



# JBoss 5.0 and Glassfish 2.1: Installation and Setup

Originals of Slides and Source Code for Examples:  
<http://courses.coreservlets.com/Course-Materials/msajsp.html>

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Taught by the author of *Core Servlets and JSP*, *More Servlets and JSP*, and this tutorial. Available at public venues, or customized versions can be held on-site at your organization. Contact [hall@coreservlets.com](mailto:hall@coreservlets.com) for details.

# Agenda

- **JBoss**

- Downloading
- Documentation
- Installation with Eclipse 3.4 and 3.5
- Making and deploying sample apps

- **Glassfish**

- Downloading
- Documentation
- Installation with Eclipse 3.4 and 3.5
- Making and deploying sample apps

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## JBoss 5: Installation and Setup

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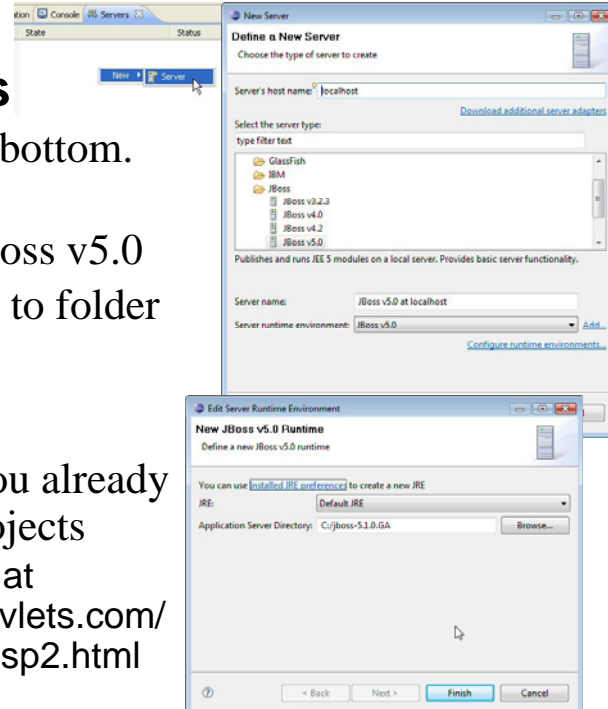
# Download JBoss App Server

- <http://www.jboss.org/jbossas/downloads/>
  - Choose latest stable version.
    - I used 5.1.0.GA.
  - Unzip into a directory of your choice.
    - I used C:\, resulting in C:\jboss-5.1.0.GA
  - Also bookmark JBoss EJB3 tutorial
    - <http://docs.jboss.com/ejb3/app-server/tutorial/>
- **JBoss is owned by Red Hat**
  - JBoss software is technically free, but Red Hat makes its money on support.
  - The free download links are hidden, and the obvious download links on the home page of jboss.org point at a version with support that costs money. You have to hunt hard to find the free download link shown above.

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# Configure Eclipse (Same for Eclipse 3.4 and 3.5)

- **Make sure Eclipse knows about JBoss**
  - Click on Servers tab at bottom. R-click in window.
  - New, Server, JBoss, JBoss v5.0
  - Next, Browse, navigate to folder
  - Press Finish
- **Note**
  - This lecture assumes you already know about Eclipse Projects
    - If not, see intro slides at <http://courses.coreservlets.com/Course-Materials/csajsp2.html>



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# Create Sample Application

- **Create new app**

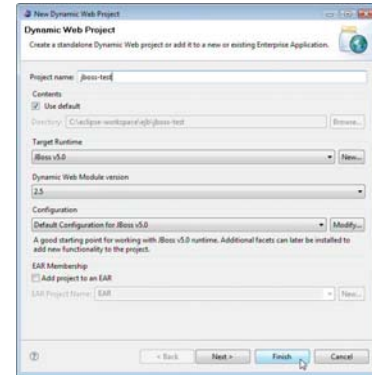
- File → New → Dynamic Web Application → (Make sure “Target Runtime” is JBoss 5) → (Enter project name) → Finish

- **Or, import my sample app**

- Download from main page of this tutorial
- File → Import → Existing Projects into Workspace → Next → Select Archive File → Browse → (Navigate to jboss-test.zip you just downloaded) → Finish

- **Note**

- Although you chose JBoss as target runtime, apps can be deployed to Glassfish without changes. Since sample app doesn't use EJB, this app can also be deployed to Tomcat.



