



ArcGIS Server

Geoportal Extension 9.3.1, Service

Pack 1

Installation Guide

Copyright © 2009 ESRI
All rights reserved.
Printed in the United States of America.

Use Subject to ESRI License Agreement

ESRI ® the ESRI Globe Logo, and other included marks are trademarks of ESRI. All Rights Reserved

The information contained in this document is the exclusive property of ESRI. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by ESRI. All requests should be sent to Attention: Contracts and Legal Services Manager, ESRI, 380 New York Street, Redlands, CA 92373-8100 USA.

The information contained in this document is subject to change without notice.

U.S. GOVERNMENT RIGHTS

The Software, Data, Web Services, and Documentation are commercial computer software, commercial data, commercial computer software documentation, and commercial Web Services. The commercial license rights in the License Agreement strictly govern Licensee's use, reproduction, or disclosure of the Software, Data, Web Services, and Documentation. No other license terms or conditions shall apply unless expressly agreed in writing by ESRI and Licensee. ESRI Software source code is unpublished and all rights to the Software, Data, Web Services, and Documentation are reserved under copyright laws of the United States. In the event any court, arbitrator, or board holds that the Licensee has greater rights to any portion of the Software, Data, Web Services, or Documentation under applicable public procurement law, such rights shall extend only to the portions affected, and use, duplication, or disclosure by the Licensee is subject to restrictions as provided in FAR 52.227-19 (June 1987), FAR 52.227-14 (ALT III) (June 1987), DFARS 252.227-7015 (NOV 1995), or NFS 1852.227-86 (December 1987), or the local, state, or foreign equivalent, as applicable. Contractor/Manufacturer is ESRI, 380 New York Street, Redlands, CA 92373-8100, USA."

Contents

| | |
|--|-----------|
| 1. PRE-INSTALLATION REQUIREMENTS | 1 |
| 2. SELECT AN AUTHENTICATION MECHANISM FOR THE GEOPORTAL EXTENSION | 1 |
| 3. CONFIGURE A DIRECTORY SERVER FOR THE GEOPORTAL EXTENSION | 2 |
| 3.1. INSTALL A NEW DIRECTORY SERVER AND CLIENT | 3 |
| 3.1.1. <i>Install Directory Server</i> | 3 |
| 3.1.2. <i>Install Directory Server Client</i> | 3 |
| 3.1.3. <i>Define a Connection from the client to the server</i> | 3 |
| 3.1.4. <i>Create an initial user</i> | 5 |
| 3.2. ADAPT AN EXISTING DIRECTORY SERVER | 6 |
| 3.2.1. <i>Create groups for the Geoportal extension roles</i> | 6 |
| 4. RUN THE GEOPORTAL EXTENSION INSTALLER | 8 |
| 5. SELECT A DATABASE SCHEMA FOR THE GEOPORTAL EXTENSION | 9 |
| 6. SET UP THE DATABASE | 10 |
| 6.1. ORACLE | 11 |
| 6.1.1. <i>Setup the Geoportal extension tablespace</i> | 11 |
| 6.1.2. <i>Create database schema</i> | 11 |
| 6.1.2.1. <i>Standalone Database Model: grants_proxy_oracle.cmd</i> | 12 |
| 6.1.2.2. <i>SDE-Enabled Database Model: grants_oracle.cmd</i> | 12 |
| 6.1.2.3. <i>All Oracle Database Models: Running create_schema_oracle.cmd</i> | 13 |
| 6.1.2.4. <i>SDE-Enabled Database Model: Register your table with SDE</i> | 14 |
| 6.2. SQL SERVER | 15 |
| 6.2.1. <i>Standalone database model: Create database schema</i> | 16 |
| 6.2.2. <i>SDE-Enabled database model: Create database schema</i> | 17 |
| 6.2.3. <i>SDE-Enabled database model: Set user permissions</i> | 18 |
| 6.2.4. <i>SDE-Enabled database model: Create a full-text catalog for the Geoportal931 database</i> | 19 |
| 6.3. POSTGRESQL | 20 |
| 6.3.1. <i>Standalone Database Model: grants_proxy_pg.cmd</i> | 20 |
| 6.3.2. <i>SDE-Enabled Database Model: grants_pg.cmd</i> | 21 |

| | |
|---|----|
| 6.3.3. <i>All PostgreSQL Database Models: Run create_schema_pg.cmd</i> | 22 |
| 7. INSTALL THE METADATASERVER (SDE-ENABLED DATABASE MODEL ONLY) | 23 |
| 8. DEPLOY AND CONFIGURE THE GEOPORTAL EXTENSION APPLICATION | 24 |
| 8.1. DEPLOY GEOPORTAL.WAR | 24 |
| 8.2. CONFIGURE GEOPORTAL | 24 |
| 8.2.1. <i>General Geoportal settings</i> | 25 |
| 8.2.2. <i>Authentication Settings</i> | 32 |
| 8.2.3. <i>Scheduler Settings</i> | 38 |
| 8.2.4 <i>Optional Configurations within gpt.xml</i> | 41 |
| 9. DEPLOY AND CONFIGURE THE SERVLET APPLICATION | 45 |
| 9.1. DEPLOY SERVLET | 45 |
| 9.2. CONFIGURE SERVLET | 46 |
| 10. TOMCAT CONFIGURATION | 46 |
| 10.1. SET UP JNDI | 46 |
| 10.2. RESTART TOMCAT AND WEB SERVER | 48 |
| 11. SMOKETEST THE GEOPORTAL | 48 |
| 12. DESKTOP TOOLS | 50 |
| 12.1. HARVESTING TOOL | 50 |
| 12.2. HARVESTING SERVICE | 50 |
| 12.2.1. <i>Create HarvestConfig.xml – the Harvesting Service Configuration file</i> | 51 |
| 12.2.2. <i>Install the Harvesting Service</i> | 52 |
| 12.2.3. <i>Configure the Harvesting Service</i> | 54 |
| 12.3. GEOPORTAL EXTENSION CSW CLIENTS | 55 |
| 12.4. GEOPORTAL EXTENSION PUBLISH CLIENT | 56 |
| 12.5. GEOPORTAL EXTENSION WMC CLIENT | 57 |
| Appendix A: Upgrade from Geoportal extension 9.3.1 to 9.3.1 sp1 | 58 |
| 1. BACKUP FILES | 58 |
| 2. UNINSTALL THE GEOPORTAL EXTENSION 9.3.1 | 59 |
| 3. INSTALL THE GEOPORTAL EXTENSION 9.3.1 SP1 INSTALLATION FILES | 59 |

| | |
|--|-----------|
| 4. IMPORTANT: READ THIS ABOUT THE DATABASE | 59 |
| 5. IF DESIRED, CHANGE THE NAME OF THE GEOPORTAL WEB APPLICATION | 59 |
| 6. DEPLOY THE NEW GEOPORTAL.WAR FILE | 59 |
| 7. CONFIGURE THE GPT.XML FILE..... | 60 |
| 8. MANAGE THE DATABASE DRIVER JAR FILE | 60 |
| 9. APPLY JNDI SETTINGS..... | 60 |
| 10. COPY OVER CUSTOMIZATIONS | 60 |
| 11. RESTART THE GEOPORTAL WEB APPLICATION AND TEST | 61 |
| 12. UPDATE DESKTOP TOOLS..... | 61 |

INTRODUCTION

This document is a guide for installing and initial configuration of the ArcGIS Server Geoportal Extension 9.3.1, service pack 1. There are two common scenarios for applying this service pack: 1) your organization installed Geoportal extension 9.3.1 and now you want to apply the changes in this service pack, or 2) your organization has purchased the Geoportal extension and will be deploying the 9.3.1 service pack 1 version as the initial Geoportal implementation.

This document addresses both scenarios. **IMPORTANT:** If you have already implemented the Geoportal extension 9.3.1 and just want to apply the service pack, 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 extension, begin at the first step below and follow these instructions all the way through.

If your organization has an older version of the Geoportal extension (GIS Portal Toolkit 3.1 or 9.3) and would like to upgrade to Geoportal extension 9.3.1 service pack 1, please contact ESRI support for guidance before proceeding.

After installing Geoportal extension 9.3.1 sp1, the WebHelp documentation available at http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm 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://webhelp.esri.com/geoportal_extension/9.3.1/preinstallation.htm.

2. SELECT AN AUTHENTICATION MECHANISM FOR THE GEOPORTAL EXTENSION

Geoportal extension 9.3.1 sp1 offers two different authentication mechanisms – 1. Simple Authentication and 2. 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 extension – the administrator. This user is specified in the main Geoportal extension configuration file, gpt.xml. Choosing this authentication mechanism does not require any additional external software to be installed. Single sign-on between the Geoportal extension 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 extension instance, please skip Section 3: Configuring a Directory Server for the Geoportal extension, and proceed to Section 4: Running the Geoportal extension Installer.

