# Geoportal Server 1.2.2 Installation Guide for GlassFish 3.1.2

## Contents

## 1. PREREQUISITES

The instructions in this document are meant to replace Sections 5-7 of the Geoportal Server 1.2.2 Installation Guide. To start installing the geoportal on GlassFish 3.1.2, first follow Sections 1-4 in the Geoportal Server 1.2.2 Installation Guide (). Then proceed with the installation instructions below.

**Note:** GlassFish 2.1 and GlassFish 3.1.1 are also supported. See the Geoportal Server GlassFish Installation Guide for Geoportal Server version 1.1.1 for GlassFish 2.1 instructions (http://sourceforge.net/projects/geoportal/files/Documents/Geoportal/1.1.1/GeoportalServer _InstallationGuide_Glassfish.pdf/download), and the Geoportal Server GlassFish Installation Guide for Geoportal Server version 1.2 for GlassFish 3.1.1 instructions (http://sourceforge.net/projects/geoportal/files/Documents/Geoportal/1.2/GeoportalServer_I nstallationGuide_Glassfish.pdf/download).

## 2. DEPLOY THE GEOPORTAL APPLICATION

First, you will deploy the geoportal.war file. There are specific steps for doing this in the GlassFish 3.1.2 environment, as described below.

- ☐ Navigate to the GlassFish Admin Console and login. The GlassFish Admin Console is typically available at the following URL: http://localhost:4848

- ☐ Click the "Deploy an Application" button in the "Common Tasks" page.
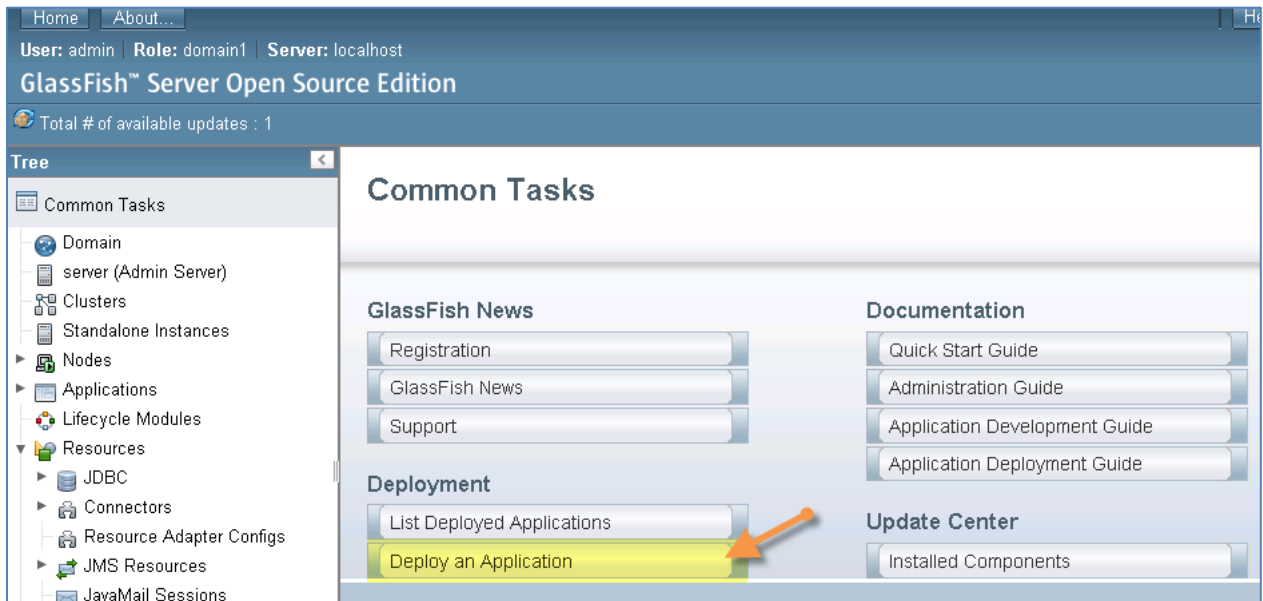
☐ Select the "Packaged File to Be Uploaded to the Server" radio option, and browse to the geoportal.war file at <Geoportal Dir>\Web Applications\Geoportal.
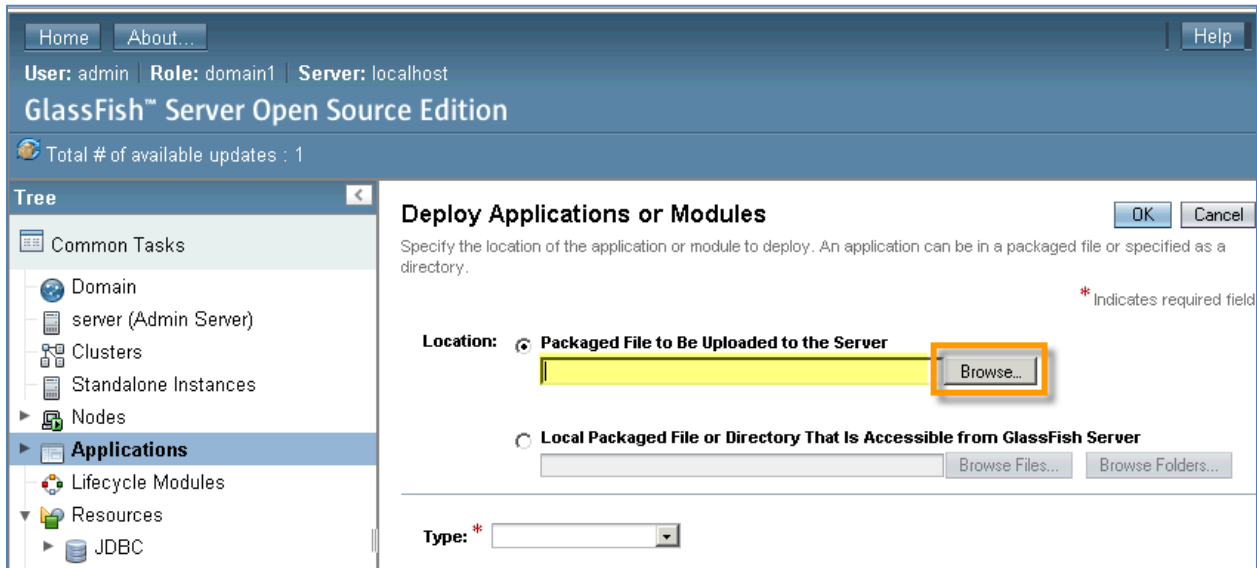