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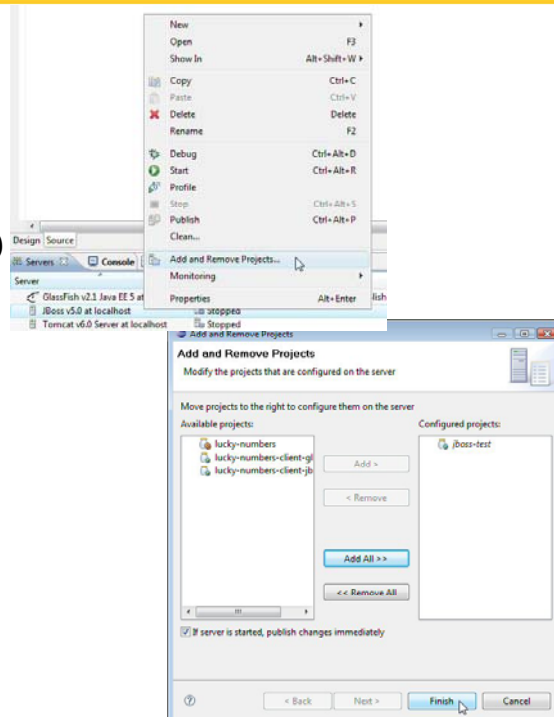
# Deploy Sample App

- **Add project to server**

- R-click on JBoss v5.0 at bottom → Add and Remove Projects → (Choose jboss-test project) → Add > → Finish

- **Start server**

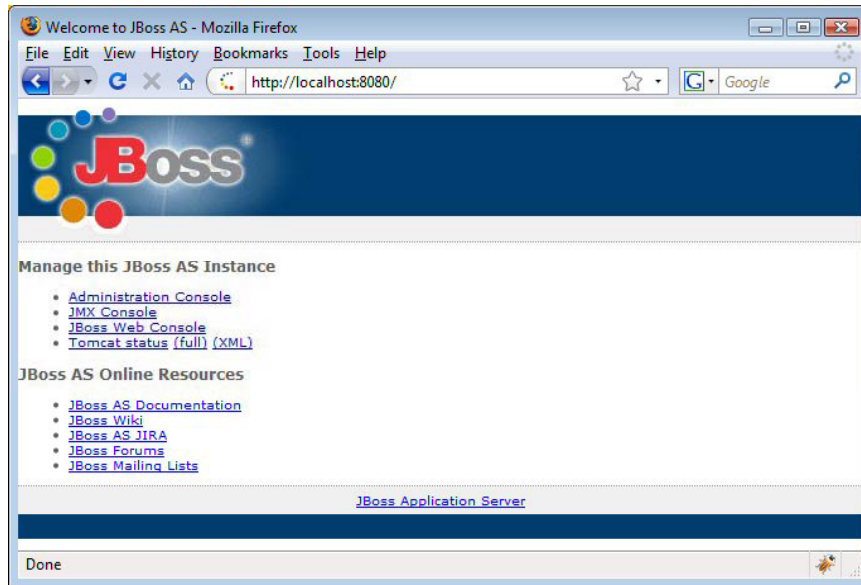
- R-click on JBoss v5.0 at bottom → Start



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# JBoss Test: JBoss Home Page

