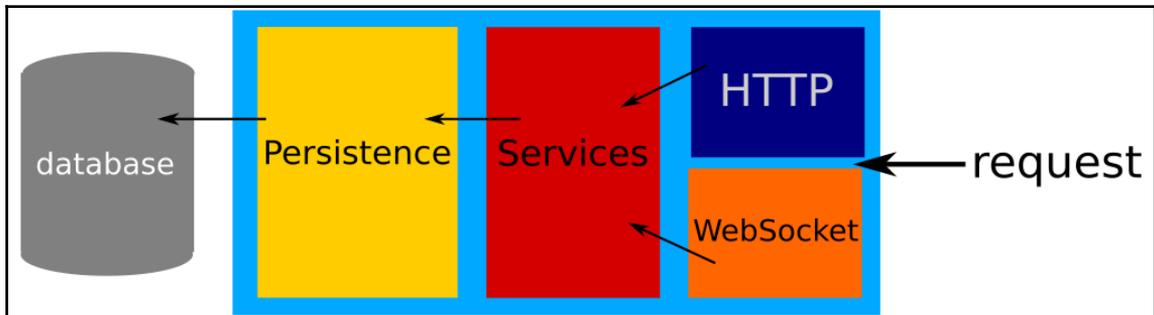
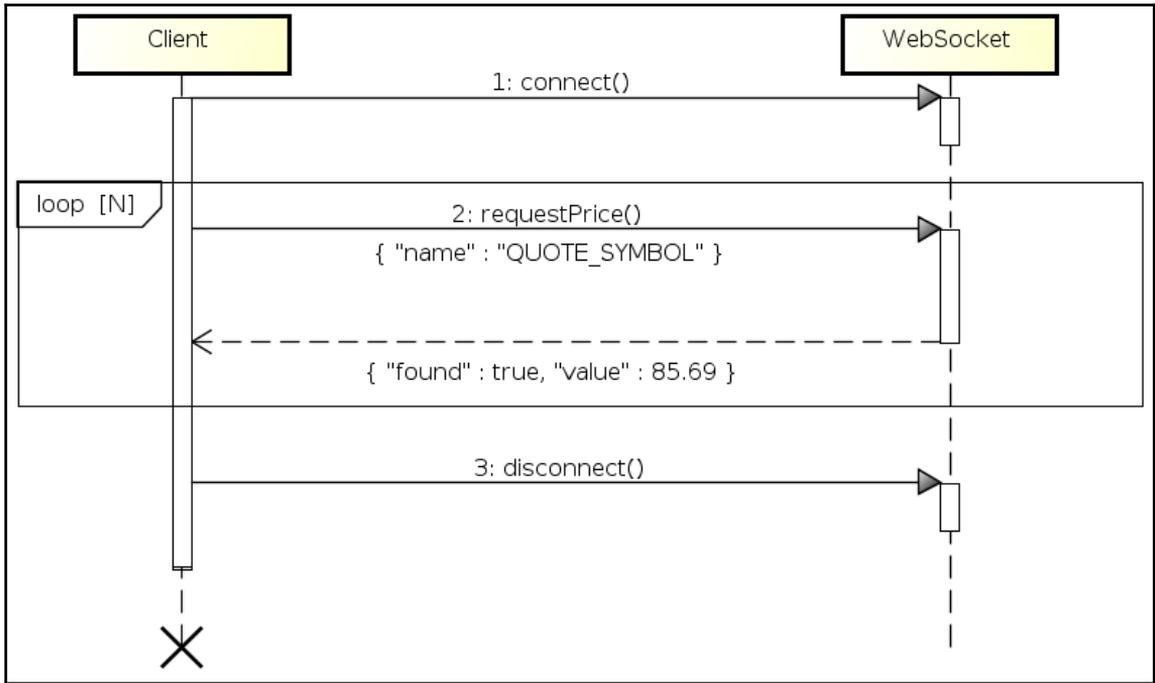


1

Graphic Bundle

Chapter 1: Money – The Quote Manager Application





Chapter 2: Looking Under the Cover – What is This EE Thing?

#	Nom	Type
<input type="checkbox"/> 1	ID 	bigint(20)
<input type="checkbox"/> 2	NAME 	varchar(255)
<input type="checkbox"/> 3	VALUE	double

```
@Entity
public class Quote {
    @Id
    @GeneratedValue
    private long id;

    @NotNull
    @Column(unique = true)
    private String name;

    private double value;|
```

Table
<input type="checkbox"/> CUSTOMER
<input type="checkbox"/> QUOTE
<input type="checkbox"/> QUOTE_CUSTOMER

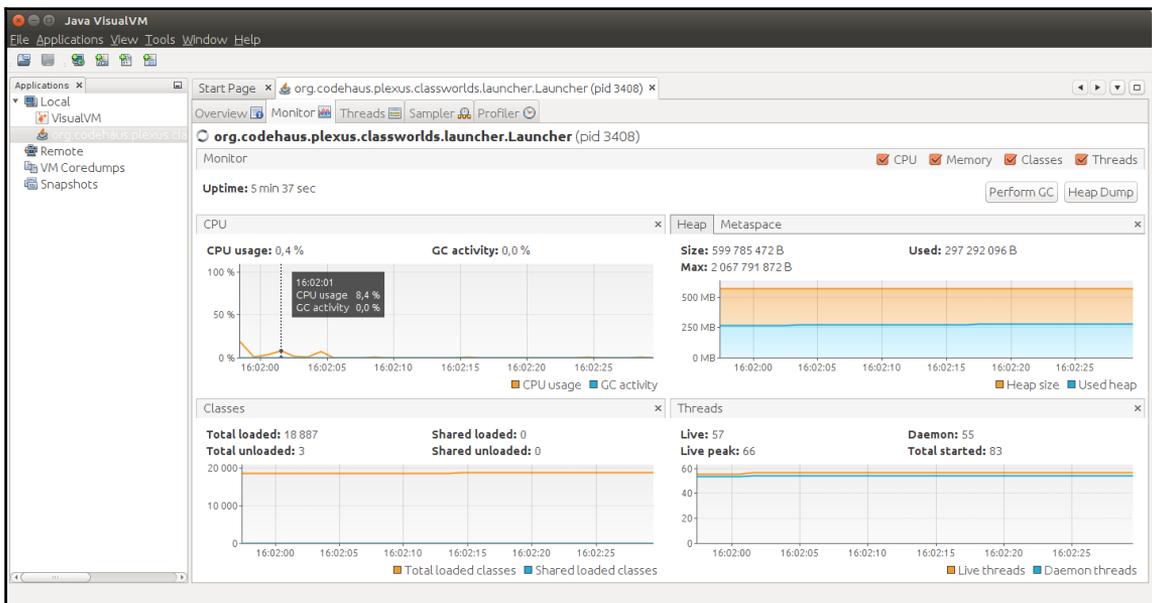
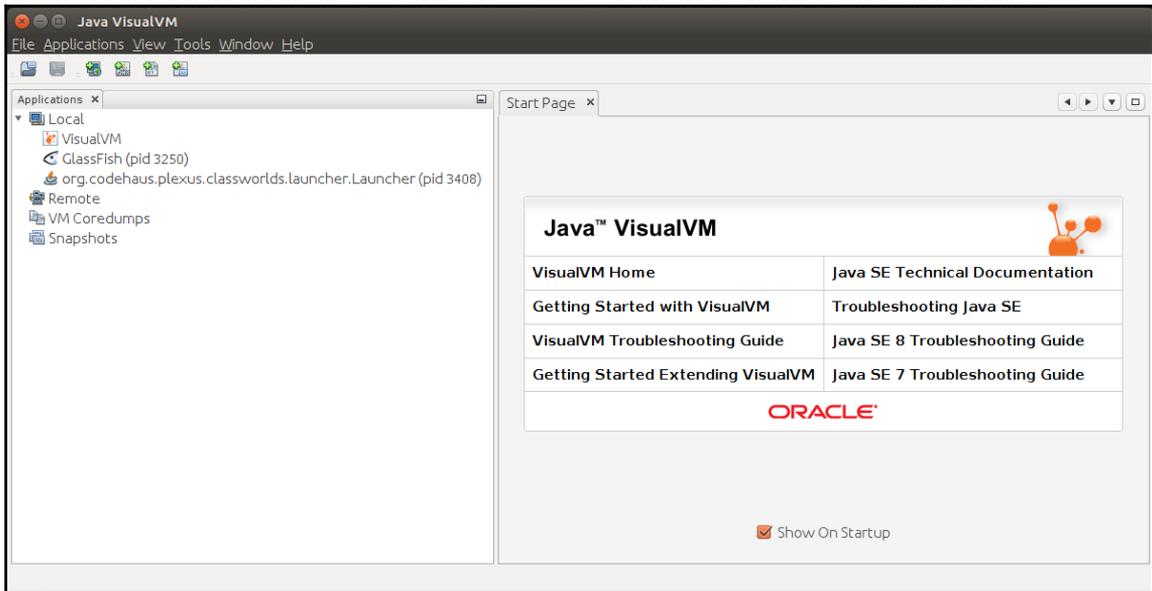
#	Nom	Type
<input type="checkbox"/> 1	customers_ID 	bigint(20)
<input type="checkbox"/> 2	quotes_ID  	bigint(20)