☐ After browsing to the geoportal.war file, click OK. The rest of the form automatically populates with values; leave these as the default.
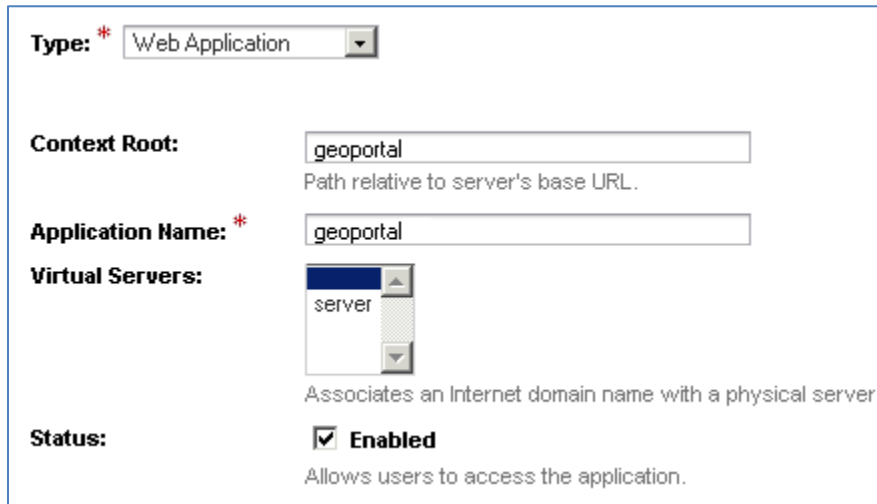


☐ Click OK at the bottom of the form. You may wait a few moments for the file to deploy.

