

2011

OpenAM Load Test



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OpenAM 9.5.2 Authentication Load Test

Introduction:

A question came up few times on the ability of OpenAM to handle large number of authentications. Our prospective customers looked for metrics that support the scalability of OpenAM. The purpose of this exercise was to conduct a load test, determine and document the scalability capabilities of OpenAM for purposes of comparison with other commercially available products in the market.

Scope:

The scope of this test was to perform a load test and document the number of authentications (both login and logout). The test was conducted on a standalone (non-clustered) instance of OpenAM.

Environment:

Hardware:

- AMD Athlon II X4 620 processor (Quad core processor) 2.6 GHz processor

- Xen Virtualization

- 2 CPUs and 2GB of RAM dedicated to OpenAM server

- 1 CPU, 1GB of RAM dedicated to OpenDJ

- 1 CPU not used

- 1 Gbps Network card

Software:

- Xenserver 5.5

- Ubuntu Server 10

- Glassfish 2.1/Tomcat 6.0.32/JBoss 5.1

- OpenAM 9.5.2

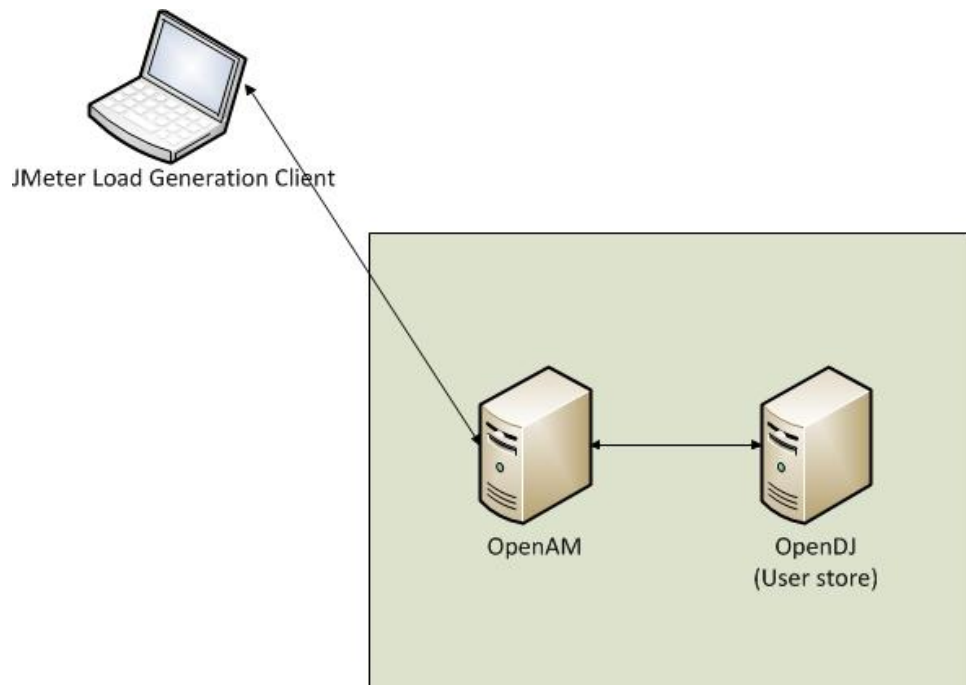
- OpenDJ 2.4.2

- JMeter 2.4

- JVM 1.6.0_update_24 with 1GB heap size

Topology

The following diagram depicts the topology for this test.



Test Scenario:

