



# Geoportal Server 1.0 Installation Guide

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### **INTRODUCTION**

This document is a guide for installing and initial configuration of the Geoportal Server version 1.0. There are three common scenarios for installing this software: 1) your organization installed a previous 9.3.x of the ArcGIS Server Geoportal extension and now you want to upgrade to the Geoportal Server, 2) your organization has downloaded the Geoportal Server and will be deploying it as the initial Geoportal implementation, or 3) your organization has implemented ArcGIS Server Geoportal extension version 10 and you want to move to the Geoportal Server.

This document addresses the first two scenarios. Because the Geoportal Server version 1.0 does not include any functional enhancements or resolved defects from the released ArcGIS Server Geoportal extension 10, there is no need to upgrade to the Geoportal Server if you have ArcGIS Server Geoportal extension 10 at this time. Future releases of the Geoportal Server will provide recommendations for upgrading from ArcGIS Server Geoportal extension 10.

**IMPORTANT:** If you have already implemented the Geoportal extension at version 9.3.x and just want to upgrade, please go to **Appendix A** at the end of this document and follow the guidelines there. If this is your organization's initial installation of the Geoportal Server, begin at the first step below and follow instructions all the way through.

After installing the Geoportal Server, the documentation available at [http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Main\\_Page](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Main_Page) provides additional information for customizations, usage, troubleshooting, and more.

### **1. PRE-INSTALLATION REQUIREMENTS**

Prior to installing, please review the system and pre-installation requirements. See <http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Preinstallation>

### **2. SELECT AN AUTHENTICATION MECHANISM FOR THE GEOPORTAL SERVER**

The Geoportal Server offers two different authentication mechanisms – Simple Authentication or LDAP Authentication. Which one you select depends solely on your geoportal instance requirements. The table below gives a quick summary of features available in each option, followed by a more detailed explanation.

Feature	Simple Authentication	LDAP Authentication
Single sign-on with other applications		•
User roles		•

User accounts/profiles	•
LDAP software required	•
Authentication configured in property file	•
Quick installation	•

### Simple Authentication

With simple authentication, there is only one user in the geoportal – the administrator. This user is specified in the main geoportal configuration file, `gpt.xml`. Choosing this authentication mechanism does not require any additional external software to be installed. Single sign-on between the geoportal and other applications is not possible.

This mechanism is a quick option for initial application testing, but is not recommended for a production environment.

If you choose simple authentication for your geoportal instance, please skip *Section 3: Configure a Directory Server for the geoportal*, and proceed to *Section 4: Set up the database*.

### LDAP Authentication

For full functionality of user-based roles in the Geoportal Server, and to have the possibility of single sign-on with other applications, an LDAP-enabled Directory Server is required for the authentication mechanism. You may use an existing Directory Server if you already have one in your organization. If you currently do not have a Directory Server, and you wish to have user-based roles, and/or single sign-on, you will need to install a Directory Server.

If you choose LDAP authentication for your geoportal instance, please proceed with *Section 3: Configure a Directory Server for the geoportal*.

## **3. CONFIGURE A DIRECTORY SERVER FOR THE GEOPORTAL**

For a complete feature-rich geoportal, the authentication mechanism must rely on LDAP communication. If you already have an existing Directory Server setup in your organization, you may use it for geoportal purposes with minimal configuration customizations. For users without a pre-existing Directory Server, section 3.1 will help you through the steps of setting up an open source Directory Server for the geoportal.

If you have an existing Directory server accessible via LDAP, skip step 3.1 and proceed directly to step 3.2.

### 3.1. INSTALL A NEW DIRECTORY SERVER AND CLIENT

#### 3.1.1. *Install Directory Server*

There are quite a few open source directory servers available. For the purposes of this installation guide we have selected Apache Directory Server. However other Directory Servers that support LDAP version 3, such as Sun OpenDS or Microsoft Active Directory can be used.

Apache Directory Server can be downloaded from: <http://directory.apache.org>

After the installation of your Directory Server is complete, make sure that the Directory Server is active, by checking whether its service is started.

- ☐ Open Control Panel>Administrative Tools>Services
- ☐ Highlight the service representing your Directory Server.
- ☐ If its status is not “Started”, click “Start”.


#### 3.1.2. *Install Directory Server Client*

Like with Directory Servers, there are quite a few open source directory server clients available for browsing your directory structure. For the purposes of this installation guide we have selected JXplorer. However other directory server clients such as Apache Directory Studio can be used.

Jxplorer can be downloaded from: <http://www.jxplorer.org>

#### 3.1.3. *Define a Connection from the client to the server*

The information in this section assumes you have installed Apache Directory Server and JXplorer. If you have a different combination of software, you can skip this step or use the information within it as a guide.

- ☐ Launch JXplorer.
- ☐ From the File menu, select “Connect” or click on the “Connect to DSA” button.  The Open LDAP/DSML Connection window opens.

- ☐ Enter the following parameters:
  - a. Host – the machine name on which the LDAP server was installed.
  - b. Port – the port number on which the LDAP server is running. Apache Directory Server default is usually 10389 or 19389.
  - c. Protocol – select LDAP v3
  - d. DSML Service – leave blank
  - e. Base DN – leave blank
  - f. Level – select “User + Password”
  - g. User DN – the **d**istinguished **n**ame (identifier) of the default admin user. Apache Server default is: *uid=admin,ou=system*
  - h. Password – the password to the LDAP server. Apache Server default is: *secret*
- ☐ Click OK.
- ☐ If all settings are correct, the connection dialog will disappear, and in the left-hand pane of the JXplorer window, with the “Explore” tab selected, you should see a tree structure, with “World” being the top node, with “com”, “schema” and “system” nodes beneath it.
- ☐ If the connection settings are incorrect, an error message will appear, and the connection dialog will still be open. Verify your settings and try establishing the connection again.
- ☐ Next time you go into the connection dialog, the settings you entered will no longer be present. To save the settings:
  - a. Enter in all necessary information from step 2 above.
  - b. Click the “Save” button in the bottom left corner.
  - c. Enter a template name in the “Replace/Create Template” dialog.
  - d. Click OK.
- ☐ To open a connection with saved settings, open the connection dialog, and choose a saved template from the drop down list near the bottom of the dialog. All previous settings should automatically fill out, except for the password.
- ☐ Enter the password for the admin user and click OK.

Now that you have a directory server available, and a client with which to browse it, you need to configure the directory server for the geoportal.

### 3.1.4. *Create an initial user*

In this step you will create a user entry, to which you will later grant geoportal administrator privileges.

- ☐ Open JXplorer if it isn't already open and connect to your Directory Server.
- ☐ Right-click on the "users" organizational unit and select "New" from the context menu. The Set Entry Object Classes dialog appears.
- ☐ Ensure that the checkmark is on for the "Suggest Classes?" option at the top of the dialog.
- ☐ The following four (4) classes need to be chosen for this node:
  - organizationalPerson
  - inetOrgPerson
  - person
  - top
- ☐ If any of the four classes listed above are not listed in the "Selected Classes:" panel on the right, add them to the panel by selecting them in the left-hand panel "Available Classes:" and clicking the "Add" button.
- ☐ If more than the four classes listed above are listed, remove the extras by selecting them in the right-hand panel "Selected Classes:" and clicking the "Remove" button.
- ☐ In the second text box, labeled "Enter RDN", type in "cn=gptadmin". This sets the user's name as "gptadmin". You can choose a different name if you want, as the geoportal does not rely on the name of the user but rather the group the user belongs to for role-based functionality.
- ☐ Click OK. This creates a user called gptadmin. Later, you will move this newly created user to a geoportal administrators group.
- ☐ You are taken immediately to the Table Editor tab, where additional properties need to be filled in for this user.

Fill out the following additional attributes by clicking in the "value" column by each attribute and typing in an entry:

- sn – user's last name. Type "gptadmin"
- mail – user's email (in case of forgotten password).
- uid – user's userId. This needs to be the same as the username used to create the entry (and the same as the cn attribute value listed in the table) i.e. "gptadmin"
- userpassword – user's password. When the value column of the password field is clicked, a "User Password Data" dialog will appear:

- Enter the user password in the 1<sup>st</sup> box.
  - Re-enter the user password in the 2<sup>nd</sup> box.
  - Select “SHA” from the drop-down list.
  - Click OK.
- ☐ Click Submit.
- ☐ The new gptadmin user should appear as a new node under the “users” organizational group in the explorer tree.
- ☐ Repeat the above steps, creating new users for the remaining geoportal roles. We suggest using the following user names:
- gftpublisher
  - gptuser

Your Directory Server is now ready to be populated with additional geoportal-specific entries. Follow the steps in Section 3.2 to finish configuring your Directory Server for the geoportal.

### **3.2. ADAPT AN EXISTING DIRECTORY SERVER**

The geoportal relies on user roles in order to grant various user and functionality privileges. The three pre-defined geoportal roles are:

- Administrator
- Publisher
- Registered User

With LDAP authentication, the definition of the geoportal roles is achieved by creating Directory Server “group” entries. A group entry is defined as an entry that has an object class of “groupOfUniqueNames”, thereby allowing it to have member (person) entries.

#### *3.2.1. Create groups for the geoportal roles*

The group structure in your Directory Server does not have to adhere to any particular schema. However it is strongly recommended that you adhere to a group structure which maps directly to the pre-defined geoportal roles.

If you are working with a newly installed Directory Server, this is fairly straightforward to create, and instructions are provided in this section.

If you are working with an existing Directory Server, you can either create a new set of groups specifically for the geoportal, or decide what the best possible mapping is of your existing groups to the new geoportal roles. This needs to be done in such a way that it does not disrupt your existing applications' authentication mechanisms, yet can be adapted to the geoportal requirements.