☐ After the file is deployed, you should see a screen like the following, showing your geoportal web application in the list:
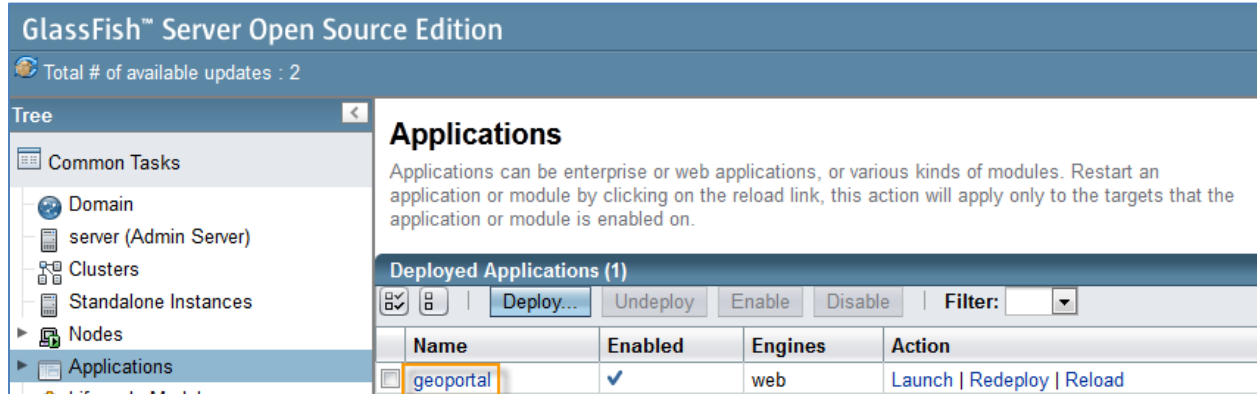
### 3. DEPLOY THE SERVLET APPLICATION (OPTIONAL)

**IMPORTANT:** This step is necessary only if users will be connecting to your geoportal to publish metadata from ArcCatalog 9.3.x environments using the Geoportal Publish Client for ArcGIS 9.3.x. If your organization is using ArcGIS 10, or will not be using Publish Client to publish metadata from ArcCatalog, then you can skip this step and proceed to Section 4 below. For more information on the geoportal Publish Client, see the webhelp at http://links.esri.com/geoportal_server_publish_client.

Deploy the servlet.war file at <Geoportal Installation Dir >\Web Applications\Servlet using the same procedure used for deploying the geoportal web application. After deployment, there is one configuration step for the servlet web application. If you have changed the name of the geoportal web application from 'geoportal' to something else, then you need to open the \\servlet\WEB-INF\web.xml file and modify the <param-value> setting for the redirectURL parameter to point to your modified geoportal web application name: /geoportal_web_app_name/com.Esri.Esrimap.Esrimap

Then, save the file and close it.

### 4. CONFIGURE THE GEOPORTAL APPLICATION
   ☐ Open the <GlassFish Installation Dir>\glassfish\domains\<domain_name>\applications\geoportal\WEB-INF\classes\gpt\config\gpt.xml file in an editor.

   ☐ Continue to the Geoportal Server1.2.2 Installation Guide and set the properties as per Section 5.2 in that guide. When you are finished configuring the gpt.xml file, proceed to Section 5 below.

### 5. SET UP THE JNDI CONNECTION FOR THE GEOPORTAL

The steps below outline the process to create a JNDI connection through the GlassFish Admin Console. To set up the JNDI connection, you will copy the database JDBC driver to the proper GlassFish folder, then create a new JDBC Connection Pool, and then create a JDBC Resource that uses the connection pool.

#### COPY THE JDBC DRIVER JAR FILE TO ITS GLASSFISH LOCATION

☐ Identify the jdbc .jar file that you will use for the database JDBC connection.  Database .jar files are typically provided with your database software, but if you cannot find the .jar files that came with your database, you can obtain them from the manufacturer's website.

