**Demystifying JINI: Dynamic Code Download**

In the 1st part of the Demystifying JINI series, we had explored how to write a bare bones non secured client/server: <http://palashray.com/demystifying-jini-non-secure-server-part-1/>

In the 2nd part, we had shown how to Spring-ify it: <http://palashray.com/demystifying-jini-non-secure-server-part-2/>

In the latest increment, we will explore how to handle dynamic code download.

I have been working with JINI for the past couple of years. And the more I explore its features, its versatility, the more I come across new ones. This project was built with the famous “[**Eight Fallacies of Distributed Computing**](http://en.wikipedia.org/wiki/Fallacies_of_distributed_computing)”. So, needless to say, it does not disappoint in terms of scalability or reliability.

**Why need dynamic code download?**

At the heart of JINI lies its flexibility. It decouples the interface from the implementation (of the Proxy), and makes it independent of the transport protocol as well. All these details are transparent to the end user.

However, there needs to be a way in which the Stubs need to be downloaded. These stubs will actually help the remote client to connect to the server, and make calls on the remote JVM. This is where dynamic code download is needed. And this comes out of the box with JINI.

**How does it work?**

To enable dynamic code download, we need to specify the code base property (similar to the Applet's) on the JINI server. When the client connects to the server via lookup, this will be available to the JINI client. In its simplest form, it can be as below:

System.*setProperty*("java.rmi.server.codebase", "http://localhost:8080/rmi-service-api-1.0.jar");

This should be called while starting the JINI server.

**Sources**

The sources for the **server** be found here:

<https://github.com/paawak/blog/tree/master/code/jini/unsecure/plain/spring-rmi-server>

The sources for the **client** be found here:

<https://github.com/paawak/blog/tree/master/code/jini/unsecure/plain/rmi-client-dynamic-code-download>

**Reference**

<http://www.softwarematters.org/jini-intro.html>