LDAP Authentication

For full functionality of user-based roles in Geoportal extension 9.3.1 sp1, 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 extension instance, please proceed with Section 3: Configure a Directory Server for the Geoportal extension.

3. CONFIGURE A DIRECTORY SERVER FOR THE GEOPORTAL EXTENSION

For a complete feature-rich Geoportal extension instance, 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 extension 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 extension.

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 softwares, 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 **distinguished name** (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 extension.

3.1.4. *Create an initial user*

In this step you will create a user entry, to which you will later grant Geoportal extension 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 1st box.
 - Re-enter the user password in the 2nd 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 extension roles. We suggest using the following user names:
- gptpublisher
 - gptuser

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

3.2. ADAPT AN EXISTING DIRECTORY SERVER

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

- Administrator
- Publisher
- Registered User

With LDAP authentication, the definition of the Geoportal extension 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 extension 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 extension 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 extension, or decide what the best possible mapping is of your existing groups to the new Geoportal extension 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 extension 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 extension 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 extension 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. RUN THE GEOPORTAL EXTENSION INSTALLER

The ArcGIS Server Geoportal extension comes with an installer that installs and unzips all the files that make up the ArcGIS Server Geoportal extension

- ☐ Insert the ArcGIS Server Geoportal extension 9.3.1 sp1 installation media
- ☐ Navigate the DVD to the setup.exe file and double click the setup.exe to launch installation.
- ☐ If you receive a security warning dialog, click Run.
- ☐ On the Welcome screen, click Next.
- ☐ Read and accept the license agreement. Click Next.

- ☐ Change or accept the default installation directory of C:\ESRI\Geoportal Extension 9.3.1. Click Next.
- ☐ Click Install.
- ☐ When the installer finishes, click Finish to dismiss the Installer dialog.

5. SELECT A DATABASE SCHEMA FOR THE GEOPORTAL EXTENSION

Geoportal extension 9.3.1 sp1 offers two different database models – 1) A Standalone Database and 2) An SDE-Enabled Database. The table below gives a quick summary of considerations for each option, followed by a more detailed explanation. A fully-functioning production-worthy geoportal is possible with either database model. Because the SDE-Enabled database will be deprecated in future Geoportal extension versions, ESRI strongly recommends that your organization pursues the Standalone Database model. The SDE-Enabled model should only be pursued if you are upgrading from a previous GIS Portal Toolkit 9.3 or a Geoportal extension 9.3.1 implementation that also used the SDE-Enabled database model.

| Feature | Standalone Database | SDE-Enabled Database |
|---|---------------------|----------------------|
| ArcSDE software required | | • |
| MetadataServer installation required | | • |
| Database must be XML-enabled | | • |
| Cross ownership between Geoportal and SDE databases | | • |
| ArcCatalog connectivity to Geoportal database | | • |
| Easy migration from GPT 9.3 | | • |
| Supported in future versions | • | |
| Simplified system architecture | • | |
| Quick installation | • | |
| Column in database containing full metadata record XML | • | |
| Use of Geoportal extension Publish Client in ArcCatalog | • | • |

Standalone Database : recommended for new Geoportal implementations

With the standalone database model, installation of the Geoportal extension is greatly simplified in that ArcSDE does not have to be present in the overall system architecture and the MetadataServer component does not have to be installed. This reduces the number of steps required for a complete installation of the Geoportal extension. However, if you have an existing GPT 9.3 database, you will not be able to make use of the update scripts in order to upgrade to Geoportal extension 9.3.1 sp1. Because the database changes using the Standalone Database model are extensive, you must create a new tablespace/database schema if you choose this model.

SDE-Enabled Database: recommended for migrating 9.3 Geoportal implementations to 9.3.1 sp1

The SDE-Enabled database model mimics the setup up the previous version of the Geoportal extension (GIS Portal Toolkit 9.3). With this database model ArcSDE is required and the MetadataServer component must be installed. Furthermore, the database needs to be XML-enabled. During database setup, the Geoportal database user and the SDE user must have owner privileges into each other's database.

The quickest and most seamless upgrade path from GIS Portal Toolkit 9.3 to the Geoportal extension 9.3.1 sp1 requires that the SDE-Enabled database model is retained. However, the SDE-Enabled database model is deprecated in Geoportal extension 9.3.1 sp1 and will not be available in future versions of the Geoportal extension.

6. SET UP THE DATABASE

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

If you are a Linux user, please refer to the document <Geoportal extension Installation Dir>Documentation\Installation\Geoportal931_InstallationGuide_Linux.pdf for Linux specific instructions.

For Windows users:

- Oracle users please follow the steps in section 6.1.
- SQL Server users please skip to section 6.2.
- PostgreSQL users please skip to section 6.3.

6.1. ORACLE

In this section you will set up the tablespace and schema that will be used for the Geoportal extension. The Geoportal extension 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 extension configuration files:

- Tablespace name: geoportal931
- Database User: geoportal931
- Database User Password: geoportal931pwd

6.1.1. *Setup the Geoportal extension 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 geoportal931 datafile 'C:\oracle\oradata\geoportal931.dbf' size 500M AUTOEXTEND ON;
- ☐ SQL>create user geoportal931 identified by geoportal931pwd default tablespace geoportal931 temporary tablespace temp;
- ☐ SQL>commit;
- ☐ SQL>quit.

6.1.2. *Create database schema*

Creating the database schema involves running two scripts:

1. A “grants” script that sets the user permissions for creating the geoportal931 schema.
2. A “create schema” script that creates the table structure, procedures and triggers and populates tables in the geoportal931 schema.

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



The “Grants” script differs depending on the database model you chose in Section 5. Make sure to run the appropriate script for your chosen database model.

If you chose the standalone database model, follow section 6.1.2.1. If you chose the sde-enabled database model, follow section 6.1.2.2. After the grants scripts is run, all Oracle users proceed to section 6.1.2.3

6.1.2.1. Standalone Database Model: 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
- geoportal931 username—The user name of the geoportal931 schema owner. Default = geoportal931

- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal extension Installation Dir>\Database Scripts\Oracle.
- ☐ Run the grants_proxy_oracle.cmd file from the command prompt window using the following parameters:
Usage: grants_proxy_oracle [sys username] [sys password] [geoportal931 username]
Where
[sys username] is the username of the sys user in Oracle
[sys password] is the password of the sys user in Oracle
[geoportal931 username] is the geoportal931 user

Sample Input: grants_proxy_oracle sys sys geoportal931

- ☐ 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.



You must fix any errors appearing in the grants.txt file. Do not continue until the script runs without errors!

6.1.2.2. SDE-Enabled Database Model: grants_oracle.cmd

Syntax of the grants_oracle.cmd

- sys username—Oracle database sys user name. Default = sys

- sys password—Password of the Oracle database sys user. Default = sys
 - geoportal931 username—The user name of the geoportal931 schema owner. Default = geoportal931
 - sde_username – The user name of the SDE user. Default = sde
- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal extension Installation 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] [geoportal931 username] [sde username]
Where
[sys username] is the username of the sys user in Oracle
[sys password] is the password of the sys user in Oracle
[geoportal931 username] is the geoportal931 user
[sde username] is the sde user
- Sample Input: grants_oracle sys sys geoportal931 sde
- ☐ 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.



You must fix any errors appearing in the grants.txt file. Do not continue until the script runs without errors!

6.1.2.3. All Oracle Database Models: Running create_schema_oracle.cmd

The create_schema_oracle script will create the necessary tables in Oracle to support the Geoportal extension 9.3.1 sp1 application. Run this script regardless of the database model you have chosen. This script is for new instances of the Geoportal extension, or for scenarios where you want to have a clean database. If you run this script on top of an existing Geoportal extension installation, you will overwrite your existing Geoportal database!

Syntax of the create_schema_oracle.cmd

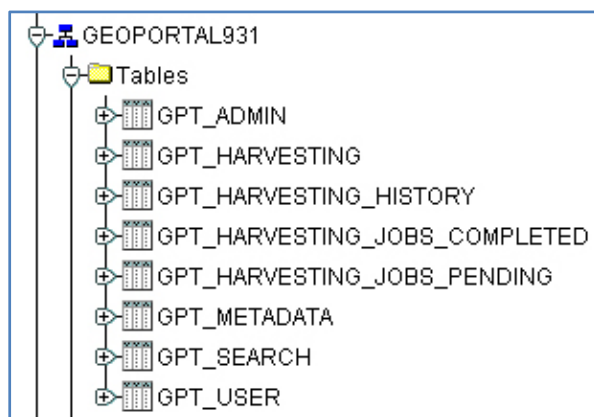
- geoportal931 username – The user name of the geoportal931 schema owner. Default = geoportal931

- geoportal931 _password—The password for the geoportal931 schema owner. Default = geoportal931pwd

- ☐ Open a command window. Start>Run>cmd
- ☐ Change the directory to the <Geoportal extension Installation 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 [geoportal931 username] [geoportal931 password]
Where
[geoportal931 username] is the username of the geoportal931 schema owner.
[geoportal931 password] is the password of the geoportal931 schema owner.