The steps in this section assume the following:

- a) You are using JXplorer as your Directory Server client browser.
  - b) You will be creating groups that directly map to the geoportal roles.
  - c) You have an organizational unit in your directory structure called "groups". If you have another organizational unit, substitute your organizational unit's name for the word "groups" in the steps below.
1. Open JXplorer if it isn't already open and connect to your Directory Server.
  2. Right-click on "groups" and select "New" from the context menu. The Set Entry Object Classes dialog appears.
  3. Ensure that the checkmark is on for the "Suggest Classes?" option at the top of the dialog.
  4. The following two (2) classes need to be chosen for this node:
    - a. groupOfUniqueNames
    - b. top
  5. If any of the two classes listed above are not listed, add them to the panel by selecting them in the left-hand panel "Available Classes:" and clicking the "Add" button.
  6. If more than the two classes listed above are listed, remove the extra ones by selecting them in the right-hand panel "Selected Classes:" and clicking the "Remove" button.
  7. Now you will create a group for the geoportal administrators. Enter a group name of "gpt\_administrators" by filling out the second text box, labeled "Enter RDN". Leave the "cn=" text present in the box or enter in "cn=" if the text is not present and type in your group name after the equals ("=") sign. i.e. cn=gpt\_administrators
  8. Click OK.
  9. You are taken immediately to the Table Editor tab, where the "uniqueMember" attribute must be specified:



- Since member ids are not trivial, temporarily enter dummy information for the value of uniqueMember. Even though you are putting in dummy info, it still has to conform to LDAP standards. Enter “cn=abc”.
  - Click Submit to create the group. The new group “gpt\_administrators” should appear as a new entry under “Groups” in the explorer tree
10. Now you will add a real user to this group. Navigate to the Users branch, and right-click on a user to be a member of the geoportal administrators group you just created.
- Select “Copy DN” from the context menu. This copies the user’s distinguished name (a unique LDAP user identifier) to the clipboard.
  - Go back to the Groups branch and click on the gpt\_administrators group.
  - In the table editor panel on the right-hand side, click inside the value column for the “uniquemember” attribute that has the dummy “cn=abc” value.
  - Press ctrl+v on your keyboard to paste the copied DN from the clipboard into this value field.
  - Click Submit.
- ☐ Repeat the above steps, creating new groups for the remaining geoportal roles. Use the following group names and associate the appropriately corresponding users that you created in Step 3.1.4, or who already exist in the directory structure for your organization:
- For geoportal publisher users, create a group called gpt\_publishers
  - For geoportal registered users, create a group called gpt\_registeredUsers

#### 4. SET UP THE DATABASE

**IMPORTANT:** The following sections assume that you have downloaded and unzipped the Geoportal Server zip files. Files within those zip files are required for the next steps.

The geoportal database scripts create a schema in the default database in your system. If you would like the geoportal tables to exist in its own database, you will want to create a new database upon which you will run the geoportal database scripts. This is recommended for requirements on backing up or restoring your geoportal database.

**IMPORTANT:** The database setup instructions vary significantly depending on the database software used.

If you are a Linux user, please refer to the document <Geoportal Dir>Documentation\Installation\GeoportalServer\_InstallationGuide\_Linux.pdf for Linux specific instructions.

For Windows users:

- Oracle users please follow the steps in section 4.1.
- SQL Server users please skip to section 4.2.
- PostgreSQL users please skip to section 4.3.

### 4.1. ORACLE

In this section you will set up the tablespace and schema that will be used for the geoportal. The geoportal should run in its own tablespace and schema. You will be using SQL commands to set up the user schema, and then a SQL script to populate the schema with tables. The sample values below are used as examples but can be set to different values if necessary for your geoportal implementation. When you choose different values, you may need to alter some default values in the geoportal configuration files:

- Tablespace name: geoportal
- Database User: geoportal
- Database User Password: geoportalpwd

#### 4.1.1. *Setup the Geoportal tablespace*

☐ Open the command console (Start>Run>cmd)

☐ Type: sqlplus /nolog



Tip: In the following commands, be sure to include the semicolons.

☐ SQL>connect sys/sys as sysdba;

☐ SQL>create tablespace geoportal datafile 'C:\oracle\oradata\geoportal.dbf' size 500M  
AUTOEXTEND ON;

☐ SQL>create user geoportal identified by geoportalpwd default tablespace geoportal  
temporary tablespace temp;

☐ SQL>commit;

☐ SQL>quit.

#### 4.1.2. *Create database schema*

Creating the database schema involves running two scripts:

1. A “grants” script that sets the user permissions for creating the geoportal schema.
2. A “create schema” script that creates the table structure, procedures and triggers and populates tables in the geoportal schema.

The scripts are located in <Geoportal Dir>\Database Scripts\Oracle.

### 4.1.3. Grants: *grants\_proxy\_oracle.cmd*

Syntax of the *grants\_proxy\_oracle.cmd*

- sys username—Oracle database sys user name. Default = sys
- sys password—Password of the Oracle database sys user. Default = sys
- geoportal username—The user name of the geoportal schema owner. Default = geoportal

- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal Dir>\Database Scripts\Oracle.
- ☐ Run the *grants\_oracle.cmd* file from the command prompt window using the following parameters:  
Usage: *grants\_oracle* [sys username] [sys password] [geoportal username] Where  
[sys username] is the username of the sys user in Oracle  
[sys password] is the password of the sys user in Oracle  
[geoportal username] is the geoportal user
- ☐ When the script finishes executing you will be returned back to the command prompt and a text file (*grants.txt*) will open. Check the *grants.txt* file for any possible error messages.

Sample Input: *grants\_oracle* sys sys geoportal



**IMPORTANT:** You must fix any errors appearing in the *grants.txt* file, except for errors that result from dropping tables and indexes – these are normal. For other errors, do not continue until the script runs without errors.

### 4.1.4. Schema: *create\_schema\_oracle.cmd*

The *create\_schema\_oracle* script will create the necessary tables in Oracle to support the geoportal web application. This script is for new instances of the geoportal, or for scenarios where you want to have a clean database. If you run this script on top of an existing geoportal installation, you will overwrite your existing geoportal database!

### Syntax of the create\_schema\_oracle.cmd

- geoportal username – The user name of the geoportal schema owner. Default = geoportal
- geoportal \_password—The password for the geoportal schema owner. Default = geoportalpwd

- ☐ Open a command window. Start>Run>cmd
- ☐ Change the directory to the <Geoportal Dir>\Database Scripts\Oracle folder
- ☐ Run the create\_schema\_oracle.cmd file from the command prompt window using the following parameters:  
Usage: create\_schema\_oracle [geoportal username] [geoportal password]  
Where  
[geoportal username] is the username of the geoportal schema owner.  
[geoportal password] is the password of the geoportal schema owner.

Sample Input: create\_schema\_oracle geoportal geoportalpwd

- ☐ When the script finishes executing you will be returned back to the command prompt and a text file (GPT\_Schema.txt) will open. Check the GPT\_Schema.txt file for any possible error messages. Error messages and warnings, which state that Table or view does not exist, can be ignored. It simply means that the script was trying to delete a nonexistent table.

Select	Schema ▲	Table Name	Tablespace
<input checked="" type="radio"/>	GEOPORTAL	<a href="#">GPT_HARVESTING_HISTORY</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_HARVESTING_JOBS_COMPLETED</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_HARVESTING_JOBS_PENDING</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_RESOURCE</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_RESOURCE_DATA</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_SEARCH</a>	GEOPORTAL
<input type="radio"/>	GEOPORTAL	<a href="#">GPT_USER</a>	GEOPORTAL

## 4.2. SQL SERVER

In this section you will use a script to set up the database, users and server logins that will be used for the geoportal. The geoportal should run in its own database. The sample values below are used as examples but can be set to different values if necessary for your geoportal

implementation. When you choose different values, you may need to alter some default values in the geoportal configuration files:

- Database name: geoportal
  - Database Login and User: geoportal
  - Database Login and User Password: geoportalpwd
- ☐ **IMPORTANT:** If you have the “Enforce Password Policy” option enabled by default for all new users, then you will need to choose a user password in keeping with your organization’s password policy. This is usually a complex password. If you do not select a password in keeping with the password policy, the script may fail.
- ☐ Verify that your server allows both Windows authentication and SQL Server authentication. If your server only allows Windows authentication, then the user that the script creates will not be able to logon to create the tables. The error in the build\_schema.log file will read 'Login failed for user'. To check and possibly change the security authentication mode (as per Microsoft, article <http://msdn.microsoft.com/en-us/library/ms188670.aspx> ), do the following:
- Login to SQL Server Management Studio.
  - In SQL Server Management Studio Object Explorer, right-click the server, and then click Properties.
  - On the Security page, under Server authentication, select the "SQL Server and Windows Authentication Mode" radial if it is not already selected, and then click OK.
  - In the SQL Server Management Studio dialog box, click OK to acknowledge the requirement to restart SQL Server.
- ☐ Open a command window. Start>Run>cmd
- ☐ Change the directory to the <Geoportal Dir>\Database Scripts\SQL Server folder

### 4.2.1. Create database schema

To support multi-lingual geoportals, the SQL Server database must be able to support Unicode characters. If your geoportal will be in a language other than English, you should run the create\_schema\_mssql\_unicode script for this step. If not, then use the create\_schema\_mssql script as shown below. Input parameters are the same for the Unicode version of the script.

- ☐ Run the create\_schema\_mssql script by typing the following:
- ```
create_schema_mssql [database server machine] [Geoportal database name]
[Geoportal database user] [Geoportal database user password]
```

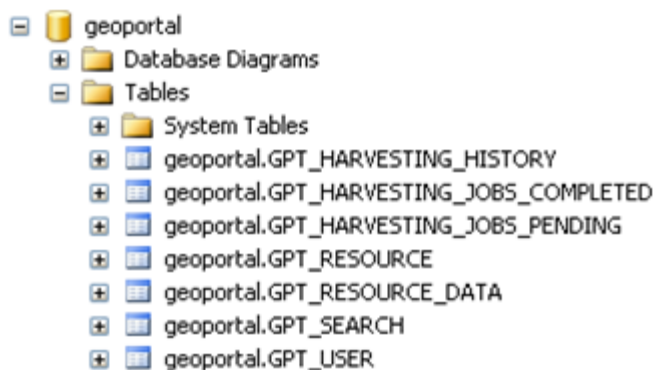
### Where

- [database server machine] is the name of the machine on which SQL Server is installed, or the named SQL Server Instance (e.g. <machineName>\instance) if applicable
- [Geoportal database name] is the name you designate for the Geoportal database
- [Geoportal database user] is the name of the login and user that will have access to the Geoportal database. This script creates a user if one does not already exist
- [Geoportal database user password] is the password for the login and user of the Geoportal database

In our example, the command line would look like this:

```
create_schema_mssql mymachine geoportal geoportal geoportalpwd
```

- ❑ After running the script, open SQL Server Management Studio and refresh the Databases folder from the Object Browser. Verify that a new database was created, and has the list of tables as shown in the image below. If the tables were not created, consult the build log file for any potential errors. The log file can be found in the same folder as the scripts that you ran.