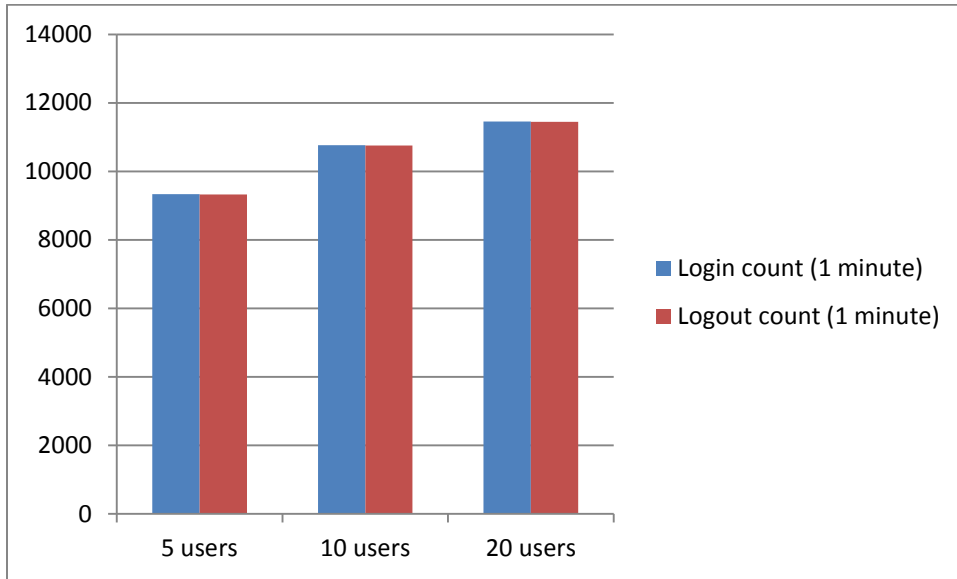
A user ("test1") with a password was created in the OpenAM. The JMeter would post the login/password to the OpenAM server. Upon successful authentication, JMeter issued a logout for the user session. The load test was conducted with three different simultaneous (5, 10, 20) user authentications. The duration of test was 1 minute. The number of successful logins/logouts were captured and tabulated. While the test was in progress, the cpu usage(on OpenAM) was captured in 10 second intervals.

At the end of the test , OpenAM logs were reviewed. No errors were observed in the OpenAM logs. All authentications were successful.

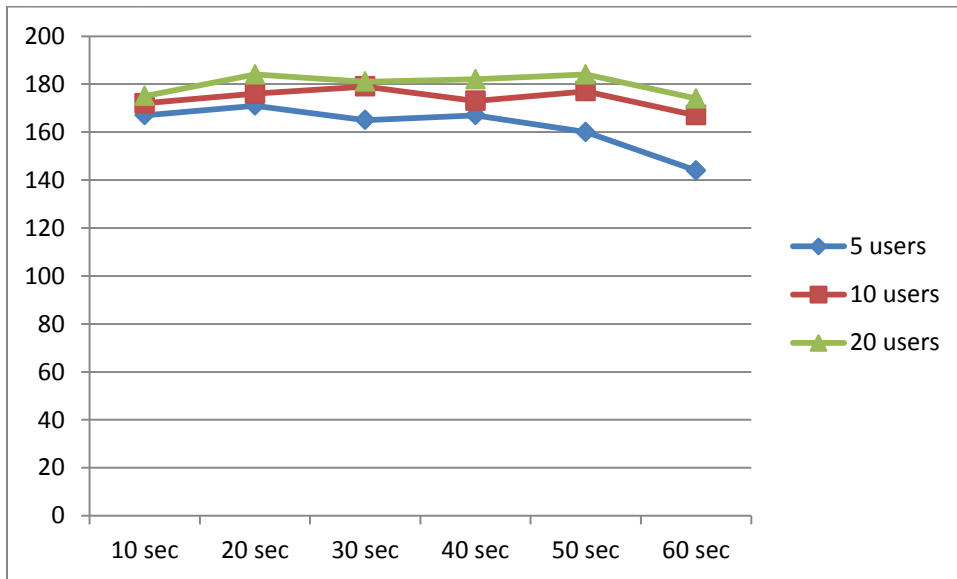
Test Results:

The following are the results of the tests.

Glassfish 2.1 (Number of Authentications - login/logout in one minute)



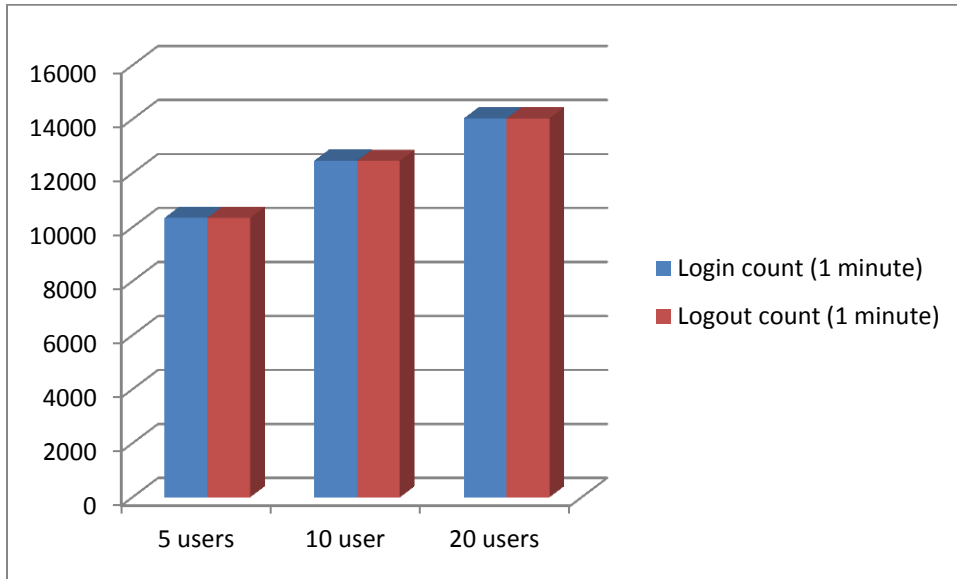
Cpu usage:



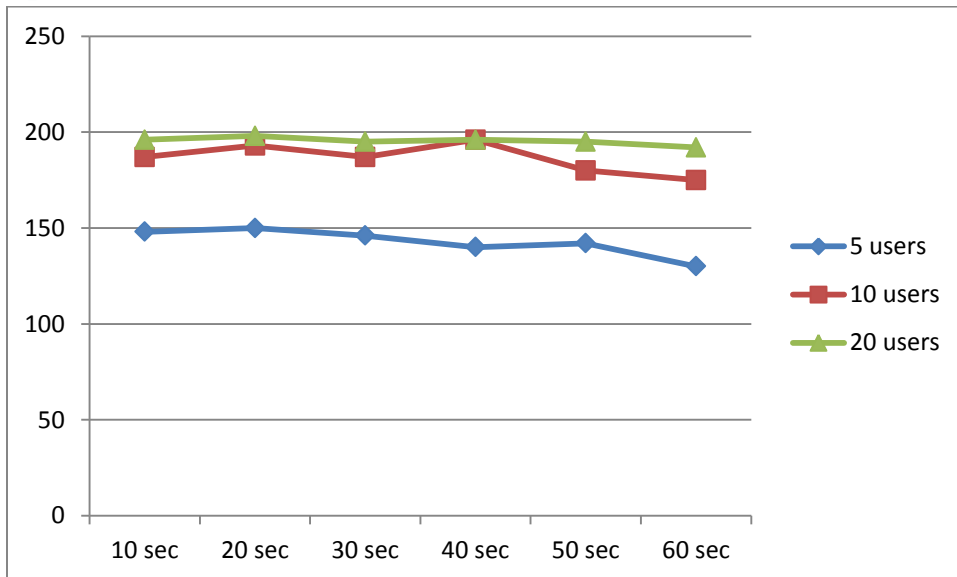
Data:

Glassfish 2.1								
# of users	CPU Usage at intervals						# Authentications	
	10 sec	20 sec	30 sec	40 sec	50 sec	60 sec	Login count (1 minute)	Logout count (1 minute)
5 users	167	171	165	167	160	144	9332	9327
10 users	172	176	179	173	177	167	10765	10758
20 users	175	184	181	182	184	174	11458	11443

Tomcat 6.0.32 (Number of Authentications - login/logout in one minute)



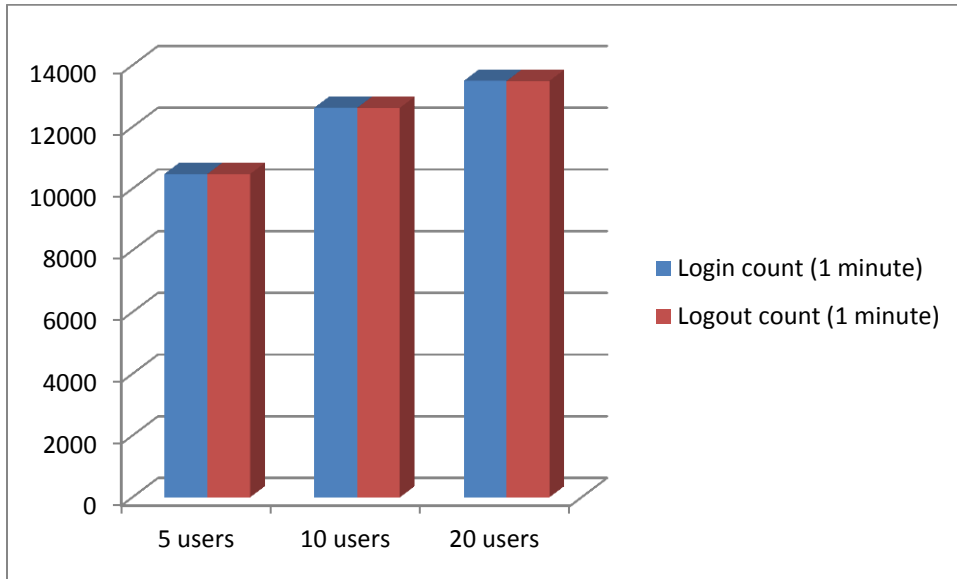
Cpu usage:



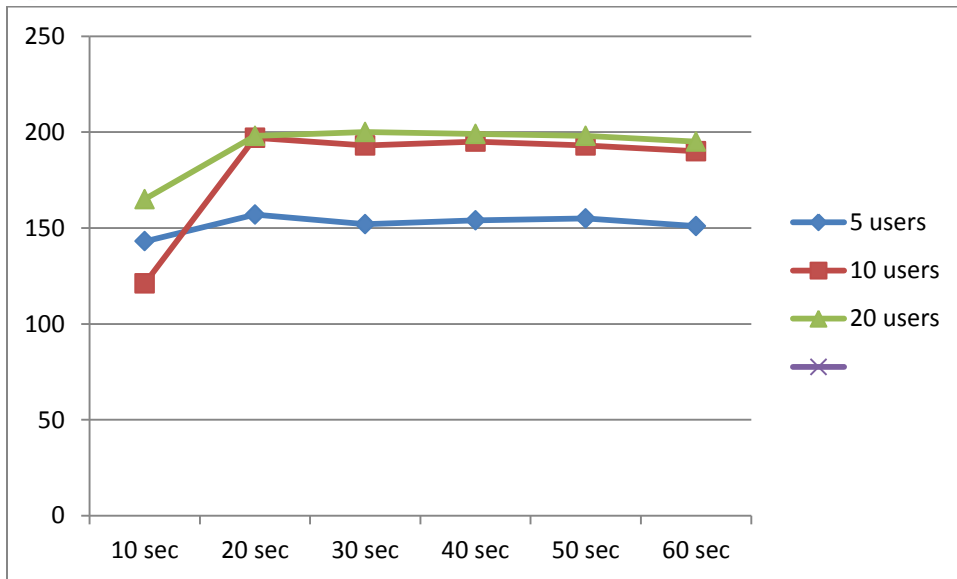
Data:

Tomcat 6.0.32								
# of users	CPU Usage at intervals						# Authentications	
	10 sec	20 sec	30 sec	40 sec	50 sec	60 sec	Login count (1 minute)	Logout count (1 minute)
5 users	148	150	146	140	142	130	10351	10349
10 users	187	193	187	196	180	175	12472	12463
20 users	196	198	195	196	195	192	14042	14035

JBoss 5.1 (Number of Authentications – login/logout in one minute)



Cpu usage:



Data:

JBoss 5.1								
# of users	CPU Usage at intervals						# Authentications	
	10 sec	20 sec	30 sec	40 sec	50 sec	60 sec	Login count (1 minute)	Logout count (1 minute)
5 users	143	157	152	154	155	151	10481	10476
10 users	121	197	193	195	193	190	12628	12622
20 users	165	198	200	199	198	195	13501	13495

About Ramp Information Technology Inc

Ramp Information Technology Inc (RampInfo) is a consulting company specializing in Identity, Access and Federation management. RampInfo's principals have extensive experience in architecting, deploying and supporting Single Sign on, Identity Provisioning, de-provisioning and SAML based identity Federation solutions for many verticals including Healthcare, Financial services, Education and Insurance. RampInfo is a Forgerock Consulting and Training Partner. More information about RampInfo may be obtained by visiting <http://www.RampInfo.com> or by emailing to Info@RampInfo.com.

** RampInfo is in the process of changing name to "Fidato Systems", the new website may be found at <http://www.FidatoSystems.com>

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Deployment Service	Meet your project time lines by bringing experienced consultants.
Migration Service	Migrate from Sun Access Manager or other commercial SSO/Directory services
Federation deployment/Integration	Integrate with partners quickly and cost effectively.
Training	Train your staff at our training facility or onsite.
Customized services	Meet your specific needs.

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