Max: 127331
Err: 25 (6.27%) Active: 244 Started: 1000 Finished: 756 | host: 54.210.8.195
> 18:56:09: Generate Summary Results = 9229 in 376s = 24.5/s Avg: 12243 Min: 0 Max: 127336
Err: 453 (4.91%) | host: 54.209.110.133
> 18:56:09: Generate Summary Results = 9183 in 376s = 24.4/s Avg: 12414 Min: 0 Max: 167786
Err: 460 (5.01%) | host: 54.209.150.121
> 18:56:09: Generate Summary Results = 9252 in 377s = 24.6/s Avg: 12035 Min: 0 Max: 167794
Err: 455 (4.92%) | host: 54.210.8.195
>
> 18:56:09: [RUNNING TOTALS] total count: 27664, current avg: 12081 (ms), average tps: 73.5 (p/sec),
recent tps: 8.9 (p/sec), total errors: 1368
>
> 18:56:24: Generate Summary Results + 329 in 142s = 2.3/s Avg: 8254 Min: 13 Max: 127335
Err: 32 (9.73%) Active: 169 Started: 1000 Finished: 831 | host: 54.209.110.133
> 18:56:25: Generate Summary Results + 319 in 141s = 2.3/s Avg: 7961 Min: 13 Max: 127333
Err: 25 (7.84%) Active: 169 Started: 1000 Finished: 831 | host: 54.209.150.121
> 18:56:25: Generate Summary Results + 293 in 142s = 2.1/s Avg: 8279 Min: 13 Max: 127316
Err: 25 (8.53%) Active: 163 Started: 1000 Finished: 837 | host: 54.210.8.195
> 18:56:40: Generate Summary Results + 222 in 139s = 1.6/s Avg: 7009 Min: 12 Max: 127324
Err: 12 (5.41%) Active: 94 Started: 1000 Finished: 906 | host: 54.209.110.133
> 18:56:40: Generate Summary Results + 235 in 141s = 1.7/s Avg: 4476 Min: 13 Max: 127320
Err: 8 (3.40%) Active: 111 Started: 1000 Finished: 889 | host: 54.209.150.121
> 18:56:40: Generate Summary Results + 212 in 141s = 1.5/s Avg: 6134 Min: 12 Max: 127323
Err: 10 (4.72%) Active: 101 Started: 1000 Finished: 899 | host: 54.210.8.195
> 18:56:55: Generate Summary Results + 132 in 140s = 0.9/s Avg: 3953 Min: 12 Max: 127290
Err: 4 (3.03%) Active: 43 Started: 1000 Finished: 957 | host: 54.209.110.133
> 18:56:55: Generate Summary Results + 143 in 139s = 1.0/s Avg: 1882 Min: 12 Max: 127327
Err: 2 (1.40%) Active: 58 Started: 1000 Finished: 942 | host: 54.209.150.121
> 18:56:55: Generate Summary Results + 142 in 138s = 1.0/s Avg: 3688 Min: 12 Max: 127282
Err: 4 (2.82%) Active: 48 Started: 1000 Finished: 952 | host: 54.210.8.195
> 18:56:55: Generate Summary Results = 9912 in 421s = 23.5/s Avg: 11883 Min: 0 Max: 127336
Err: 501 (5.05%) | host: 54.209.110.133
> 18:56:55: Generate Summary Results = 9880 in 422s = 23.4/s Avg: 11929 Min: 0 Max: 167786
Err: 495 (5.01%) | host: 54.209.150.121
> 18:56:55: Generate Summary Results = 9899 in 422s = 23.5/s Avg: 11677 Min: 0 Max: 167794
Err: 494 (4.99%) | host: 54.210.8.195
>
> 18:56:55: [RUNNING TOTALS] total count: 29691, current avg: 3174 (ms), average tps: 70.4 (p/sec),
recent tps: 2.9 (p/sec), total errors: 1490
>
> 18:57:10: Generate Summary Results + 55 in 15.4s = 3.6/s Avg: 94 Min: 13 Max: 209
Err: 0 (0.00%) Active: 20 Started: 1000 Finished: 980 | host: 54.209.110.133
> 18:57:10: Generate Summary Results + 75 in 15.4s = 4.9/s Avg: 80 Min: 0 Max: 243
Err: 1 (1.33%) Active: 24 Started: 1000 Finished: 976 | host: 54.209.150.121
> 18:57:10: Generate Summary Results + 65 in 16s = 4.2/s Avg: 86 Min: 12 Max: 271
Err: 0 (0.00%) Active: 18 Started: 1000 Finished: 982 | host: 54.210.8.195
> 18:57:25: Generate Summary Results + 25 in 16.5s = 1.5/s Avg: 65 Min: 13 Max: 212
Err: 0 (0.00%) Active: 5 Started: 1000 Finished: 995 | host: 54.209.110.133
> 18:57:26: Generate Summary Results + 32 in 15s = 2.2/s Avg: 86 Min: 13 Max: 204
Err: 0 (0.00%) Active: 9 Started: 1000 Finished: 991 | host: 54.209.150.121
> 18:57:26: Generate Summary Results + 22 in 15s = 1.5/s Avg: 87 Min: 14 Max: 222
Err: 0 (0.00%) Active: 8 Started: 1000 Finished: 992 | host: 54.210.8.195
> 18:57:41: Generate Summary Results + 8 in 15s = 0.5/s Avg: 74 Min: 14 Max: 185
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.209.110.133
> 18:57:41: Generate Summary Results + 11 in 13s = 0.9/s Avg: 69 Min: 14 Max: 208
Err: 0 (0.00%) Active: 2 Started: 1000 Finished: 998 | host: 54.209.150.121
> 18:57:41: Generate Summary Results + 11 in 20s = 0.6/s Avg: 52 Min: 14 Max: 166
Err: 0 (0.00%) Active: 2 Started: 1000 Finished: 998 | host: 54.210.8.195
> 18:57:41: Generate Summary Results = 10000 in 469s = 21.3/s Avg: 11779 Min: 0 Max: 127336
Err: 501 (5.01%) | host: 54.209.110.133
> 18:57:41: Generate Summary Results = 9998 in 468s = 21.4/s Avg: 11789 Min: 0 Max: 167786