- ❑ Open the build\_schema.log file that was created when the database script finished. You will find this file in the same folder as the source sql scripts. The file should not contain any errors. It may possibly contain the following warnings, which you can safely ignore:

```
Warning! The maximum key length is 900 bytes. The index
'GPT_RESOURCE_IDX2' has maximum length of 4000 bytes. For some
combination of large values, the insert/update operation will fail.
Warning! The maximum key length is 900 bytes. The index
'GPT_RESOURCE_IDX3' has maximum length of 4000 bytes. For some
combination of large values, the insert/update operation will fail.
Warning! The maximum key length is 900 bytes. The index
'GPT_RESOURCE_IDX5' has maximum length of 4000 bytes. For some
combination of large values, the insert/update operation will fail.
Warning! The maximum key length is 900 bytes. The index
```

'GPT\_RESOURCE\_IDX11' has maximum length of 4000 bytes. For some combination of large values, the insert/update operation will fail.

### 4.3. POSTGRESQL

Setting up a PostgreSQL database for the geoportal consists of two steps – setting up database permissions, and creating the database schema. Each of these steps is accomplished by running a script:

1. A “grants” scripts that sets the user permissions for creating the geoportal schema
2. A “create schema” script that creates the table structure, procedures, and triggers and populates tables in the geoportal schema.

The scripts are located in <Geoportal Dir>\Database Scripts\PostgreSQL

#### 4.3.1. Grants: *grants\_pg.cmd*

This script creates a database schema called ‘geoportal’, as well as an associated user, also named ‘geoportal’. It also establishes permissions for the geoportal user to the geoportal schema.

- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal Dir>\Database Scripts\PostgreSQL.
- ☐ Run the grants\_pg.cmd file from the command prompt window using the following parameters:

Usage: grants\_pg [host] [port] [database] [geoportal schema] [userToConnect]  
[geoportalUser]

Where

[host] is the machine name hosting PostgreSQL

[port] is the port number of PostgreSQL. Default = 5432

[database] is the database name for the geoportal. Default = postgres

[geoportal schema] is the name for the geoportal schema. Default=geoportal

[userToConnect] is the name of the user to connect to the database as.

Default=postgres

[geoportalUser] is the name for the geoportal schema owner. Default=geoportal

Sample Input: grants\_proxy\_pg localhost 5432 postgres geoportal postgres geoportal

- ☐ When prompted with the message “Enter password for new role:”, input the password for the geoportal user
- ☐ When prompted with the message “Enter it again:”, input the password for the geoportal user again.
- ☐ When the script finishes executing you will be returned back to the command prompt and a text file (grants\_pg.txt) will open. Check the grants\_pg.txt file for any possible error messages.



**IMPORTANT:** You must fix errors appearing in the grants\_pg.txt file, except for errors that result from dropping tables and indexes – these are normal. For other errors, do not continue until the script runs without errors.

### 4.3.2. Schema: Run create\_schema\_pg.cmd

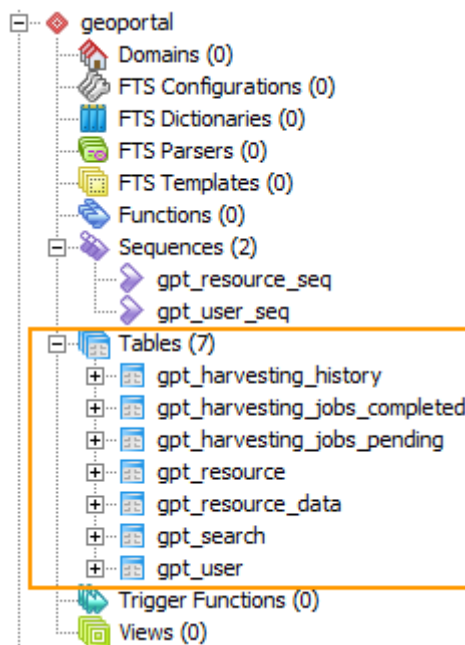
This script creates the table structure for the geoportal and populates some tables.

- ☐ Run the create\_schema\_pg.cmd file from the command prompt window using the following parameters:  
Usage: create\_schema\_pg [host] [port] [geoportal database] [geoportal user]  
Where  
[host] is the machine name hosting PostgreSQL  
[port] is the port number of PostgreSQL. Default = 5432  
[geoportal database] is the geoportal database name. Default = geoportal  
[geoportal user] is the name for the geoportal schema owner. Default = geoportal

Sample Input: create\_schema\_pg machineName 5432 geoportal geoportal

- ☐ When prompted with the message “Enter password for geoportal user:”, input the password for the geoportal user
- ☐ When the script finishes executing you will be returned back to the command prompt and a text file (Geoportal\_Schema.txt) will open. Check the Geoportal\_Schema.txt file for any possible error messages. Error messages and warnings, which state that Table or view does not exist, can be ignored. It simply means that the script was trying to delete a nonexistent table.
- ☐ Open the PostgreSQL Administrator tool.
- ☐ Verify that a new database was created, and that it has a list of tables as show in the image below:





### 5. DEPLOY AND CONFIGURE THE GEOPORTAL WEB APPLICATION

This step deploys the geoportal web application. First you will deploy the geoportal.war file, and then you will configure its property file so that the web application can successfully communicate with other components of your system.

*The steps in this section assume you are running Tomcat. If you are running WebLogic, GlassFish, or ServletExec refer to the appropriate installation document as below:*

- *WebLogic: <GeoportalServer Installation  
Dir>\Documentation\Installation\GeoportalServer\_InstallationGuide\_WebLogic.pdf*
- *GlassFish: <GeoportalServer Installation  
Dir>\Documentation\Installation\GeoportalServer\_InstallationGuide\_GlassFish.pdf*
- *\*ServletExec: <GeoportalServer Installation  
Dir>\Documentation\Installation\GeoportalServer\_InstallationGuide\_ServletExec.pdf*  
\* **IMPORTANT:** ServletExec deprecated at Geoportal Server version 0.9, and not supported in subsequent versions.

#### 5.1. DEPLOY GEOPORTAL.WAR

- ☐ Copy the geoportal.war file from the <Geoportal Dir>\Web Applications\Geoportal folder to your <Tomcat>\webapps folder.

- ❑ After a few moments, Tomcat should automatically recognize the new war file and deploy it by creating a geoportal folder. If it does not, restart Tomcat.



**IMPORTANT:** If your geoportal will need to support searching multibyte characters – such as Chinese - then you must configure the Tomcat server.xml file to support UTF-8 character encoding. In a text editor, open the server.xml file from the \\Tomcat\\conf folder. Add the **URIEncoding="UTF-8"** attribute below to the connector settings referenced by the <connector> tags for any port the geoportal web application will be using. For example:

```
<Connector port="8080" protocol="HTTP/1.1" connectionTimeout="20000"
redirectPort="8443" URIEncoding="UTF-8"/>
```

## 5.2. CONFIGURE THE GEOPORTAL

- ❑ Navigate to: <Tomcat Installation Directory>\webapps\geoportal\WEB-INF\classes\gpt\config
- ❑ Open the gpt.xml file in a text editor.



*The settings mentioned in the tables below are the ones that need modification. If a setting is not mentioned, it should be left with its default value. Additionally, there are a number of optional configuration settings that can be inserted into the gpt.xml file but are not included by default. These are indicated in the 'Optional Configurations within gpt.xml' section below.*

### 5.2.1. General geoportal settings

Find the section just after the "Mail server configuration" comment. This section defines the *mail* settings to determine who will receive feedback forms submitted from the geoportal application. It will also determine the return address for any mail sent from the geoportal, such as password reminders. Set the following properties:

| ✓ | Property Name    | Function                                                                                                                                   | Accepted Values            |
|---|------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|   | smtpHost         | smtp of your mail server                                                                                                                   | Any valid smtp address.    |
|   | smtpPort         | Port on which the mail server runs                                                                                                         | Integer specifying a port. |
|   | siteEmailAddress | The email address of the person who is to receive feedback forms, and is the email address from whom email is sent out from the geoportal. | Any valid email address.   |

|          |                                                                                                                  |                                                                                             |
|----------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| smtpAuth | Settings for username, password and whether the password is encrypted if the smtp server requires authentication | Valid string values for username and password. True or false for the “encrypted” parameter. |
|----------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

Next, find the “interactiveMap” start tag. The *interactiveMap* settings determine information about the map used on the search page. Set the properties as per the table below. For properties not mentioned, leave the defaults already set in the file.

| ✓ | Property Name               | Function                                                                                                                                                                                                                                                                                | Accepted Values                                                                                                                                                                           |
|---|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | jsapiUrl                    | URL to the ArcGIS Server JavaScript API.<br>Default:<br><a href="http://serverapi.arcgisonline.com/jsapi/arcgis/?v=2.0">http://serverapi.arcgisonline.com/jsapi/arcgis/?v=2.0</a>                                                                                                       | Any valid URL pointing to the ArcGIS Server JavaScript API.                                                                                                                               |
|   | mapServiceUrl               | REST URL to a map service that is to be used for the map on the search page. Example:<br><a href="http://localhost:8399/arcgis/rest/services/MapServiceName/MapServer">http://localhost:8399/arcgis/rest/services/MapServiceName/MapServer</a>                                          | Any valid REST URL pointing to an ArcGIS Server map service.                                                                                                                              |
|   | mapServiceType              | The caching scheme for the map service                                                                                                                                                                                                                                                  | String. “dynamic” or “tiled”.<br><b>Note:</b> the search map may not display tiled services correctly. For best results, set this to “dynamic”.                                           |
|   | geometryServiceUrl          | REST URL to a geometry service that is used to handle the projection of coordinates when using a projected map service.<br>Example: <a href="http://localhost:8399/arcgis/rest/services/Geometry/GeometryServer">http://localhost:8399/arcgis/rest/services/Geometry/GeometryServer</a> | Any valid REST URL pointing to an ArcGIS Server Geometry Service.                                                                                                                         |
|   | locatorUrl                  | URL to an ArcGIS Server locator service, used for the find place functionality.                                                                                                                                                                                                         | Any valid URL pointing to an ArcGIS Server locator service.                                                                                                                               |
|   | locatorSingleFieldParameter | Parameter name associated with a single field locator. This is used for the place search function in the geoportal search page map.                                                                                                                                                     | String value representing a locator field. This will be one of the Address Fields parameters when you view the locator service information in a web browser (Examples: City, State, Zip). |