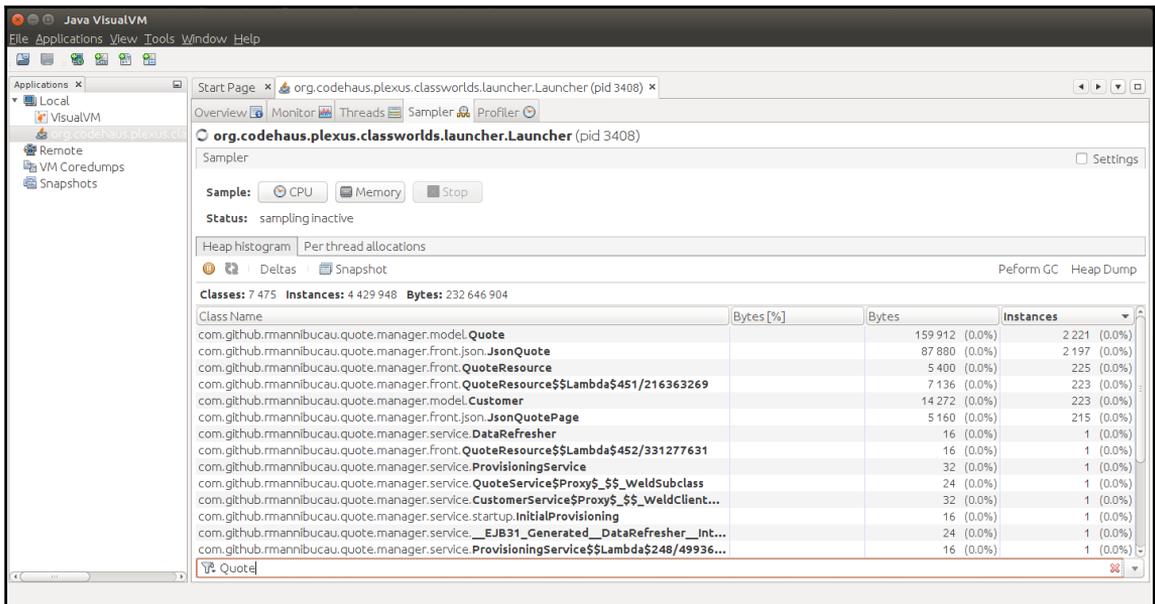
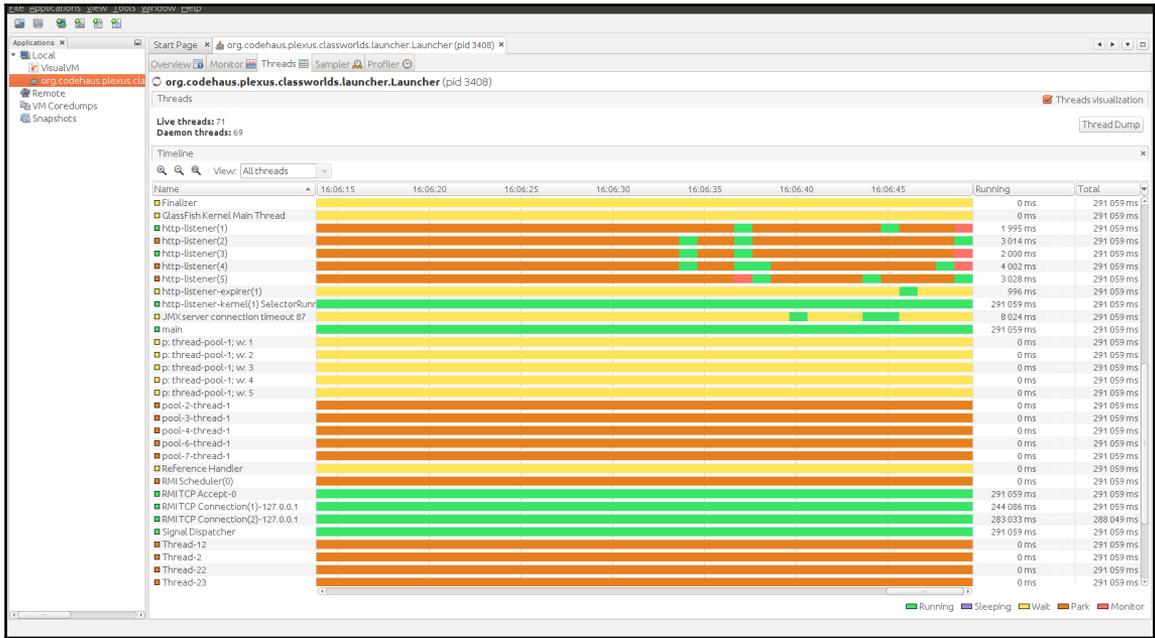


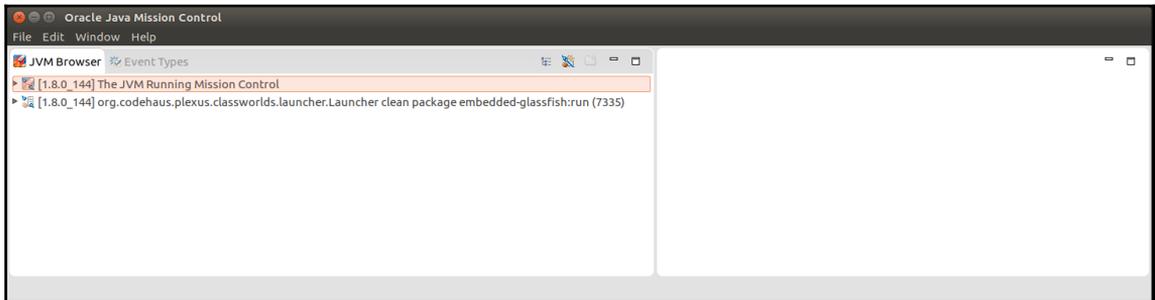
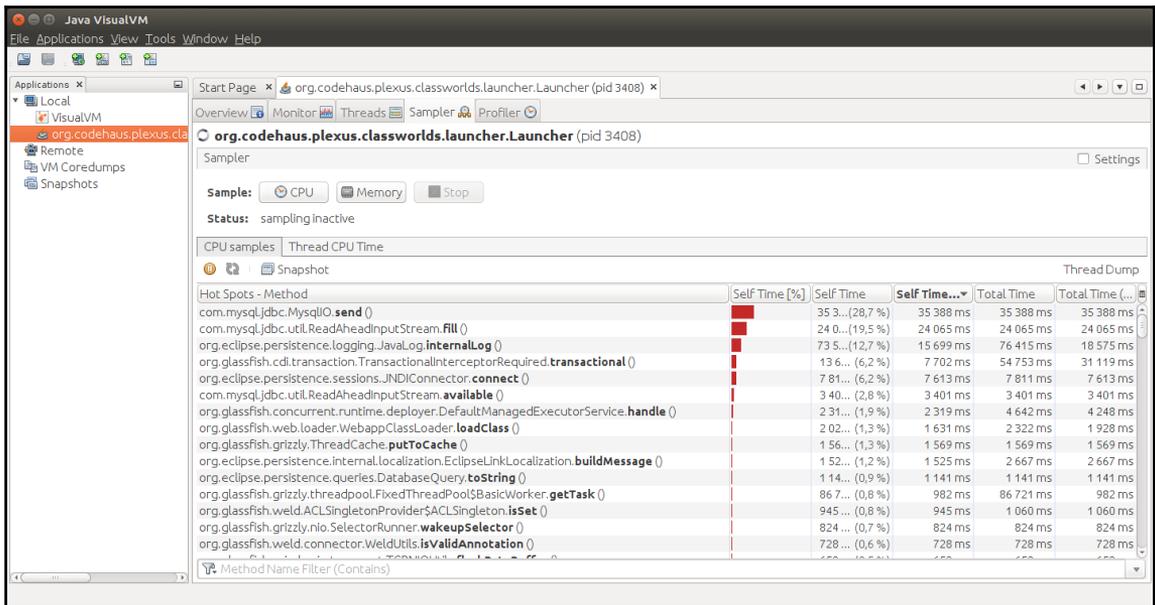
Name	Type
customers_ID 	bigint(20)
quotes_ID  	bigint(20)

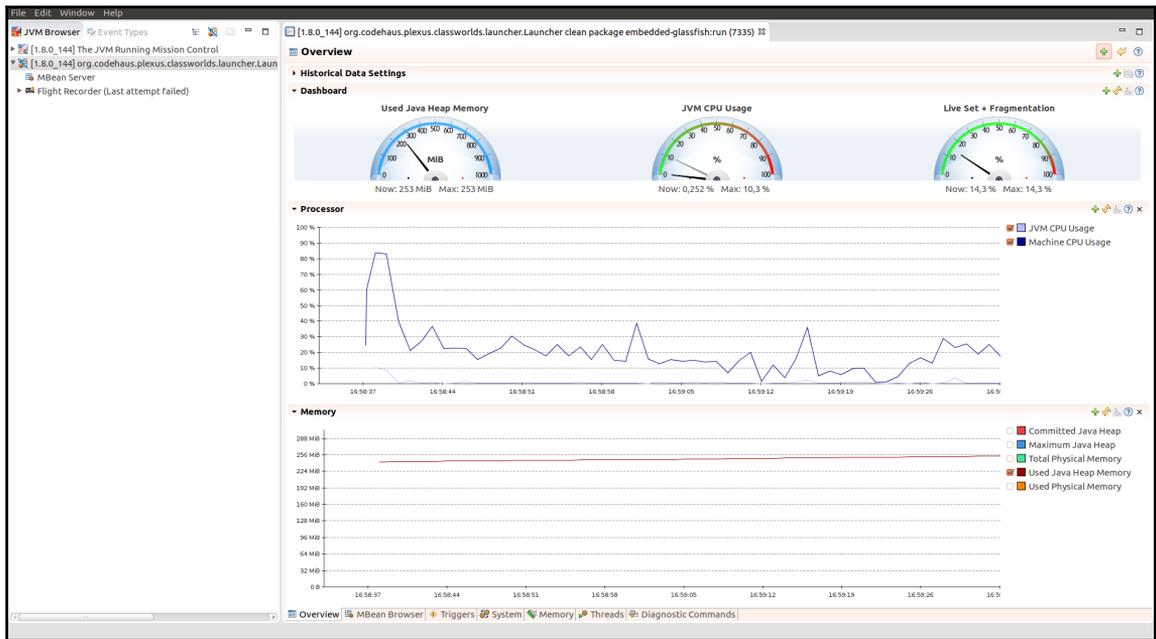
General	Advanced	Additional Properties
<h3>Edit JDBC Connection Pool</h3> <p>Modify an existing JDBC connection pool. A JDBC connection pool is a group of reusable connections for a particular database.</p> <p>Load Defaults Flush Ping</p> <h4>General Settings</h4> <p>Pool Name: DerbyPool</p> <p>Resource Type: <input type="text" value="javax.sql.DataSource"/> ▼ Must be specified if the datasource class implements more than 1 of the interface.</p> <p>Datasource Classname: <input type="text" value="org.apache.derby.jdbc.ClientDataSource"/> Vendor-specific classname that implements the DataSource and/or XADataSource APIs</p> <p>Driver Classname: <input type="text"/> Vendor-specific classname that implements the java.sql.Driver interface.</p> <p>Ping: <input checked="" type="checkbox"/> Enabled When enabled, the pool is pinged during creation or reconfiguration to identify and warn of any erroneous values for its attributes</p> <p>Deployment Order: <input type="text" value="100"/> Specifies the loading order of the resource at server startup. Lower numbers are loaded first.</p> <p>Description: <input type="text"/></p> <hr/> <h4>Pool Settings</h4> <p>Initial and Minimum Pool Size: <input type="text" value="8"/> Connections Minimum and initial number of connections maintained in the pool</p> <p>Maximum Pool Size: <input type="text" value="32"/> Connections Maximum number of connections that can be created to satisfy client requests</p> <p>Pool Resize Quantity: <input type="text" value="2"/> Connections Number of connections to be removed when pool idle timeout expires</p> <p>Idle Timeout: <input type="text" value="300"/> Seconds Maximum time that connection can remain idle in the pool</p> <p>Max Wait Time: <input type="text" value="60000"/> Milliseconds Amount of time caller waits before connection timeout is sent</p> <hr/> <h4>Transaction</h4> <p>Non Transactional Connections: <input type="checkbox"/> Enabled Returns non-transactional connections</p> <p>Transaction Isolation: <input type="text" value=""/> ▼ If unspecified, use default level for JDBC Driver</p> <p>Isolation Level: <input checked="" type="checkbox"/> Guaranteed All connections use same isolation level; requires Transaction Isolation</p>		

Chapter 3: Monitor Your Application









[1.8.0_144] org.codehaus.plexus.classworlds.launcher.Launcher clean package embedded-glassfish:run (7335) ⌵

Diagnostic Commands

Operations	Description
GC.rotate_log	
JFR.check	
JFR.dump	
JFR.stop	
VM.check_commercial_features	
VM.command_line	
VM.flags	
VM.system_properties	
VM.unlock_commercial_features	
VM.uptime	
VM.version	
help	
GC.run	
GC.run_finalization	
JFR.start	
Thread.print	
VM.native_memory	
GC.class_histogram	
GC.class_stats	

