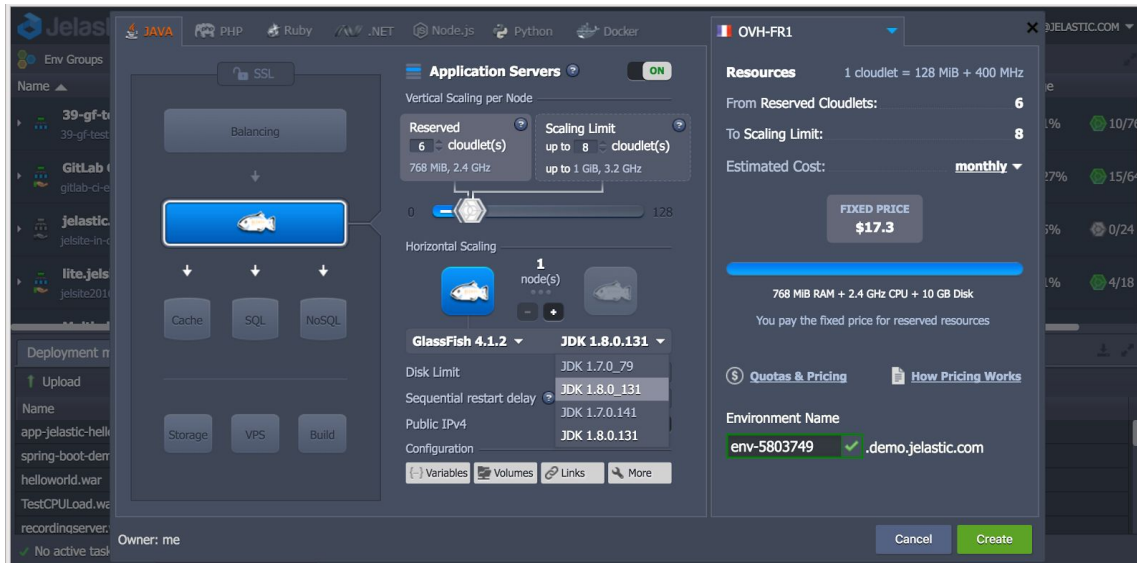


## GF Auto-clustering

For now the new containers are not published yet on the demo, but you can get it visible with the following link <https://app.demo.jelastic.com/?action=previewtemplates>

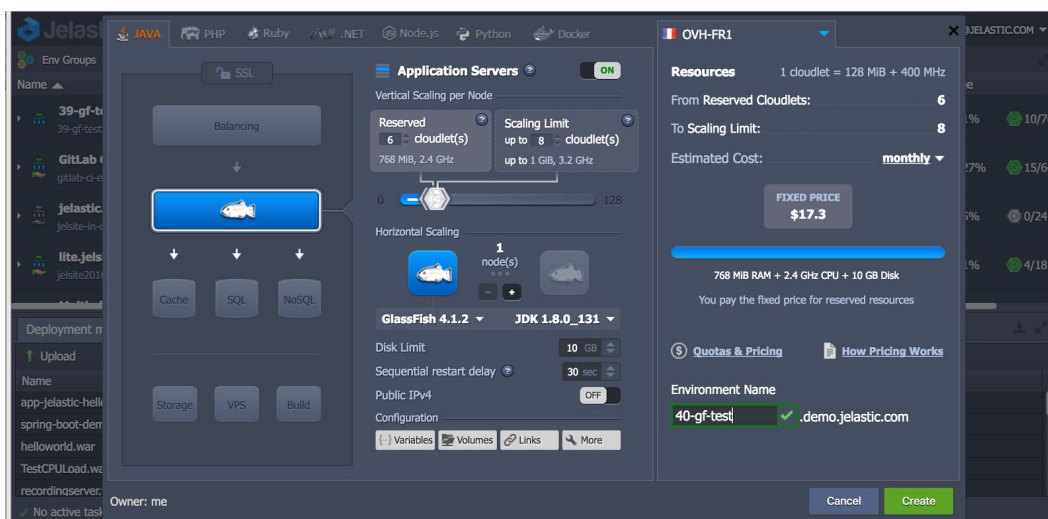
In case if you see multiple similar versions