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Err: 496 (4.96%) | host: 54.209.150.121
> 18:57:41: Generate Summary Results = 9997 in 472s = 21.2/s Avg: 11564 Min: 0 Max: 167794
Err: 494 (4.94%) | host: 54.210.8.195
>
> 18:57:41: [RUNNING TOTALS] total count: 29995, current avg: 65 (ms), average tps: 63.9 (p/sec),
recent tps: 2.0 (p/sec), total errors: 1491
>
> 18:57:56: Generate Summary Results + 8 in 15s = 0.5/s Avg: 74 Min: 14 Max: 185
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.209.110.133
> 18:57:56: Generate Summary Results + 2 in 15s = 0.1/s Avg: 95 Min: 19 Max: 172
Err: 0 (0.00%) Active: 0 Started: 1000 Finished: 1000 | host: 54.209.150.121
> 18:57:56: Generate Summary Results + 1 in 0s = 62.5/s Avg: 16 Min: 16 Max: 16
Err: 0 (0.00%) Active: 0 Started: 1000 Finished: 1000 | host: 54.210.8.195
>
>
> 18:58:11: [FINAL RESULTS] total count: 30000, overall avg: 11708 (ms), overall tps: 62.0 (p/sec),
recent tps: 63.1 (p/sec), errors: 1491
>
===== END OF JMETER-EC2 TEST
=====

```

```

downloading results from 54.209.110.133.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-1405680117-0.jtl complete
downloading results from 54.209.150.121.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-1405680117-1.jtl complete
downloading results from 54.210.8.195.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-1405680117-2.jtl complete

```

```

terminating instance(s)...
INSTANCE i-3f116113 running shutting-down
INSTANCE i-3e116112 running shutting-down
INSTANCE i-3c116110 running shutting-down

```

processing results...

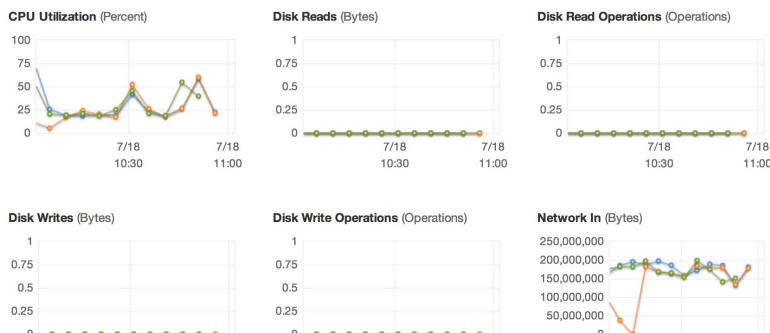
jmeter-ec2 Automation Script - COMPLETE

Test Results: /Users/user/Work/jmeter-ec2/joget4-ec2/results/joget4-ec2-1405680117-complete.jtl

EC2 monitoring

Filter: Running instances	All instance types	Search Instances	1 to 7 of 7 Instances			
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status
<input type="checkbox"/> Joget Server 2 c3.large	i-3f116113	c3.large	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> Joget Server 4 c3.large	i-3e116112	c3.large	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> Joget Server 3 c3.large	i-3c116110	c3.large	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> jmeter-ec2-joget4-ec2	i-3f116113	t2.micro	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> jmeter-ec2-joget4-ec2	i-3e116112	t2.micro	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> jmeter-ec2-joget4-ec2	i-3c116110	t2.micro	us-east-1a	running	2/2 checks...	None
<input type="checkbox"/> Apache Load Balancer	i-3f116113	t2.micro	us-east-1a	running	2/2 checks...	None

Filter: Running instances	All instance types	Search Instances	1 to 4 of 4 Instances			
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status
<input checked="" type="checkbox"/> Joget Server 2 c3.large	i-3f116113	c3.large	us-east-1a	running	2/2 checks...	None
<input checked="" type="checkbox"/> Joget Server 4 c3.large	i-3e116112	c3.large	us-east-1a	running	2/2 checks...	None
<input checked="" type="checkbox"/> Joget Server 3 c3.large	i-3c116110	c3.large	us-east-1a	running	2/2 checks...	None



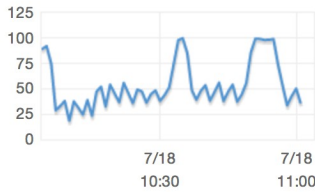
RDS monitoring

Time Range: **Last Hour** ▾

1 2 3 **Show All**

Below are your CloudWatch metrics for the selected resources. Click on a graph to see an expanded view. [View all CloudWatch metrics](#)

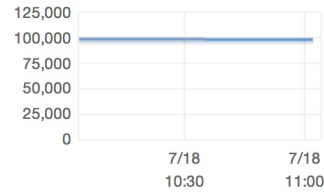
CPU Utilization (Percent)



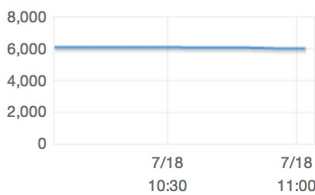
DB Connections (Count)



Freeable Space (MB)



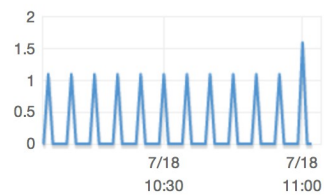
Freeable Memory (MB)



Write IOPS (Count/Second)



Read IOPS (Count/Second)



Legend: | jwdb

5000 users 1 c3.8xlarge node

Top output

