

# Test Drive Geronimo EJB Clustering

## Overview

Geronimo now has some basic support for SFSB clustering. If you would like to give it a try then here are some instructions.

## Create a clustered EJB module.

- SFSBs must implement Serializable even if they are EJB3 SFSBs.
- In the geronimo-openejb DD, include the 'openejb-clustering-wadi' element.

I have done some testing with an OpenEJB example, namely CounterImpl, that you can co from <https://svn.apache.org/repos/asf/openejb/trunk/openejb3/examples/simple-stateful>. Note that you need to update CounterImpl so that it implements Serializable.

And here is the geronimo-opejnejb.xml plan I am using:

```
<?xml version="1.0" encoding="UTF-8"?>
<ejb-jar xmlns="http://geronimo.apache.org/xml/ns/j2ee/ejb/openejb-2.0"
  xmlns:wadi="http://geronimo.apache.org/xml/ns/openejb-clustering-wadi-1.2">
  <environment>
    <moduleId>
      <groupId>org.codehaus.wadi</groupId>
      <artifactId>wadi-openejb</artifactId>
      <version>2.0-SNAPSHOT</version>
      <type>jar</type>
    </moduleId>
  </environment>
  <wadi:openejb-clustering-wadi>
    <wadi:deltaReplication>false</wadi:deltaReplication>
  </wadi:openejb-clustering-wadi>
</ejb-jar>
```

## Deploy clustering EJB Module

## Create and start an additional Geronimo Server

- To create another instance, say NODE2, you can execute the following commands from the Geronimo install dir:

```
mkdir NODE2
cp -r var NODE2
perl -pi -e 's/PortOffset=0/PortOffset=1/' NODE2/var/config/config-substitutions.properties
perl -pi -e 's/clusterNodeName=NODE/clusterNodeName=NODE2/' NODE2/var/config/config-substitutions.properties
```

- To start this instance, within gshell type:

```
geronimo/start-server -G server.name=NODE2 -b
```

## Test the clustered SFSBs

If you are also using CounterImpl, then you can use this snippet:

```
Properties properties = new Properties();
properties.setProperty(Context.INITIAL_CONTEXT_FACTORY, "org.apache.openejb.client.
RemoteInitialContextFactory");
properties.setProperty(Context.PROVIDER_URL, "ejbd://0.0.0.0:4201");
InitialContext remoteContext = new InitialContext(properties);

CounterRemote counterRemote = (CounterRemote) remoteContext.lookup("CounterImplRemote");
int cpt = counterRemote.increment();
System.out.println(cpt);
cpt = counterRemote.increment();
System.out.println(cpt);
cpt = counterRemote.increment();
System.out.println(cpt);
```

To actually trial the clustering:

1. put a breakpoint on the last increment;
2. kill -9 the 'default' Geronimo Server
3. continue your debug session. 3 should be printed.

This is a test demonstrating replication.