Find the catalog start tag. The *catalog* settings contain general information needed by the Geoportal to connect to the database and appropriate schema. Set the following properties:

| ✓ | Property Name | Function | Accepted Values |
|---|---------------|----------|-----------------|
|---|---------------|----------|-----------------|

|                |                                                                           |                                                   |
|----------------|---------------------------------------------------------------------------|---------------------------------------------------|
| gptTablePrefix | The prefix that is used for all database tables created for the geoportal | String representing a table prefix. Default: GPT_ |
|----------------|---------------------------------------------------------------------------|---------------------------------------------------|

The *lucene* settings contain information about the Lucene index. Lucene is the local indexing engine used by the geoportal for indexing published documents for fast retrieval in a search (see

[http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Using\\_Lucene\\_Search\\_Text\\_Queries](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Using_Lucene_Search_Text_Queries) for more information). **IMPORTANT:** You will need to create a folder to hold the index files. After creating a new folder and giving it a sensible name (e.g., "lucene") set the following properties:

| ✓ | Property Name          | Function                                                                                                                                                                                                                                                                                                              | Accepted Values                                               |
|---|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
|   | indexLocation          | Absolute path to the folder that will hold indexed documents. This can be any path on your machine. Example: C:\lucene                                                                                                                                                                                                | String representing an absolute path.                         |
|   | writeLockTimeout       | Time in milli-seconds that Lucene will wait to acquire a write-lock. The write-lock is used to keep processes from concurrently attempting to modify an index. Lucene will at times generate an inactive write-lock file within the indexLocation folder, and this file may require manual deletion.                  | Any integer. Default: "60000", which is 60 seconds            |
|   | useNativeFSLockFactory | If true a NativeFSLockFactory is used otherwise use a SimpleFSLockFactory. For NativeFSLockFactory documentation, see <a href="http://lucene.apache.org/java/2_4_0/api/org/apache/lucene/store/NativeFSLockFactory.html">http://lucene.apache.org/java/2_4_0/api/org/apache/lucene/store/NativeFSLockFactory.html</a> | Boolean value: "true" or "false". Default: "true"             |
|   | analyzerClassName      | The class name for the Lucene analyzer                                                                                                                                                                                                                                                                                | Default: org.apache.lucene.analysis.standard.StandardAnalyzer |

There are additional parameters that define the Lucene index for the ability to comment and rate resources. The Lucene *index based assertions* settings define where the comment and rating index is stored and other settings for this feature. Set the following properties:

| ✓ | Property Name                            | Function                                                                                          | Accepted Values                                                                                                                                                                                                                     |
|---|------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | assertion.index.enabled                  | Indicates if ratings and comments should be enabled.                                              | true or false                                                                                                                                                                                                                       |
|   | assertion.index.location                 | Filepath to the folder that will hold the indexed comments and ratings.                           | String representing an absolute path. <b>NOTE:</b> This index should not be deleted and should be on a file backup/restore plan. Also, this filepath should not be the same location as the lucene\indexLocation value set earlier. |
|   | assertion.index.allowNonLocalResourceIds | If true, comments and ratings can be made about resources that do not exist in the local catalog. | true or false                                                                                                                                                                                                                       |
|   | assertion.rating.enabled                 | Allow users to rate resources.                                                                    | true or false                                                                                                                                                                                                                       |
|   | assertion.comment.enabled                | Allow users to leave comments for resources.                                                      | true or false                                                                                                                                                                                                                       |
|   | assertion.comment.maxLength              | maximum characters allowed for one comment                                                        | Integer. Default: 2048                                                                                                                                                                                                              |

The *search* settings contain general information needed by the geoportal in order to search and retrieve published metadata documents. Set the following properties:

| ✓ | Property Name                     | Function                                                                                                                                                                          | Accepted Values                                                                                                                  |
|---|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|   | searchTimeoutMillisecs            | The length of time allotted to a search attempt before a timeout error occurs                                                                                                     | Any valid integer representing milliseconds. Default: 10000                                                                      |
|   | distributedSearchTimeoutMillisecs | length of time allotted to a federated search attempt before a timeout error occurs                                                                                               | Integer. Default: 5000                                                                                                           |
|   | distributedSearchMaxSelectedSites | maximum number of sites allowed to be searched in one federated search attempt                                                                                                    | Integer. Default: 5                                                                                                              |
|   | searchResultsPerPage              | The number of results to show on a page. If more results are returned than this value, page navigation will be visible                                                            | Any integer. Default: 10                                                                                                         |
|   | searchResultsReviewsShown         | Determines circumstance for displaying the review icon for search results on the search page. Options are "none" (no review icons shown in search results), "only-reviewed" (icon | "none", "only-reviewed", or "all". If "only-reviewed" is chosen but the user is logged in, then the page will behave like "all". |

|                         |                                                                                                                                                 |                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|                         | present only for resources that have been reviewed) or "all" (review icon displays for all resources, even if they have not yet been reviewed). |                             |
| maxSavedSearches        | The maximum number of allowed searches in storage, per user.                                                                                    | Any integer.<br>Default: 10 |
| allowExternalSiteSearch | Whether to enable federated search to remote catalogs.                                                                                          | true or false               |

You do not need to change settings in the <repositories> tag. A <repository> here refers to a single or type of catalog available in the federated search on the search page. If you leave these settings as default, the geoportal will provide federated search to the local geoportal catalog, ArcGIS.com, and CS-W repositories flagged to appear on the search page when registered through the 'Register network resource' page.

The *metadataAccessPolicy* settings specify information about what method to use for restricting access to metadata documents. There are three possible methods to choose from:

1. Unrestricted: This means that all documents published to the geoportal are public and discoverable by anyone.
2. Public-Protected: A single LDAP group is identified as a group that can own "private" documents. Any documents set as "restricted" will only be discoverable for users that are logged in and members of the specified group. Public users will not find the restricted documents.
3. Restricted: Metadata documents can be restricted to any number of LDAP groups. A document can belong to multiple groups. Any documents set as "restricted" will only be discoverable for users that are logged in and members of the same group or groups that a metadata document belongs to. Public users, or users that do not belong to the same group as the document will not find the restricted documents.

Once you have decided which policy configuration you want for your geoportal instance, set the *metadataAccessPolicy* setting as below:

| ✓ | Property Name | Function                                                      | Accepted Values                                                                                                                     |
|---|---------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|   | Type          | The type of metadata access policy to employ in the geoportal | One of three: <ol style="list-style-type: none"> <li>1. Unrestricted</li> <li>2. Public-protected</li> <li>3. Restricted</li> </ol> |

|                   |                                                                                                                                                                            |                                                                                   |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| protectedGroup DN | Specifies the single LDAP group that can have “restricted” documents assigned to it. This property is required if the type parameter as above is set to “public-protected” | A valid DN of an LDAP group. Example: “cn=gpt_administrators,ou=groups,ou=system” |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|

The *Sitemap Parameters* settings specify how your site should be indexed for discovery by search engines such as Google™. The settings for each parameter can be left with its current default value. To modify the behavior of your site’s indexing, modify the appropriate parameters as per the descriptions in the gpt.xml file’s inline comments for the sitemap section.

The *Synchronizer parameters* settings are optional settings that define how synchronization is handled in the geoportal. Synchronization is the processes by which registered network resources are revisited by the geoportal to update the geoportal catalog with new resources, propagate updates to existing resources, and delete resources no longer found at the registered network source. For more information, see the section on synchronization ([http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=How to Publish Resource s](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=How_to_Publish_Resource_s)). Synchronization is configured to run automatically by default without further configuration required. The synchronization parameters in the gpt.xml are **optional** configurations. If you do not change these settings, synchronization will automatically run when you deploy your geoportal, and no additional configuration is required. The synchronizer parameter settings are described in the table below.

| ✓ | Property Name              | Function                                                                                                                                                                                                                                                                                                                                  | Accepted Values                                                                                                                                              |
|---|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | webharvester.active        | A value of ‘false’ will disable synchronization in the geoportal                                                                                                                                                                                                                                                                          | false (if you do not set this parameter, synchronization is enabled by default)                                                                              |
|   | webharvester.queue Enabled | Allows users to queue a resource for synchronization even if the synchronization is not activated for the geoportal (webharvester.active =“false”). This allows for a segmented geoportal architecture where a separate geoportal instance manages all synchronization, and that geoportal synchronizes with the main geoportal instance. | true or false. Default: current webharvester.active value.<br><b>IMPORTANT:</b> it is not possible to set this flag to false if webharvester.active = “true” |
|   | webharvester.poolsize      | The number of working threads that can run for synchronization. Each thread will be a different synchronization                                                                                                                                                                                                                           | Integer value. Default: 4                                                                                                                                    |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
|                                  | process running concurrently. Example: if four threads are available and three registered resources are set to be synchronized at the same time, three threads will be used and one will be idle. If two more resources are registered for synchronizing while those three threads are running, one of the newly registered resources will begin to be synchronized while the other will be queued to synchronize as soon as a thread is available. There is not a known limit to the number of threads the geoportal can accept and no cost if threads are sitting unused, but there is a limit to how many java can sustain. The default number of threads is four. |                                       |
| webharvester.autoSelectFrequency | Autoselect is a background thread responsible for checking if there is anything eligible to synchronize, and tracks when the next time to synchronize should be. The check is also activated if there is activity on the geoportal's "Register resource on the network" interface.                                                                                                                                                                                                                                                                                                                                                                                    | Default: 1[ HOUR]                     |
| webharvester.watchDogFrequency   | Similar to autoselect, except used in a load balancing scenario. Checks if anything is cancelled while processing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Default: 1[ MINUTE]                   |
| webharvester.baseContextPath     | The basecontextpath is most used in a load balanced scenario as an access URL so users can access the synchronization reports in a load balanced situation behind the firewall.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | String representing an absolute path. |

The *downloadData* settings specify information about the default map service and its corresponding geoprocessing service that is used by the Data Download functionality. Configuring Data Download is a customization and is not required for the functioning of the geoportal. For information on how to configure the Data Download function, see [http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=DataDownload\\_Tab](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=DataDownload_Tab). By default, the taskURL and mapServiceURL are left blank and the download tab will not appear in the geoportal interface.

### 5.2.2. Authentication Settings



The *identity* section defines the settings for the geoportal authentication.