Sample Input: create_schema_oracle geoportal931 geoportal931pwd

- ☐ 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.



6.1.2.4. SDE-Enabled Database Model: Register your table with SDE



This step is only for users that have chosen the SDE-Enabled Database Model. If you chose the Standalone Database model, skip this step and proceed to Section 8.

Due to a known issue in Oracle SDE with regards to Oracle's handling of spatial types, one of the newly created tables (GPT_ADMIN) must be explicitly registered with SDE.

- ☐ Open a command window. Start>Run>cmd
- ☐ Change the directory to point to the <ArcSDE for Oracle>\etc folder

Run the following command:

```
sdetable -o register -t gpt_admin -C none -i sde_instance -s machineName -u gptUserName -p gptUserPassword
```

Example: `sdetable -o register -t gpt_admin -C none -i 5151 -s machineName -u gpt93 -p gpt93pwd`

6.2. 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 extension. The Geoportal extension 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 extension configuration files:

- Database name: Geoportal931
- Database Login and User: geoportal931
- Database Login and User Password: geoportal931pwd
- ☐ 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 extension Installation Dir>\Database Scripts\SQL Server folder



The script differs depending on the database model you chose in Section 5. Make sure to run the appropriate script for your chosen database model.

If you chose the standalone database model, follow section 6.2.1. If you chose the sde-enabled database model, follow section 6.2.2.

6.2.1. Standalone database model: Create database schema

☐ Run the `create_proxy_schema_mssql` script by typing the following:

```
create_proxy_schema_mssql [database server machine] [Geoportal database name] [Geoportal database user] [Geoportal database user password]
```

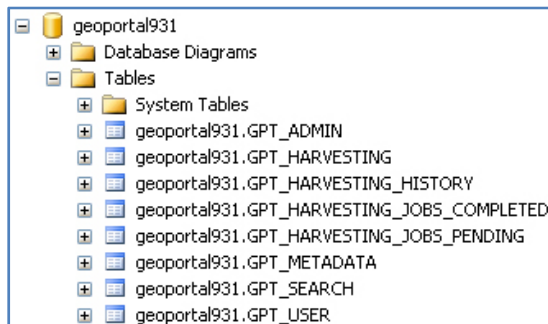
Where

- [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 of the Geoportal database.
- [Geoportal database user] is the name of the login and user that will have access to the Geoportal database
- [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_proxy_schema_mssql mymachine Geoportal931 geoportal931  
geoportal931pwd
```

- ☐ 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_METADATA_IDX1' 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_ADMIN_IDX4' 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_ADMIN_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_ADMIN_IDX7' has maximum length of 4000 bytes. For some
combination of large values, the insert/update operation will fail.
```

6.2.2. *SDE-Enabled database model: Create database schema*

□ 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]
[sde user]
```

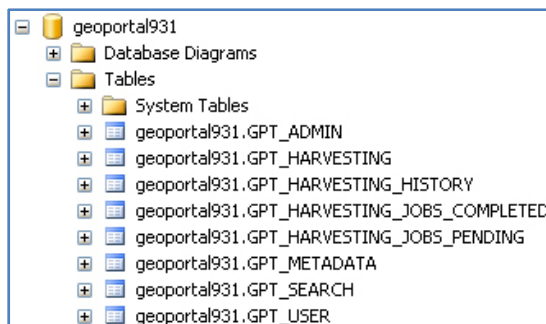
Where

- [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 of the Geoportal database.
- [Geoportal database user] is the name of the login and user that will have access to the Geoportal database
- [Geoportal database user password] is the password for the login and user of the Geoportal database
- [sde user] is the SDE user

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