- <http://localhost:8080/>



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# Simple JSP Page: Code

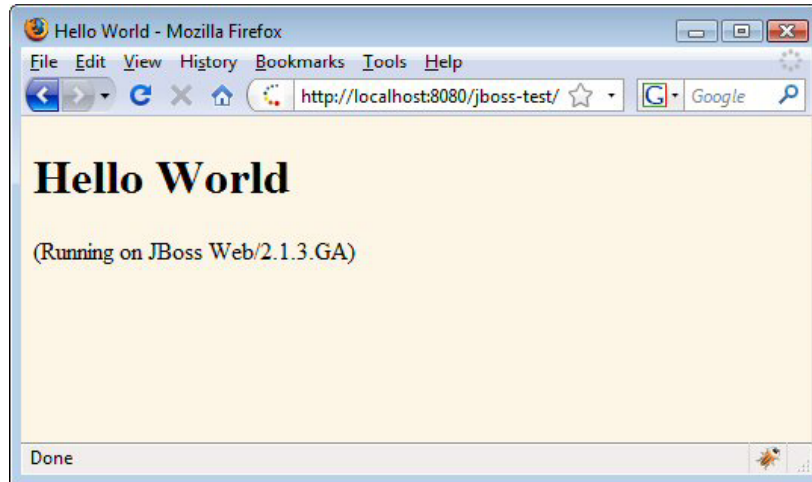
- In `jboss-test/WebContent`

```
<!DOCTYPE ... >
<html xmlns="http://www.w3.org/1999/xhtml">
<head><title>Hello World</title></head>
<body bgcolor="#fdf5e6">
<h1>Hello World</h1>
(Running on ${pageContext.servletContext.serverInfo})
</body></html>
```

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# Simple JSP Page: Result

- <http://localhost:8080/jboss-test/> or <http://localhost:8080/jboss-test/index.jsp>



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# Simple Servlet: Code

- In `jboss-test/src/coreservlets`

```
public class TestServlet extends HttpServlet {
    @Override
    public void doGet(HttpServletRequest request,
                      HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String docType =
            "<!DOCTYPE HTML PUBLIC \"-//W3C//DTD HTML 4.0 \" +
            \"Transitional//EN\">\n";
        out.println(docType +
            "<HTML>\n" +
            "<HEAD><TITLE>Hello World</TITLE></HEAD>\n" +
            "<BODY BGCOLOR=\"#FDF5E6\">\n" +
            "<H1>Hello World</H1>\n" +
            "(Running on " +
            getServletContext().getServerInfo() + ")\n" +
            "</BODY></HTML>");
    }
}
```