```
top - 12:29:01 up 1:06, 1 user, load average: 16.67, 7.26, 3.31
Tasks: 524 total, 1 running, 523 sleeping, 0 stopped, 0 zombie
%Cpu0  : 57.9 us,  8.4 sy,  0.0 ni, 31.1 id,  1.3 wa,  1.3 hi,  0.0 si,  0.0 st
%Cpu1  : 54.7 us,  7.1 sy,  0.0 ni, 35.8 id,  1.0 wa,  1.4 hi,  0.0 si,  0.0 st
%Cpu2  : 56.3 us,  7.3 sy,  0.0 ni, 34.3 id,  0.3 wa,  1.3 hi,  0.0 si,  0.3 st
%Cpu3  : 50.7 us,  7.0 sy,  0.0 ni, 40.6 id,  0.3 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu4  : 53.5 us,  6.4 sy,  0.0 ni, 38.1 id,  0.7 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu5  : 52.3 us,  7.4 sy,  0.0 ni, 38.3 id,  0.7 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu6  : 49.3 us,  9.4 sy,  0.0 ni, 36.9 id,  0.0 wa,  4.4 hi,  0.0 si,  0.0 st
%Cpu7  : 56.2 us,  6.4 sy,  0.0 ni, 35.8 id,  0.3 wa,  1.3 hi,  0.0 si,  0.0 st
%Cpu8  : 55.9 us,  7.4 sy,  0.0 ni, 35.1 id,  0.3 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu9  : 53.4 us,  7.0 sy,  0.0 ni, 38.3 id,  0.0 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu10 : 54.0 us,  6.7 sy,  0.0 ni, 37.9 id,  0.3 wa,  1.0 hi,  0.0 si,  0.0 st
%Cpu11 : 54.4 us,  7.0 sy,  0.0 ni, 36.9 id,  0.3 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu12 : 54.7 us,  7.0 sy,  0.0 ni, 36.7 id,  0.0 wa,  1.3 hi,  0.0 si,  0.3 st
%Cpu13 : 54.8 us,  7.4 sy,  0.0 ni, 36.1 id,  0.0 wa,  1.3 hi,  0.0 si,  0.3 st
%Cpu14 : 54.7 us,  7.0 sy,  0.0 ni, 36.3 id,  0.3 wa,  1.3 hi,  0.0 si,  0.3 st
%Cpu15 : 53.8 us,  7.4 sy,  0.0 ni, 37.5 id,  0.0 wa,  1.3 hi,  0.0 si,  0.0 st
%Cpu16 : 44.5 us,  5.3 sy,  0.0 ni, 48.5 id,  0.3 wa,  1.0 hi,  0.0 si,  0.3 st
%Cpu17 : 45.5 us,  5.4 sy,  0.0 ni, 48.2 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu18 : 45.0 us,  5.3 sy,  0.0 ni, 48.7 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu19 : 48.7 us,  5.3 sy,  0.0 ni, 45.0 id,  0.3 wa,  0.7 hi,  0.0 si,  0.0 st
%Cpu20 : 44.1 us,  5.0 sy,  0.0 ni, 50.2 id,  0.0 wa,  0.7 hi,  0.0 si,  0.0 st
%Cpu21 : 46.0 us,  5.3 sy,  0.0 ni, 47.3 id,  0.3 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu22 : 45.2 us,  5.0 sy,  0.0 ni, 48.8 id,  0.3 wa,  0.7 hi,  0.0 si,  0.0 st
%Cpu23 : 43.1 us,  5.0 sy,  0.0 ni, 50.8 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu24 : 48.2 us,  4.7 sy,  0.0 ni, 46.2 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu25 : 48.0 us,  5.3 sy,  0.0 ni, 45.7 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu26 : 47.3 us,  4.7 sy,  0.0 ni, 47.0 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
%Cpu27 : 47.5 us,  4.7 sy,  0.0 ni, 46.8 id,  0.0 wa,  0.7 hi,  0.0 si,  0.3 st
```

```

%Cpu28 : 45.3 us, 5.3 sy, 0.0 ni, 48.3 id, 0.0 wa, 0.7 hi, 0.0 si, 0.3 st
%Cpu29 : 41.9 us, 4.7 sy, 0.0 ni, 52.3 id, 0.0 wa, 0.7 hi, 0.0 si, 0.3 st
%Cpu30 : 45.3 us, 5.7 sy, 0.0 ni, 48.0 id, 0.0 wa, 0.7 hi, 0.0 si, 0.3 st
%Cpu31 : 47.2 us, 4.7 sy, 0.0 ni, 47.2 id, 0.0 wa, 0.7 hi, 0.0 si, 0.3 st
KiB Mem: 61836112 total, 8688688 used, 53147424 free, 118072 buffers
KiB Swap: 0 total, 0 used, 0 free. 1897864 cached Mem

```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
11856	mysql	20	0	16.751g	513536	7704	S	984.2	0.8	21:51.71	mysqld
12023	root	20	0	25.437g	4.856g	15464	S	871.4	8.2	26:21.87	java
8	root	20	0	0	0	0	S	1.3	0.0	0:07.70	rcu_sched
654	root	20	0	0	0	0	S	0.7	0.0	0:01.77	jbd2/xvda1-8
15252	ubuntu	20	0	23948	2036	1172	R	0.7	0.0	0:00.46	top
9	root	20	0	0	0	0	S	0.3	0.0	0:01.46	rcuos/0
10	root	20	0	0	0	0	S	0.3	0.0	0:01.31	rcuos/1

jmeter-ec2 output

requesting 5 instance(s)...success

waiting for instance status checks to pass (this can take several minutes).....all hosts ready

assigning tags...

```

TAG instance i-24661608 ProductKey joget4-ec2
TAG instance i-25661609 ProductKey joget4-ec2
TAG instance i-2666160a ProductKey joget4-ec2
TAG instance i-2766160b ProductKey joget4-ec2
TAG instance i-2266160e ProductKey joget4-ec2
TAG instance i-24661608 Description PerformanceTest
TAG instance i-25661609 Description PerformanceTest
TAG instance i-2666160a Description PerformanceTest
TAG instance i-2766160b Description PerformanceTest
TAG instance i-2266160e Description PerformanceTest
TAG instance i-24661608 Name jmeter-ec2-joget4-ec2
TAG instance i-25661609 Name jmeter-ec2-joget4-ec2
TAG instance i-2666160a Name jmeter-ec2-joget4-ec2
TAG instance i-2766160b Name jmeter-ec2-joget4-ec2
TAG instance i-2266160e Name jmeter-ec2-joget4-ec2

```

complete

copying install.sh to 5 server(s)...connecting to host 54.210.97.167connecting to host 54.210.97.168connecting to host 54.210.97.162connecting to host 54.210.97.159connecting to host 54.210.97.158.complete

running install.sh on 5 server(s)...

```

..sudo: unable to resolve host ip-172-30-0-117
sudo: unable to resolve host ip-172-30-0-116
sudo: unable to resolve host ip-172-30-0-115
sudo: unable to resolve host ip-172-30-0-114
sudo: unable to resolve host ip-172-30-0-118
..sudo: unable to resolve host ip-172-30-0-116
sudo: unable to resolve host ip-172-30-0-118
sudo: unable to resolve host ip-172-30-0-117
sudo: unable to resolve host ip-172-30-0-115
sudo: unable to resolve host ip-172-30-0-114
Extracting templates from packages: 100%
Extracting templates from packages: 100%
Extracting templates from packages: 100%
Extracting templates from packages: 100%
Extracting templates from packages: 100%
..
Current default time zone: 'Etc/UTC'
Local time is now: Fri Jul 18 12:25:02 UTC 2014.
Universal Time is now: Fri Jul 18 12:25:02 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

```

```

Current default time zone: 'Etc/UTC'
Local time is now: Fri Jul 18 12:25:04 UTC 2014.
Universal Time is now: Fri Jul 18 12:25:04 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

```

