

Friendly Load Generator

Simple Web Based load generator

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Why a web based load generator?

- Traditional load generation tools and agents are installed into the operating system (OS).
- Often in Cloud environments you can't obtain an OS
 - Infrastructure as a Service (IaaS) does allow OS access
 - Platform as a Service (PaaS) does not let you get at the OS
- If we could build a Load Generator as a simple Web App then we could run it in any simple web server, could run in:
 - Tomcat
 - Liberty
 - WAS
 - Weblogic
 - JBoss
 - ...

Basic design ideas for the Web Load Gen

- Requirements:
 - Built in Java
 - Must be multi-threaded to allow for many web users
 - Use only basic java classes such as java.lang, java.io, java.net, ...
 - Easily configure the web workload to be executed as a sequence of HTTP urls
 - Support session persistence
 - Interact with the Workload engine via:
 - Simple front-end Web Application to interact with the workload engine
 - In addition allow for simple java main(), so it can be run on an OS as a java standalone
- Packaging:
 - Distributed as a simple WAR file
 - Distributed as a simple java JAR file

Java WAR

Architecture diagram

HTML
&
JSPs

Interaction CmdServlet

Java JAR

Java main()

Workload Engine

Client Thread Pool

Client Thread

Invokes WL in a loop

HTTP Workload

(Sequence of HTTP URLs)

Call url1
Call url2
...
...
Call url.x

Generate unique
User IDs

Replace URL
Parameters

Preserve Session
Cookie(s)

FriendlyURLRequest

Implements session cookie chaining
to the next request

engine.properties config file

```
numClients=80
uidStart=1
uidEnd=50000
host=10.84.253.226
port=9080
url1=http://%host%:%port%/CTLBankWeb/welcome.jsp
url2=http://%host%:%port%/CTLBankWeb/App?action=login&uid=%uid%&passwd=password
url3=http://%host%:%port%/CTLBankWeb/App?action=acctSummary
url4=http://%host%:%port%/CTLBankWeb/App?action=Deposit&amount=10&accID=%uid%01
url5=http://%host%:%port%/CTLBankWeb/App?action=Withdraw&amount=10&accID=%uid%01
url6=http://%host%:%port%/CTLBankWeb/App?action=custProfile
url7=http://%host%:%port%/CTLBankWeb/App?action=logout
```

HTTP Requests

Target System
to be tested