Help Execute GC.rotate_log

Overview MBean Browser Triggers System Memory Threads Diagnostic Commands

Commercial Features Not Unlocked

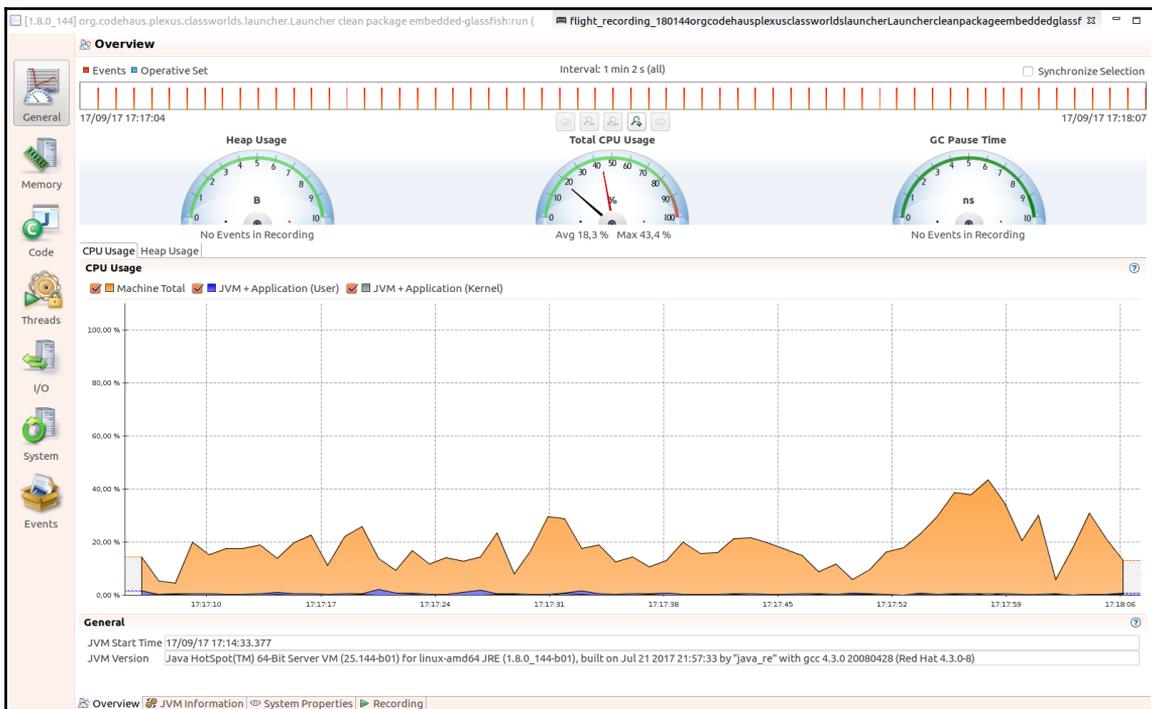
? Commercial Features must be unlocked to start a Flight Recording. Do you want to unlock Commercial Features in the JVM now?

If you don't want to see this dialog in the future, you can unlock the Commercial Features by adding `-XX:+UnlockCommercialFeatures-XX:+FlightRecorder` to the command line.

Commercial Features are covered by the Binary Code License.

[Read about the Binary Code License](#)

No Yes



Stack Trace	Sample Count	Percentage
java.lang.Thread.interrupted()	1	0,04
- UNCLASSIFIABLE -()	731	31,29
com.github.mannibucau.quote.manager.front.QuoteResource.lambda\$findAll\$3(int, int, AsyncResponse)	68	2,91
java.util.stream.ReferencePipeline.collect(Collector)	41	1,76
java.util.stream.AbstractPipeline.evaluate(TerminalOp)	41	1,76
java.util.stream.ReduceOps\$ReduceOp.evaluateSequential(PipelineHelper, Splitter)	41	1,76
java.util.stream.AbstractPipeline.wrapAndCopyInto(Sink, Splitter)	41	1,76
java.util.stream.AbstractPipeline.copyInto(Sink, Splitter)	41	1,76
java.util.Vector\$VectorSplitter.forEachRemaining(Consumer)	41	1,76
java.util.stream.ReferencePipeline\$S\$1.accept(Object)	41	1,76
com.github.mannibucau.quote.manager.front.QuoteResource.lambda\$null\$2(Quote)	41	1,76
java.util.Optional.map(Function)	41	1,76
org.eclipse.persistence.indirection.IndirectSet.size()	41	1,76
org.eclipse.persistence.indirection.IndirectSet.getDelegate()	41	1,76
org.eclipse.persistence.indirection.IndirectSet.buildDelegate()	41	1,76
org.eclipse.persistence.internal.indirection.DatabaseValueHolder.getValue()	41	1,76
org.eclipse.persistence.internal.indirection.UnitOfWorkValueHolder.instantiate()	41	1,76
org.eclipse.persistence.internal.indirection.UnitOfWorkValueHolder.instantiateImpl()	41	1,76
org.eclipse.persistence.internal.indirection.DatabaseValueHolder.getValue()	41	1,76
org.eclipse.persistence.internal.indirection.QueryBasedValueHolder.instantiate()	41	1,76
org.eclipse.persistence.internal.indirection.QueryBasedValueHolder.instantiate(AbstractSession)	41	1,76
org.eclipse.persistence.internal.sessions.AbstractSession.executeQuery(DatabaseQuery, AbstractRecord)	41	1,76
org.eclipse.persistence.internal.sessions.AbstractSession.executeQuery(DatabaseQuery, AbstractRecord, InternalExecuteQuery)	41	1,76
org.eclipse.persistence.internal.sessions.UnitOfWorkImpl.internalExecuteQuery(DatabaseQuery, AbstractRecord, InternalExecuteQuery)	41	1,76
org.eclipse.persistence.queries.ObjectLevelReadQuery.executeInUnitOfWork(UnitOfWorkImpl, AbstractSession, AbstractRecord)	41	1,76
org.eclipse.persistence.queries.ReadAllQuery.execute(AbstractSession, AbstractRecord)	41	1,76
org.eclipse.persistence.queries.ObjectLevelReadQuery.execute(AbstractSession, AbstractRecord)	41	1,76
com.github.mannibucau.quote.manager.service.QuoteService\$Proxy\$_\$\$_WeldClientProxy.findAll(int, int)	19	0,81
com.github.mannibucau.quote.manager.service.QuoteService\$Proxy\$_\$\$_WeldClientProxy.countAll()	7	0,30

Monitoring Service

Enable monitoring for a component or service by selecting either LOW or HIGH. Monitoring Service and Monitoring MBeans must both be enabled to use Administration Console monitoring features.