The opening tag “identity” has an *encKey* attribute which is used to specify an encryption key. This key is used in conjunction with a two-way encryption algorithm to encode/decode user names and passwords that are stored in the database, for example, in the information for a metadata repository. The default value of the key is PtkEsri, which is case-sensitive. The identity element also has a *realm* attribute, which is referenced when a publisher user updates a metadata record by using an external XML editor, such as Altova XMLSpy®. The realm is sometimes - but not always, depending on the XML editor software or system setup - displayed by the client prompting for credentials. The realm value helps users better understand that they are about to log into an editing session for a record from the geoportal. **IMPORTANT:** If the value of encKey is changed at any point, any data already stored in the database that was encrypted with the “old” encKey will become invalid and will have to be re-generated and re-stored in the database to correspond to the new encKey value.

| ✓ | Property Name | Function                                                                                 | Accepted Values                                                                                                 |
|---|---------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|   | encKey        | Encryption key for encrypted values stored in the database.                              | PtkEsri (default). Any string value is acceptable, but changing post-deployment can have serious repercussions. |
|   | realm         | Displayed during publisher login for editing a metadata record in an external XML editor | Any String. Default: “Geoportal”                                                                                |

### Simple Authentication Settings

The *simpleAdapter* settings specify the user account details for a single administrative user. If per Section 2, you chose to use simple authentication with your geoportal instance:

- ☐ Uncomment this simpleAdapter section by deleting the <!-- and --> comment markings.
- ☐ Set the properties as per the following table:

| ✓ | Property Name | Function                             | Accepted Values   |
|---|---------------|--------------------------------------|-------------------|
|   | username      | The username for the single account. | Any valid string. |
|   | password      | The password for the single account. | Any valid string. |

|           |                                                                                                                                                                                                                                                                                                                                                                          |               |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| encrypted | Specifies whether the password value set in the password parameter is encrypted or not. For instructions on encrypting your password, refer to <a href="http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Security_Concepts#Encryption_Concepts">http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Security_Concepts#Encryption_Concepts</a> | True or false |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

Since you have chosen to use simple authentication, you must comment out the `LdapAdapter` section:

- ☐ Insert the opening comment `<!--` just before the `<LdapAdapter>` tag.
- ☐ Insert the ending comment `-->` just after the `</LdapAdapter>` tag.

### LDAP Authentication Settings

The *LdapConnectionProperties* settings determine the connection to the Directory Server. If per Section 2 you chose to use LDAP authentication with your geoportal instance, set the properties as per the table below. For properties not mentioned, leave the defaults already set in the file.

**IMPORTANT:** Default values below are for an implementation using Apache Directory server. If you are using a different Directory Server provider, this section may need to be adjusted with values corresponding to your Directory Server software. For guidance with Microsoft Windows Active Directory, Oracle Internet Directory, or IBM Tivoli Directory Server, see [http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Connecting\\_to\\_a\\_User\\_Directory](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Connecting_to_a_User_Directory)

| ✓ | Property Name       | Function                                                                                                                    | Accepted Values                                                                                                                                                      |
|---|---------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | providerUrl         | URL to the server on which the directory server management resides, and will include the port used for the LDAP connection. | Any valid LDAP URL. i.e. <code>ldap://machine:port</code> . Common port numbers are 10389 or 19389 for Apache Directory Server, or 389 for Windows Active Directory. |
|   | securityPrincipal   | Username with which to connect to the Directory Server.                                                                     | An LDAP distinguished name. Same value that was used to connect to the Directory Server in step 3.1.3<br>Example: <code>"uid=admin,ou=system"</code>                 |
|   | securityCredentials | Password with which to connect to the Directory Server                                                                      | String representing a password. Same value that was used to connect to the Directory Server in Step 3.1.3. Apache Directory Server default: <code>"secret"</code>    |

|                |                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Encrypted      | Specifies whether the password value set in the securityCredentials parameter is encrypted or not. For instructions on encrypting your password, refer to <a href="http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Security_Concepts#Encryption_Concepts">http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Security_Concepts#Encryption_Concepts</a> | True or false                                                                                                 |
| catalogAdminDN | The LDAP distinguished name of the geoportal administrator.<br><b>Note:</b> This user must be a member of the geoportal Administrators group.                                                                                                                                                                                                                                       | Any valid DN string. For Apache Directory server, could be the following:<br>"cn=gptadmin,ou=users,ou=system" |

The *singleSignOn* settings determine how the geoportal is to function when configured with single sign-on with other applications. For more information about single sign-on for the geoportal, see [http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Single\\_Sign-On](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Single_Sign-On).

| ✓ | Property Name      | Function                                       | Accepted Values                                                                                                                          |
|---|--------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|   | active             | Whether single sign-on is enabled or not.      | True or False.<br>Default: false                                                                                                         |
|   | credentialLocation | The mechanism for providing credentials        | Either "userPrincipal" which is a default Java mechanism. Or a vendor specific value that comes in the http header (header.variablename) |
|   | anonymousValue     | The value that represents an anonymous user    | Any string. When the header variable is set to this value, the user coming in is "anonymous".                                            |
|   | logoutOutcome      | URL specifying where to redirect to on logout. | Valid URL string.                                                                                                                        |

The *selfCareSupport* settings contain information about the behaviors and functionalities of the geoportal with respects to user account. Usually these settings are either all set to false, or all set to true. Set the following properties:

| ✓ | Property Name | Function | Accepted Values |
|---|---------------|----------|-----------------|
|---|---------------|----------|-----------------|

|                               |                                                                                                                                                                                                                                                                                     |                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| supportsLogin                 | Allows a user to login to the geoportal. If False, no login link will be displayed.                                                                                                                                                                                                 | True of False.<br>Default: true |
| supportsLogout                | Allows a user to logout of the geoportal. If supportsLogin is true, it is recommended leaving supportsLogout set to true as well.                                                                                                                                                   | True of False.<br>Default: true |
| supportsUserRegistration      | Whether users can register for accounts in the geoportal interface. If you don't want users to be able to create new entries in your directory structure through the geoportal interface, then set this to False. This will disable the "Register" link in the geoportal interface. | True of False.<br>Default: true |
| supportsUserProfileManagement | Whether users can modify their profile information in the geoportal interface. If you don't want users to be able to change their user information as managed by the directory server (such as email, name, phone number, etc.) through the geoportal interface, set this to False. | True of False.<br>Default: true |
| supportsPasswordChange        | Whether users can modify their password in the geoportal interface.                                                                                                                                                                                                                 | True of False.<br>Default: true |
| supportsPasswordRecovery      | Whether the "Forgot Password" functionality is active.                                                                                                                                                                                                                              | True of False.<br>Default: true |

The *roles* settings establish the mapping between Directory Server groups, and the default Geoportal user roles. Set the following properties:

| ✓ | Property Name                               | Function                                                                                                | Accepted Values                                                                     |
|---|---------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   | authenticatedUserRequiresRole               | Whether each user of the geoportal has to be assigned to at least one role.                             | True of False.<br>Default: true                                                     |
|   | For the <role key="gptRegisteredUser"> tag: |                                                                                                         |                                                                                     |
|   | groupDN                                     | Name of the Directory Server group that will map to the registered user's role                          | LDAP Distinguished Name<br>Example:<br>"cn=gpt_registeredUsers,ou=groups,ou=system" |
|   | For the <role key="gptPublisher"> tag:      |                                                                                                         |                                                                                     |
|   | Inherits                                    | Name(s) of role(s) whose properties will be inherited by the publisher role. Default: gptRegisteredUser | Comma-delimited string representing (a) role name(s).                               |

|                                            |                                                                                                           |                                                                                    |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| groupDN                                    | Name of the Directory Server group that will map to the publisher's role                                  | LDAP Distinguished Name<br>Example:<br>"cn=gpt_publishers,ou=groups,ou=system"     |
| For the <role key="gptAdministrator"> tag: |                                                                                                           |                                                                                    |
| Inherits                                   | Name(s) of role(s) whose properties will be inherited by the administrator role.<br>Default: gptPublisher | Comma-delimited string representing (a) role name(s).                              |
| groupDN                                    | Name of the Directory Server group that will map to the administrator's role                              | LDAP Distinguished Name<br>Example:<br>"cn=gpt_administrators,ou=groups,ou=system" |

The *users* settings determine properties of user accounts. Set the properties as per the table below. Set the following properties:

| ✓                                                                                                                                                                                                                                                                                            | Property Name               | Function                                                                                         | Accepted Values                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                              | displayNameAttribute        | The user entry attribute that is used for displaying the user's name in the geoportal interface. | String representing a user entry attribute name. Default: cn                                              |
|                                                                                                                                                                                                                                                                                              | passwordEncryptionAlgorithm | The algorithm used for encrypting passwords sent from the geoportal to the Directory Server      | Accepted values are "MD5" or "SHA"<br>Default: "SHA"                                                      |
|                                                                                                                                                                                                                                                                                              | newUserDNPattern            | The pattern of the distinguished name for new users.                                             | String value representing a DN pattern, pointing to the users node.<br>Example: cn={0},ou=users,ou=system |
|                                                                                                                                                                                                                                                                                              | usernameSearchPattern       | The search pattern for the Directory Server to use when looking for users.                       | String value representing a user entry pattern.                                                           |
|                                                                                                                                                                                                                                                                                              | searchDIT                   | The path in the Directory Information Tree to search for users.                                  | LDAP DN representing the "Users" organizational unit entry.<br>Example: ou=users,ou=system                |
| For the <requiredObjectClasses> tag: Each <objectClass> child tag represents a mandatory class that must be part of a new entry when creating new users in the Directory Server. You may add to, modify or delete from this list as needed.                                                  |                             |                                                                                                  |                                                                                                           |
| For the <userAttributeMap> tag: Each key value of an <attribute> child tag represents a property of a user's profile that is used in the geoportal. Each key value has to be mapped to its Directory Server attribute name equivalent, as represented by the ldapName value. You may add to, |                             |                                                                                                  |                                                                                                           |

modify or delete from this list as needed.