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# web.xml

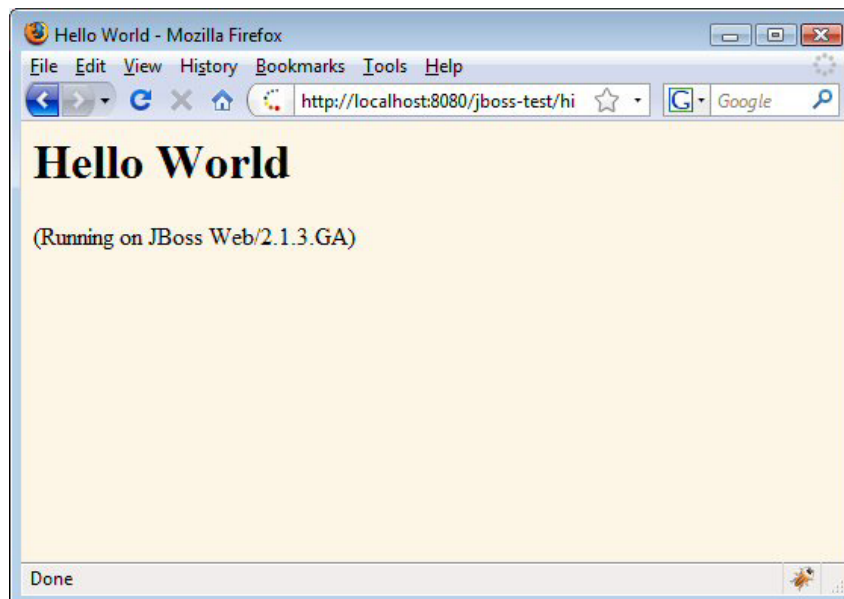
- In `jboss-test/WebContent/WEB-INF`

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app ...>
  <servlet>
    <servlet-name>Simple Servlet for Testing</servlet-name>
    <servlet-class>coreservlets.TestServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>Simple Servlet for Testing</servlet-name>
    <url-pattern>/hi</url-pattern>
  </servlet-mapping>
  <welcome-file-list>
    <welcome-file>index.jsp</welcome-file>
    <welcome-file>index.html</welcome-file>
  </welcome-file-list>
</web-app>
```

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# Simple Servlet: Result

- `http://localhost:8080/jboss-test/hi`



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# Dynamic Web Projects vs. EJB Projects

- **Dynamic Web Projects**

- Purpose
  - Servlets, JSP, JSF, Struts, and other Web apps. Can access EJBs locally (@EJB) or remotely (InitialContext).
- Creating
  - File, New, Dynamic Web Project
  - For direct access (via @EJB) to beans in EJP projects on same server, choose “Add project to an EAR”

- **EJB Projects**

- Purpose
  - Stateless & stateful session beans, message-driven beans
- Creating
  - File, New, EJB Project
  - To permit direct access (via @EJB) to beans from projects on same server, specify “Add project to an EAR”

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## Glassfish 2.1: Installation and Setup

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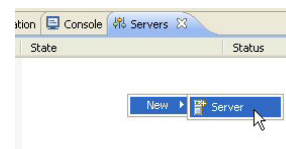
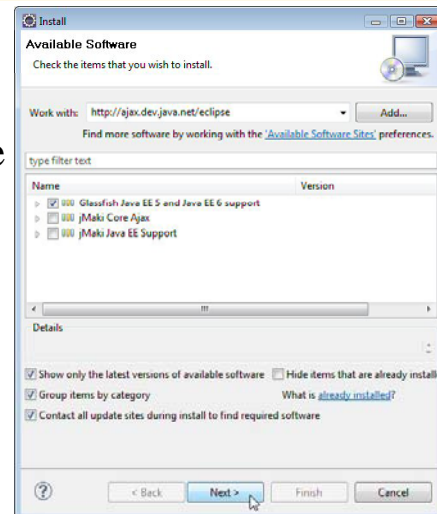
# Download Glassfish App Server

- <https://glassfish.dev.java.net/public/downloadsindex.html>
  - Choose “final version”. I used the link that says “Download Sun’s Official Release”
    - This takes you to [http://www.sun.com/software/products/appsrvr/get\\_it.jsp](http://www.sun.com/software/products/appsrvr/get_it.jsp), and choose “Sun GlassFish Enterprise Server v2.1”
  - Run installer, pointing at a directory of your choice.
    - I used C:\, resulting in C:\Sun\AppServer
    - You will choose an admin password. Remember it.
  - Also bookmark Sun’s Glassfish-oriented EJB3 tutorial
    - <http://java.sun.com/javaee/5/docs/tutorial/doc/bnblr.html>
  - And bookmark Glassfish EJB FAQ
    - [https://glassfish.dev.java.net/javaee5/ejb/EJB\\_FAQ.html](https://glassfish.dev.java.net/javaee5/ejb/EJB_FAQ.html)