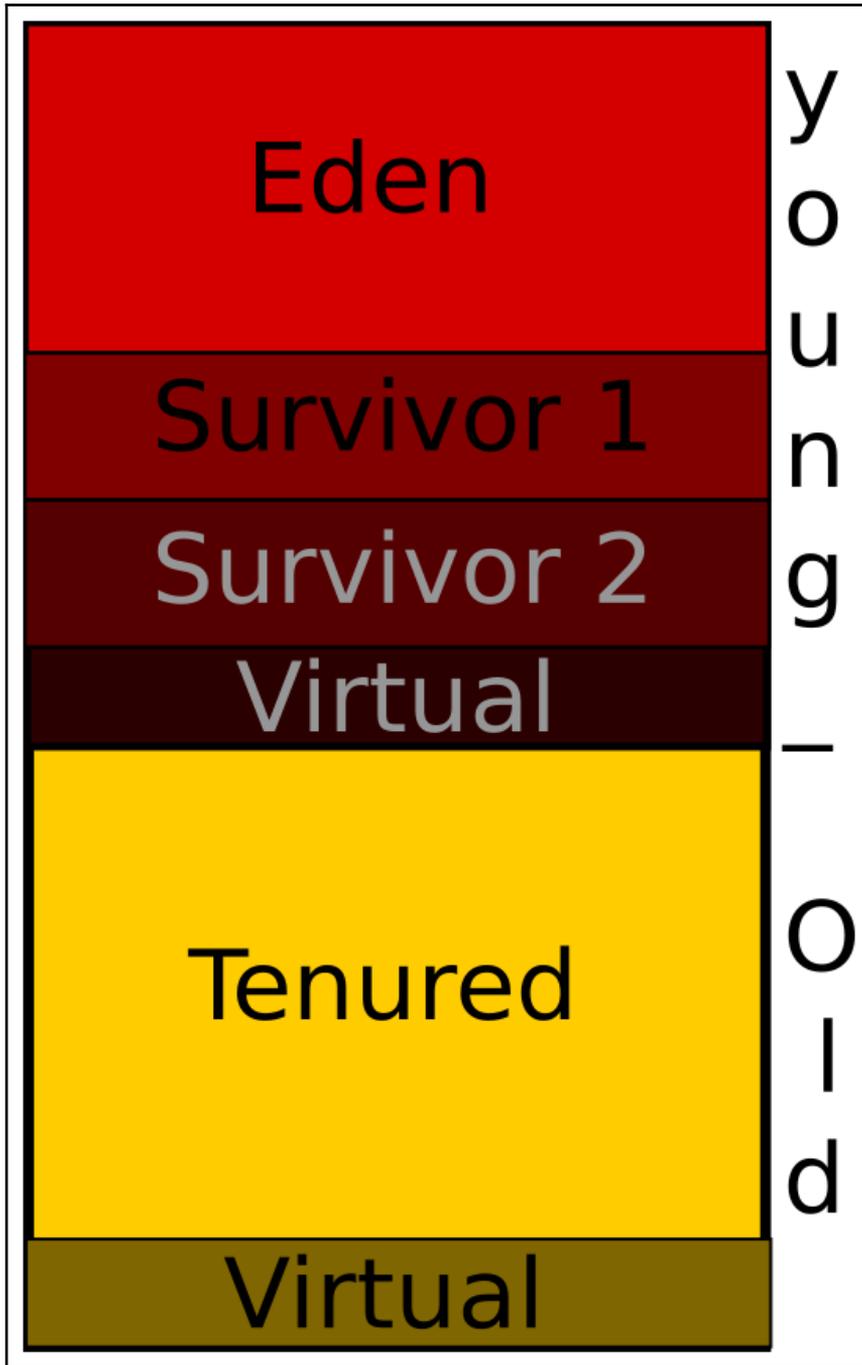
Configuration Name: server-config

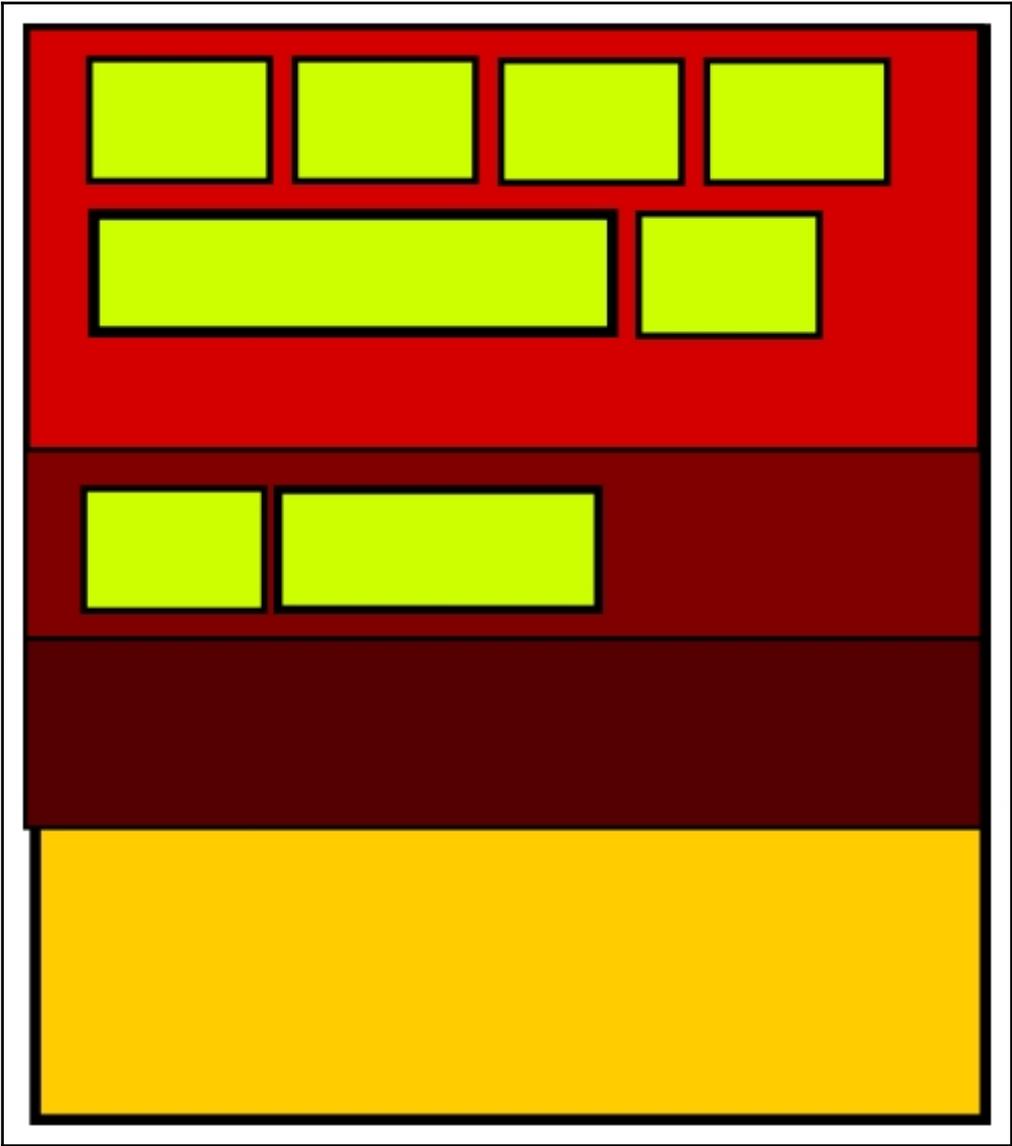
Monitoring Service: Enabled
Enable monitoring for GlassFish Server

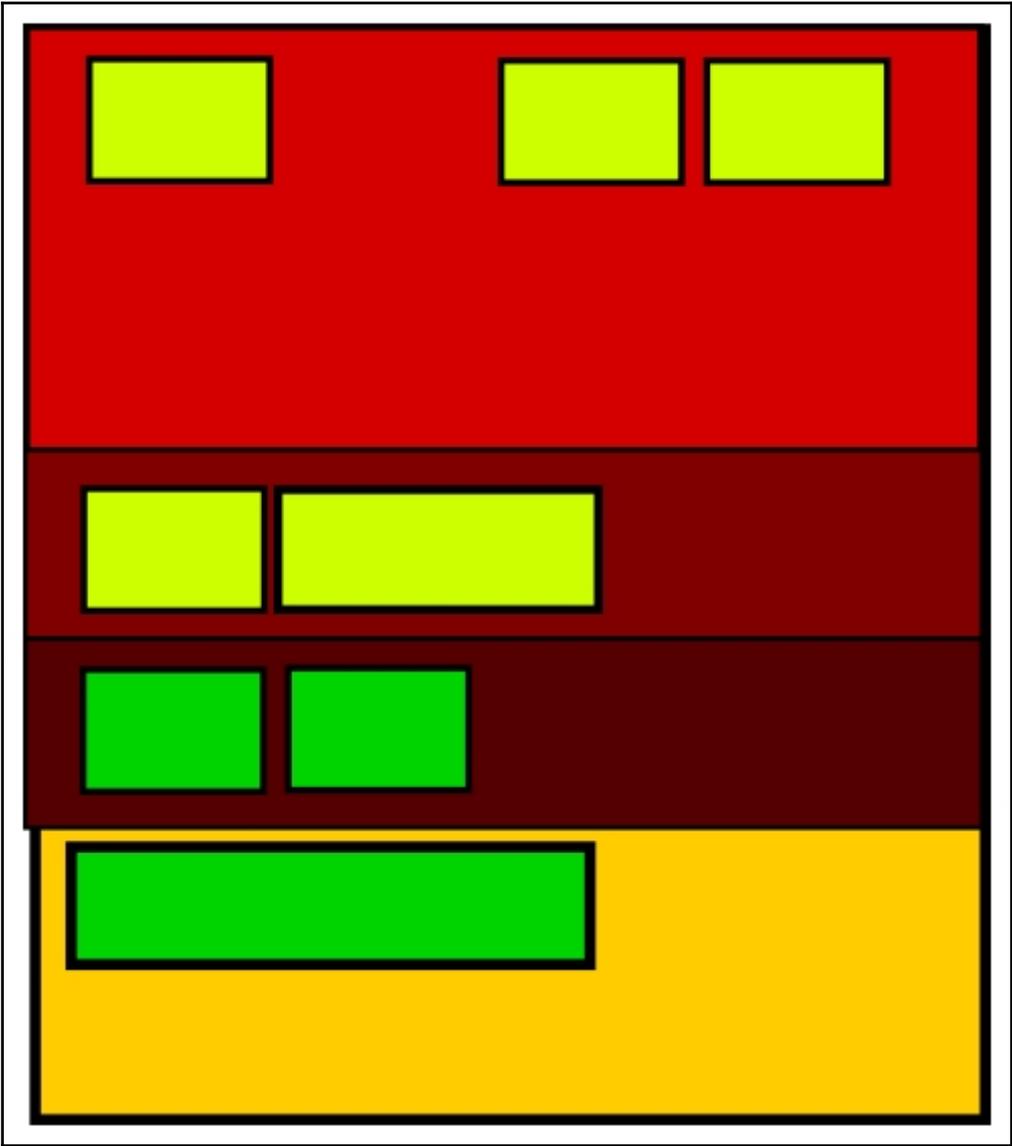
Monitoring MBeans: Enabled
Deploy all MBeans needed for monitoring

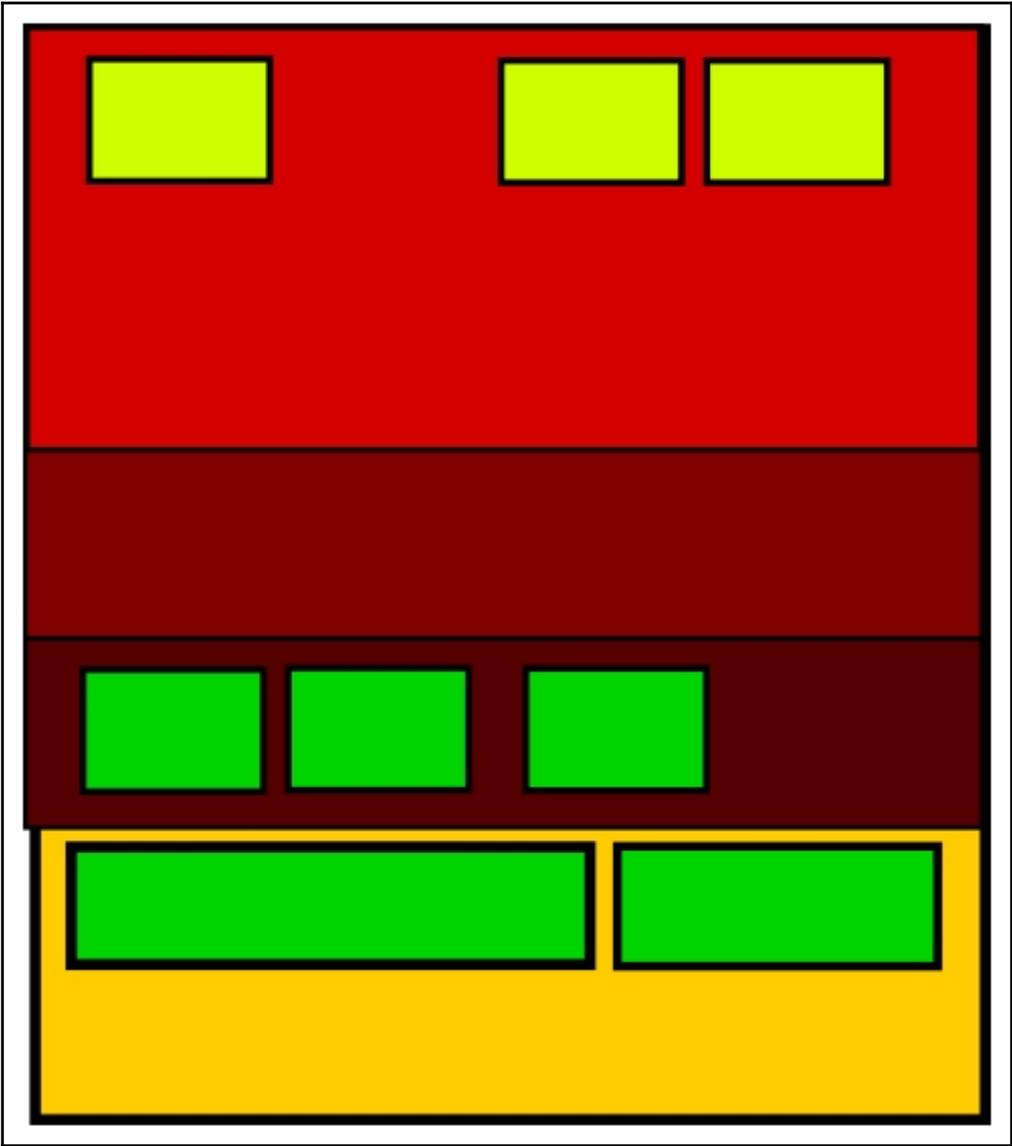
Select	Module	Monitoring Level
<input type="checkbox"/>	Jvm	HIGH
<input type="checkbox"/>	Transaction Service	HIGH
<input type="checkbox"/>	Connector Service	HIGH
<input type="checkbox"/>	Jms Service	HIGH
<input type="checkbox"/>	Security	HIGH
<input type="checkbox"/>	Web Container	HIGH
<input type="checkbox"/>	Jersey(RESTful Web Services)	HIGH
<input type="checkbox"/>	Web Services Container	HIGH
<input type="checkbox"/>	Java Persistence	HIGH
<input type="checkbox"/>	Jdbc Connection Pool	HIGH
<input type="checkbox"/>	Thread Pool	HIGH
<input type="checkbox"/>	Ejb Container	HIGH
<input type="checkbox"/>	ORB (Object Request Broker)	HIGH
<input type="checkbox"/>	Connector Connection Pool	HIGH
<input type="checkbox"/>	Deployment	HIGH
<input type="checkbox"/>	Http Service	HIGH