The *groups* settings determine the properties of the Directory Server groups, set up to map to Geoportal user roles. Set the following properties:

| ✓ | Property Name                  | Function                                                                                                         | Accepted Values                                                                       |
|---|--------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|   | displayNameAttribute           | The group entry attribute to use for displaying the group's name. Currently not used in the geoportal interface. | String representing a group entry attribute name. Default: cn                         |
|   | dynamicMemberOfGroupsAttribute | A vendor specific attribute that can be used to determine all the groups to which a user belongs                 | String representing a group entry attribute name. Default: ""                         |
|   | dynamicMembersAttribute        | A vendor specific attribute that can be used to determine all the members of a group.                            | String representing a group entry attribute name. Default: ""                         |
|   | memberAttribute                | The group entry attribute that is used to determine which users belong to the group                              | String representing a group entry attribute name. Default: uniquemember               |
|   | memberSearchPattern            | The search pattern for the Directory Server to use when looking for groups.                                      | String value representing a group entry pattern.                                      |
|   | searchDIT                      | The Directory Information Tree path to search for groups.                                                        | LDAP DN representing the "Groups" organizational unit. Example: "ou=groups,ou=system" |

Metadata management groups are special group entries within the Directory Server in which all member users share metadata document editor access. All users belonging to a metadata management group have access to each other's metadata. Each `<metadataManagementGroup>` tag specifies the details about an existing metadata management group. You may add to, modify or delete from this list as needed. For each group definition, set the following properties:

| ✓ | Property Name | Function                                                                        | Accepted Values                         |
|---|---------------|---------------------------------------------------------------------------------|-----------------------------------------|
|   | Name          | The name of the metadata management group, as it exists in the Directory Server | String value representing a group name. |
|   | groupDN       | Distinguished name of the metadata management group.                            | LDAP Distinguished Name                 |

## 5.2.3. Scheduler Settings

The *scheduler* settings define the properties for Catalog synchronization and the Index optimization. It is important to consider your CatalogSynchronizer and LuceneIndexOptimizer thread time attributes. Make sure that these are not configured to start at the same time.

Catalog synchronization is a process that ensures that the Lucene indexing is synchronized with the resources' metadata stored in the geoportal database. The synchronizer will trigger the indexing of all approved or reviewed documents where indexes don't exist. The <thread> element for the catalog synchronizer has a class value of

"com.Esri.gpt.catalog.context.CatalogSynchronizer", which should not be changed. However, the *period* and *delay* values can be updated, as specified below.

| ✓ | Property Name | Function                                                                                                                                                                    | Accepted Values                                          |
|---|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|   | period        | Specifies the time intervals at which cleanup should occur. Time unit can be [millisecond] (Default), [second], [minute], [hour], [day], [week], [month].                   | Integer value + time unit. Default: 1[HOURL]             |
|   | delay         | Specifies the initial delay before cleanup occurs after an application start. Time unit can be [millisecond] (Default), [second], [minute], [hour], [day], [week], [month]. | Integer value + optional time unit. Default: 30 [SECOND] |

The Index optimization is a process that rewrites the lucene index so searches can be performed faster. If the lucene index is never optimized, then performance will deteriorate over time. The amount of time required to synchronize the lucene index and the catalog is related to the size of your metadata database. For example, if the catalog contains 3,000 records, it will synchronize much faster than if it contains 300,000 records. The <thread> element of the index optimizer has a class value of "com.Esri.gpt.catalog.lucene.LuceneIndexOptimizer", which should not be changed. However, the *at* value can be updated, as specified below.

| ✓ | Property Name | Function                                           | Accepted Values                 |
|---|---------------|----------------------------------------------------|---------------------------------|
|   | At            | Specifies the start time for the optimizer to run. | Time specified in HH:MM format. |

### 5.2.4. Optional Configurations within gpt.xml

Below are **optional** parameters that can be configured within gpt.xml. They are not included in the out-of-the-box gpt.xml file, and must be added to the correct place of the file if desired. They encompass forward proxy authentication, reverse proxy settings, schema caching, spatial

relevance settings, class settings for lucene, identifying resource links, building REST URLs, rendering live data through the Previewer, settings for how ArcGIS Server service endpoints are processed on the Upload page, additional settings for the catalog synchronization thread, and an alternative setting for integrating a map viewer. The table below shows the location in the gpt.xml file where they should be copied, and the text that should be copied which includes descriptions for functionality in comments. These parameters will need to be updated with values that are applicable for your organization.

| v | Tag path in gpt.xml         | Text with functionality in comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | gptConfig/forwardProxyAuth  | <p>&lt;!-- Forward proxy authentication The following element can be optionally configured if authentication is required by a forward (outbound) proxy.</p> <p>username: the username credential</p> <p>password: the password credential</p> <p>encrypted: "true" or "false" (indicates if this password is encrypted)</p> <p>For a forward proxy, the system properties "http.proxyHost"</p> <p>"http.proxyPort" and "http.nonProxyHosts" are configured at the Java web server level (e.g. Tomcat - catalina.properties)</p> <p>--&gt;</p> <pre>&lt;forwardProxyAuth   username=""   password=""   encrypted="false"/&gt;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|   | gptConfig/catalog/parameter | <p>&lt;!-- Optional catalog parameters</p> <ul style="list-style-type: none"> <li>- reverseProxy.baseContextPath: useful for generated full callback URLs when the site is fronted by a reverse proxy, default = auto generated - http://host:port/application.</li> <li>- rssProviderUrl: the provider URL included within RSS responses, default = auto generated - http://host:port/application.</li> <li>- BaseServlet.autoAuthenticate: indicates if the com.Esri.gpt.framework.context.BaseServlet class should auto-authenticate credentials found within an HTTP request header, valid values: "true" or "false", default = true.</li> <li>- cacheSchemaDefinitions: indicates if metadata schema definition files should be cached. Caching improves production performance but can be overridden while developing definitions, valid values: "true" or "false", default = true.</li> <li>- spatialRelevance.queryPower: spatial relevance weighting power associated with the query envelope (input as criteria), default = 2.0.</li> <li>- spatialRelevance.targetPower: spatial relevance weighting power associated with the target envelope (stored within the database), default = 0.5.</li> <li>- spatialRelevance.ranking.enabled: indicates whether or not spatial query results will be spatially scored/ranked, valid values: "true", "false", "auto"; true: always use spatial relevance ranking, false: never use spatial relevance ranking (filter results spatially but do not score), auto: turn on/off spatial relevance ranking based upon the number of indexed documents, default = auto.</li> </ul> |



- spatialRelevance.ranking.maxDoc: specifies the threshold associated with the invocation of spatial relevance ranking (maximum indexed document count), applies to: spatialRelevance.ranking.enabled="auto", default = 150000.
- discoveryQueryAdapter: class associated with the execution of an internal discovery query, must extend: com.Esri.gpt.catalog.discovery.DiscoveryQueryAdapter, default = com.Esri.gpt.catalog.lucene.LuceneQueryAdapter
- lucene.useSingleSearcher: indicates that all Lucene searches should use a single instance of the Lucene IndexSearcher class. Using a single searcher can improve search performance for indexes that are essentially in read-only mode. This parameter should not be set to "true" if writing to the lucene index has not been explicitly disabled, valid values: "true" or "false", default = false.
- resourceLinkIdentifier: class associated with the identification of resource links, must extend: com.Esri.gpt.catalog.search.ResourceIdentifier, default = com.Esri.gpt.catalog.search.ResourceIdentifier.
- resourceLinkBuilder: class associated with the building of search result resource links, must extend: com.Esri.gpt.catalog.search.ResourceLinkBuilder, default = com.Esri.gpt.catalog.search.ResourceLinkBuilder.
- restUrlBuilder: class associated with the building of REST URLs associated with query criteria, must extend: com.Esri.gpt.catalog.search.RestUrlBuilder, default = com.Esri.gpt.catalog.search.RestUrlBuilder.
- liveDataRendererFactoryBuilder: class associated with the building factories supporting live data rendering (i.e. preview), must extend: com.Esri.gpt.control.livedata.LiveDataRendererFactoryBuilder, default = com.Esri.gpt.control.livedata.LiveDataRendererFactoryBuilder.
- AGSProcessor.interrogation.enabled: indicates whether or not ArcGIS server/service endpoints will be considered from the Upload Metadata page, valid values: "true" or "false", default = true.
- AGSProcessor.GeoDataServer.recurse: indicates whether or not ArcGIS GeoDataServer endpoints will be recursed, publishing all underlying datasets having metadata, valid values: "true" or "false", default = true.
- AGSProcessor.GeoDataServer.maxDataElements: specifies an upper threshold for data elements within an ArcGIS GeoDataServer. If the maxDataElements is exceeded, no data elements associated with the GeoDataServer will be published to the Geoportal. A value of -1 indicates no limit, default = 200.
- AGSProcessor.GeoDataServer.expandDescendants: specifies whether or not descendants should be expanded when retrieving data elements from the GeoDataServer. If false, children are expanded (com.Esri.arcgisws.EsriDEExpandType.EsriDEExpandDescendants vs. com.Esri.arcgisws.EsriDEExpandType.EsriDEExpandChildren).

-->

```
<parameter key="reverseProxy.baseContextPath"
value="http://host:port/application"/>
<parameter key="rssProviderUrl" value="http://host:port/application"/>
<parameter key="BaseServlet.autoAuthenticate" value="true"/>
```