- Oracle: http://www.oracle.com/technetwork/database/features/jdbc/index-091264.html
- SQL Server: http://msdn.microsoft.com/en-us/sqlserver/aa937724.aspx
- PostgreSQL: http://jdbc.postgresql.org/download.html
- MySQL: http://dev.mysql.com/downloads/connector/j/

☐ The database .jar file you use is determined by the database vendor and Java version you have running. Because Geoportal Server version 1.2.2 requires Java 1.6, make sure that your driver supports JDBC4. See the table below to identify recommended .jar files for your environment. Refer to the individual database provider to confirm if newer versions of these .jars are available and would work to support JDBC4.

| Database | Oracle (10g, 11g) | SQL Server (2005, 2008) | Postgres (8.4, 9.1) | MySQL 5.5 |
|----------|-------------------|--------------------------|----------------------|-----------|
| .jar file | ojdbc6.jar | sqljdbc4.jar | postgresql-9.1-901.jdbc4.jar | mysql-connector-java-5.1.18-bin.jar |

☐ Copy the database JDBC driver to the <GlassFish Installation Dir>\glassfish\domains\<domain_name>\lib\ext directory.

☐ **IMPORTANT:** Restart the GlassFish Application Server service after copying the JDCBC driver. If you don't restart the service, GlassFish may not recognize the driver when configuring the JDBC connection.

#### CREATE A NEW JDBC CONNECTION POOL

The next two steps are done in the GlassFish Admin UI.

☐ Log in to the GlassFish Admin Console, e.g. http://localhost:4848

- On the "Common Tasks" window on the left, navigate the tree view to "JDBC Resources" and click on "JBDC Connection Pools". In the "JDBC Connection Pools" screen that results, click the "new" button, located above the list of existing connection pools.

- The "New JDBC Connection Pool (Step 1 of 2)" panel opens.
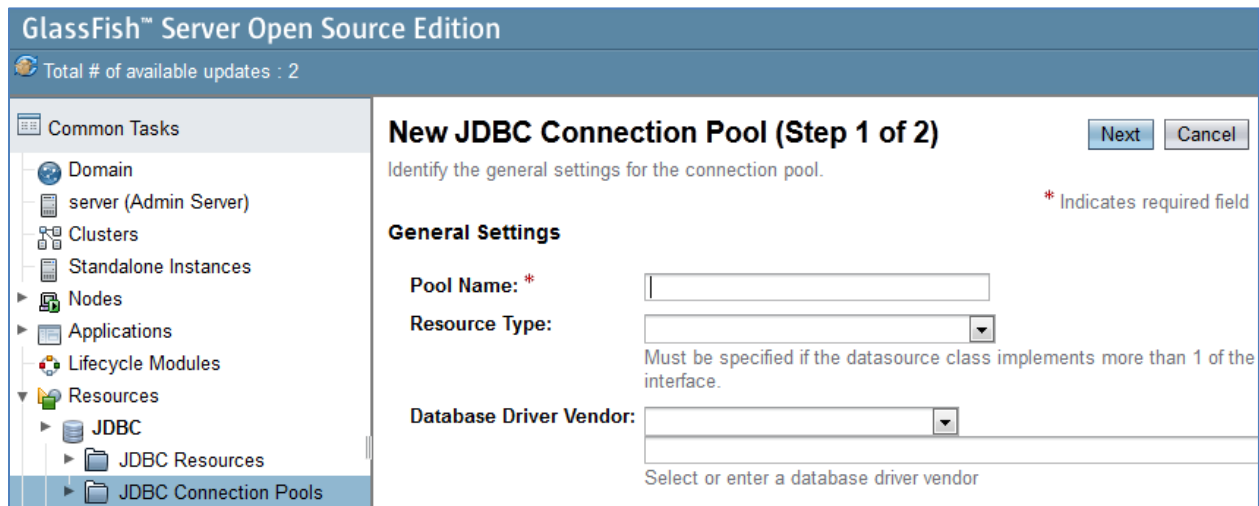


- Enter the following properties:
    - **Pool Name:** Any single-word text string. This defines the name of the Geoportal JDBC source. Our sample value is 'gpt'.
    - **Resource Type** (enter one of the following):
        - `javax.sql.DataSource`
            - for local transactions only
        - `javax.sql.XADataSource`
            - for global transactions
        - `java.sql.ConnectionPoolDataSource`
            - for local transactions, possible performance improvements
    - **Database Driver Vendor**: Choose from the dropdown the one corresponding to your database.
    - **Introspect:** Enable if desired.