```

Current default time zone: 'Etc/UTC'
Local time is now: Fri Jul 18 12:25:04 UTC 2014.

```

Universal Time is now: Fri Jul 18 12:25:04 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

Current default time zone: 'Etc/UTC'
Local time is now: Fri Jul 18 12:25:04 UTC 2014.
Universal Time is now: Fri Jul 18 12:25:04 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

Current default time zone: 'Etc/UTC'
Local time is now: Fri Jul 18 12:25:05 UTC 2014.
Universal Time is now: Fri Jul 18 12:25:05 UTC 2014.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

..... * Setting up X socket directories...
...done.
* Setting up X socket directories...
...done.

Creating config file /etc/gconf/2/path with new version
* Setting up X socket directories...
...done.
* Setting up X socket directories...
...done.

Creating config file /etc/gconf/2/path with new version
* Setting up X socket directories...
...done.

Creating config file /etc/gconf/2/path with new version

Creating config file /etc/gconf/2/path with new version

Creating config file /etc/gconf/2/path with new version

(gconftool-2:6958): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a \$DISPLAY for X11

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Unable to autolaunch a dbus-daemon without a \$DISPLAY for X11

(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a \$DISPLAY for X11

(gconftool-2:6957): GConf-WARNING **: Client failed to connect to the D-BUS daemon:
Unable to autolaunch a dbus-daemon without a \$DISPLAY for X11

.....complete

editing thread counts...

- joget4-ec2.jmx has 1 threadgroup(s) - [inc. those disabled]
- There are 5000 threads in the test plan, this test is set to execute 100 percent of these, so
will run using 5000 threads

...thread counts updated

copying test files to 5 server(s)...jmx files..done....data
dir..done....jmeter.properties..done....jmeter execution file...done....project specific jar
file(s)...done....all files uploaded

starting jmeter on:

54.210.97.167
54.210.97.168
54.210.97.162
54.210.97.159
54.210.97.158

JMeter started at Fri Jul 18 20:26:24 MYT 2014

===== START OF JMETER-EC2 TEST
=====

> [updates: every 15 seconds | running total: every 45 seconds]
>

```

> waiting for the test to start...to stop the test while it is running, press CTRL-C
> 20:26:54: Generate Summary Results + 49 in 9s = 5.5/s Avg: 58 Min: 34 Max: 101
Err: 0 (0.00%) Active: 144 Started: 144 Finished: 0 | host: 54.210.97.167
> 20:26:54: Generate Summary Results + 52 in 10s = 5.4/s Avg: 59 Min: 33 Max: 94
Err: 0 (0.00%) Active: 142 Started: 142 Finished: 0 | host: 54.210.97.168
> 20:26:54: Generate Summary Results + 41 in 9s = 4.8/s Avg: 60 Min: 39 Max: 98
Err: 0 (0.00%) Active: 142 Started: 142 Finished: 0 | host: 54.210.97.159
> 20:26:54: Generate Summary Results + 43 in 9s = 5.0/s Avg: 63 Min: 34 Max: 97
Err: 0 (0.00%) Active: 142 Started: 142 Finished: 0 | host: 54.210.97.158
> 20:27:09: Generate Summary Results + 258 in 15.1s = 17.1/s Avg: 43 Min: 25 Max: 256
Err: 0 (0.00%) Active: 291 Started: 291 Finished: 0 | host: 54.210.97.167
> 20:27:09: Generate Summary Results + 250 in 15s = 16.7/s Avg: 42 Min: 25 Max: 228
Err: 0 (0.00%) Active: 289 Started: 289 Finished: 0 | host: 54.210.97.168
> 20:27:09: Generate Summary Results + 256 in 15s = 17.7/s Avg: 46 Min: 25 Max: 343
Err: 0 (0.00%) Active: 289 Started: 289 Finished: 0 | host: 54.210.97.162
> 20:27:10: Generate Summary Results + 268 in 15s = 18.0/s Avg: 44 Min: 26 Max: 251
Err: 0 (0.00%) Active: 290 Started: 290 Finished: 0 | host: 54.210.97.159
> 20:27:10: Generate Summary Results + 260 in 15s = 17.5/s Avg: 42 Min: 25 Max: 181
Err: 0 (0.00%) Active: 289 Started: 289 Finished: 0 | host: 54.210.97.158
> 20:27:25: Generate Summary Results + 469 in 15s = 31.4/s Avg: 64 Min: 10 Max: 292
Err: 0 (0.00%) Active: 440 Started: 440 Finished: 0 | host: 54.210.97.167
> 20:27:25: Generate Summary Results + 470 in 15s = 31.3/s Avg: 66 Min: 10 Max: 672
Err: 0 (0.00%) Active: 438 Started: 438 Finished: 0 | host: 54.210.97.168