```
create_schema_mssql mymachine Geoportal931 geoportal931
geoportal931pwd sde
```

- 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 ignore.

Warning! The maximum key length is 900 bytes. The index 'GPT_METADATA_IDX1' 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_ADMIN_IDX4' 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_ADMIN_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_ADMIN_IDX7' has maximum length of 4000 bytes. For some combination of large values, the insert/update operation will fail.

6.2.3. SDE-Enabled database model: Set user permissions

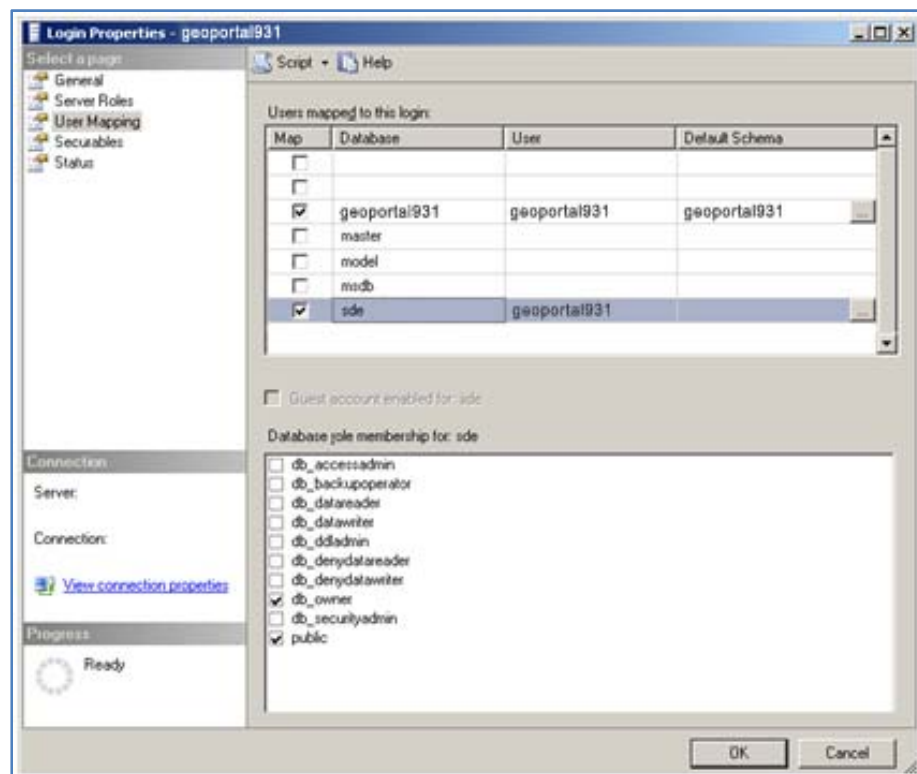


This step is only for users that have chosen the SDE-Enabled Database Model. If you chose the Standalone Database model, skip this step and proceed to Section 8.

The Geoportal931 user that was created by the schema setup script needs to be given permissions to the SDE database.

- ☐ Connect to the database server with a login that can access both the SDE and the Geoportal931 database, such as the “sa” login. Logging in with your geoportal931 user credentials may not give you access to the SDE database.
- ☐ Open the “Security” folder in the main catalog tree.
Note: *There is a security folder under each database as well. In this step however, you want the security folder under the main Server node.*
- ☐ Select Logins

- ☐ Right-click the geoportal931 login from the right-hand pane and choose Properties
- ☐ In the top-left “Select a page” section, select “User Mapping”.
- ☐ In the “Users mapped to this login” pane, check the box next to the “sde” database and the “geoportal931” database.
- ☐ In the “Database role membership” pane, check the box next to db-owner for each database name you selected in the previous step.



- ☐ Click OK.

6.2.4. *SDE-Enabled database model: Create a full-text catalog for the Geoportal931 database*

- Expand the Storage folder under your Geoportal931 database, and expand the Full Text Catalogs folder. If there is no entry titled ‘SDE_DEFAULT_CAT’, then right click on Full Text Catalogs and select “New Full Text Catalog”.

- In the New Full Text Catalog window, type SDE_DEFAULT_CAT in the field for Full-text catalog name.
- Accept all other defaults, and click OK to close the dialog. You should now see your SDE_DEFAULT_CAT full text catalog under the Full Text Catalog folder.
- For more information about full text catalogs, see <http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Configuring a SQL Server database to support XML columns&anchor=cs164794>

6.3. PostgreSQL

Setting up a PostgreSQL database for the Geoportal extension 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 geoportal931 schema
2. A “create schema” script that creates the table structure, procedures, and triggers and populates tables in the geoportal931 schema.

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



The “Grants” script differs depending on the database model you chose in Section 5. Make sure to run the appropriate script for your chosen database model.

If you chose the standalone database model, follow section 6.3.1. If you chose the sde-enabled database model, follow section 6.3.2. After the grants scripts is run, all PostgreSQL users proceed to section 6.3.3

6.3.1. Standalone Database Model: *grants_proxy_pg.cmd*

This script creates a database schema called ‘geoportal931’, as well as an associated user, also named ‘geoportal931. It also establishes permissions for the geoportal931 user to the geoportal931 schema.

- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal extension Installation Dir>\Database Scripts\PostgreSQL.

- ☐ Run the grants_proxy_pg.cmd file from the command prompt window using the following parameters:

Usage: grants_proxy_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=geoportal931

[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=geoportal931

Sample Input: grants_proxy_pg localhost 5432 postgres geoportal931 postgres
geoportal931

- ☐ When prompted with the message "Enter password for new role:", input the password for the geoportal931 user
- ☐ When prompted with the message "Enter it again:", input the password for the geoportal931 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.



You must fix any errors appearing in the grants_pg.txt file. Do not continue until the script runs without errors!

6.3.2. SDE-Enabled Database Model: grants_pg.cmd

This script creates a database schema called 'geoportal931', as well as an associated user, also named 'geoportal931'. It also establishes permissions for the geoportal931 user to both the geoportal931 schema and the sde schema.

- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Change directories to point to <Geoportal extension Installation Dir>\Database Scripts\PostgreSQL.

- ☐ Run the grants_pg.cmd file from the command prompt window using the following parameters:
Usage: grants_pg [host] [port] [sde database] [sdeUser] [geoportal schema] [sde schema] [geoportalUser]
Where
[host] is the machine name hosting PostgreSQL
[port] is the port number of PostgreSQL. Default = 5432
[sde database] is the SDE database name. Default = sde
[sdeUser] is the sde user. Default = sde
[geoportal schema] is the name for the geoportal schema. Default=geoportal931
[sde schema] is the name of the sde schema. Default = sde
[geoportalUser] is the name for the geoportal schema owner. Default=geoportal931

Sample Input: grants_pg localhost 5432 sde sde geoportal931 sde geoportal931

- ☐ When prompted with the message "Enter password for new role:", input the password for the geoportal931 user
- ☐ When prompted with the message "Enter it again:", input the password for the geoportal931 user again.
- ☐ When prompted with the message "Password:", input the password for the sde user.
- ☐ When prompted with the message "Password for user sde:", input the password for the sde 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.



You must fix any errors appearing in the grants_pg.txt file. Do not continue until the script runs without errors!

6.3.3. All PostgreSQL Database Models: 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

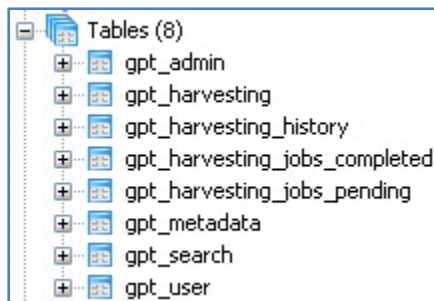
[port] is the port number of PostgreSQL. Default = 5432

[geoportal database] is the Geoportal database name. Default = geoportal931

[geoportal user] is the name for the geoportal schema owner. Default = geoportal931

Sample Input: `create_schema_pg machineName 5432 geoportal931 geoportal931`

- ☐ When prompted with the message “Enter password for geoportal931 user:”, input the password for the geoportal931 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:



7. INSTALL THE METADATASERVER (SDE-ENABLED DATABASE MODEL ONLY)

If you chose the Standalone database model, skip this section and proceed to Section 8. This step only applies if you have chosen the SDE-Enabled database model.

The SDE-Enabled database model requires that you install the MetadataServer component. This will create additional tables in your database, and will create a Windows Service or Linux daemon.

Installation instructions for the MetadataServer are available in the document *Geoportal931_Installing_MetadataServer.pdf* in the <Geoportal extension Installation Dir> \Documentation\Installation folder.

8. DEPLOY AND CONFIGURE THE GEOPORTAL EXTENSION APPLICATION

This step deploys the ArcGIS Server Geoportal extension 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: <Geoportal extension Installation Dir>\Documentation\Installation\Geoportal931_InstallationGuide_WebLogic.pdf*
- *GlassFish: <Geoportal extension Installation Dir>\Documentation\Installation\Geoportal931_InstallationGuide_GlassFish.pdf*
- *ServletExec : <Geoportal extension Installation Dir>\Documentation\Installation\Geoportal931_InstallationGuide_ServletExec.pdf*

8.1. DEPLOY GEOPORTAL.WAR

- ☐ Copy the `geoportal.war` file from the <Geoportal extension Installation 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.

8.2. CONFIGURE GEOPORTAL

- ☐ Navigate to: <Tomcat Installation Directory>\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 Section 8.2.4, 'Optional Configurations within gpt.xml'.

8.2.1. 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. Default: http://serverapi.arcgisonline.com/jsapi/arcgis/?v=1.5 | 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: http://localhost:8399/arcgis/rest/services/MapServiceName/MapServer | Any valid REST URL pointing to an ArcGIS Server map service. |
| | mapServiceType | The caching scheme for the map service | String. “dynamic” or “tiled”. Note: the search map may not display tiled services correctly. It is recommended that this setting be set to “dynamic” for best |

| | | |
|-----------------------------|---|---|
| | | results. |
| geometryServiceUrl | REST URL to a geometry service that is used to handle the projection of coordinates when using a projected map service. Example: http://localhost:8399/arcgis/rest/services/Geometry/GeometryServer | 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 |
|---|--------------------------------|--|---|
| | metadataServerTimeoutMillisecs | The number of milliseconds before the metadata server times out. This setting is ignored if you are using the Standalone Database Model as per Section 5. | Any integer. A value of 0 represents no timeout. |
| | metadataServerPublishService | The name of the metadata server metadata service on which there are write permissions. If the SDE-Enabled database model is used, this information will be used for the Metadata Service parameter in the Publish Client tool. | String representing a service name. Default: GPT_Publish_Metadata |
| | metadataServerBrowseService | The name of the metadata server metadata service which is accessible anonymously. | String representing a service name. Default: GPT_Browse_Metadata |

| | | |
|-------------------------|---|--|
| metadataServerTableName | The name of the key metadata server service table name, as established with the metadata server services are first started. | String representing the root Geoportal table name. Default: GPT_METADATA. Note: If the SDE-Enabled Database Model was selected, the value needs to match the table name as specified in the MetadataServer's PTWeblink.cfg file. (see section 7). Default becomes GPT_META |
| gptTablePrefix | The prefix that is used for all database tables created for the Geoportal | String representing a table prefix. Default: GPT_ |
| mvsTablePrefix | For migration from GPT 9.3 only. The prefix that is used for all database tables used by the Map Viewer Solution, if it was deployed in a past GPT installations. | String representing a table prefix. Default: MVS_ |