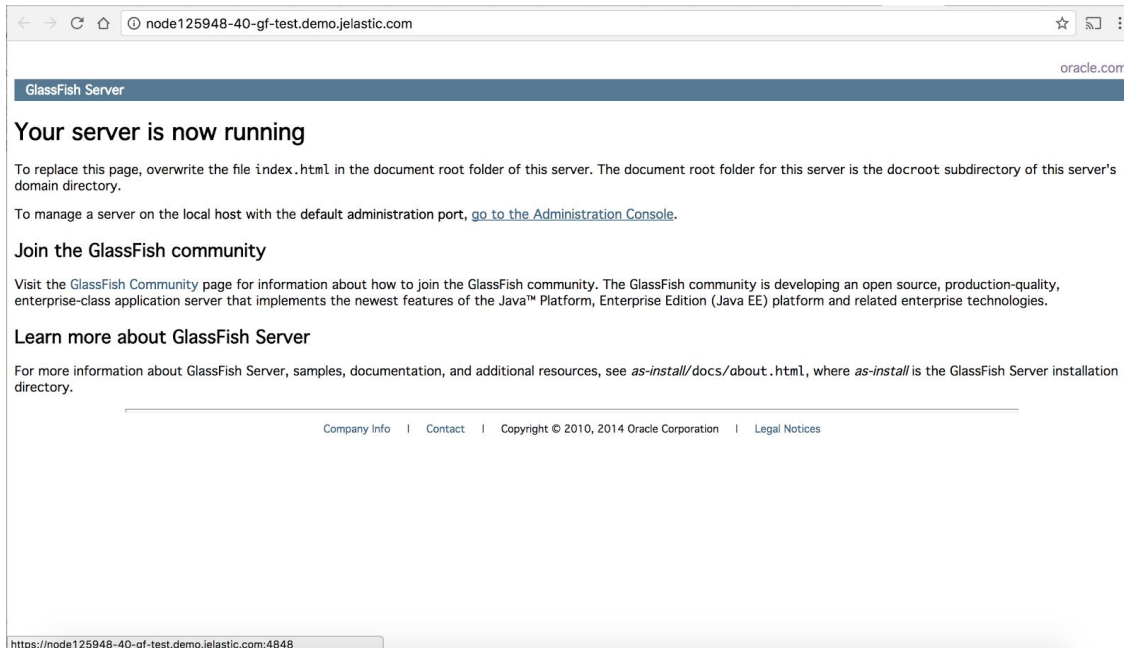
Please double check that env variable ON\_ENV\_INSTALL is defined (press “Variables” button). If it’s present in the list of env variables then it is the right image to test.

## Standalone Setup

Create one container only



And test in the same way as we do it usually: deploy, open admin panel, restart, etc



Check your email box



Congratulations! A new **GlassFish** container has been successfully added to your [40-gf-test](#) environment in the [Jelastec Cloud](#).

Please use the following data to gain the admin access to it:

**Access URL:** <https://node125948-40-gf-test.demo.jelastic.com:4848>

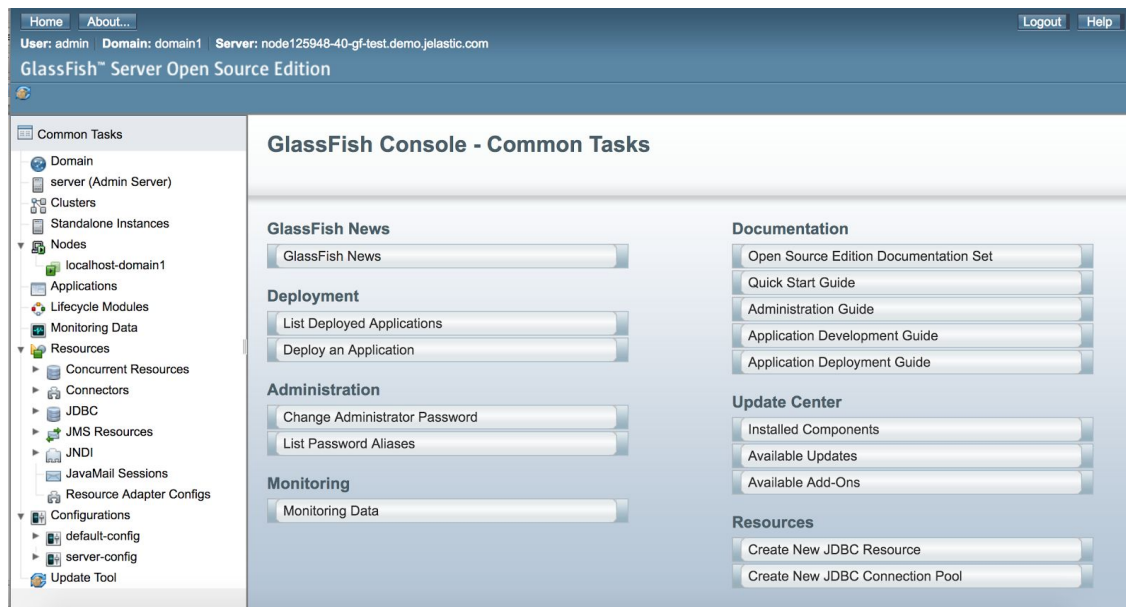
**Login:** admin

**Password:** IOZvlh24367

Go to the Admin Panel



Check the the nodes and deployed applications



At the moment you have only one localhost-domain1 node

## Application Deployment

Use "Deployment manager" for an easy way to deploy an application

**Jelastic** NEW ENVIRONMENT IMPORT MARKETPLACE BALANCE \$20651.08 SETTINGS HELP RS@JELASTIC.COM

Env Groups

Name	Status	Tags
<b>40-gf-test</b> 40-gf-test.demo.jelastic.com	Running	
<b>GlassFish 4.1.2</b> Node ID: 125948		4.1.2-jdk-1.8.0_131
<b>GitLab CI for ENIAB</b> gitlab-ci-eniab.demo.jelastic.com	Running	gs • CTBTO - Demo
<b>jelastic.com Production</b> jelsite-in-docker2.demo.jelastic.com	Stopped	il.svc.website • website 5% 0/24

Environment **40-gf-test** has been successfully created. The detailed information was sent to your email.

**What's next?**

- Deployment Guide
- Application Configuration
- Application Monitoring
- Automatic Horizontal Scaling

[Env. Settings](#)

**Deployment manager**

Upload

Name	Comment	Size	Upload date
app-jelastic-helloworld.zip	New HelloWorld	568 KB	17:34   17 Jul 2017
spring-boot-demo.jar		23547 KB	23:50   03 May 2017
helloworld.war	Uploaded by Jelastic Maven plugin	83 KB	11:48   16 Apr 2017
TestCPULoad.war	40-gf-test	111 KB	12:48   10 Feb 2017
recordingserver.war	tomcat-lets-encrypt-long-test	11318 KB	22:49   24 Oct 2016

No active tasks Deployment manager

**Jelastic** NEW ENVIRONMENT IMPORT MARKETPLACE BALANCE \$20651.08 SETTINGS HELP RS@JELASTIC.COM

Env Groups

Name	Status	Tags	Usage
<b>40-gf-test</b> 40-gf-test.demo.jelastic.com	Running		16% 6/22
<b>GlassFish 4.1.2</b> Node ID: 125948		4.1.2-jdk-1.8.0_131	16% 6/22
<b>GitLab CI for ENIAB</b> gitlab-ci-eniab.demo.jelastic.com			27% 15/64
<b>jelastic.com Production</b> jelsite-in-docker2.demo.jelastic.com			5% 0/24

**Deploy to 40-gf-test**

Select one of the existing contexts or type new.

http://40-gf-test.demo.jelastic.com/

Read more about [zero-downtime deployment options](#).

[Cancel](#) [Deploy](#)

**Deployment manager**

Upload

Name	Comment	Size	Upload date
app-jelastic-helloworld.zip	New HelloWorld	568 KB	17:34   17 Jul 2017
spring-boot-demo.jar		23547 KB	23:50   03 May 2017
helloworld.war	Uploaded by Jelastic Maven plugin	83 KB	11:48   16 Apr 2017
TestCPULoad.war		111 KB	12:48   10 Feb 2017
recordingserver.war	Chronon	11318 KB	22:49   24 Oct 2016

No active tasks Deployment manager

## Check it in the Admin Panel

Home About... Logout Help

User: admin Domain: domain1 Server: node125948-40-gf-test.demo.jelastic.com

**GlassFish™ Server Open Source Edition**

**Common Tasks**

- Domain
  - server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
  - localhost-domain1
  - Applications**
    - test
- Lifecycle Modules

**Applications**

Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

**Deployed Applications (1)**

[Deploy](#) [Undeploy](#) [Enable](#) [Disable](#) Filter:

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	test	100	✓	web	<a href="#">Launch</a> <a href="#">Redeploy</a> <a href="#">Reload</a>