|                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              | <pre> &lt;parameter key="cacheSchemaDefinitions" value="true"/&gt; &lt;parameter key="spatialRelevance.queryPower" value="2.0"/&gt; &lt;parameter key="spatialRelevance.targetPower" value="0.5"/&gt; &lt;parameter key="spatialRelevance.ranking.enabled" value="auto"/&gt; &lt;parameter key="spatialRelevance.ranking.maxDoc" value="50000"/&gt; &lt;parameter key="discoveryQueryAdapter" value="com.Esri.gpt.catalog.lucene.LuceneQueryAdapter"/&gt; &lt;parameter key="lucene.useSingleSearcher" value="false"/&gt; &lt;parameter key="resourceLinkIdIdentifier" value="com.Esri.gpt.catalog.search.ResourceIdentifier"/&gt; &lt;parameter key="resourceLinkBuilder" value="com.Esri.gpt.catalog.search.ResourceLinkBuilder"/&gt; &lt;parameter key="restUrlBuilder" value="com.Esri.gpt.catalog.search.RestUrlBuilder"/&gt; &lt;parameter key="liveDataRendererFactoryBuilder" value="com.Esri.gpt.control.livedata.LiveDataRendererFactoryBuilder"/&gt; &lt;parameter key="AGSPProcessor.interrogation.enabled" value="true"/&gt; &lt;parameter key="AGSPProcessor.GeoDataServer.recurse" value="true"/&gt; &lt;parameter key="AGSPProcessor.GeoDataServer.maxDataElements" value="200"/&gt; &lt;parameter key="AGSPProcessor.GeoDataServer.expandDescendants" value="false"/&gt; </pre> |
| gptConfig/catalog/<br>scheduler/thread/@<br>class="com.Esri.gpt.<br>catalog.context.Cata<br>logSynchronizer" | <pre> &lt;!-- Optional parameter configuration for catalog synchronization thread element. - feedbackSeconds: an approximate number of seconds between FINER log messages, default = 120. - maxDeleteTokens: the maximum number of deletions to execute in a single transaction, default = 1000. -maxSqlTokens: for an SQL SELECT statement, the maximum number of OR operators to include in a single WHERE clause, default = 1000. - maxUuidCache: the maximum number of UUIDs to store in memory. The memory is only used while the synchronizer is active. Having a maxUuidCache greater than or equal to the number of documents within the catalog will result in the best performance, default = 100000. --&gt; &lt;!-- Catalog synchronization --&gt; &lt;thread class="com.Esri.gpt.catalog.context.CatalogSynchronizer" period='1[ HOUR]' delay="30[SECOND]"&gt;   &lt;parameter key="feedbackSeconds" value="120"/&gt;   &lt;parameter key="maxDeleteTokens" value="1000"/&gt;   &lt;parameter key="maxSqlTokens" value="1000"/&gt;   &lt;parameter key="maxUuidCache" value="100000"/&gt; &lt;/thread&gt; </pre>                                                                                                                                                                     |
| gptConfig/catalog/<br>search/@mapViewe                                                                       | <pre> &lt;!-- Optional configuration to support a custom Map Viewer application. Example: mapViewerUrl = "http://machine_name/map_viewer_app". Will </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|      |                                                                                                                                                                                                                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rUrl | automatically generate a link to launch a specified Map Viewer in the geoportal interface. To integrate Flex or Silverlight based viewers, see <a href="http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Map_View_er">http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Map_View_er</a> |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ☐ You are now finished configuring the geoportal web application. Save the gpt.xml file and close it.

### 6. DEPLOY AND CONFIGURE THE SERVLET WEB APPLICATION

This step deploys the servlet web application. The servlet is responsible for communication between the geoportal and ArcCatalog 9.3.x when users are publishing to the Geoportal using the Publish Client tool. Note that deploying the servlet.war file is only necessary if users with a 9.3.x version of ArcCatalog will be connecting to your geoportal using the Publish Client. If users will be using ArcCatalog 10 to connect to your geoportal, deploying the servlet.war is not necessary. For more information on the Geoportal Publish Client, see [http://links.esri.com/geoportal\\_publish\\_client](http://links.esri.com/geoportal_publish_client). Follow the steps below to deploy the servlet.war file.

- ☐ Navigate to the <Geoportal Dir>\Web Applications\Servlet folder to find the servlet.war file.
- ☐ Deploy the servlet.war file in the same manner which you deployed the geoportal.war file. By default, the servlet web application needs no further configuration unless you have modified the name of the geoportal web application.
- ☐ If you modified the name of your deployed application from “geoportal” to something else, you must let the servlet know the reference to your newly-named geoportal application.
  - Navigate to: <Tomcat Installation Directory>\servlet\WEB-INF
  - Open the web.xml file in a text editor.
  - Modify the <param-value> setting (for the redirectURL parameter above) to point to your machine’s geoportal application deployment path starting from the web application name:  
i.e. */applicationName/com.Esri.Esrimap.Esrimap*
- ☐ Save the file and close it.

### 7. JDBC CONFIGURATION

The geoportal uses a Java Naming and Directory Interface (JNDI) key to connect to the database through a JDBC connection. This allows system components to find the database connection information using the JNDI key instead of having to store the JDBC connection

information in many places. In this step, we will setup the JNDI configuration and JDBC connection for Tomcat. Please see the installation guides in the < Geoportal Server Installation Dir>\Documentation\Installation\ directory if you are using WebLogic, GlassFish, or ServletExec instead.

- ☐ 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.

<http://www.oracle.com/technetwork/database/features/jdbc/index-091264.html>  
<http://msdn.microsoft.com/en-us/sqlserver/aa937724.aspx>  
<http://jdbc.postgresql.org/download.html>

- ☐ The database .jar file you use is determined by the database vendor and Java version you have running. See the table below to identify the appropriate .jar file for your environment. Note that the PostgreSQL drivers support both PostgreSQL 8.3 and 8.4.

|               | Oracle (10g, 11g) | SQL Server 2005 | SQL Server 2008 | Postgres (8.3, 8.4)          |
|---------------|-------------------|-----------------|-----------------|------------------------------|
| <b>Java 5</b> | ojdbc5.jar        | sqljdbc.jar     | Not recommended | postgresql-8.4-701.jdbc3.jar |
| <b>Java 6</b> | ojdbc6.jar        | sqljdbc4.jar    | sqljdbc4.jar    | postgresql-8.4-701.jdbc4.jar |

- ☐ Copy the database jdbc driver .jar to one of the following directories, depending on your Tomcat version:
  - Tomcat 5.x: <Tomcat Installation Directory>\common\lib
  - Tomcat 6.x: <Tomcat Installation Directory>\lib
- ☐ Copy the "geoportal.xml" file from the <Geoportal Dir>\Other\JNDI Configuration\ folder and paste it into your C:\<Tomcat Installation Directory>\conf\Catalina\localhost folder. If you are using Tomcat 6 and you don't have a Catalina\localhost directory in your conf directory, then you need to create it.
- ☐ Open the geoportal.xml file in a text editor. Modify the properties specified in the table below, then save the file and close it. The values that you modify should not include placeholder brackets ("<" or ">").

| v | Property Name   | Line   | Expected Values                                                          | Example                                                                                                                                                                               |
|---|-----------------|--------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | docBase         | Line 3 | The name of your geoportal web application in Tomcat. Default: geoportal | docBase="geoportal"                                                                                                                                                                   |
|   | Path            | Line 3 | The name of the geoportal application directory within Tomcat webapps.   | path="/geoportal"                                                                                                                                                                     |
|   | driverClassName | Line 5 | The JDBC Driver class name. Vendor specific.                             | Oracle: oracle.jdbc.driver.OracleDriver<br>SQL Server: com.microsoft.sqlserver.jdbc.SQLServerDriver<br>PostgreSQL: org.postgresql.Driver                                              |
|   | url             | Line 6 | The JDBC URL connection string                                           | Oracle*: jdbc:oracle:thin:@serverName:1521:oracleSID<br>SQL Server: jdbc:sqlserver://serverName:1433;databaseName=geoportal<br>PostgreSQL: jdbc:postgresql://serverName:5432/postgres |
|   | userName        | Line 7 | geoportal database user                                                  | username="geoportal"                                                                                                                                                                  |
|   | password        | Line 8 | geoportal database user password                                         | password="geoportalpwd"                                                                                                                                                               |

\* The oracleSID (System Identifier) is typically the service\_name attribute contained within the comment descriptor in the tnsnames.ora Oracle configuration file.

**Note:** Please verify the JDBC settings with official driver documentation found online your database vendor's website.

**IMPORTANT:** If you are using Oracle and Java 6 – and therefore, the ojdbc6.jar file – and the configuration described above is not connecting the geoportal to your database, then try the configuration below in your geoportal.xml file. Users have reported that in some instances, this configuration is successful with the ojdbc6.jar file and Java 6. You will need to change the “type” attribute, and add the “factory” attribute, as shown highlighted below:

```
<Resource name="jdbc/gpt" auth="Container"
    type="oracle.jdbc.pool.OracleDataSource"
    factory="oracle.jdbc.pool.OracleDataSourceFactory"
    driverClassName="oracle.jdbc.driver.OracleDriver"
```

## 8. SMOKETEST THE GEOPORTAL

**IMPORTANT:** Before proceeding with the smoketest, save all configuration files, and restart your geoportal web application.

Now that your geoportal web application has been installed, it is important to do a brief smoketest before continuing with installing the Desktop Tools. The following steps describe basic steps to check that your geoportal is up and running. These are steps for an initial smoketest. Your organization should also do extensive testing and reference Post-Deployment Actions – at

[http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Post\\_Deployment\\_Actions](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Post_Deployment_Actions) - before the geoportal goes into production.

If you encounter errors during the smoketest, review your 'gpt' logfiles (Tomcat\logs) and see 'Common Problems and Solutions' at

[http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Common\\_problems\\_and\\_solutions](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=Common_problems_and_solutions).

- ☐ Launch the geoportal web application in a web browser. A sample URL:  
<http://serverName:port/geoportal>
- ☐ Click the Login link from upper right corner
- ☐ Login with your Administrator user login credentials
  - The Administration and Repositories tabs should now appear
- ☐ Click the Administration tab
- ☐ Click Add link. You will be presented with three options for adding a resource to the geoportal
- ☐ From the list, choose the radio next to 'Use dedicated editor to create metadata manually'. A page presenting the supported metadata profiles will appear.
- ☐ In this exercise, you will create a simple Dublin Core metadata record for testing. Select the "Dublin Core" radial
- ☐ Fill out information for all required fields. Required fields have bold/italic headings
- ☐ Click Save at the bottom
  - You should receive a success message, or a message saying what is missing in the document to be valid
- ☐ Click the Manage link

- ☐ Check the box next to your newly created record, and then select “Set as Approved” from the dropdown box. Then click the “Execute Action” button
- ☐ The document should now have a Status of Approved
- ☐ Click the Search tab
- ☐ Type a word in the search field that was included in your newly approved record
- ☐ Click Search
  - Your document should be returned
- ☐ Click on the record to display its options. Select the “Metadata” link
  - The document’s metadata XML should load in a new browser window

## 9. DESKTOP TOOLS

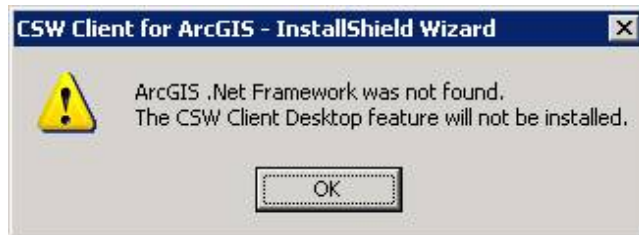
There are several Desktop tools that can be used in conjunction with your geoportal. Installation for each is described below. The machine hosting Desktop Tools does not need to be the same machine hosting the geoportal web application, ArcGIS Server services, or the database.