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# Configure Eclipse: Install Adapter (Eclipse 3.5)

- **Add adapter for Glassfish**
  - Go to Help, Install New Software
  - Enter <http://ajax.dev.java.net/eclipse>
  - Add, Choose Glassfish Support
  - Next and continue
  - Click on Servers tab at bottom. R-click in window.
  - New, Server
  - Choose Glassfish 2.1 adapter
  - (Skip ahead 2 pages)

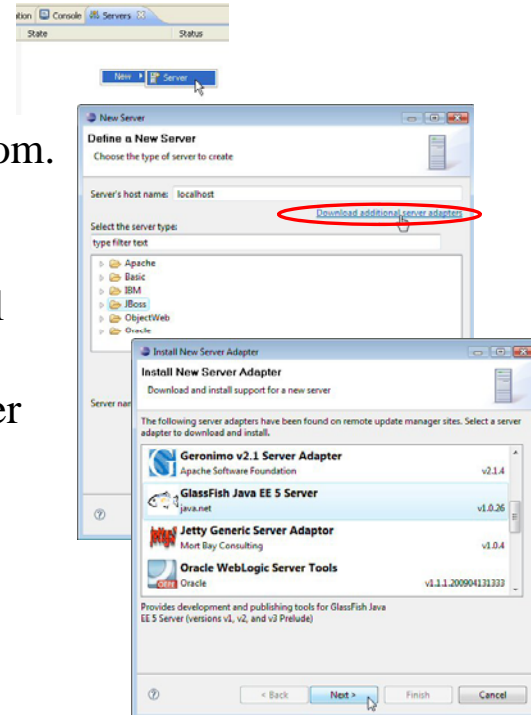


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# Configure Eclipse: Install Adapter (Eclipse 3.4)

- **Add adapter for Glassfish**

- Click on Servers tab at bottom. R-click in window.
- New, Server
- Click “Download additional server adapters” in top right
- Choose Glassfish 2.1 adapter
- (Continue to next page)

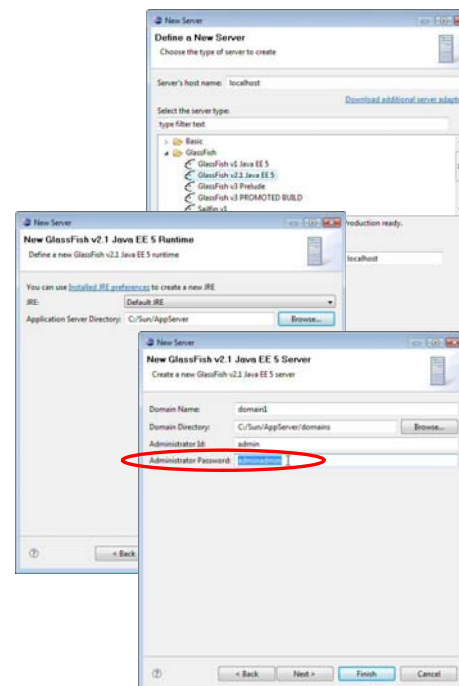


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# Configure Eclipse: Add Glassfish Server

- **Make sure Eclipse knows about Glassfish**

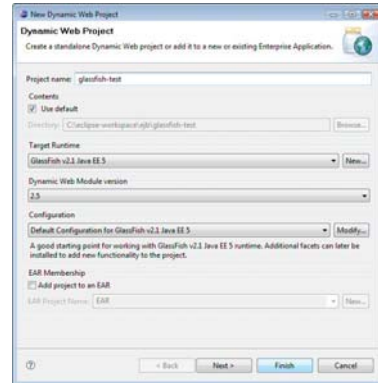
- (Continue from previous page)
- Choose Glassfish 2.1 as the server
- Next, Browse, navigate to folder
- Enter admin password you selected during installation
- Press Finish



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# Create Sample Application

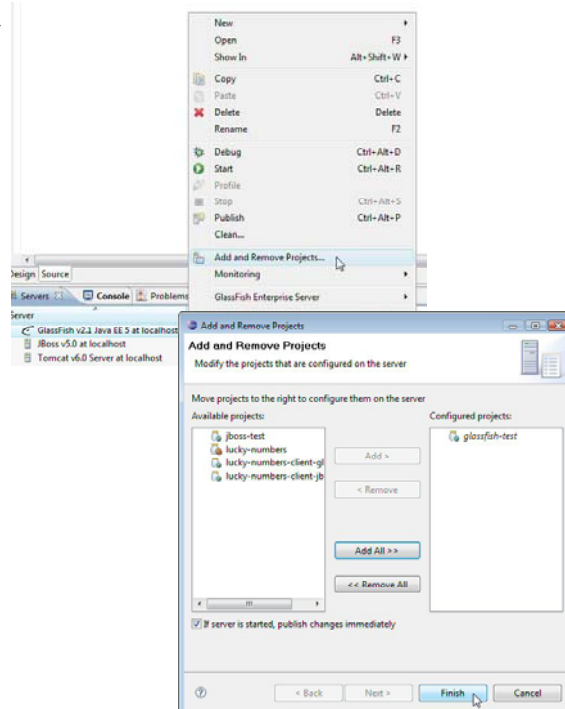
- **Create new app**
  - File → New → Dynamic Web Application → (Make sure “Target Runtime” is Glassfish 2.1) → (Enter project name) → Finish
- **Or, import my sample app**
  - Download from main page of this tutorial
  - File → Import → Existing Projects into Workspace → Next → Select Archive File → Browse → (Navigate to glassfish-test.zip you just downloaded) → Finish
- **Note**
  - Glassfish adapter inserts non-portable project facet, so cannot be deployed on JBoss without tweaking. If you will deploy on multiple app servers, choose JBoss as runtime initially.



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# Deploy Sample App

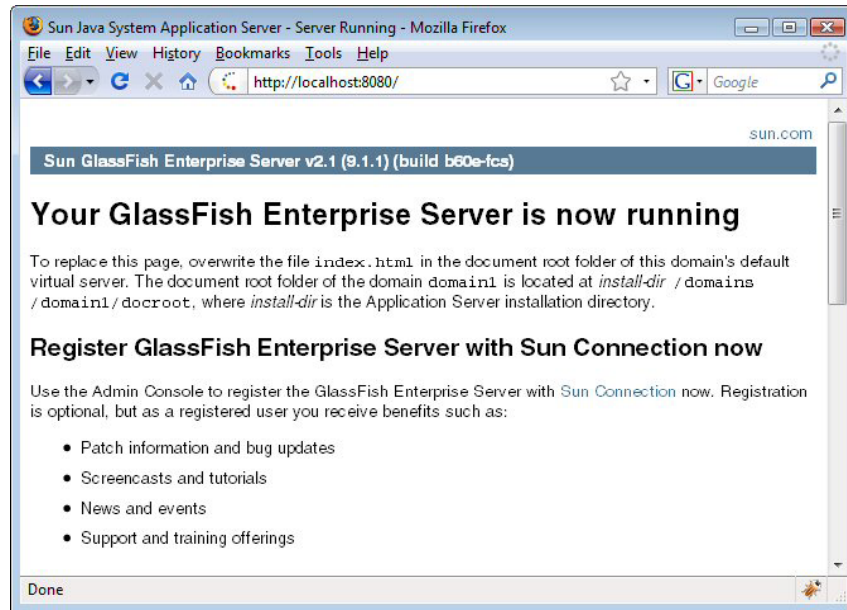
- **Add project to server**
  - R-click on Glassfish 2.1 at bottom → Add and Remove Projects → (Choose glassfish-test) → Add > → Finish
- **Start server**
  - R-click on Glassfish 2.1 at bottom → Start



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# Glassfish Test: Glassfish Home Page

- <http://localhost:8080/>



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# Simple JSP Page: Code (No Changes from JBoss Example)

- In `glassfish-test/WebContent`