## Scaling Out -> Auto-Clustering

Scale the environment out via topology wizard: +1 or more nodes in “Application servers” layer

The screenshot shows the Jelastic topology wizard interface. On the left, a stack of services is visible: NGINX (green box), followed by a blue box containing a fish icon (representing Application Servers), and then Cache, SQL, and NoSQL (grey boxes). Below these are Storage, VPS, and Build (grey boxes). The 'Application Servers' section is highlighted with a blue bar and a toggle switch set to 'ON'. It shows 'Vertical Scaling per Node' with 'Reserved' set to 6 cloudlet(s) (768 MiB, 2.4 GHz) and 'Scaling Limit' set to up to 22 cloudlet(s) (up to 2.75 GiB, 8.8 GHz). A horizontal scaling slider is set to 2 node(s). Below this, 'GlassFish 4.1.2' and 'JDK 1.8.0\_131' are selected. Other settings include 'Disk Limit' (10 GB), 'Sequential restart delay' (30 sec), and 'Public IPv4' (OFF). On the right, the 'Resources' section shows '1 cloudlet = 128 MiB + 400 MHz'. It calculates 'From Reserved Cloudlets: 1 + 12 = 13' and 'To Scaling Limit: 4 + 44 = 48'. The 'Estimated Cost' is shown as 'FROM \$32.9' to 'TO \$43' monthly. A progress bar indicates the scaling process. At the bottom right, the 'Environment Name' is '40-gf-test.demo.jelastic.com'. The 'Owner' is 'me'. 'Cancel' and 'Apply' buttons are at the bottom right.

After the first scale event the dedicated DAS node will be automatically added to “Extra” layer as well as NGINX will be added to “Balancing” layer

The screenshot shows the Jelastic Admin Panel. The top navigation bar includes 'NEW ENVIRONMENT', 'IMPORT', 'MARKETPLACE', 'BALANCE \$20651.08', 'SETTINGS', 'HELP', and 'RS@JELASTIC.COM'. The main section is titled 'Env Groups' and shows a table of environments. The first environment is '40-gf-test' (40-gf-test.demo.jelastic.com) with status 'Running'. It has a 'Usage' of 1% and 10/64 cloudlets. Below this, a list of nodes and applications is shown:

Node ID	Application	Version	Usage	Cloudlets
125953	Ngix	1.10.1	9%	1/4
125948	GlassFish	4.1.2-jdk-1.8.0_131	17%	3/22
125952	GlassFish	4.1.2-jdk-1.8.0_131	17%	3/22
125958	DAS	4.1.2-jdk-1.8.0_131	1%	3/16

Below the table, there are sections for 'Contexts' and 'Glassfish'. The '41-gf-test' environment is shown as 'Creating...'. The 'GitLab CI for ENIAB' environment is shown as 'Running' with 27% usage and 15/64 cloudlets. The 'jelastic.com Production' environment is shown as 'Running'.

Check the Nodes and Applications again in Admin Panel

Home About... Logout

User: admin Domain: domain1 Server: node125958-40-gf-test.demo.jelastic.com

GlassFish™ Server Open Source Edition

Common Tasks

- Domain
  - server (Admin Server)
- Clusters
- Standalone Instances
- Nodes**
  - localhost-domain1
  - node125948-40-gf-test.demo.jelastic.com
  - node125952-40-gf-test.demo.jelastic.com
- Applications
  - test
- Lifecycle Modules
- Monitoring Data
- Resources
  - Concurrent Resources
  - Connectors
  - JDBC
  - JMS Resources
  - JNDI
  - JavaMail Sessions
  - Resource Adapter Configs

**Nodes**

A node represents a host on which the GlassFish Server software is installed. A node must exist for every host on which GlassFish Server instances run.

Nodes (3)

Select	Name	Node Host	Type	Instances
<input type="checkbox"/>	localhost-domain1	localhost	CONFIG	
<input type="checkbox"/>	node125948-40-gf-test.demo.jelastic.com	node125948-40-gf-test.demo.jelastic.com	SSH	node125948-40-gf-test.demo.jelastic.com Running
<input type="checkbox"/>	node125952-40-gf-test.demo.jelastic.com	node125952-40-gf-test.demo.jelastic.com	SSH	node125952-40-gf-test.demo.jelastic.com Restart Required

## Scaling In

Scale the cluster in by removing one or more nodes in “Application Servers” layer