- Click Next. The "New JDBC Connection Pool (Step 2 of 2)" panel opens.

- The 'Datasource Classname' parameter should be automatically populated with the datasource classname corresponding to your database JDBC driver; if not, select the applicable driver classname from the dropdown list.

☐ Scroll to the bottom of the page and edit the 'Additional Properties' required for the JDBC connection.  **IMPORTANT:** Oracle, SQL Server, PostgresSQL, and MySQL may require differing additional properties in this section. Below is a list for each datasource and additional properties that are required to successfully establish a connection. Note that you may need to use the "Add Property" button to add the property described below if it doesn't automatically appear in the list (e.g., the 'URL' property).

- o Oracle:

   **Datasource Classname:**
   ```
   oracle.jdbc.pool.OracleDataSource
   ```
   **Additional Properties:**
   - `serverName` - Specify the host name or IP address of the database server.
   - `portNumber` - Specify the port number of the database server.
   - `SID` - Set as appropriate.
   - `user` - Set as appropriate.
   - `password` - Set as appropriate.
   - `URL: jdbc:sun:oracle://[serverName]:portNumber;SID=[SID_name]`

- o SQL Server:

   **Datasource Classname:**
   ```
   com.microsoft.sqlserver.jdbc.SQLServerDataSource
   ```
   **Additional Properties:**
   - `DatabaseName` – Specify the database name
   - `user` - Set as appropriate.
   - `password` - Set as appropriate.
   - `serverName` - Specify the host name or IP address of the database server.
   - `portNumber` - Specify the port number of the database server.
   - `URL:`
   `jdbc:sqlserver://[serverName]:[portNumber]`

- o PostgreSQL:

   **Datasource Classname:**
   ```
   org.postgresql.ds.PGSimpleDataSource
   ```
   **Additional Properties:**
   - `serverName` - Specify the host name or IP address of the database server.
   - `DatabaseName` – Specify the database name
   - `portNumber` - Specify the port number of the database server.
   - `user` - Set as appropriate.

- **password** - Set as appropriate.
- URL:
jdbc:postgresql://[serverName]:[portNumber]/[database_name]

  o MySQL:

  **Datasource Classname:**
  com.mysql.jdbc.jdbc2.optional.MysqlDataSource
  **Additional Properties:**
  - **portNumber** - Specify the port number of the database server.
  - **DatabaseName** – Specify the database name
  - **serverName** - Specify the host name or IP address of the database server.
  - **user** - Set as appropriate.
  - **password** - Set as appropriate.
  - URL:
  jdbc:mysql://[serverName]:[portNumber]/[database_name]

☐ After filling out the 'Additional Properties' section, click Finish. The next screen will show you the existing 'JDBC Connection Pools'. The connection you created – e.g., 'gpt' – should show in the list.