```
<!DOCTYPE ... >
<html xmlns="http://www.w3.org/1999/xhtml">
<head><title>Hello World</title></head>
<body bgcolor="#fdf5e6">
<h1>Hello World</h1>
(Running on ${pageContext.servletContext.serverInfo})
</body></html>
```

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# Simple JSP Page: Result

- <http://localhost:8080/glassfish-test/> or <http://localhost:8080/glassfish-test/index.jsp>



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# Simple Servlet: Code (No Changes from JBoss Example)

- In `glassfish-test/src/coreservlets`

```
public class TestServlet extends HttpServlet {
    @Override
    public void doGet(HttpServletRequest request,
                      HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String docType =
            "<!DOCTYPE HTML PUBLIC \"-//W3C//DTD HTML 4.0 \" +
            \"Transitional//EN\">\n";
        out.println(docType +
            "<HTML>\n" +
            "<HEAD><TITLE>Hello World</TITLE></HEAD>\n" +
            "<BODY BGCOLOR=\"#FDF5E6\">\n" +
            "<H1>Hello World</H1>\n" +
            "(Running on " +
            getServletContext().getServerInfo() + ")\n" +
            "</BODY></HTML>");
    }
}
```

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# web.xml (No Changes from JBoss Example)

- In glassfish-test/WebContent/WEB-INF

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app ...>
  <servlet>
    <servlet-name>Simple Servlet for Testing</servlet-name>
    <servlet-class>coreservlets.TestServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>Simple Servlet for Testing</servlet-name>
    <url-pattern>/hi</url-pattern>
  </servlet-mapping>
  <welcome-file-list>
    <welcome-file>index.jsp</welcome-file>
    <welcome-file>index.html</welcome-file>
  </welcome-file-list>
</web-app>
```

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## Simple Servlet: Result

- <http://localhost:8080/glassfish-test/hi>



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# Questions?

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