The *useMetadataServerProxyMode* setting refers to the database model, as outlined in Section 5. By default, its value is set to “true”, meaning that the Geoportal extension is to use the Standalone Database Model. The other attributes that follow in the metadataServerSocketQueue tag are not needed for the Standalone Database Model and are commented out. If the Standalone Database Model is your chosen model, you do not have to modify any of the settings in the table below and can skip to the next table after this one. If you chose the SDE-Enabled database model however, the settings do need to be enabled – by uncommenting this section - and modified. They contain general information about how the Geoportal should behave in its communication with the metadata server. Set the following properties:

| ✓ | Property Name | Function | Accepted Values |
|--|----------------------------|--|---|
| | useMetadataServerProxyMode | Whether the Standalone Database model is chosen (value=true) or the SDE-Enabled Database Model is chosen (value=false) | True or false for the value of the “value” attribute. |
| <i>The remainder of the settings in this table are only to be set when using the SDE-Enabled Database Model (e.g., useMetadataServerProxyMode value="false")</i> | | | |

| | | |
|---------------------------|---|--|
| MetadataServerSocketQueue | The section of parameters giving information about the Metadata Server. | Uncomment this line by deleting the <!-- at the beginning of the line and the --> at the end of the section. |
| Host | The machine name on which the Metadata Server is installed. | String representing a machine name. |
| Port | The port number on which the Metadata Server is installed | Default: 9000. Refer to setup steps in section 7. |
| tokenSize | Specifies how many request tokens can be used at a time | Any integer. Default is 10. A value of 0 represents no limits on the number of requests sent at one time. |
| waitSeconds | Specifies the number of seconds a request will wait for a token before timing out. | Any integer. |
| sleepMillis | Specifies the number of milliseconds a request waiting for a token will wait before asking for a token again. | Any integer. |
| orphanSeconds | Specifies how many seconds the application will wait for a token to be returned before reclaiming it. | Any integer. |
| windowsServiceName | The name of the Windows Metadata Service, created in step 7. Default: MetadataServer | String representing the Windows Metadata Service Name. |

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 webhelp

http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#srch_lucene2.htm 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 http://lucene.apache.org/java/2_4_0/api/org/apache/lucene/store/NativeFSLockFactory.html | Boolean value: "true" or "false". Default: "true" |
| analyzerClassName | The class name for the Lucene analyzer | Default: org.apache.lucene.analysis.standard.StandardAnalyzer |

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 |
| | 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 |
| | cswServletUrlProfile | The name of the default CSW profile at the cswServletUrl location. | String representing a profile name. |
| | mapViewerUrl | URL to a map viewer application, if one is to be deployed. This is an optional customization, see webhelp at http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#map_viewer.htm | Valid URL. i.e. http://localhost/mvs_viewer or a blank value "" indicating no map viewer. |
| | gpt2cswXslt | Location of XSLT file responsible for transforming Geoportal csw search criteria to standard OGC CSW search criteria. | Relative path pointing to XSLT location, starting at WEB-INF\classes. |
| | maxSavedSearches | The maximum number of allowed searches in storage, per user. | Any integer. Default: 10 |

| | | |
|---|--|----------------------------------|
| allowExternalSiteSearch | Whether to enable “direct search” thereby searching other catalogs without prior harvesting. | Boolean value: “true” or “false” |
| For the <repositories> tag: Each <repository> child tag represents a default repository that will appear in the “Search in” list when using direct search from the search interface. By default, the local Geoportal, ArcGIS Online, and any registered CSW repositories are included in the list of choices of where to direct the search. | | |

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"> 1. Unrestricted 2. Public-protected 3. Restricted |
| | 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 *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 the webhelp at http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#gpt_datadownload.htm. By default, the taskURL and mapServiceURL are left blank and the download tab will not show up in the Geoportal interface.

| v | Property Name | Function | Accepted Values |
|---|-----------------------|---|--|
| | taskUrl | REST URL to a geoprocessing service containing an extract data task and map layers to be used by the data download functionality. | Any valid REST URL pointing to an ArcGIS Server geoprocessing service containing the extract data task. |
| | mapServiceURL | REST URL to a map service that is to be used in conjunction with the data download. Note: The layers of this map service must be the same as defined within the geoprocessing service. | A valid REST URL pointing to the map service associated with the geoprocessing service. This cannot be a random map service. |
| | mapServiceType | The caching scheme for the map service | String. "dynamic" or "tiled" |
| For the <projections> tag: Each <projection> child tag represents a projection that is listed in the projections drop-down list on the data download page. You may add to, modify or delete from this list as needed. Set the attributes of each <projection> tag as follows: | | | |
| | Attribute Name | Function | Accepted Values |
| | key | Represents the name of the file that defines the projection, and is included in the geoprocessing task. | Please see the data download documentation for a list of accepted values. |
| | alias | Represents the numeric code for the given projection. | Please see the data download documentation for a reference to projection codes. |
| | resKey | Reference to a key in the gpt.properties resource file. The value of this key is what will be displayed in the drop-down list. | The value should be of the format: catalog.download.projection.projectionID (an integer) |
| For the <formats> tag: Each <format> child tag represents an output format that is listed in the output formats drop-down list on the data download page. You may add to, modify or delete from this list as needed. Set the attributes of each <format> tag as follows: | | | |
| | Attribute Name | Function | Accepted Values |
| | Key | Represents the FME (Feature Manipulation Engine) recognized output | Please see the data download documentation for |

| | | |
|--------|--|---|
| | format code, and output file extension. | a list of accepted values. |
| Alias | Represents an “easy” reference to the more complicated key value. | Any string that uniquely identifies its corresponding key value. |
| resKey | Reference to a key in the gpt.properties resource file. The value of this key is what will be displayed in the drop-down list. | The value should be of the format: catalog.download.outputFormat. <i>anyString</i> |

8.2.2. Authentication Settings

The *identity* section defines the settings for the Geoportal extension’s 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.

| ✓ | 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 as noted below. |
| | realm | Displayed during publisher login for editing a metadata record in an external XML editor | Any String. Default: “Geoportal” |

There are two important things to note about the encKey attribute:

1. 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.
2. The same key that is specified in this gpt.xml file is used when transmitting repository information to the Harvesting Tool and Harvesting Service. Thus, both of these desktop

tools have to be set up with the same encKey value as is defined in gpt.xml. For the Harvesting Tool, the encryption key is stored in the registry in two places:

- a) HKEY_CURRENT_USER\Software\ESRI\Applications\Portal_Harvesting_Tool\Harvester\EncryptionKey
- b) HKEY_LOCAL_MACHINE\SOFTWARE\ESRI\Applications\Portal_Harvesting_Tool\Harvester\EncryptionKey

Furthermore, if the Harvesting Tool is used to connect to multiple Geoportals, the encKey value has to either match amongst all the Geoportals, or be changed each time the Harvesting Tool connects to a Geoportal that has a different encKey value.

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 the section "Encryption Concepts" in the Web Help document http://webhelp.esri.com/geoportal_extension/9.3.1/security.htm | 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 information 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. Please note that 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, IBM Tivoli Directory Server, or other directory server software, please see the KB article at

<http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=37191>

| v | 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. ldap://machine:port. 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 Example: "uid=admin,ou=system" |
| | 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: "secret" |
| | Encrypted | Specifies whether the password value set in the securityCredentials parameter is encrypted or not. For instructions on encrypting your password, refer to the section "Encryption Concepts" in the Web Help document http://webhelp.esri.com/geoportal_extension/9.3.1/security.htm | True or false |

| | | |
|----------------|--|---|
| catalogAdminDN | The LDAP distinguished name of the gpt administrator as set up in section 3.1.4. Note: This user must be a member of the Geoportal Administrators group. | Any valid DN string. For Apache Directory server, could be the following: "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://webhelp.esri.com/geoportal_extension/9.3.1/gpt_single_signon.

| ✓ | Property Name | Function | Accepted Values |
|---|--------------------|--|--|
| | active | Whether single sign-on is enabled or not. | True or False. 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 or False. 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 or False. 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 or False. 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 | True or False. Default: true |

| | | |
|---------------------------|---|---------------------------------|
| | managed by the directory server (such as email, name, phone number, etc.) through the geoportal interface, set this to False. | |
| supportsPassword Change | Whether users can modify their password in the Geoportal interface. | True or False. Default: true |