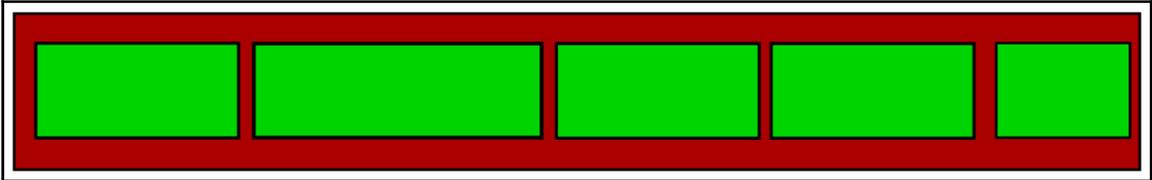
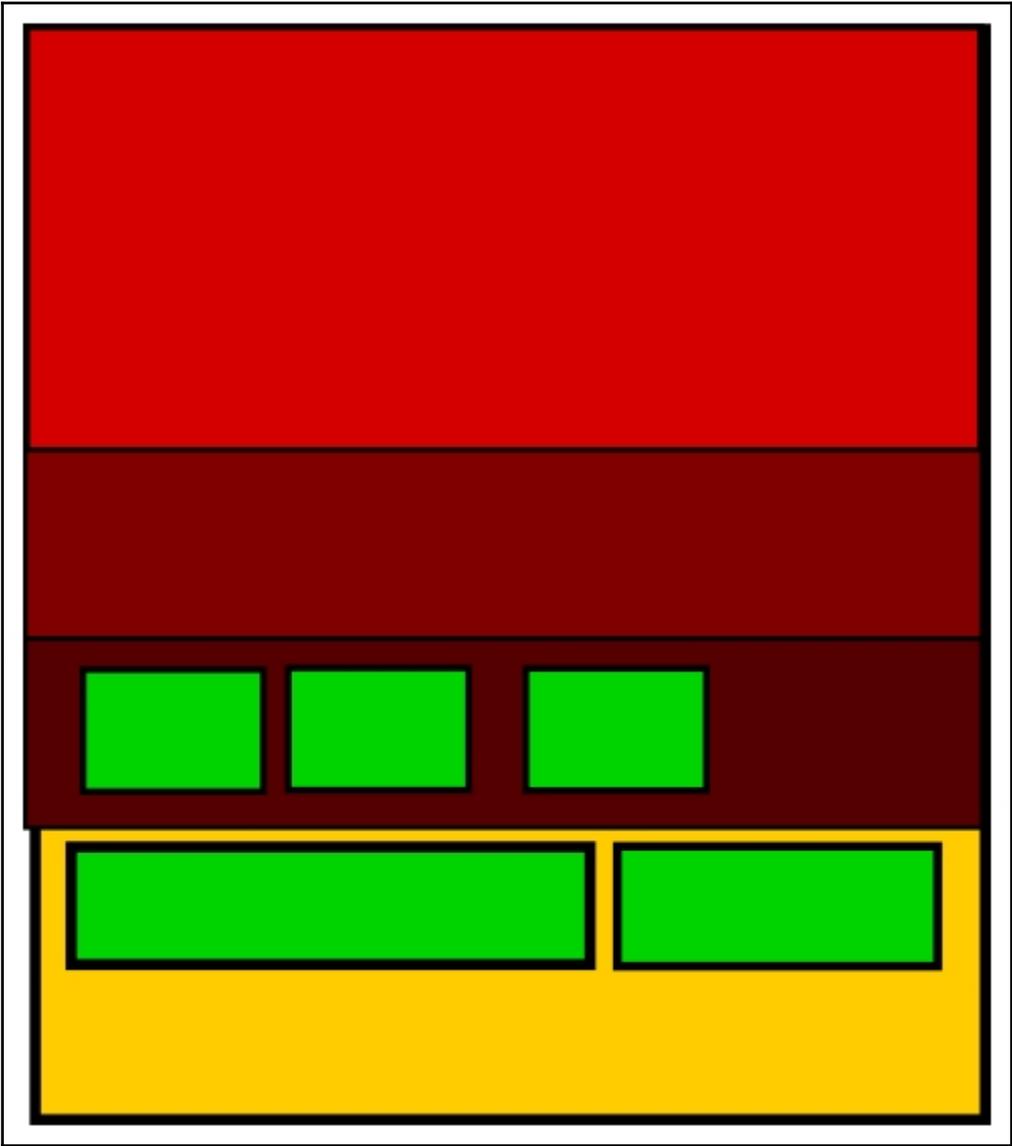
Chapter 4: Application Optimization – Memory Management and Server Configuration

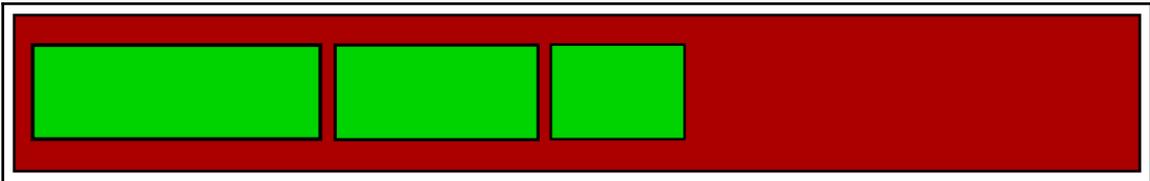
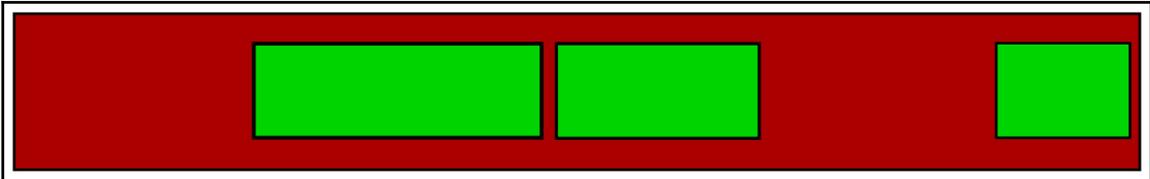
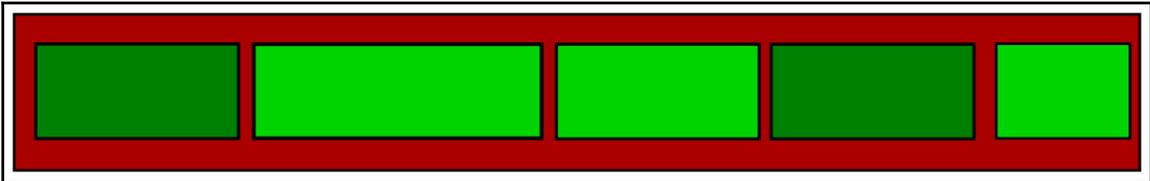