> 20:27:25: Generate Summary Results + 462 in 15s = 30.8/s Avg: 60 Min: 10 Max: 272
Err: 0 (0.00%) Active: 438 Started: 438 Finished: 0 | host: 54.210.97.162
> 20:27:25: Generate Summary Results + 470 in 15s = 31.5/s Avg: 63 Min: 11 Max: 612
Err: 0 (0.00%) Active: 439 Started: 439 Finished: 0 | host: 54.210.97.159
> 20:27:25: Generate Summary Results + 455 in 15s = 30.4/s Avg: 62 Min: 1 Max: 1089
Err: 1 (0.22%) Active: 438 Started: 438 Finished: 0 | host: 54.210.97.158
> 20:27:40: Generate Summary Results + 680 in 16s = 43.8/s Avg: 130 Min: 9 Max: 1103
Err: 0 (0.00%) Active: 588 Started: 588 Finished: 0 | host: 54.210.97.167
> 20:27:40: Generate Summary Results + 681 in 15.2s = 44.9/s Avg: 124 Min: 9 Max: 807
Err: 0 (0.00%) Active: 587 Started: 587 Finished: 0 | host: 54.210.97.168
> 20:27:40: Generate Summary Results + 699 in 15.1s = 46.4/s Avg: 123 Min: 9 Max: 1034
Err: 0 (0.00%) Active: 586 Started: 586 Finished: 0 | host: 54.210.97.162
> 20:27:40: Generate Summary Results + 676 in 15.3s = 44.2/s Avg: 127 Min: 9 Max: 744
Err: 0 (0.00%) Active: 587 Started: 587 Finished: 0 | host: 54.210.97.159
> 20:27:41: Generate Summary Results + 674 in 15.3s = 43.9/s Avg: 130 Min: 0 Max: 1152
Err: 1 (0.15%) Active: 586 Started: 586 Finished: 0 | host: 54.210.97.158
> 20:27:41: Generate Summary Results = 1457 in 55s = 26.7/s Avg: 91 Min: 9 Max: 1103
Err: 0 (0.00%) | host: 54.210.97.167
> 20:27:41: Generate Summary Results = 1454 in 58s = 25.2/s Avg: 89 Min: 9 Max: 807
Err: 0 (0.00%) | host: 54.210.97.168
> 20:27:41: Generate Summary Results = 1463 in 53s = 27.7/s Avg: 88 Min: 9 Max: 1034
Err: 0 (0.00%) | host: 54.210.97.162
> 20:27:41: Generate Summary Results = 1456 in 55s = 26.7/s Avg: 89 Min: 9 Max: 744
Err: 0 (0.00%) | host: 54.210.97.159
> 20:27:41: Generate Summary Results = 1433 in 54.3s = 26.4/s Avg: 90 Min: 0 Max: 1152
Err: 2 (0.14%) | host: 54.210.97.158
>
> 20:27:41: [RUNNING TOTALS] total count: 7263, current avg: 126 (ms), average tps: 132.7 (p/sec),
recent tps: 223.2 (p/sec), total errors: 2
>
> 20:27:56: Generate Summary Results + 823 in 16s = 52.5/s Avg: 484 Min: 10 Max: 4208
Err: 0 (0.00%) Active: 736 Started: 736 Finished: 0 | host: 54.210.97.167
> 20:27:56: Generate Summary Results + 827 in 15.5s = 53.5/s Avg: 474 Min: 11 Max: 5317
Err: 0 (0.00%) Active: 735 Started: 735 Finished: 0 | host: 54.210.97.168
> 20:27:56: Generate Summary Results + 832 in 15.3s = 54.3/s Avg: 469 Min: 1 Max: 5038
Err: 1 (0.12%) Active: 735 Started: 735 Finished: 0 | host: 54.210.97.162
> 20:27:56: Generate Summary Results + 845 in 16s = 54.4/s Avg: 471 Min: 9 Max: 5301
Err: 0 (0.00%) Active: 735 Started: 735 Finished: 0 | host: 54.210.97.159
> 20:27:56: Generate Summary Results + 826 in 16s = 52.2/s Avg: 494 Min: 11 Max: 5259
Err: 0 (0.00%) Active: 734 Started: 734 Finished: 0 | host: 54.210.97.158
> 20:28:11: Generate Summary Results + 869 in 20s = 43.6/s Avg: 1619 Min: 9 Max: 11221
Err: 0 (0.00%) Active: 885 Started: 885 Finished: 0 | host: 54.210.97.167
> 20:28:11: Generate Summary Results + 857 in 20s = 43.8/s Avg: 1690 Min: 10 Max: 11487
Err: 0 (0.00%) Active: 883 Started: 883 Finished: 0 | host: 54.210.97.168
> 20:28:11: Generate Summary Results + 846 in 20s = 42.7/s Avg: 1691 Min: 11 Max: 13331
Err: 0 (0.00%) Active: 883 Started: 883 Finished: 0 | host: 54.210.97.162
> 20:28:11: Generate Summary Results + 830 in 20s = 42.3/s Avg: 1739 Min: 9 Max: 9681
Err: 0 (0.00%) Active: 882 Started: 884 Finished: 2 | host: 54.210.97.159
> 20:28:11: Generate Summary Results + 839 in 20s = 42.9/s Avg: 1588 Min: 10 Max: 12802
Err: 0 (0.00%) Active: 882 Started: 883 Finished: 1 | host: 54.210.97.158
> 20:28:27: Generate Summary Results + 916 in 27.1s = 33.9/s Avg: 3552 Min: 9 Max: 23432
Err: 0 (0.00%) Active: 986 Started: 1000 Finished: 14 | host: 54.210.97.167
> 20:28:27: Generate Summary Results + 935 in 28.1s = 33.3/s Avg: 3371 Min: 10 Max: 23906
Err: 0 (0.00%) Active: 982 Started: 1000 Finished: 18 | host: 54.210.97.168

```