Owner: me

Application Servers **ON**

Vertical Scaling per Node

Reserved: 6 cloudlet(s) 768 MiB, 2.4 GHz

Scaling Limit: up to 8 cloudlet(s) up to 1 GiB, 3.2 GHz

Horizontal Scaling

1 node(s)

GlassFish 4.1.2 JDK 1.8.0\_131

Disk Limit: 10 GB

Sequential restart delay: 30 sec

Public IPv4: OFF

Configuration: Variables Volumes Links More

Resources

1 cloudlet = 128 MiB + 400 MHz

From Reserved Cloudlets: 1 + 6 + 1 = 8

To Scaling Limit: 4 + 8 + 16 = 28

Estimated Cost: monthly

FROM \$27.1 TO \$33.3

You do not pay for unused resources

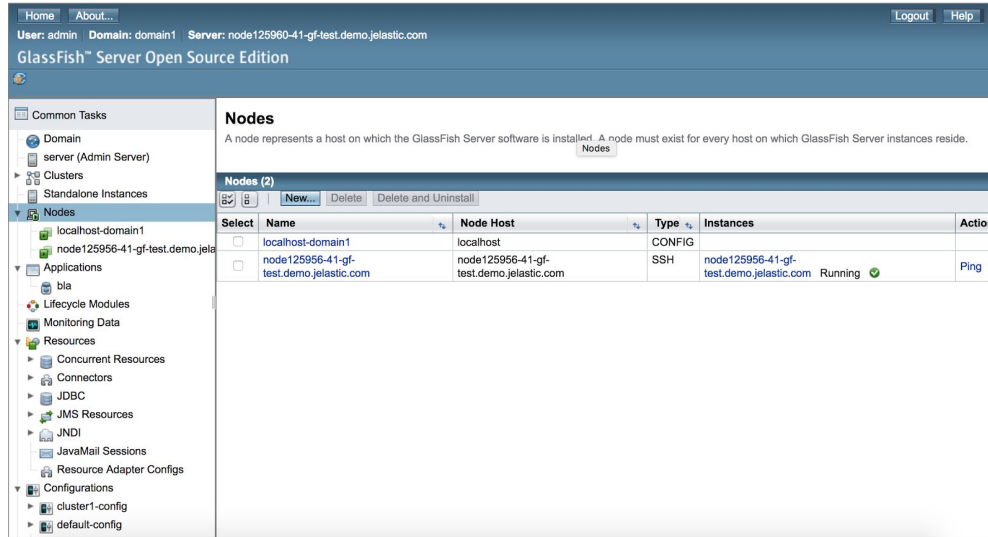
Quotas & Pricing How Pricing Works

Environment Name: 41-gf-test.demo.jelastic.com

Cancel Apply

Check the Nodes again in Admin Panel

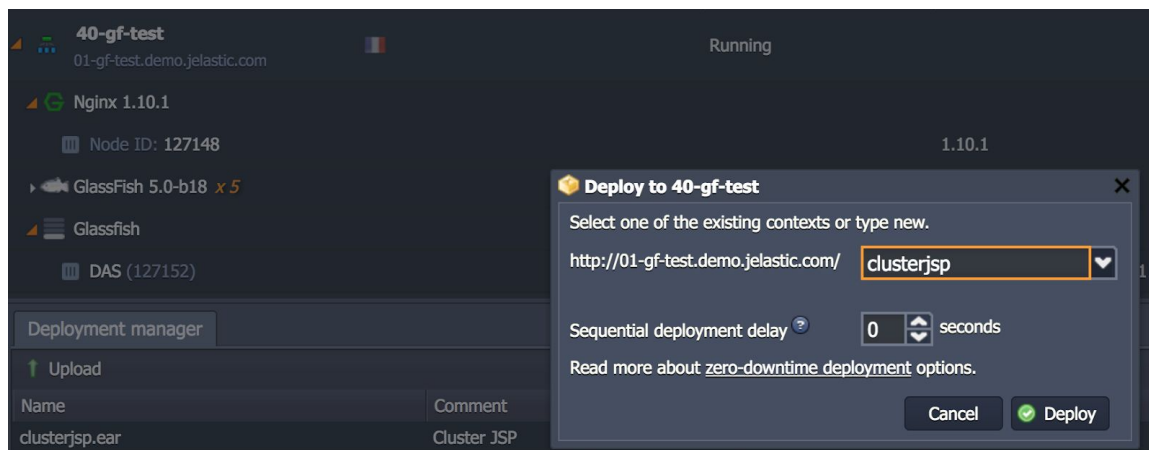







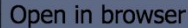





## Checking Session Replication

Deploy the special test app to “clusterjsp” context


<https://github.com/jelastic-jps/glassfish/raw/master/glassfish-cluster/test-app/clusterjsp.ear>