### 9.1. GEOPORTAL CSW CLIENTS

The Geoportal CSW Clients make possible the searching of CSW 2.0.x-enabled metadata repositories from ArcGIS Desktop or ArcGIS Explorer. Installation instructions are below:

- ☐ Open the <Geoportal Dir>\Desktop Tools\CSWClients directory.
- ☐ Double-click on the setup.exe file. Click Next to proceed to the license screen.
- ☐ Accept the license and click Next.
- ☐ Enter in your Information into the Username and Organization text boxes. Click Next.
- ☐ You will be asked if you’d like the complete or custom install. The custom option allows you to install only the CSW Clients for ArcGIS Explorer, or only the CSW Clients for ArcGIS Desktop. The complete installation is for both. If ArcGIS Explorer is not installed and you’d like to install it, it can be downloaded from <http://www.esri.com/software/arcgis/explorer/index.html>. If you do not want to download ArcGIS Explorer but do want to use the CSW Clients in ArcMap, then it does not matter which option is selected on this screen. Select an option and click Next.

- ☐ The installation proceeds. **IMPORTANT:** During installation, the installer checks for the presence of the ArcGIS .NET framework. If it is not found, the CSW Client for ArcGIS Desktop will not be installed. However, installation will continue for CSW Client for ArcGIS Explorer, and a dialog box will appear notifying of the status.



- ☐ After installation, refer to the documentation at [http://links.esri.com/geoportal\\_csw\\_clients](http://links.esri.com/geoportal_csw_clients) for information to add the CSW Clients to ArcMap and ArcGIS Explorer. This online documentation also has instructions for how to use the CSW Clients.

### 9.2. GEOPORTAL PUBLISH CLIENT

The Geoportal Publish Client is a tool for ArcCatalog that allows publisher users to easily publish metadata from their local desktop to the geoportal. The metadata can come from Shapefiles, personal Geodatabases or Enterprise Geodatabases, or any other local data formats for which you can create metadata in ArcCatalog. Installation instructions are below:

- ☐ Open the <Geoportal Dir>\Desktop Tools\PublishClient folder.
- ☐ Double-click on the setup.exe file.
- ☐ Click Next on the Welcome screen.
- ☐ Accept the License Agreement. Click Next.
- ☐ Enter in your Information into the Username and Organization text boxes. Click Next.
- ☐ Choose the Destination Folder into which the Publish Client should install or accept the default. Click Next.
- ☐ Click Install to begin the installation.



- ☐ Once the installation wizard completes, click Finish.
- ☐ After installation, refer to the documentation at [http://links.esri.com/geoportal\\_publish\\_client](http://links.esri.com/geoportal_publish_client) for information to add the Geoportal Publish Client to ArcCatalog. This online documentation also has instructions for how to use the Geoportal Publish Client.

### 9.3. WMC CLIENT

The WMC Client allows for a Web Map Context (WMC) file to be opened directly in ArcMap. WMC files adhere to the Open Geospatial Consortium (OGC) specification and have the extension ".cml", ".wmc", or ".xml". WMC files provide pointers to remote accessible data, specifically Live Data and Map resources. Installation instructions are below:

- ☐ Open the <Geoportal Dir>\Desktop Tools\WMCOpener folder.
- ☐ Double-click on the setup.exe file.
- ☐ Click Next on the Welcome screen.
- ☐ Accept the License Agreement. Click Next.
- ☐ Enter in your Information into the Username and Organization text boxes. Click Next.
- ☐ Choose the Destination Folder into which the WMC Client should install or accept the default. Click Next.
- ☐ Click Install to begin the installation.
- ☐ Once the installation wizard completes, click Finish.
- ☐ After installation, refer to the documentation at [http://links.esri.com/geoportal\\_wmc\\_client](http://links.esri.com/geoportal_wmc_client) for information to add the WMC Client to ArcMap. This online documentation also has instructions for how to use the WMC Client.

## Appendix A: Upgrade from Geoportal extension 9.3.x to Geoportal Server version 1.0

This section is for organizations that have already implemented the Geoportal extension 9.3.1 or 9.3.1 sp1, but want to move to the Geoportal Server version 1.0.

The Geoportal Server is an entirely new version of the Geoportal extension software, although the basic user interface and file architecture remain. You cannot simply replace files from your earlier 9.3.x deployment with the updated Geoportal Server files. To upgrade your existing 9.3.1 Geoportal implementation, carefully follow the steps below and refer to the installation instructions above if you need further information on one of the steps. Be aware that there are no provisions for automatically upgrading the geoportal web application, especially for highly-customized geoportals. Therefore, you will have to deploy the geoportal.war file from the Geoportal Server distribution, make a backup copy of the newly deployed Geoportal Server files, manually copy customizations and configuration settings from the former geoportal web application to the new geoportal web application, and then test your customizations for additional adjustments necessary.

### **UPGRADE STEPS**

#### **1. BACKUP FILES**

Before proceeding with moving to the Geoportal Server, it is recommended that copies are made of the following:

- JNDI settings. If using Tomcat, this is the JNDI connection file, found at <TOMCAT>\conf\Catalina\localhost\geoportal.xml. You will likely be able to use these same connection settings for your Geoportal Server implementation.
- The entire geoportal web application folder found at <TOMCAT>\webapps\geoportal if using Tomcat. You will not be able to directly copy files from this backup to your new geoportal web application, but you can refer to these files to apply settings that have not changed or customizations your organization implemented.
- Your former Geoportal installation files that were installed when you ran the *Geoportal Extension 9.3.1.msi* file on your Geoportal 9.3.1 distribution DVD. You will have to uninstall the previous version of Geoportal 9.3.1 using Add/Remove

Programs, and the uninstall process will remove these files that you might want to keep for reference.

### **2. UNINSTALL THE GEOPORTAL EXTENSION 9.3.1**

If using a Windows system, you can do this through Start → Control Panel → Add/Remove Programs.

### **3. INSTALL THE GEOPORTAL SERVER INSTALLATION FILES**

Unzip the geoportal into a computer that is on the same network as the previous version of your geoportal web application. The next steps will reference <Geoportal Dir>, which is the directory where you unzipped the Geoportal Server files.

### **4. MIGRATE TO THE GEOPORTAL SERVER DATABASE SCHEMA**

The GeoportalServer\_MigrationGuide.pdf document, found in the <Geoportal Server Installation Dir>\Documentation\Installation folder, provides instructions that guide you through copying the data from your former Geoportal database into a new Geoportal Server schema. Be sure to follow the instructions for your database software and your geoportal version carefully. Do not attempt to migrate using tools other than the utilities provided in the Migration Guide.

### **5. IF DESIRED, CHANGE THE NAME OF THE GEOPORTAL WEB APPLICATION**

The Geoportal Server provides a web application file titled “geoportal.war”, which is the same name as the Geoportal 9.3.1 web application. If the new geoportal web application will coexist in the same servlet container context as the former geoportal web application, consider changing the name of the new geoportal web application. Note that if you change the name of the new geoportal web application, you will need to update the name in the servlet web application’s WEB-INF\web.xml file (as per instructions in Section 6).

### **6. DEPLOY THE NEW GEOPORTAL.WAR FILE**

The new geoportal.war file is found in the <Geoportal Dir>\Web Applications\Geoportal directory if you accepted the default install location when running the Installation DVD.

### **7. CONFIGURE THE GPT.XML FILE**

Navigate to the [\\geoportal\WEB-INF\classes\gpt\config](#) folder and open the gpt.xml file in a text editor. Open your previous gpt.xml file from the backup copy of your Geoportal 9.3.1 web application created earlier. Use the general gpt.xml configuration instructions found in Section

5 of this Installation Guide to configure the new gpt.xml, but you may find it useful to copy certain sections – your <identity> parameters, for example – from the former 9.3.1 gpt.xml.

### **8. MANAGE THE DATABASE DRIVER JAR FILE**

Follow instructions from Section 7 above to copy the correct JDBC .jar files from your <Geoportal Dir>\Database Scripts\lib folder to the appropriate place in your servlet container application. Note that the destination for the database jar file may be different depending on if you use Tomcat 5, Tomcat 6, WebLogic, Glassfish, or ServletExec. Consult the corresponding servlet container Geoportal installation guides from the <Geoportal Dir>\Installation folder for specific details.

### **9. APPLY JNDI SETTINGS**

Refer to instructions in Section 7 of this Installation Guide for configuring the JDBC database connection for your migrated geoportal database.

### **10. COPY OVER CUSTOMIZATIONS**

It is highly likely that your organization customized your Geoportal 9.3.1. Use the backup copy of the geoportal 9.3.1 web application to investigate files that your organization may have customized, and copy important customizations into your new geoportal application. In particular, compare the new and the 9.3.1 versions of the following files.

- Text in the geoportal interface, at \\geoportal\WEB-INF\classes\gpt\resources\gpt.properties
- Customized metadata schemas, at \\geoportal\WEB-INF\classes\gpt\metadata
- Color themes and images, at \\geoportal\catalog\skins\themes
- JSP page and Javascript changes, in subfolders at \\geoportal\catalog

### **11. DATA DOWNLOAD TAB IN VERSION 10**

If you had a custom Data Download page (see documentation at [http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=DataDownload\\_Tab](http://sourceforge.net/apps/mediawiki/geoportal/index.php?title=DataDownload_Tab)) in your previous Geoportal extension implementation, it will still work with the Geoportal Server version. However, because the Geoportal Server provides a new Data Download page, you will need to specify which Data Download page the Geoportal should use. To point the geoportal to your 9.3.x Data Download page instead of the new version, do the following:

1. Navigate to the \\geoportal\catalog\download folder.
2. Open the download.jsp page in a text editor.

3. Update the <tiles:put> parameter's value attribute such that it reads *value="/catalog/download/downloadBody.jsp* instead of *value="/catalog/download/downloadBody10.jsp*.

4. Save the download.jsp file.

### **12. RESTART THE GEOPORTAL WEB APPLICATION AND TEST**

### **13. UPDATE GEOPORTAL CLIENTS FOR ARCGIS**

The Geoportal Clients have changed to support ArcGIS Desktop version 10. Note, you can still use the 9.3.1 Geoportal Clients to connect to your Geoportal Server CSW and Publish Client endpoints if your ArcGIS Desktop environment is still at 9.3.1.

To upgrade the Clients to be compatible with ArcGIS Desktop version 10, you will need to uninstall them (in Windows, this can be done through the Add/Remove programs interface), and then reinstall the version 10 Clients versions from your <Geoportal Dir>\Desktop Tools folder. The following Desktop Tools have been updated:

- CSW Clients
- Publish Client
- WMC Client