☐ Click the link associated with your newly created 'gpt' connection pool. The "Edit JDBC Connection Pool" dialog opens. On this screen, test the connection by clicking the "Ping" button.  The Ping should be successful; if not, check back in these JDBC connection steps, verifying that the correct .jar file is copied to the correct glassfish directory and the connection properties correspond to your geoportal database configuration.
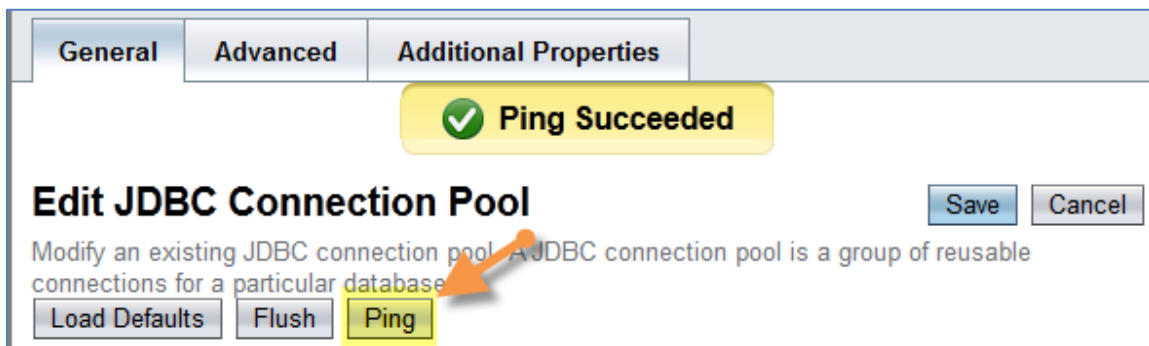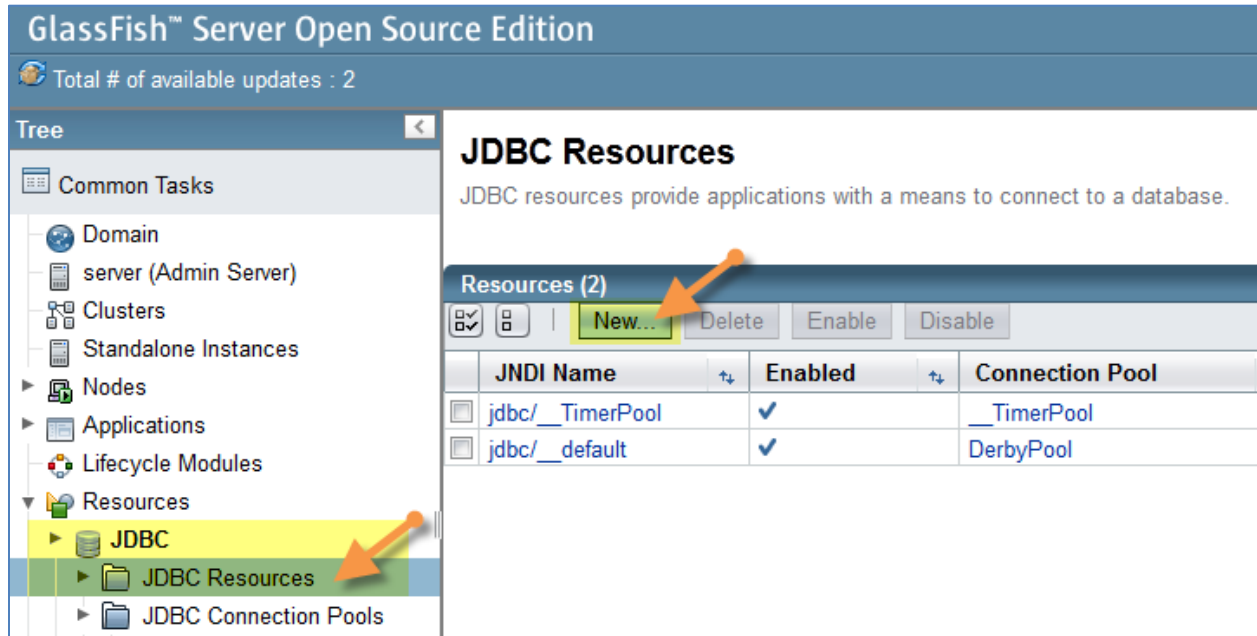


### CREATE A NEW JDBC RESOURCE

In this step, you will associate your newly created 'gpt' connection pool with a JDBC Resource.