Press “Open in Browser” button at the main entry point (env or lb layer) and navigate to /clusterjsp

Name ▲	Status
 <b>40-gf-test</b> 01-gf-test.demo.jelastic.com	  <b>Running</b>
	
 <b>Nginx 1.10.1</b>	
 <b>Node ID: 127148</b>	
 <b>GlassFish 5.0-b18 x 5</b>	
 <b>Glassfish</b>	
 <b>DAS (127152)</b>	

You will see the following page






## Cluster - HA JSP Sample

### HttpSession Information:

- Served From Server: **01-gf-test.demo.jelastic.com**
- Server Port Number: **80**
- Executed From Server: **node127618-01-gf-test.demo.jelastic.com**
- Served From Server instance: **node127618**
- Executed Server IP Address: **192.168.7.179**
- Session ID: **09f04ca5b0f603a793e1f9a3a60b**
- Session Created: Wed Aug 23 19:43:30 UTC 2017
- Last Accessed: Wed Aug 23 19:43:30 UTC 2017
- Session will go inactive in **1800 seconds**

### Enter session attribute data:

Name of Session Attribute:

Value of Session Attribute:

Add some session attribute data. Now you will see your session attributes. Please also note the server that responded.



# Cluster - HA JSP Sample

## HttpSession Information:

- Served From Server: **01-gf-test.demo.jelastic.com**
- Server Port Number: **80**
- Executed From Server: **node127618-01-gf-test.demo.jelastic.com**
- Served From Server instance: **node127618**
- Executed Server IP Address: **192.168.7.179**
- Session ID: **09f04ca5b0f603a793e1f9a3a60b**
- Session Created: Wed Aug 23 19:43:30 UTC 2017
- Last Accessed: Wed Aug 23 19:44:35 UTC 2017
- Session will go inactive in **1800 seconds**

## Enter session attribute data:

Name of Session Attribute:

Value of Session Attribute:

## Data retrieved from the HttpSession:

- name2 = value2
- name1 = value1

Go to Admin Panel and “Stop” the instance that replied at the previous step

The screenshot shows the GlassFish Admin Console interface. On the left is a navigation tree with categories like Common Tasks, Domain, Clusters, Nodes, Applications, etc. The main panel has tabs for General, Applications, Instances, Resources, Properties, Batch, and JMS Physical Destinations. The 'Instances' tab is active, displaying 'Clustered Server Instances' for 'cluster1'. Below this, there's a table titled 'Server Instances (5)' with columns: Select, Name, LB Weight, Configuration, Node, and Status. The table contains five rows of instances. The first four instances (node127147, node127149, node127150, node127151) are in a 'Running' state, indicated by a green checkmark. The fifth instance (node127618) is in a 'Stopped' state, indicated by a red stop sign icon.

Select	Name	LB Weight	Configuration	Node	Status
<input type="checkbox"/>	node127147	100	cluster1-config	node127147	Running
<input type="checkbox"/>	node127149	100	cluster1-config	node127149	Running
<input type="checkbox"/>	node127150	100	cluster1-config	node127150	Running
<input type="checkbox"/>	node127151	100	cluster1-config	node127151	Running
<input type="checkbox"/>	node127618	100	cluster1-config	node127618	Stopped

Switch back to the test application page and press “RELOAD PAGE” button. You should get response from another instance with the same session attributes

# Cluster - HA JSP Sample

## HttpSession Information:

- Served From Server: **01-gf-test.demo.jelastic.com**
- Server Port Number: **80**
- Executed From Server: **node127151-01-gf-test.demo.jelastic.com**
- Served From Server instance: **node127151**
- Executed Server IP Address: **192.168.5.200**
- Session ID: **09f04ca5b0f603a793e1f9a3a60b**
- Session Created: Wed Aug 23 19:43:30 UTC 2017
- Last Accessed: Wed Aug 23 19:51:04 UTC 2017
- Session will go inactive in **1800 seconds**

## Enter session attribute data:

Name of Session Attribute:

Value of Session Attribute:

---

## Data retrieved from the HttpSession:

- name2 = value2
  - name1 = value1

## Other Tests

Run all other tests like restart env, clone, etc.