```

> 20:28:27: Generate Summary Results + 944 in 27.2s = 34.7/s Avg: 3382 Min: 10 Max: 22557
Err: 0 (0.00%) Active: 981 Started: 1000 Finished: 19 | host: 54.210.97.162
> 20:28:27: Generate Summary Results + 906 in 30s = 30.5/s Avg: 3429 Min: 10 Max: 28077
Err: 0 (0.00%) Active: 981 Started: 1000 Finished: 19 | host: 54.210.97.159
> 20:28:27: Generate Summary Results + 925 in 29s = 32.0/s Avg: 3423 Min: 10 Max: 25370
Err: 0 (0.00%) Active: 988 Started: 1000 Finished: 12 | host: 54.210.97.158
> 20:28:27: Generate Summary Results = 4065 in 100s = 40.8/s Avg: 1277 Min: 9 Max: 23432
Err: 0 (0.00%) | host: 54.210.97.167
> 20:28:27: Generate Summary Results = 4073 in 103s = 39.7/s Avg: 1257 Min: 9 Max: 23906
Err: 0 (0.00%) | host: 54.210.97.168
> 20:28:27: Generate Summary Results = 4085 in 98s = 41.8/s Avg: 1259 Min: 1 Max: 22557
Err: 1 (0.02%) | host: 54.210.97.162
> 20:28:27: Generate Summary Results = 4037 in 100s = 40.6/s Avg: 1258 Min: 9 Max: 28077
Err: 0 (0.00%) | host: 54.210.97.159
> 20:28:27: Generate Summary Results = 4023 in 99.3s = 40.5/s Avg: 1252 Min: 0 Max: 25370
Err: 2 (0.05%) | host: 54.210.97.158
>
> 20:28:27: [RUNNING TOTALS] total count: 20283, current avg: 3431 (ms), average tps: 203.4 (p/sec),
recent tps: 164.4 (p/sec), total errors: 3
>
> 20:28:42: Generate Summary Results + 714 in 33s = 21.7/s Avg: 2836 Min: 10 Max: 27720
Err: 0 (0.00%) Active: 977 Started: 1000 Finished: 23 | host: 54.210.97.167
> 20:28:42: Generate Summary Results + 710 in 43s = 16.6/s Avg: 2985 Min: 10 Max: 28717
Err: 0 (0.00%) Active: 971 Started: 1000 Finished: 29 | host: 54.210.97.168
> 20:28:42: Generate Summary Results + 701 in 36s = 19.5/s Avg: 2935 Min: 10 Max: 27550
Err: 0 (0.00%) Active: 976 Started: 1000 Finished: 24 | host: 54.210.97.162
> 20:28:42: Generate Summary Results + 717 in 34.1s = 21.0/s Avg: 3149 Min: 1 Max: 26847
Err: 1 (0.14%) Active: 975 Started: 1000 Finished: 25 | host: 54.210.97.159
> 20:28:42: Generate Summary Results + 719 in 34.3s = 20.9/s Avg: 3186 Min: 10 Max: 23941
Err: 0 (0.00%) Active: 980 Started: 1000 Finished: 20 | host: 54.210.97.158
> 20:28:57: Generate Summary Results + 250 in 54.2s = 4.6/s Avg: 11502 Min: 219 Max: 50328
Err: 4 (1.60%) Active: 974 Started: 1000 Finished: 26 | host: 54.210.97.167
> 20:28:58: Generate Summary Results + 248 in 49.1s = 5.0/s Avg: 10779 Min: 219 Max: 45697
Err: 2 (0.81%) Active: 968 Started: 1000 Finished: 32 | host: 54.210.97.168
> 20:28:58: Generate Summary Results + 256 in 51s = 5.0/s Avg: 10153 Min: 205 Max: 47216
Err: 2 (0.78%) Active: 969 Started: 1000 Finished: 31 | host: 54.210.97.162
> 20:28:58: Generate Summary Results + 272 in 51.1s = 5.3/s Avg: 9985 Min: 181 Max: 47942
Err: 1 (0.37%) Active: 973 Started: 1000 Finished: 27 | host: 54.210.97.159
> 20:28:58: Generate Summary Results + 248 in 52.5s = 4.7/s Avg: 10353 Min: 243 Max: 44745
Err: 3 (1.21%) Active: 975 Started: 1000 Finished: 25 | host: 54.210.97.158
> 20:29:13: Generate Summary Results + 594 in 64s = 9.3/s Avg: 17738 Min: 10 Max: 57037
Err: 3 (0.51%) Active: 908 Started: 1000 Finished: 92 | host: 54.210.97.167
> 20:29:13: Generate Summary Results + 586 in 63s = 9.3/s Avg: 17817 Min: 10 Max: 55946
Err: 7 (1.19%) Active: 899 Started: 1000 Finished: 101 | host: 54.210.97.168
> 20:29:13: Generate Summary Results + 636 in 66s = 9.7/s Avg: 17027 Min: 10 Max: 58451
Err: 11 (1.73%) Active: 902 Started: 1000 Finished: 98 | host: 54.210.97.162
> 20:29:13: Generate Summary Results + 626 in 62s = 10.1/s Avg: 16769 Min: 10 Max: 60928
Err: 10 (1.60%) Active: 909 Started: 1000 Finished: 91 | host: 54.210.97.159
> 20:29:13: Generate Summary Results + 610 in 69s = 8.9/s Avg: 17688 Min: 9 Max: 59118
Err: 9 (1.48%) Active: 923 Started: 1000 Finished: 77 | host: 54.210.97.158
> 20:29:13: Generate Summary Results = 5623 in 145s = 38.9/s Avg: 3669 Min: 9 Max: 57037
Err: 7 (0.12%) | host: 54.210.97.167
> 20:29:13: Generate Summary Results = 5617 in 148s = 38.0/s Avg: 3624 Min: 9 Max: 55946
Err: 9 (0.16%) | host: 54.210.97.168
> 20:29:13: Generate Summary Results = 5678 in 143s = 39.7/s Avg: 3633 Min: 1 Max: 58451
Err: 14 (0.25%) | host: 54.210.97.162
> 20:29:13: Generate Summary Results = 5652 in 145s = 39.1/s Avg: 3636 Min: 1 Max: 60928
Err: 12 (0.21%) | host: 54.210.97.159
> 20:29:13: Generate Summary Results = 6107 in 159s = 38.3/s Avg: 4588 Min: 0 Max: 75965
Err: 29 (0.47%) | host: 54.210.97.158
>
> 20:29:13: [RUNNING TOTALS] total count: 28170, current avg: 17407 (ms), average tps: 194.5
(p/sec), recent tps: 47.3 (p/sec), total errors: 56
>
> 20:29:28: Generate Summary Results + 547 in 86s = 6.4/s Avg: 14917 Min: 10 Max: 83163
Err: 0 (0.00%) Active: 773 Started: 1000 Finished: 227 | host: 54.210.97.167
> 20:29:28: Generate Summary Results + 517 in 84s = 6.2/s Avg: 13442 Min: 10 Max: 70733
Err: 0 (0.00%) Active: 777 Started: 1000 Finished: 223 | host: 54.210.97.168
> 20:29:28: Generate Summary Results + 543 in 77.4s = 7.0/s Avg: 14108 Min: 10 Max: 71887
Err: 0 (0.00%) Active: 783 Started: 1000 Finished: 217 | host: 54.210.97.162
> 20:29:29: Generate Summary Results + 563 in 79s = 7.2/s Avg: 14253 Min: 10 Max: 70286
Err: 0 (0.00%) Active: 761 Started: 1000 Finished: 239 | host: 54.210.97.159
> 20:29:29: Generate Summary Results + 592 in 84.5s = 7.0/s Avg: 14097 Min: 10 Max: 74013
Err: 0 (0.00%) Active: 778 Started: 1000 Finished: 222 | host: 54.210.97.158
> 20:29:44: Generate Summary Results + 589 in 82.1s = 7.2/s Avg: 17681 Min: 10 Max: 81692
Err: 0 (0.00%) Active: 693 Started: 1000 Finished: 307 | host: 54.210.97.167
> 20:29:44: Generate Summary Results + 596 in 79.1s = 7.5/s Avg: 17766 Min: 10 Max: 74919