| supportsPassword Recovery | Whether the “Forgot Password” functionality is active. | True or False. 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 |
|---|--------------------------------|---|---|
| | authenticatedUser RequiresRole | Whether each user of the Geoportal has to be assigned to at least one role. | True or False. 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 Example: "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 Example: "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. 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 Example: "cn=gpt_administrators,ou=groups,ou=system" |

The *users* settings determine properties of user accounts. Set the properties as per the table below. For an example of Windows Active Directory settings, see the knowledge base article

<http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=37191>.

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" Default: "SHA" |
| | newUserDNPattern | The pattern of the distinguished name for new users. | String value representing a DN pattern, pointing to the users node. 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 Directory Information Tree to search for when searching for users. | LDAP DN representing the "Users" organizational unit entry. 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. For Windows Active Directory, see the knowledge base article referenced in the previous user settings section. 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 | String representing a group entry attribute name. |

| | | |
|--------------------------|---|---|
| | to which a user belongs | Default: "" |
| dynamicMembers Attribute | 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 to search for when searching for groups. | LDAP DN representing the "Groups" organizational unit entry. 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 |

8.2.3. Scheduler Settings

The *scheduler* settings define the properties for Catalog synchronization, as well as the Harvester, File cleanup, and (optional) ArcGIS Server synchronization services. Please refer to the Post-deployment Geoportal Webhelp at http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#post_deploy.htm#scheduler_sync for important considerations when setting the scheduler settings.

Catalog synchronization is a process that ensures that the Lucene indexing is synchronized with the GPT_METADATA (or GPT_META if using the SDE-Enabled database model) and GPT_ADMIN tables. 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[HOUR] |
| | 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 <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. |

The Harvested documents cleanup is a process which checks each metadata document that has been harvested into the Geoportal from another catalog to see if it still exists in the other catalog. If the document has been deleted from the other catalog, the Harvester cleanup process will delete the document from the Geoportal catalog. The <thread> element of the Harvested documents cleanup has a class value of "com.esri.gpt.catalog.harvest.cleanup.CleanupThread", 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 scheduler to run. | Time specified in HH:MM format. |

The file cleanup is a process which deletes files from a defined directory that are older than a specified time. If you chose the Standalone Database model, the file cleanup process is not needed, and can remain commented out.

If you chose the SDE-Enabled Database model however, when the Metadata Server was installed in Section 7, its resulting property file, the PtWeblink.cfg file, will have an output directory defined. This directory should be cleaned up at regular intervals to avoid large amounts of disk space being used up by obsolete files. For each metadata document that is returned in a search result, a corresponding XML is written to the output directory. After a certain time period this XML will no longer be needed, or if it is needed again, it will be regenerated. Therefore the directory should be purged of these old files. The <thread> element for the file cleanup has a class value of "com.esri.gpt.framework.scheduler.FileCleanupThread ", which should not be changed.

| ✓ | Property Name | Function | Accepted Values |
|---|--|---|---|
| | <i>The settings in this table are only to be set when using the SDE-Enabled Database Model. Enable or disable these settings by using "<!--" and "-->" comment markings.</i> | | |
| | 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: 2[HOUR] |
| | delay (optional) | 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: 5000 |
| | folderPath | The absolute path to the directory that should be cleaned up, as defined in the <MetadataServer>\etc\PtWeblink.cfg file Default: <Tomcat>\webapps\servlet\Output | String value representing an absolute file path. |
| | filePrefix | The prefix of the files that are candidates for cleanup | Comma-delimited string value representing a whole or partial filename. i.e. GPT, Metadata |
| | fileSuffix | The file extension of all files that are candidates for cleanup | Comma-delimited string value representing known file extensions. i.e. xml, gif, jpg |
| | expirationTime Minutes | The number of minutes that must pass before a file is deemed obsolete | Integer value representing number of minutes. i.e. 15 |

It is possible to automatically synchronize the content of an ArcGIS server with the Geoportal catalog. This means that for the ArcGIS Servers listed in the gpt.xml file with a <thread class="com.esri.gpt.catalog.arcgis.metadata.AGSSynchronizer" > element, the Geoportal will update its catalog as services are added, deleted, or updated. All services running on the ArcGIS Server will be synchronized, including GeoDataServer services. This includes layers with metadata within the GeoDataServer service as well.

Each ArcGIS server which should be synchronized will need a `<thread class="com.esri.gpt.catalog.arcgis.metadata.AGSSynchronizer">` element with the four parameters shown in the table below. Additionally, the opening `<thread>` element itself has two attributes: *period* and *delay*. *Period* specifies the time intervals at which synchronization with the ArcGIS Server should occur. *Delay* specifies the initial delay before synchronization with the ArcGIS Server should occur after an application start. Time units for both can be [millisecond] (Default), [second], [minute], [hour], [day], [week], [month]. **Note:** If multiple AGSSynchronizer threads are configured (the case if more than one ArcGIS Server instance should be synchronized), then it is important to stagger the start times for synchronization by setting a different period and/or delay value. If two threads are scheduled to start at the same time, the second thread will not start. See http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#post_deploy.htm#scheduler_syntax for more information.

| ✓ | Property Name | Function | Accepted Values |
|---|---------------------------|--|--|
| | restUrl | REST URL for the ArcGIS Server to be synchronized. | String. Example: http://host:port/arcgis/rest/services |
| | soapUrl | SOAP URL for the ArcGIS Server to be synchronized | String. Example: http://host:port/arcgis/services |
| | autoApprove | If "true" then new catalog entries will be automatically approved | Integer value + optional time unit. Default: 5000 |
| | updateOnlyIfXMLHasChanged | if "true" then catalog entries will be updated only if the associated metadata XML has changed | String value representing an absolute file path. |

The `z3950Client` tag references the Java class that is used for various operations against Z39.50 repositories. You may leave it set to the default.

| ✓ | Property Name | Function | Accepted Values |
|---|---------------|--|---------------------------------------|
| | Class | Specifies the Java class used for operations against Z39.50 repositories | String value specifying a class path. |

8.2.4 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, additional parameters associated with the

Metadata Server (if deployed), reverse proxy settings, schema caching, spatial relevance settings, class settings for Lucene, identifying resource links, building REST URLs, and rendering live data through the Previewer, settings for how ArcGIS Server service endpoints are processed on the Upload page, and additional settings for the catalog synchronization thread. 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.

| ✓ Tag path in gpt.xml | Text with functionality in comments |
|-----------------------------|---|
| gptConfig/forwardProxyAuth | <p><!-- 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>--></p> <pre><forwardProxyAuth username="" password="" encrypted="false"/></pre> |
| gptConfig/catalog/parameter | <p><!-- Optional catalog parameters</p> <p>useMetadataServerProxyMode: indicates if the site is running with or without a metadata server component</p> <p>valid values: "true" or "false" ("true" indicates no metadata server)</p> <p>default = false</p> <p>reverseProxy.baseContextPath: useful for generated full callback URLs when the site is fronted by a reverse proxy</p> <p>default = auto generated - http://host:port/application</p> <p>rssProviderUrl: the provider URL included within RSS responses,</p> <p>default = auto generated - http://host:port/application</p> <p>BaseServlet.autoAuthenticate: indicates if the com.esri.gpt.framework.context.BaseServlet class should auto-authenticate credentials found within an HTTP request header</p> <p>valid values: "true" or "false"</p> <p>default = true</p> <p>cacheSchemaDefinitions: indicates if metadata schema definition files should be cached. Caching improves production performance but can be over-ridden while developing definitions</p> <p>valid values: "true" or "false"</p> <p>default = true</p> <p>spatialRelevance.queryPower: spatial relevance weighting power associated with the query envelope (input as criteria)</p> <p>default = 2.0</p> |

spatialRelevance.targetPower: spatial relevance weighting power associated with the target envelope (stored within the database)
 default = 0.5

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

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 = 50000

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

AGSPProcessor.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

| | |
|--|--|