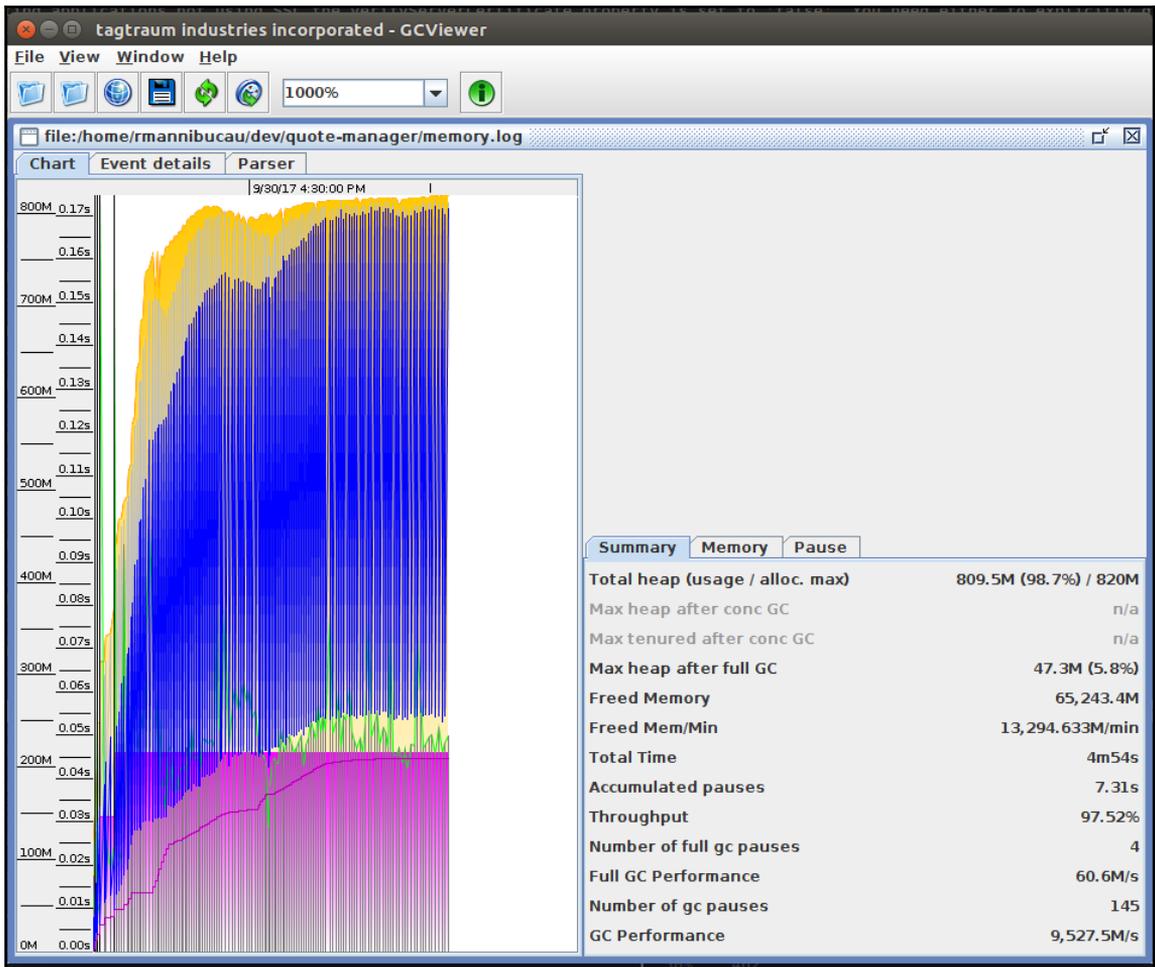


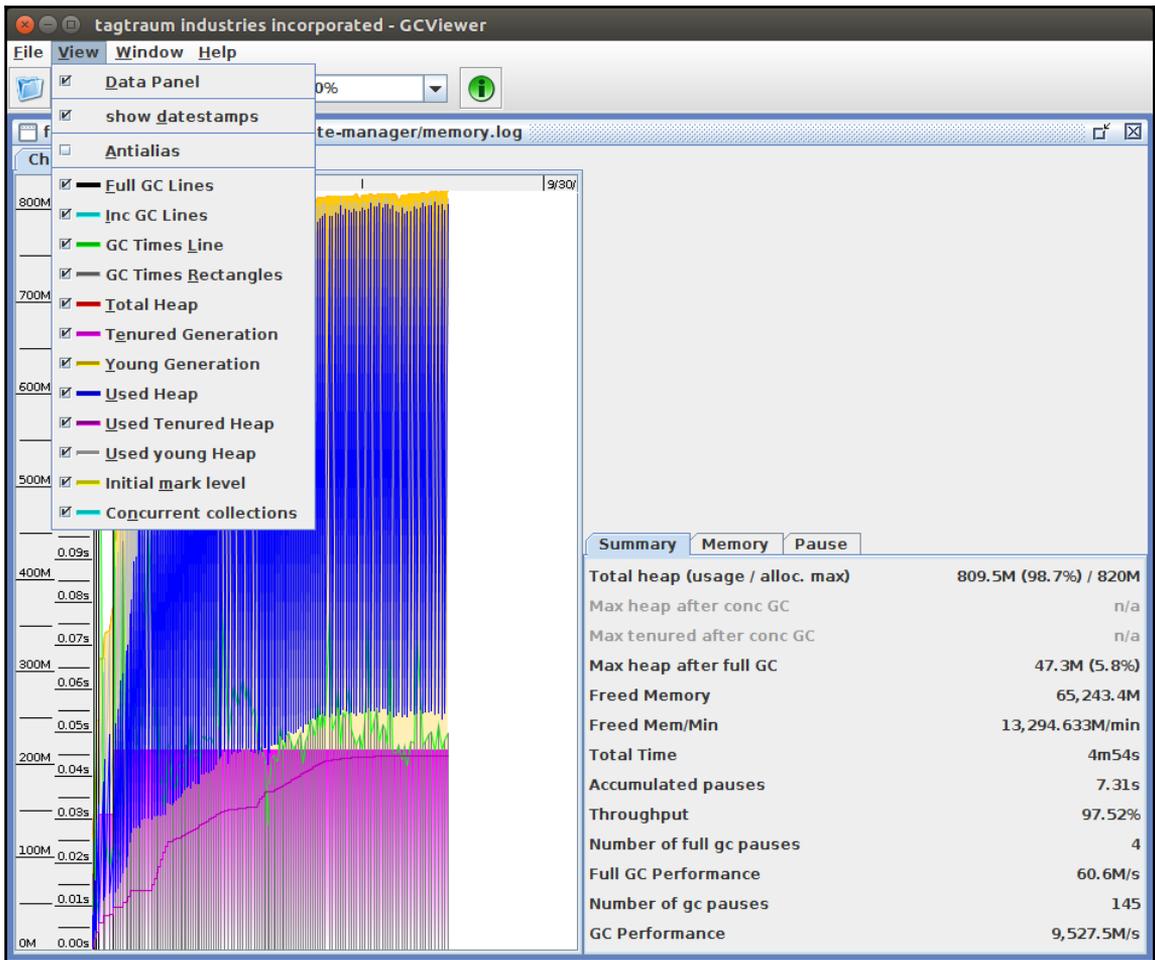


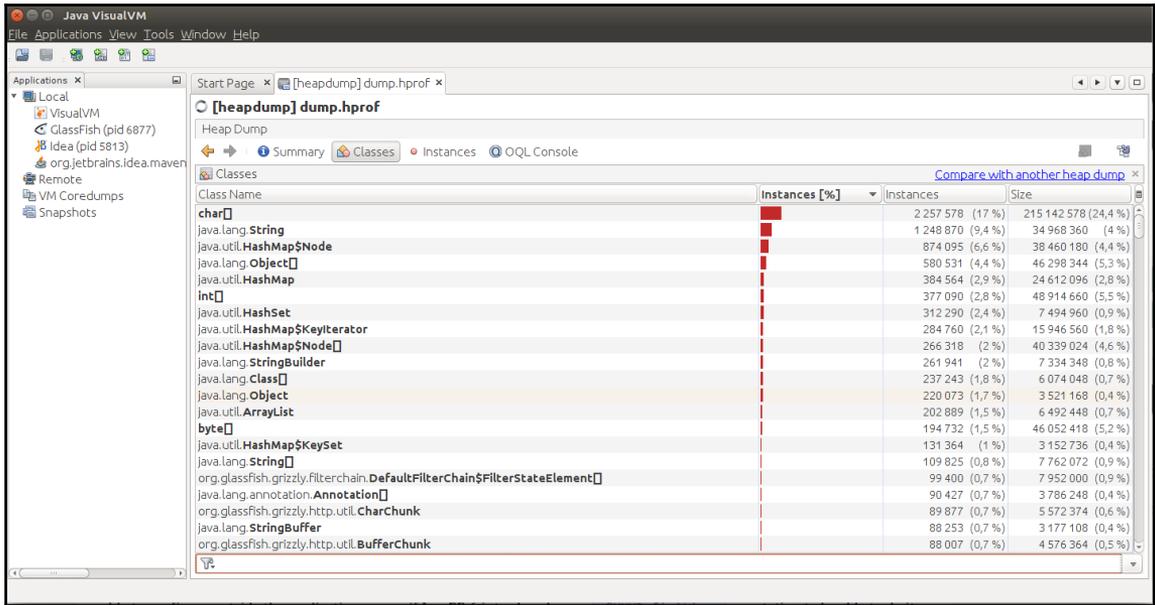


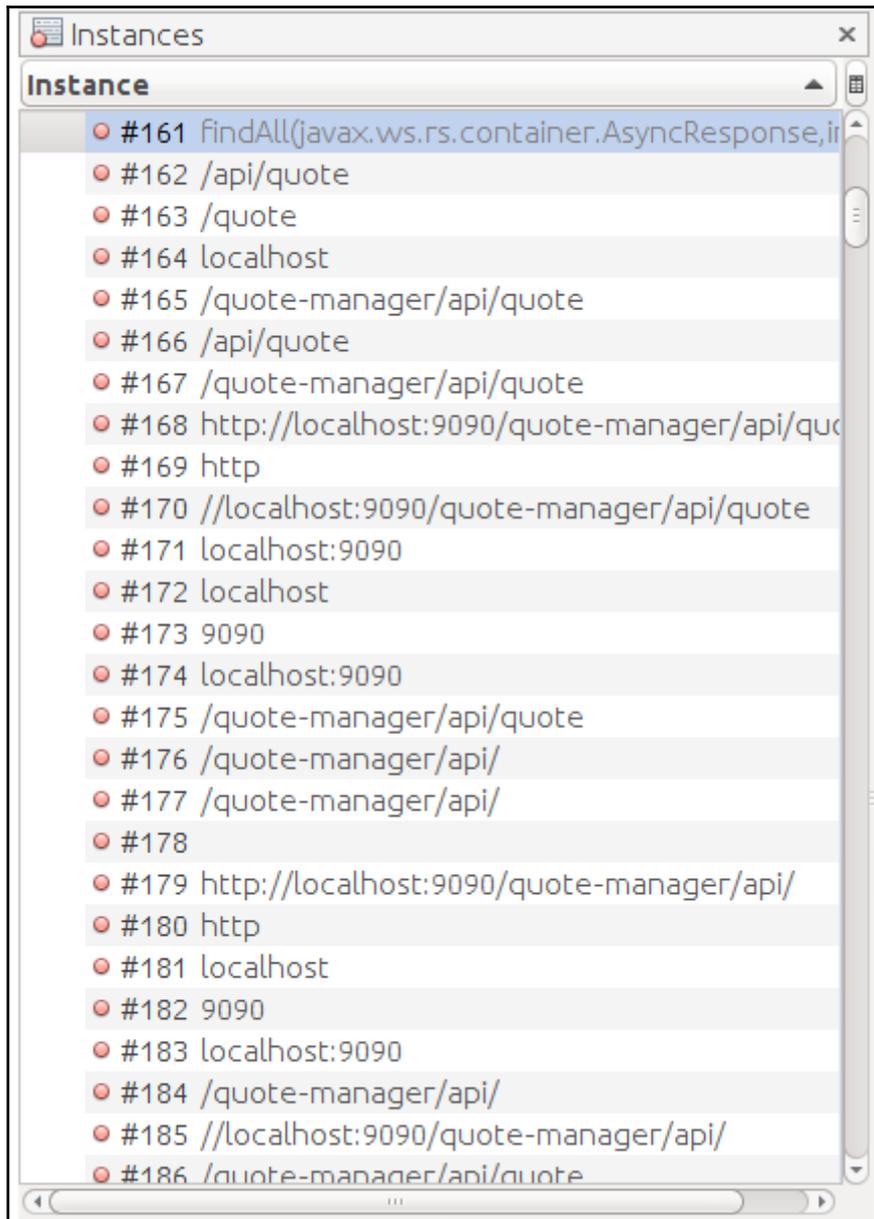












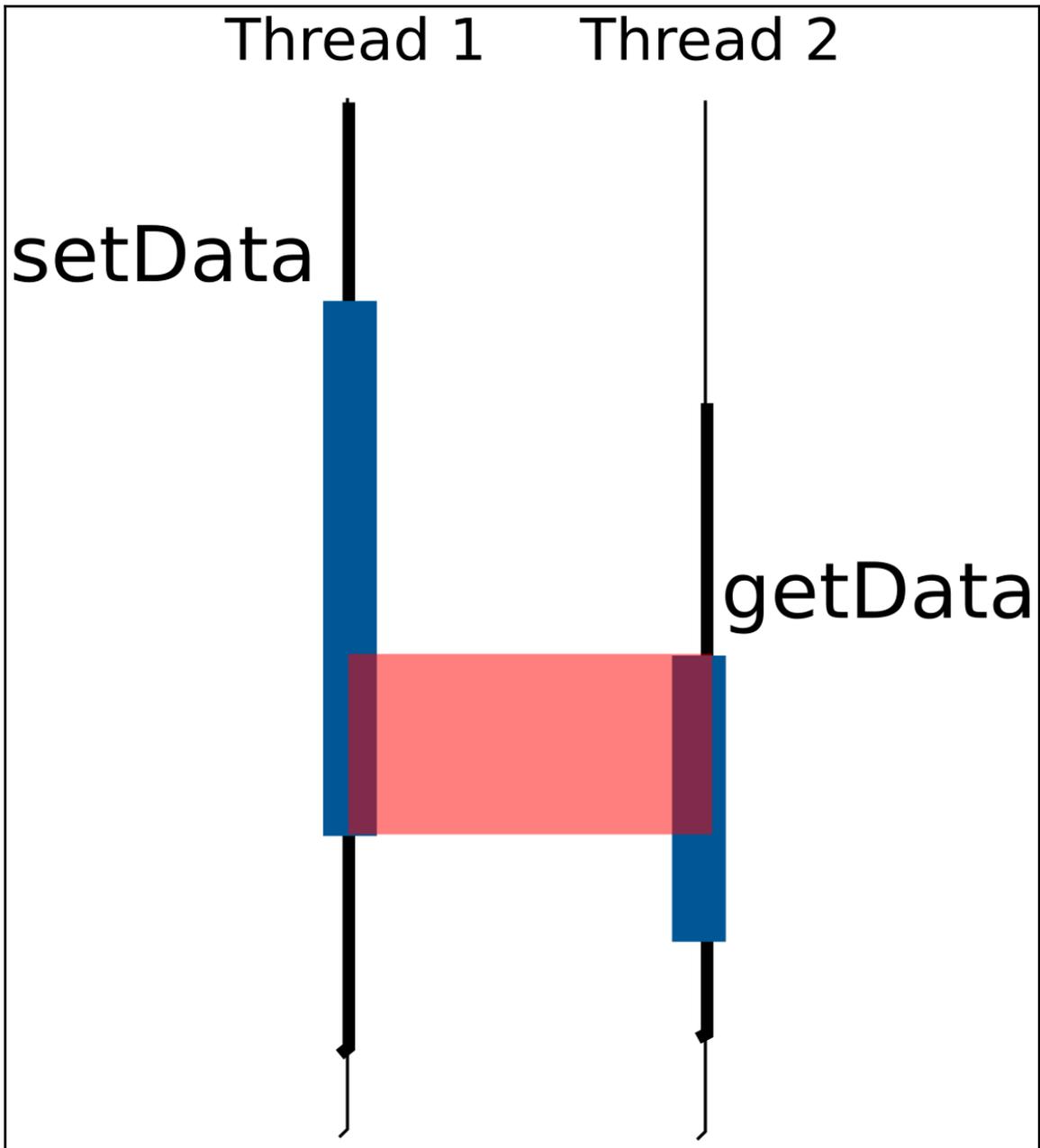
The screenshot shows a Java Heap Dump tool interface. At the top, it displays the path `com.github.rmannibucau.quote.manager.front.json.JsonQuotePage` and summary statistics: `Instances: 991 | Instance size: 32 | Total size: 31 712 | Compute Retained Sizes`. The main view is divided into three panes:

- Instances:** A list of 27 instances, each represented by a red circle icon and a number (#1 to #27).
- Fields:** A tree view of the selected instance's fields. The root is `this` (Type: `JsonQuotePage`, Value: #1). It contains:
 - `items` (Type: `ArrayList`, Value: #181110)
 - `size` (Type: `int`, Value: 10)
 - `elementData` (Type: `Object[]`, Value: #537537 10 Items)
 - `[0]` (Type: `JsonQuote`, Value: #10072)
 - `customerCount` (Type: `long`, Value: 1)
 - `value` (Type: `double`, Value: 9.85)
 - `name` (Type: `String`, Value: #1110414 FLWS)
 - `id` (Type: `long`, Value: 1)
 - `<classLoader>` (Type: `WebappClassLoader`, Value: #3)
 - `[1]` (Type: `JsonQuote`, Value: #10071)
 - `[2]` (Type: `JsonQuote`, Value: #10070)
 - `[3]` (Type: `JsonQuote`, Value: #10069)
 - `[4]` (Type: `JsonQuote`, Value: #10068)
 - `[5]` (Type: `JsonQuote`, Value: #10067)
 - `[6]` (Type: `JsonQuote`, Value: #10066)

- References:** A table showing references to the selected instance:

Field	Type	Value
<code>this</code>	<code>JsonQuotePage</code>	#1
<code>entity</code>	<code>WriterInterceptorExecutor</code>	#1
<code>val\$response</code>	<code>ServerRuntime\$AsyncRespond...</code>	#1
<code>entity</code>	<code>OutboundMessageContext</code>	#9
<code>entity</code>	<code>OutboundMessageContext</code>	#10

Chapter 5: Scale Up – Threading and Implications



Protocol	SSL	HTTP	File Cache
HTTP			
Modify HTTP settings for the protocol.			
Load Defaults			
Configuration Name: default-config			
Protocol Name:	http-listener-1		
Server Name:	<input type="text"/>		
	Alias name if server uses an alias. If a colon and port number are appended, that port will be used in URLs the server sends to the client.		
Default Virtual Server:	server ▼		
	Use the Virtual Servers page to define a new virtual server		
Redirect Port:	<input type="text"/>		
	SSL port value for redirects		
Max Connections:	<input type="text" value="256"/>		
	Maximum number of requests per connection in keep-alive mode.		
Timeout:	<input type="text" value="30"/>	Seconds	
	Maximum time a connection can be deemed as idle and kept in the keep-alive state. A value of -1 will disable it.		
Upload Timeout:	<input checked="" type="checkbox"/> Enabled		
	Enable closing of connection for a servlet that reads bytes slowly after Connection Upload Timeout is reached		
Connection Upload Timeout:	<input type="text" value="300000"/>	Milliseconds	
	Timeout for uploads if Upload Timeout is enabled. A value of -1 will disable it.		
Request Timeout:	<input type="text" value="900"/>	Seconds	
	Time after which a request times out. A value of -1 will disable it.		
Send Buffer Size:	<input type="text" value="8192"/>	Bytes	
	Size of the send buffer		
Header Buffer Length:	<input type="text" value="8192"/>	Bytes	
	The size of the buffer used by the request processing threads to read the request data		
Max Post Size:	<input type="text" value="-1"/>	Bytes	
	Maximum size of POST actions		
Max Save Post Size	<input type="text" value="4096"/>	Bytes	
	Maximum size of a POST which will be saved by the container during authentication.		
URI Encoding:	<input type="text" value="UTF-8"/>		
	Character set used to decode the request URIs received		
Version:	<input type="text" value="HTTP/1.1"/>		
	Version of the HTTP protocol used		
Compression:	<input type="text" value="off"/> ▼		
	Enable HTTP/1.1 GZIP compression to save server bandwidth		
Compressible Mime Types:	<input type="text" value="text/html,text/xml,text/plain"/>		
	Comma-separated list of MIME types for which HTTP compression is used		
Compression Minimum Size:	<input type="text" value="2048"/>	Bytes	
	Minimum size of a file when compression is applied		

Edit Thread Pool

Modify an existing thread pool.

[Load Defaults](#)

Configuration Name: default-config

Name: http-thread-pool

Class Name:
The name of the class that implements the thread pool

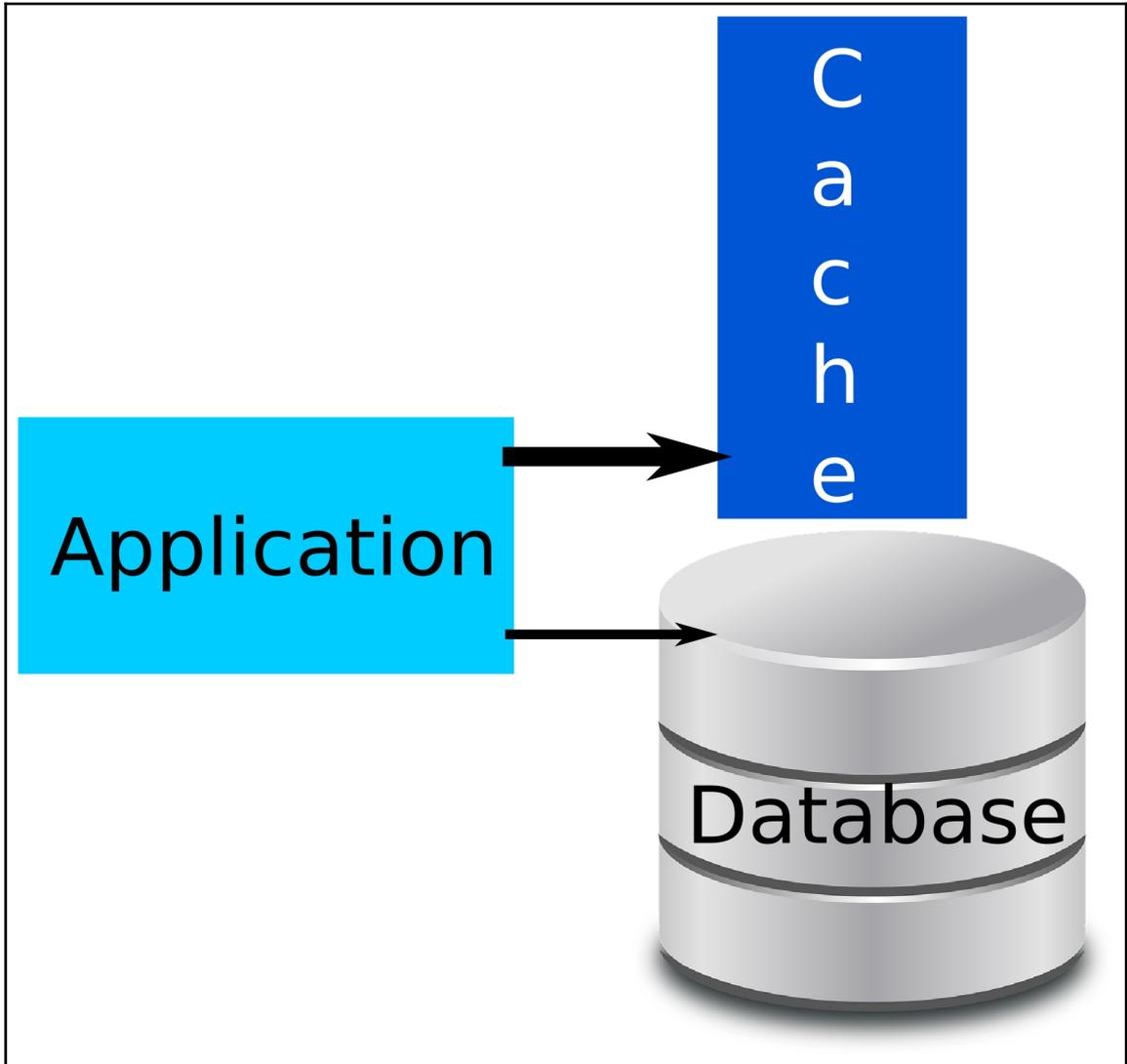
Max Queue Size:
The maximum number of threads in the queue. A value of -1 indicates that there is no limit to the queue size.