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Err:      0 (0.00%) Active: 718 Started: 1000 Finished: 282 | host: 54.210.97.168
> 20:29:44: Generate Summary Results + 575 in 86s = 6.7/s Avg: 15898 Min: 10 Max: 73864
Err:      0 (0.00%) Active: 714 Started: 1000 Finished: 286 | host: 54.210.97.162
> 20:29:44: Generate Summary Results + 619 in 82s = 7.5/s Avg: 14521 Min: 10 Max: 72714
Err:      0 (0.00%) Active: 683 Started: 1000 Finished: 317 | host: 54.210.97.159
> 20:29:44: Generate Summary Results + 587 in 79.4s = 7.4/s Avg: 15454 Min: 10 Max: 70970
Err:      0 (0.00%) Active: 716 Started: 1000 Finished: 284 | host: 54.210.97.158
> 20:29:59: Generate Summary Results + 683 in 93.4s = 7.3/s Avg: 11213 Min: 10 Max: 83731
Err:      0 (0.00%) Active: 620 Started: 1000 Finished: 380 | host: 54.210.97.167
> 20:29:59: Generate Summary Results + 671 in 94s = 7.2/s Avg: 12539 Min: 10 Max: 86019
Err:      0 (0.00%) Active: 626 Started: 1000 Finished: 374 | host: 54.210.97.168
> 20:29:59: Generate Summary Results + 631 in 96s = 6.6/s Avg: 12227 Min: 0 Max: 82740
Err:      1 (0.16%) Active: 638 Started: 1000 Finished: 362 | host: 54.210.97.162
> 20:29:59: Generate Summary Results + 670 in 100.4s = 6.7/s Avg: 11915 Min: 10 Max: 87899
Err:      0 (0.00%) Active: 622 Started: 1000 Finished: 378 | host: 54.210.97.159
> 20:30:00: Generate Summary Results + 677 in 100.2s = 6.8/s Avg: 11888 Min: 10 Max: 86983
Err:      0 (0.00%) Active: 633 Started: 1000 Finished: 367 | host: 54.210.97.158
> 20:30:00: Generate Summary Results = 7945 in 205s = 38.8/s Avg: 6785 Min: 9 Max: 83731
Err:     17 (0.21%) | host: 54.210.97.167
> 20:30:00: Generate Summary Results = 7909 in 208s = 38.1/s Avg: 6834 Min: 9 Max: 86019
Err:     22 (0.28%) | host: 54.210.97.168
> 20:30:00: Generate Summary Results = 7912 in 203s = 39.0/s Avg: 6545 Min: 0 Max: 82740
Err:     27 (0.34%) | host: 54.210.97.162
> 20:30:00: Generate Summary Results = 8049 in 205s = 39.4/s Avg: 6605 Min: 1 Max: 87899
Err:     22 (0.27%) | host: 54.210.97.159
> 20:30:00: Generate Summary Results = 7963 in 204s = 39.0/s Avg: 6717 Min: 0 Max: 86983
Err:     29 (0.36%) | host: 54.210.97.158
>
> 20:30:00: [RUNNING TOTALS] total count: 39778, current avg: 11956 (ms), average tps: 194.3
(p/sec), recent tps: 34.6 (p/sec), total errors: 117
>
> 20:30:15: Generate Summary Results + 559 in 104s = 5.4/s Avg: 13437 Min: 9 Max: 99486
Err:      0 (0.00%) Active: 536 Started: 1000 Finished: 464 | host: 54.210.97.167
> 20:30:15: Generate Summary Results + 602 in 104s = 5.8/s Avg: 13974 Min: 9 Max: 98907
Err:      0 (0.00%) Active: 534 Started: 1000 Finished: 466 | host: 54.210.97.168
> 20:30:15: Generate Summary Results + 592 in 104s = 5.7/s Avg: 17304 Min: 9 Max: 100250
Err:      0 (0.00%) Active: 556 Started: 1000 Finished: 444 | host: 54.210.97.162
> 20:30:15: Generate Summary Results + 570 in 104s = 5.5/s Avg: 13134 Min: 9 Max: 99616
Err:      0 (0.00%) Active: 541 Started: 1000 Finished: 459 | host: 54.210.97.159
> 20:30:15: Generate Summary Results + 612 in 104s = 5.9/s Avg: 14096 Min: 9 Max: 99218
Err:      0 (0.00%) Active: 541 Started: 1000 Finished: 459 | host: 54.210.97.158
> 20:30:30: Generate Summary Results + 673 in 117s = 5.7/s Avg: 5733 Min: 9 Max: 106179
Err:      0 (0.00%) Active: 361 Started: 1000 Finished: 639 | host: 54.210.97.167
> 20:30:30: Generate Summary Results + 637 in 117s = 5.4/s Avg: 5083 Min: 10 Max: 106626
Err:      0 (0.00%) Active: 354 Started: 1000 Finished: 646 | host: 54.210.97.168
> 20:30:30: Generate Summary Results + 686 in 117s = 5.8/s Avg: 5355 Min: 9 Max: 107273
Err:      0 (0.00%) Active: 337 Started: 1000 Finished: 663 | host: 54.210.97.162
> 20:30:30: Generate Summary Results + 636 in 117s = 5.4/s Avg: 5704 Min: 9 Max: 105714
Err:      0 (0.00%) Active: 349 Started: 1000 Finished: 651 | host: 54.210.97.159
> 20:30:30: Generate Summary Results + 639 in 116s = 5.5/s Avg: 5406 Min: 9 Max: 101453
Err:      0 (0.00%) Active: 357 Started: 1000 Finished: 643 | host: 54.210.97.158
> 20:30:46: Generate Summary Results + 441 in 29.2s = 15.1/s Avg: 137 Min: 8 Max: 14175
Err:      0 (0.00%) Active: 182 Started: 1000 Finished: 818 | host: 54.210.97.167
> 20:30:46: Generate Summary Results + 450 in 22s = 20.4/s Avg: 129 Min: 8 Max: 7161
Err:      0 (0.00%) Active: 192 Started: 1000 Finished: 808 | host: 54.210.97.168
> 20:30:46: Generate Summary Results + 410 in 22s = 18.8/s Avg: 117 Min: 9 Max: 6763
Err:      0 (0.00%) Active: 196 Started: 1000 Finished: 804 | host: 54.210.97.162
> 20:30:46: Generate Summary Results + 433 in 23s = 19.2/s Avg: 164 Min: 8 Max: 7596
Err:      0 (0.00%) Active: 171 Started: 1000 Finished: 829 | host: 54.210.97.159
> 20:30:46: Generate Summary Results + 434 in 22.4s = 19.4/s Avg: 238 Min: 8 Max: 7538
Err:      0 (0.00%) Active: 181 Started: 1000 Finished: 819 | host: 54.210.97.158
> 20:30:46: Generate Summary Results = 9618 in 250s = 38.5/s Avg: 6793 Min: 8 Max: 106179
Err:     17 (0.18%) | host: 54.210.97.167
> 20:30:46: Generate Summary Results = 9598 in 253s = 38.0/s Avg: 6851 Min: 8 Max: 106626
Err:     22 (0.23%) | host: 54.210.97.168
> 20:30:46: Generate Summary Results = 9600 in 248s = 38.7/s Avg: 6849 Min: 0 Max: 107273
Err:     27 (0.28%) | host: 54.210.97.162
> 20:30:46: Generate Summary Results = 9688 in 250s = 38.8/s Avg: 6642 Min: 1 Max: 105714
Err:     22 (0.23%) | host: 54.210.97.159
> 20:30:46: Generate Summary Results = 9648 in 249s = 38.7/s Avg: 6807 Min: 0 Max: 101453
Err:     29 (0.30%) | host: 54.210.97.158
>
> 20:30:46: [RUNNING TOTALS] total count: 48152, current avg: 157 (ms), average tps: 192.7 (p/sec),
recent tps: 92.9 (p/sec), total errors: 117
>
> 20:31:01: Generate Summary Results + 243 in 139s = 1.8/s Avg: 2169 Min: 0 Max: 127280
Err:      6 (2.47%) Active: 80 Started: 1000 Finished: 920 | host: 54.210.97.167