| | <p>AGSPProcessor.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</p> <p>AGSPProcessor.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</p> <p>AGSPProcessor.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) --></p> <pre> <parameter key="useMetadataServerProxyMode" value="false"/> <parameter key="reverseProxy.baseContextPath" value="http://host:port/application"/> <parameter key="rssProviderUrl" value="http://host:port/application"/> <parameter key="BaseServlet.autoAuthenticate" value="true"/> <parameter key="cacheSchemaDefinitions" value="true"/> <parameter key="spatialRelevance.queryPower" value="2.0"/> <parameter key="spatialRelevance.targetPower" value="0.5"/> <parameter key="spatialRelevance.ranking.enabled" value="auto"/> <parameter key="spatialRelevance.ranking.maxDoc" value="50000"/> <parameter key="discoveryQueryAdapter" value="com.esri.gpt.catalog.lucene.LuceneQueryAdapter"/> <parameter key="lucene.useSingleSearcher" value="false"/> <parameter key="resourceLinkIdentifier" value="com.esri.gpt.catalog.search.ResourceIdentifier"/> <parameter key="resourceLinkBuilder" value="com.esri.gpt.catalog.search.ResourceLinkBuilder"/> <parameter key="restUrlBuilder" value="com.esri.gpt.catalog.search.RestUrlBuilder"/> <parameter key="liveDataRendererFactoryBuilder" value="com.esri.gpt.control.livedata.LiveDataRendererFactoryBuilder"/> <parameter key="AGSPProcessor.interrogation.enabled" value="true"/> <parameter key="AGSPProcessor.GeoDataServer.recurse" value="true"/> <parameter key="AGSPProcessor.GeoDataServer.maxDataElements" value="200"/> <parameter key="AGSPProcessor.GeoDataServer.expandDescendants" value="false"/> </pre> |
| gptConfig/catalog/scheduler/thread/@class="com.esri.gpt.catalog.context.Cata | <p><!-- Optional parameter configuration for catalog synchronization thread element</p> <p>useLuceneIndexSynchronizer: should be set to true (the false setting is only</p> |

| | |
|------------------|---|
| logSynchronizer" | <p>intended for backward compatibility) valid values: "true" or "false" default = true</p> <p>feedbackSeconds: an approximate number of seconds between FINER log messages default = 120</p> <p>maxDeleteTokens: the maximum number of deletions to execute in a single transaction default = 1000</p> <p>maxSqlTokens: for an SQL SELECT statement, the maximum number of OR operators to include in a single WHERE clause default = 1000</p> <p>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</p> <pre>--> <!-- Catalog synchronization --> <thread class="com.esri.gpt.catalog.context.CatalogSynchronizer" period='1[HOUR]' delay="30[SECOND]"> <parameter key="useLuceneIndexSynchronizer" value="true"/> <parameter key="feedbackSeconds" value="120"/> <parameter key="maxDeleteTokens" value="1000"/> <parameter key="maxSqlTokens" value="1000"/> <parameter key="maxUuidCache" value="100000"/> </thread></pre> |
|------------------|---|

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

9. DEPLOY AND CONFIGURE THE SERVLET APPLICATION

This step deploys the servlet application. The servlet is responsible for communication between the Geoportal and ArcCatalog when using the Publish Client tool. First you will deploy the servlet.war file, and then you will configure its property file so that the web application can successfully communicate with other components of your system.

9.1. DEPLOY SERVLET

- ☐ Copy the servlet.war from the <Geoportal extension 9.3.1 sp1 Distribution>\Web Applications\Servlet folder to your <Tomcat>\webapps folder.

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

9.2. CONFIGURE SERVLET

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



The next two steps are only for users that chose the SDE-Enabled database model and have the Metadata Server installed.

If you chose the SDE-Enabled database, and installed the Metadata Server in Section 7, its resulting property file, the PtWeblink.cfg file, had an output directory defined. Now that the servlet web application has been deployed, you need to create this directory.

- ☐ Navigate to <Tomcat Installation Directory>\webapps\servlet
- ☐ Create a new directory called “Output” (Case-Sensitive!). Make sure that the value in the ‘folderPath’ parameter in the gpt.xml file’s <scheduler> settings maps to the filepath of this Output folder.

10. TOMCAT CONFIGURATION

This step completes the Tomcat setup to account for the new web applications you just deployed.

10.1. SET UP JNDI

By setting up a Java Naming and Directory Interface (JNDI), the database connection information is defined in only one spot. The connection definition is given a name, and it is by this name that other parts of the code access the database connection information they need.

- ☐ Copy the database jdbc driver from the <Tomcat Installation Directory>\webapps\geoportal\WEB-INF\lib 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

Which jar file?

- For Oracle databases this is the ojdbc5.jar
 - For PostgreSQL databases this is the postgresql-8.3-603.jdbc3.jar
 - For SQL Server 2005 or SQL Server 2008 databases, read the following:
 - The SQL Server drivers have strict requirements on the Java runtime environment (JRE) version. The sqljdbc.jar must be used when the JRE is version 5, and the sqljdbc4.jar must be used when the JRE is version 6.
 - For environments using Tomcat 5.x and JRE 5, delete the sqljdbc4.jar from the <Tomcat Installation Directory>\webapps\geoportal\WEB-INF\lib . Copy the sqljdbc.jar file to the <Tomcat Installation Directory>\common\lib folder.
 - For environments using Tomcat 6.x and JRE 6, delete the sqljdbc.jar from the <Tomcat Installation Directory>\webapps\geoportal\WEB-INF\lib . Copy the sqljdb4c.jar file to the Tomcat 6.x: <Tomcat Installation Directory>\lib folder.
- ☐ Copy the “geoportal.xml” file from the <Geoportal extension Distribution>\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 | Oracle: oracle.jdbc.driver.OracleDriver |

| | | | |
|----------|--------|----------------------------------|---|
| | | name. Vendor specific. | SQL Server: com.microsoft.sqlserver.jdbc.SQLServerDriver PostgreSQL: org.postgresql.Driver |
| url | Line 6 | The JDBC URL connection string | Oracle*: jdbc:oracle:thin:@serverName:1521:oracleSID SQL Server: jdbc:sqlserver://serverName:1433;databaseName=Geoportal931 PostgreSQL: jdbc:postgresql://serverName:5432/postgres |
| username | Line 7 | Geoportal database user | username="geoportal931" |
| password | Line 8 | Geoportal database user password | password="geoportal931pwd" |

* 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 at:

Oracle: http://www.oracle.com/technology/tech/java/sqlj_jdbc/index.html

SQLServer: <http://msdn.microsoft.com/en-us/library/bb469732.aspx>

PostgreSQL: <http://jdbc.postgresql.org/documentation/83/index.html>

10.2. RESTART TOMCAT AND WEB SERVER

The final step is to restart the web server and servlet engine so that all the recent changes are recognized.

- ☐ Open the Services panel. Start>Administrative Tools>Services.
- ☐ Highlight Apache Tomcat and select the Restart Service button from the toolbar or right-click and select Restart.
- ☐ If you are using IIS, highlight IIS Admin Service and select the restart button or link. When prompted about restarting associated services, click yes.

If you are using Apache web server, highlight Apache and select the restart button or link.

11. SMOKETEST THE GEOPORTAL

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 (http://webhelp.esri.com/geoportal_extension/9.3.1/post_deploy.htm) before the Geoportal goes into production.

If you encounter errors during the smoketest, review your 'gpt' logfiles (Tomcat\logs) and see the help documentation for Common Problems and Solutions at http://webhelp.esri.com/geoportal_extension/9.3.1/trblshtg.htm

- ☐ Launch the geoportal web application in a web browser. A sample url: <http://serverName:port/geoportal> .
- ☐ Click 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 Create link. You will be creating a simple Dublin Core metadata record for testing.
- ☐ Select "Dublin Core" radial
- ☐ Fill out information for all required fields. Required fields have bold/italic headings.
- ☐ Click Submit 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 dropdown box. Then click "Execute Action" button
- ☐ Document should be set as approved
- ☐ Click 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 window

12. 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, ArcGIS Server services, or database.

12.1. HARVESTING TOOL

The Harvesting Tool is a desktop Visual Basic 6 application that lets you collect metadata from external repositories and optionally, publish it right away to your Geoportal. For more information about Harvesting, see webhelp at

http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#harvesting.htm . **Note:**

Microsoft .NET Framework 2.0 or higher should be installed on the machine hosting the Geoportal Harvesting Tool and the Harvesting Service

- ☐ If you will be harvesting from a Z39.50 repository, you must first install a third-party software component called ZMARCO. ZMARCO is a downloadable tool available from <http://zmarco.sourceforge.net/> . Download ZMARCO to your machine, unzip the downloaded file, and double-click setup.exe to start the installation. When the installer asks to replace or keep a newer version of an existing file, choose to keep the newer version.
- ☐ Open the <Geoportal extension Installation Dir>\Desktop Tools\HarvestingTool directory.
- ☐ Double-click on the setup.exe file.
- ☐ Follow the instructions throughout the Install Wizard. Default options can be accepted all the way through.
- ☐ Choose Start->All Programs->ESRI->Geoportal Extension->Harvesting Tool to launch the Harvesting Tool.

Refer to the Geoportal extension Web Help for usage instructions.

http://webhelp.esri.com/geoportal_extension/9.3.1/harvesting.htm

12.2. HARVESTING SERVICE

The Harvesting Service is a Windows service that works as a scheduled process to harvest from registered repositories at specified time intervals. The Harvesting Service pings the

Geoportal and retrieves information on which repositories are queued to be harvested at that time. The sections below describe how to configure the HarvestConfig.xml file, specify parameters in the installer, and configure the installed Harvesting Service.

12.2.1. Create HarvestConfig.xml – the Harvesting Service Configuration file

Before installing the Harvesting Service, you will need to create a configuration file called HarvestConfig.xml. A sample document is provided in the <Geoportal extension Installation Dir>\Desktop Tools\Harvesting Service folder. You may use this document as a template.

- ☐ Navigate to the <Geoportal extension Installation Dir>\Desktop Tools\Harvesting Service folder and copy the HarvestConfig.xml file.
- ☐ Navigate to the directory where the Harvesting Tool is installed (e.g., C:\Program Files\ESRI\Geoportal) and paste the HarvestConfig.xml file there.
- ☐ Open this pasted version of the HarvestConfig.xml file in Notepad. Its text should be similar to the text shown below:

```
<?xml version="1.0" encoding="UTF-8"?>
<job>
  <autopublish>True</autopublish>
  <autosave>False</autosave>
  <repository>
  </repository>
  <publish>
    <publishserviceurl>http://machineName/geoportal_appName/HarvestPublish.do</publishserviceurl>
    <user>geoportal_admin_username</user>
    <password>geoportal_admin_password</password>
  </publish>
  <output>
    <folder>
      <name>output_folder_filepath</name>
    </folder>
    <processsubfolders>True</processsubfolders>
    <overwritemeta>True</overwritemeta>
  </output>
</job>
```

- ☐ Change the parameters in the file as per the table below to match your geoportal's settings.

| ✓ | Parameter Name | Line | Function | Accepted Values |
|---|----------------|--------|---|-----------------|
| | Autopublish | Line 3 | Determines if the Harvesting Service should automatically publish harvested | True/False |

| | | | |
|--|---------|--|--|
| | | records to the Geoportal, or whether they should simply be saved locally. | |
| Autosave | Line 4 | Determines if the Harvesting Service should automatically save harvested records to a folder. The folder is specified in the <output>\<folder>\<name> parameter. | True/False |
| Note: At least one of the two parameters above must be set to true. | | | |
| Repository | Line 5 | Leave blank | |
| PublishServiceURL | Line 7 | URL to the Publish Service to which harvested metadata documents are published to. | URL string of the format: http://machineName/geoportal/HarvestPublish.do |
| User | Line 8 | The Geoportal Administrator name | String value. |
| Password | Line 9 | The Geoportal Administrator password. | String value. |
| Folder | Line 13 | The absolute folder path to which harvested metadata documents should be saved. | String value. |
| processSubFolders | Line 15 | Enables the harvesting of subfolders when harvesting from a WAF (web-accessible directory). | True/False |
| overwriteMeta | Line 16 | Enables any existing metadata in the output folder to be overwritten during subsequent harvests. | True/False |

- ☐ Save the HarvestConfig.xml file and close it.

12.2.2. Install the Harvesting Service

- ☐ Open the <Geoportal extension Installation Dir>\Desktop Tools\Harvesting Service folder.
- ☐ Double-click on the setup.exe file.
- ☐ Accept the defaults on the first three screens.
- ☐ On the first Harvesting Service Custom Parameters screen, enter the following inputs and Click Next.
 - a. Harvesting Service ID: Any name, to identify the service in the Registry key settings. In the Services window, it will always be called “Geoportal extension Harvesting Service”.
 - b. Harvester Servlet URL: <http://machineName/geoportal/HarvesterServlet>

- c. Username: Geoportal admin username (ex: gptadmin)
- d. Password: Geoportal admin user password (ex: gptadmin)

ArcGIS Server Geoportal extension Harvesting Service - InstallShield

Harvesting Service Custom Parameters
Enter parameters below

Harvesting Service
Harvesting Service ID:

GIS Portal Server
Harvester Servlet URL:
Username:
Password:

InstallShield

< Back Next > Cancel

- ❑ On the second Harvesting Service Custom Parameters screen, enter the following inputs and Click Next:
 - a. Program File: Absolute file path to the Harvesting Tool executable. Example:
C:\Program Files\ESRI\Geoportal\Harvesting_Tool\bin\Harvester.exe
 - b. Configuration File: Absolute file path to the HarvestConfig.xml file you created earlier. Example: C:\Program Files\ESRI\Geoportal\HarvestConfig.xml



- ☐ Continue through the rest of the installation wizard accepting defaults. When the Install Wizard completes, click “Finish”.
- ☐ When you open your Windows services, you should now see the Geoportal extension Harvesting Service has been started. Because you likely do not want to automatically harvest your registered repositories at a regular interval yet, set the service to run manually and stop the service.

12.2.3. Configure the Harvesting Service

This section describes how to set the timer for how often the Harvesting Service should check with the Geoportal for repositories to be harvested.

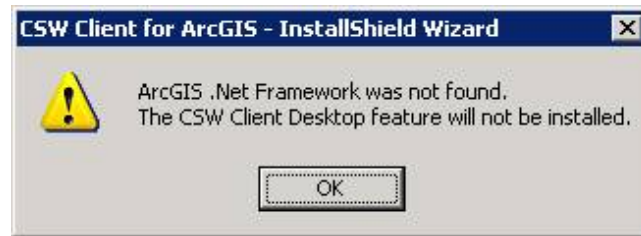
- ☐ Navigate to Control Panel > Administrative Tools > Services.
- ☐ Stop the Harvesting Service.
- ☐ Navigate to the Harvesting Service Installation Directory
Default: C:\Program Files\ESRI\Geoportal\Harvesting_Service
- ☐ Open the HarvestingService.exe.config file in a text editor.
- ☐ Scroll near to the bottom, and around find the text:
`<!-- timer interval, in milliseconds-->`

- ☐ On the next line down, set the “WindowsServiceTimerInterval” property to the time interval at which you want the Harvesting Service to run. The value is specified in milliseconds. For example, the default value is 60000 milliseconds represents once a minute.
- ☐ Save the file and close it.
- ☐ Navigate to Control Panel > Administrative Tools > Services
- ☐ Now that the timer interval has been set, you can start the Harvesting Service. The Harvesting Service will now harvest all harvesting requests in its queue at the specified time interval.

12.3. GEOPORTAL EXTENSION CSW CLIENTS

The Geoportal extension 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 extension Installation 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
- ☐ On the dialog that asks to select which version of ArcGIS Explorer is installed, select either ‘ArcGIS Explorer 500 or lower’, or ‘ArcGIS Explorer 900’ according to the ArcGIS Explorer version installed. If ArcGIS Explorer is not installed, 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. **Note:** 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 Geoportal extension Web Help http://webhelp.esri.com/geoportal_extension/9.3.1/ext_csw_clnts.htm for information to add the CSW Clients to ArcMap, ArcGIS Explorer, and ArcGIS Explorer 900 applications. This online documentation also has instructions for how to use the CSW Clients.

12.4. GEOPORTAL EXTENSION PUBLISH CLIENT

The Geoportal extension 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. For publishing metadata from ArcIMS Metadata Services we recommend setting up a harvesting schedule using the Geoportal harvesting capabilities.

Installation instructions are below:

- ☐ Open the <Geoportal extension Installation Dir>\Desktop Tools\GPTPublishClient 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 Geoportal extension Web Help http://webhelp.esri.com/geoportal_extension/9.3.1/ext_pub_clnt.htm for information to add the Geoportal extension Publish Client to ArcCatalog. This online documentation also has instructions for how to use the Geoportal extension Publish Client.

12.5. GEOPORTAL EXTENSION 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 extension Installation 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 Geoportal extension Web Help http://webhelp.esri.com/geoportal_extension/9.3.1/ext_wmc_clnt.htm 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 9.3.1 to 9.3.1 sp1

This section is for organizations who have already implemented the Geoportal extension 9.3.1, but want to apply 9.3.1 service pack 1.

It is useful to perceive Geoportal extension 9.3.1 sp1 more as a new version than a service pack. Although the Geoportal extension 9.3.1 sp1 contains basic enhancements and many defect fixes to Geoportal extension 9.3.1, you cannot simply replace files from your earlier 9.3.1 deployment with the updated service pack 1 files. To apply service pack 1 to your existing implementation, please carefully follow the steps below and refer to the installation instructions above if you need further information on one of the steps.

IMPORTANT: Be aware that there are no provisions for automatically upgrading the geoportal web application, especially for highly-customized geoportals. The Geoportal 9.3.1 service pack 1 web application closely resembles the Geoportal 9.3.1 web application, but there are important differences. Therefore, you will have to deploy the geoportal.war file from the Geoportal extension 9.3.1 service pack 1 distribution, and manually copy customizations and configuration settings from the former geoportal web application to the new geoportal web application.

UPGRADE STEPS

1. BACKUP FILES

Before proceeding with upgrading to service pack 1, 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 service pack 1 Geoportal 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 EXTENSION 9.3.1 SP1 INSTALLATION FILES

Insert the Geoportal Extension 9.3.1 sp1 DVD into a computer that is on the same network as your geoportal web application. Run the *Geoportal Extension 9.3.1.msi* to launch the installer. Navigate through the installer, accepting the license and specifying an install location for the installation files (C:\ESRI\Geoportal Extension 9.3.1 by default).

4. IMPORTANT: READ THIS ABOUT THE DATABASE

You will not need to run any database scripts; you can simply refer to your existing Geoportal 9.3.1 database from the new geoportal web application you will deploy in the steps below.

WARNING: If you run the database scripts in the C:\ESRI\Geoportal Extension 9.3.1\Database Scripts folder, as per the installation guide above, your existing Geoportal database may be dropped. Do not run database scripts for an sp1 upgrade unless you want to create a new Geoportal database.

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

The Geoportal extension 9.3.1 sp1 provides a web application file titled “geoportal.war”, which is the same name as the pre-sp1 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 geoportal sp1 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 9.2).

6. DEPLOY THE NEW GEOPORTAL.WAR FILE

This file is found in the C:\ESRI\Geoportal Extension 9.3.1\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 configuration information provided in the former gpt.xml file to populate settings in the new file. New configuration parameters added at sp1 are included in the general gpt.xml configuration instructions in Section 8.2 earlier in this document.

8. MANAGE THE DATABASE DRIVER JAR FILE

Follow instructions from Section 10.1 above to copy the correct jar files from your [\\geoportal\WEB-INF\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 C:\ESRI\Geoportal Extension 9.3.1\Documentation\Installation folder for specific details.

9. APPLY JNDI SETTINGS

Refer to the JNDI file or settings that you noted in Step 1. If deploying in Tomcat, you likely copied a backup copy of a file called geoportal.xml from the \\Tomcat\conf\Catalina\localhost folder. If you changed the name of your service pack 1 geoportal web application, then this JNDI filename must be updated to match your web application name. If you are using a different servlet container than Tomcat, the JNDI settings used in your former Geoportal 9.3.1 implementation can be referenced for this new service pack 1 implementation, because you are pointing to that same Geoportal 9.3.1 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 service pack 1 geoportal application. In particular, compare service pack 1 and 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. RESTART THE GEOPORTAL WEB APPLICATION AND TEST

12. UPDATE DESKTOP TOOLS

Certain Geoportal extension desktop tools have changed in service pack 1. To upgrade the tools, you will need to uninstall them (in Windows, this can be done through the Add/Remove programs interface), and then reinstall the service pack 1 versions from your <Geoportal extension 9.3.1 sp1 installation>\Desktop Tools folder. The following Desktop Tools have been updated:

- CSW Clients
- Publish Client
- WMC Client
- Harvesting Tool
- Harvesting Service