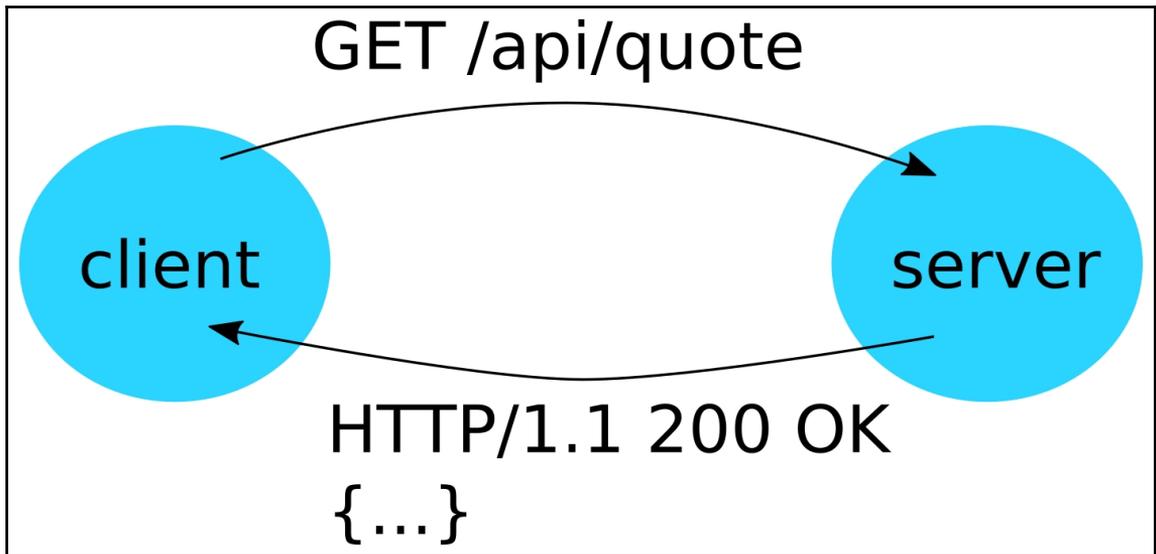
Max Thread Pool Size:
The maximum number of threads in the thread pool

Min Thread Pool Size:
The minimum number of threads in the thread pool

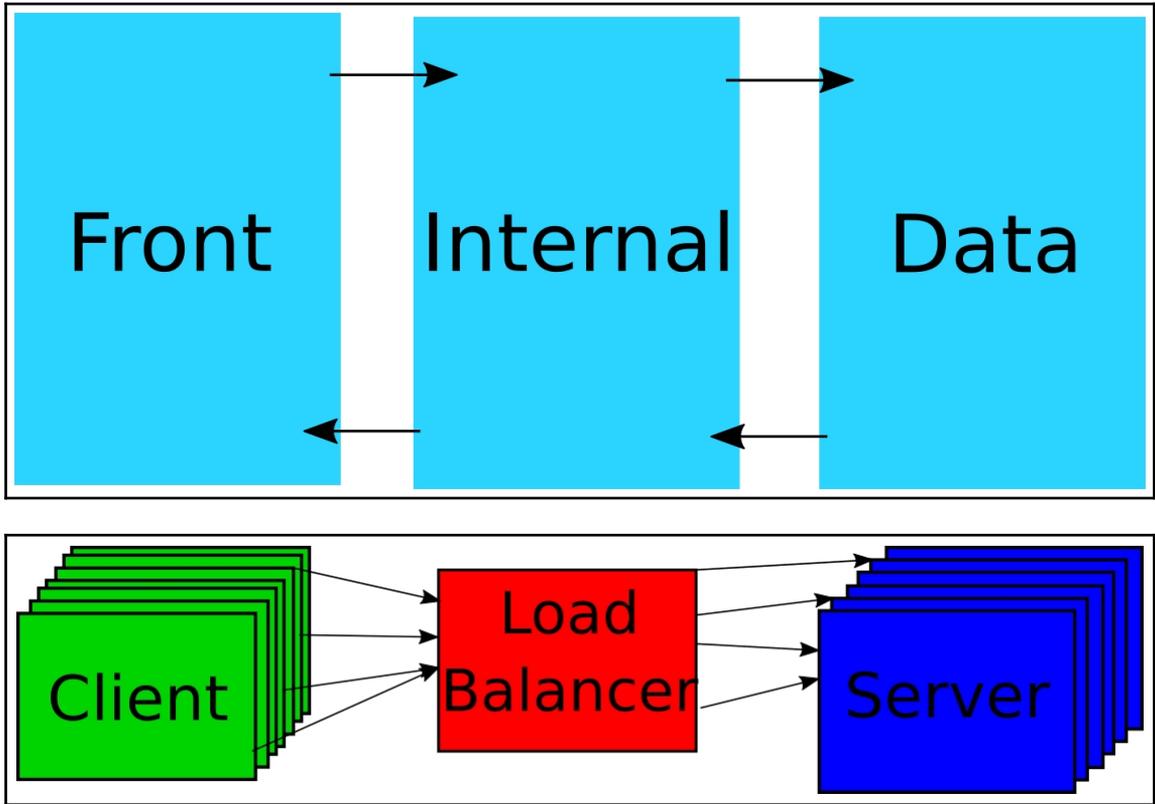
Idle Thread Timeout: Seconds
The maximum amount of time that a thread can remain idle in the pool. After this time expires, the thread is removed from the pool.

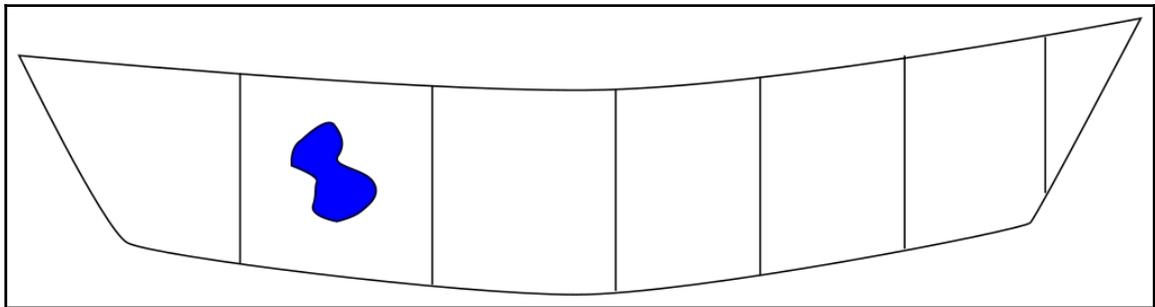
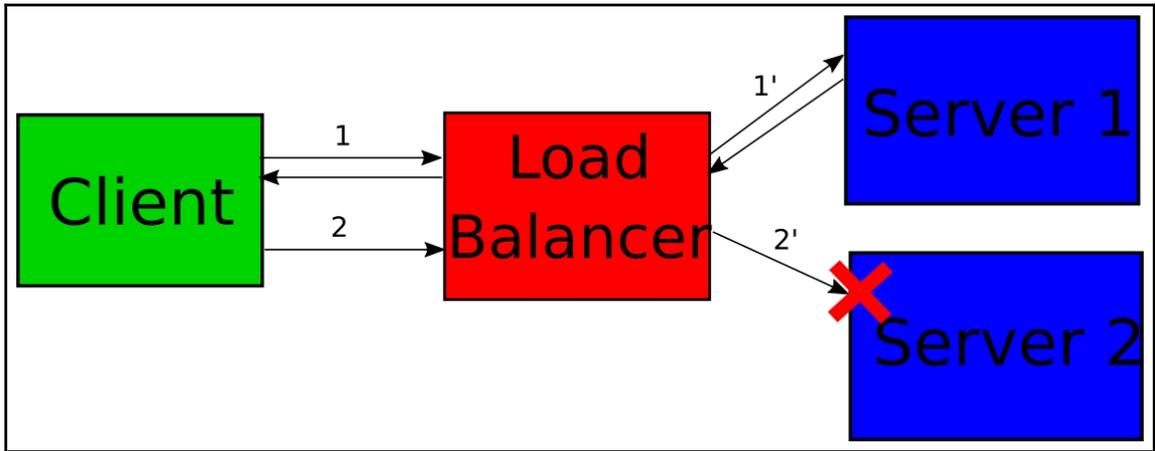
Chapter 6: Be Lazy; Cache Your Data



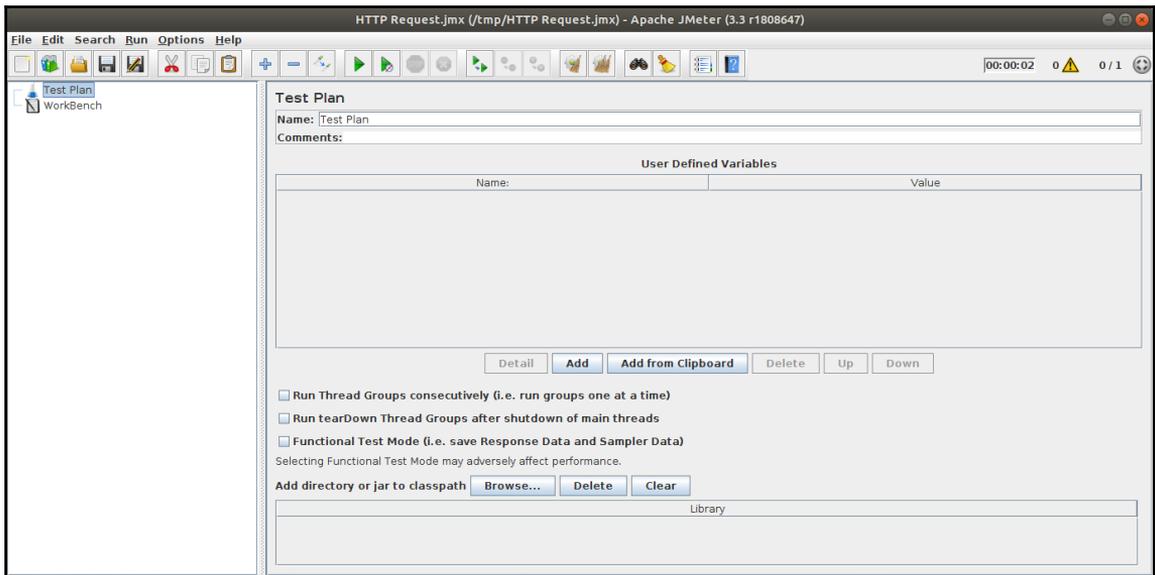
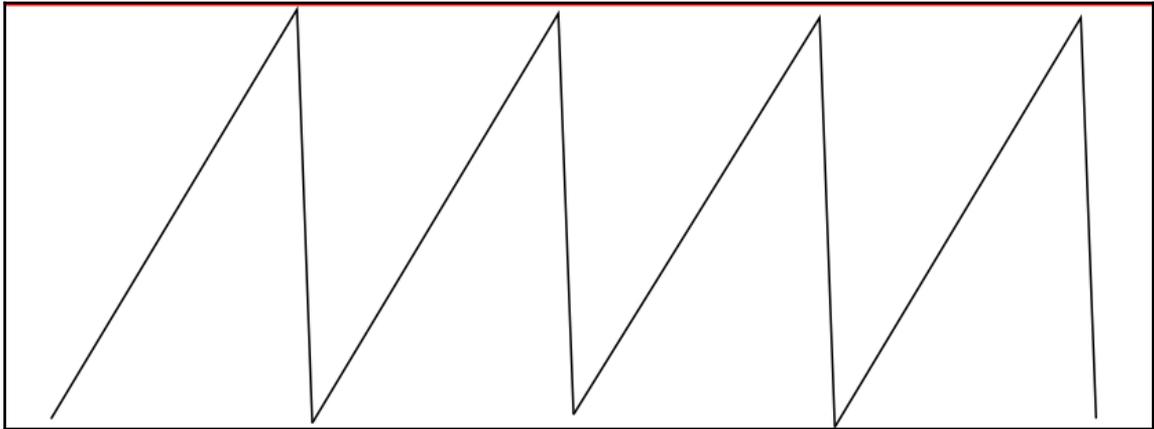


Chapter 7: Be Fault-Tolerant





Chapter 9: Benchmarking Your Application



Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Max	Error %	Throughput	Received K...	Sent kB/sec
Login page	8	1	0	1	12	12	0	12	100.00%	32.0/sec	59,25	0,00
Authentica...	1	1	1	1	1	1	1	1	100.00%	1000.0/sec	1851,56	0,00
TOTAL	9	1	1	1	12	12	0	12	100.00%	36.0/sec	66,66	0,00