☐ Log in to the GlassFish Admin Console, e.g. http://localhost:4848

☐ Navigate the tree view on the left to "JDBC Resources" and click on "New…"



☐ On the "New JDBC Resource" page, enter the following:
   o **JNDI Name:** This is defined in the 'jndiName' attribute of the *databaseReference* element in the \\geoportal\WEB-INF\classes\gpt\config\gpt.xml file, and is by default 'jdbc/gpt'. Unless you've changed this in your gpt.xml file, use the value jdbc/gpt.
   o **Pool Name:** select the JDBC Connection Pool you created earlier, e.g., 'gpt', from the dropdown.
   o **Description (optional):** enter a description for your connection resource.
   o **Status:** make sure 'Enabled' is checked.
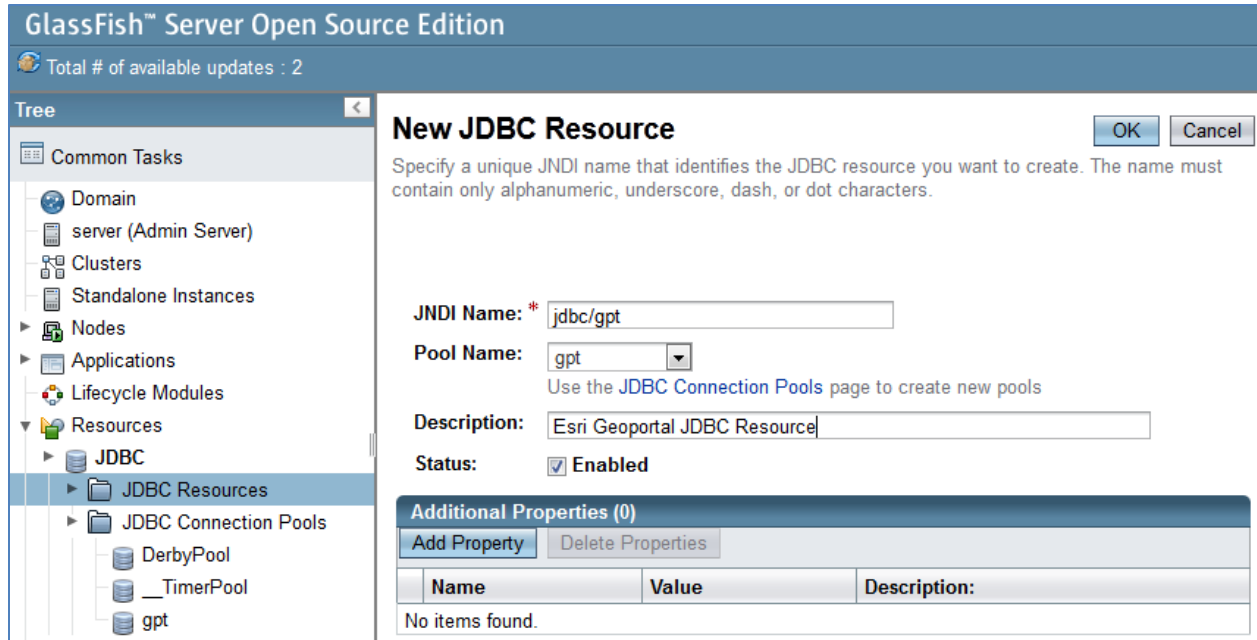
☐ Click OK. The next screen should show a list of 'JDBC Resources'. You should see your 'jdbc/gpt' resource in the list.

## 6. VERIFY THE AVAILABILITY OF THE GEOPORTAL

The application should now be deployed and active. To verify the availability of the geoportal application, open a browser and navigate to the following URL: http://serverName:GlassFishPort/geoportal

Example: http://localhost:8080/geoportal

If the geoportal web application does not open, then restart your GlassFish service by doing the following steps, and then attempt to launch the geoportal URL again.

☐ Open a command window (Start->Run->cmd)

☐ Change the directory to <GlassFish Installation Dir>\glassfish\domains\<domain_name>\bin

☐ Type asadmin stop-domain <domainname>

☐ Type asadmin start-domain <domainname>

## 7. SMOKETEST & DESKTOP TOOLS

After deploying the web applications, the Geoportal Server 1.2.2 Installation Guide proceeds with instructions for conducting a basic smoketest and for setting up the desktop tools. Since these activities are not specific to GlassFish, refer back to the Geoportal Server 1.2.2 Installation Guide, starting at Section 8 to complete the geoportal installation.