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> 20:31:01: Generate Summary Results + 249 in 15.1s = 16.5/s Avg: 75 Min: 8 Max: 650
Err: 0 (0.00%) Active: 97 Started: 1000 Finished: 903 | host: 54.210.97.168
> 20:31:01: Generate Summary Results + 250 in 138s = 1.8/s Avg: 2111 Min: 8 Max: 127292
Err: 4 (1.60%) Active: 90 Started: 1000 Finished: 910 | host: 54.210.97.162
> 20:31:01: Generate Summary Results + 218 in 15s = 14.6/s Avg: 71 Min: 8 Max: 667
Err: 0 (0.00%) Active: 62 Started: 1000 Finished: 938 | host: 54.210.97.159
> 20:31:02: Generate Summary Results + 232 in 139s = 1.7/s Avg: 1173 Min: 8 Max: 127196
Err: 2 (0.86%) Active: 77 Started: 1000 Finished: 923 | host: 54.210.97.158
> 20:31:17: Generate Summary Results + 104 in 15s = 6.9/s Avg: 63 Min: 8 Max: 209
Err: 0 (0.00%) Active: 23 Started: 1000 Finished: 977 | host: 54.210.97.167
> 20:31:17: Generate Summary Results + 125 in 15s = 8.3/s Avg: 66 Min: 8 Max: 219
Err: 0 (0.00%) Active: 25 Started: 1000 Finished: 975 | host: 54.210.97.168
> 20:31:17: Generate Summary Results + 116 in 15s = 7.7/s Avg: 64 Min: 8 Max: 223
Err: 0 (0.00%) Active: 22 Started: 1000 Finished: 978 | host: 54.210.97.162
> 20:31:17: Generate Summary Results + 78 in 16s = 4.9/s Avg: 67 Min: 8 Max: 603
Err: 0 (0.00%) Active: 14 Started: 1000 Finished: 986 | host: 54.210.97.159
> 20:31:17: Generate Summary Results + 96 in 16s = 6.1/s Avg: 64 Min: 8 Max: 190
Err: 0 (0.00%) Active: 21 Started: 1000 Finished: 979 | host: 54.210.97.158
> 20:31:32: Generate Summary Results + 25 in 15s = 1.7/s Avg: 50 Min: 8 Max: 589
Err: 0 (0.00%) Active: 6 Started: 1000 Finished: 994 | host: 54.210.97.167
> 20:31:32: Generate Summary Results + 125 in 15s = 8.3/s Avg: 66 Min: 8 Max: 219
Err: 0 (0.00%) Active: 25 Started: 1000 Finished: 975 | host: 54.210.97.168
> 20:31:32: Generate Summary Results + 25 in 16s = 1.6/s Avg: 36 Min: 8 Max: 172
Err: 0 (0.00%) Active: 4 Started: 1000 Finished: 996 | host: 54.210.97.162
> 20:31:32: Generate Summary Results + 15 in 15s = 1.0/s Avg: 42 Min: 8 Max: 207
Err: 0 (0.00%) Active: 2 Started: 1000 Finished: 998 | host: 54.210.97.159
> 20:31:32: Generate Summary Results + 24 in 18.1s = 1.3/s Avg: 34 Min: 8 Max: 165
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.210.97.158
> 20:31:32: Generate Summary Results = 9990 in 296s = 33.8/s Avg: 6594 Min: 0 Max: 127280
Err: 23 (0.23%) | host: 54.210.97.167
> 20:31:32: Generate Summary Results = 10000 in 302s = 33.1/s Avg: 6579 Min: 8 Max: 106626
Err: 22 (0.22%) | host: 54.210.97.168
> 20:31:32: Generate Summary Results = 9991 in 294s = 34.0/s Avg: 6634 Min: 0 Max: 127292
Err: 31 (0.31%) | host: 54.210.97.162
> 20:31:32: Generate Summary Results = 9999 in 296s = 33.8/s Avg: 6438 Min: 1 Max: 105714
Err: 22 (0.22%) | host: 54.210.97.159
> 20:31:32: Generate Summary Results = 10000 in 298s = 33.6/s Avg: 6595 Min: 0 Max: 127196
Err: 31 (0.31%) | host: 54.210.97.158
>
> 20:31:32: [RUNNING TOTALS] total count: 49952, current avg: 45 (ms), average tps: 170.5 (p/sec),
recent tps: 13.9 (p/sec), total errors: 129
>
> 20:31:47: Generate Summary Results + 9 in 15.1s = 0.6/s Avg: 57 Min: 9 Max: 160
Err: 0 (0.00%) Active: 2 Started: 1000 Finished: 998 | host: 54.210.97.167
> 20:31:48: Generate Summary Results + 28 in 19.2s = 1.5/s Avg: 24 Min: 8 Max: 164
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.210.97.168
> 20:31:48: Generate Summary Results + 25 in 16s = 1.6/s Avg: 36 Min: 8 Max: 172
Err: 0 (0.00%) Active: 4 Started: 1000 Finished: 996 | host: 54.210.97.162
> 20:31:48: Generate Summary Results + 1 in 0s = 111.1/s Avg: 9 Min: 9 Max: 9
Err: 0 (0.00%) Active: 0 Started: 1000 Finished: 1000 | host: 54.210.97.159
> 20:31:48: Generate Summary Results + 24 in 18.1s = 1.3/s Avg: 34 Min: 8 Max: 165
Err: 0 (0.00%) Active: 1 Started: 1000 Finished: 999 | host: 54.210.97.158
>
>
> 20:32:03: [FINAL RESULTS] total count: 50000, overall avg: 6565 (ms), overall tps: 161.7 (p/sec),
recent tps: 290.8 (p/sec), errors: 129
>
===== END OF JMETER-EC2 TEST
=====

downloading results from 54.210.97.167.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405685979-0.jtl complete
downloading results from 54.210.97.168.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405685979-1.jtl complete
downloading results from 54.210.97.162.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405685979-2.jtl complete
downloading results from 54.210.97.159.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405685979-3.jtl complete
downloading results from 54.210.97.158.../Users/user/Work/jmeter-ec2/joget4-ec2/joget4-ec2-
1405685979-4.jtl complete

terminating instance(s)...
INSTANCE i-25661609 running shutting-down
INSTANCE i-24661608 running shutting-down
INSTANCE i-2766160b running shutting-down
INSTANCE i-2266160e running shutting-down
INSTANCE i-2666160a running shutting-down

```

processing results...

jmeter-ec2 Automation Script - COMPLETE

Test Results: /Users/user/Work/jmeter-ec2/joget4-ec2/results/joget4-ec2-1405685979-complete.jtl
