Installation Guide for GIS Portal Toolkit 3.1

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Section **Page**

1.0: Introduction

1.1 Overview of GIS Portal Toolkit

GIS Portal Toolkit (GPT) provides a cost-effective way to build a functional geographic information system (GIS) portal quickly. ESRI's GIS Portal Toolkit is a technology and services solution for implementing local, regional, national, and global spatial data infrastructure (SDI) portals. GIS portals organize content and services such as directories, search tools, community information, support resources, data, and applications. They provide capabilities to query metadata records for relevant data and services, then link directly to the online sites that host content services. The content can be visualized as maps and used in geographic queries and analyses. Portals can also control commercial usage of services.

1.1.1 What Is the ESRI GIS Portal Toolkit 3.1?

The ESRI GIS Portal Toolkit 3.1 provides you with a site starter for your Web site and all the functional capabilities needed to deploy a GIS portal for your organization's SDI. The GIS Portal Toolkit is designed for interoperability and supports many finalized Open Geospatial Consortium, Inc. (OGC), specification standards.

GIS Portal Site Starter—A customizable, integrated set of Web pages for setting up a GIS portal for your organization. The GIS portal site starter provides generic capabilities for the workflows needed to support SDI:

- Search and discover metadata about GIS data and services.
- Channel pages for organizing thematic content.
- Online mapping.
- User login and profile.
- Save maps and searches.
- Metadata management for publishers and administrators.
- Register metadata repositories for harvesting.

GIS Portal Catalog Service—Web service component for handling metadata discovery, publishing, and validation. The GIS portal supports public and private metadata collections. ISO 19115, ISO 19139 and Federal Geographic Data Committee (FGDC) metadata standards are supported by default in the GIS portal. Users interact with the catalog service using the GIS portal site starter.

Map Viewer—Integrated Map Viewer that allows users to view multiple live data and map services in one map. The Map Viewer can connect to OGC Web Map Server (WMS), Web Feature Server (WFS), Web Coverage Service (WCS), and ArcIMS services. Users can share their maps with others, save their maps to their login account, or save the maps as an OGC Web Map Context (WMC) file on their local computer for reuse.

Harvesting Tool—A desktop application that allows the metadata publishers to register metadata collections for scheduled harvesting into the GIS portal metadata catalog. The

Harvesting tool can harvest from ArcIMS metadata services, Z39.50, Open Archives Initiative (OAI), Web Catalog Service (CS-W) repositories, and Web-accessible folders.

Channel Editor—A desktop application for stewards of thematic channels to select and organize their online content. Channels provide fast access to key information resources.

Portal Toolbar for ArcMap—Provides interoperability between the GIS desktop and the GIS portal. When added to ArcMap, this toolbar allows users to search a GIS portal for live data and map services and add selected services to a map. The toolbar can also open WMC files created by a GIS portal Map Viewer.

1.2 Intended Audience

This document, specifically sections 2.0–4.0, is intended for those who have attended the ESRI GIS Portal Toolkit instructor-led class and want to install and configure ESRI GIS Portal Toolkit 3.1 on different operating systems than were taught in the workshop. The workshop only addresses Windows-based installations.
Section 4.0 is intended for users of the desktop applications.

1.3 Document Structure

- **Section 1.0—**Introduction provides the background of GIS Portal Toolkit and an overview of the document structure.
- **Section 2.0—**Environment Verification guides users through the general software setup sequence of the required base software and provides guidelines for ensuring a workable computer system for GIS Portal Toolkit.
- **Section 3.0—**Windows-Based Installation guides users through the installation of Oracle, SQL Server, and DB2 database-based portals on the Windows operating system.
- **Section 4. 0—** Setting Up the GIS Portal Application guides users through the installation of the Portal application files, and how to configure the newly installed portal.
- **Section 5.0**—Desktop Tools Installation describes how to install the three desktop applications that are part of the GIS Portal Toolkit software suite.

2.0: Environment Verification

2.1 Installing the Base Software

This section outlines the recommended setup procedure for the required base software on systems that will be used to host ESRI GIS Portal Toolkit 3.1. This information is based on the classroom and testing environment setup the ESRI GIS portal team uses in-house.

2.1.1 Software Requirements for GIS Portal Toolkit 3.1

OS

Windows 2000, Windows XP, Windows Server 2003, and Red Hat Linux 9 (Enterprise 3.0)

ESRI Software

ArcSDE 9.1 SP2 or ArcSDE 9.2 SP2 or higher
ArcIMS 9.1 SP2 or ArcIMS 9.2 SP2 or higher
ArcGIS 9.1 SP2 or ArcGIS 9.2 SP2 or higher
ArcIMS Data Delivery Extension (optional)
ArcIMS CS-W Connector
ArcGIS Explorer build 380 or higher (necessary for Portal Extensions)

Database (one of the following)

DB2 8.2
Oracle 9i or 10g
SQL Server 2000 or SQL Server 2005

Web Server (one of the following)

IIS (version dependent on Windows version)
Apache 2.0.48 or Apache 2.0.58

Servlet Connector (one of the following)

ArcIMS 9.1 and ArcSDE 9.1 systems require Tomcat 5.0.28
ArcIMS 9.2 and ArcSDE 9.2 systems require Tomcat 5.5.17

Java (one of the following)

ArcIMS 9.1 and ArcSDE 9.1 systems require j2sdk1.4.2_06
ArcIMS 9.2 and ArcSDE 9.2 systems require j2sdk1.5.0_06

* All ESRI software must have the same level of service pack installed. For example, if you have SP3 installed on ArcIMS, you must also have SP3 on ArcSDE and ArcGIS.

 Tip: Servlet Connectors (Tomcat) and Java (JDK) versions must correspond to the support level associated with the ArcIMS and ArcSDE versions on your system.

2.1.2 Recommended Setup Order

Correct installation of the base software on your machine is the first step toward setting up a successful portal. The following steps show you the order in which you must install the base software.

Step 1: Set Up the Database

- Install SQL Server 2000 or 2005 with full text search capabilities (demands a custom install of SQL Server), Oracle9i (9.2.0.1+), Oracle 10gR2 (10.2.1.2), or DB2 8.2.
- Restart your computer (may be required for certain database installs).
- Install any service patches for the DBMS.

Notes

- Keep track of the passwords for database access for the various administrative users.
- Install SQL Server with mixed authentication.
- Install SQL Server with the Full Text Search option.
- Oracle System Identifier (SID) Database instance name: _____
- When installing DB2 on your machine, ensure that you have a C++ compiler installed as well.
- In the ESRI Learning Center, a single machine is set up and ghosted, mirroring this configuration on other machines. After ghosting, the machines are disconnected from the network. They become pure stand-alone systems.

Step 2: Install ArcSDE

- Install ArcSDE.
- Apply any applicable patches.
- Run the ArcSDE post-install

Step 3: Install HTTP Server

- Install IIS or Apache 2.0.48 (for 9.1) and 2.0.58 (for 9.2).

Step 4: Install Java 2 SDK 1.4.2 (or higher)

- Install j2sdk1.4.2_06 or higher in C:\j2sdk142.

Step 5: Install Tomcat – NOTE: ensure that there are no spaces or periods in the filepath!

- Install Tomcat 5.0.28 (for 9.1) in C:\Tomcat5028.
- Install Tomcat 5.5.17 (for 9.2) in C:\Tomcat5517
- Add Tomcat as a Windows NT service during install.

Step 6: Install ArcIMS

- Add the following components to the default ArcIMS install: Java Connector, CS-W connector,
- Apply any applicable patches.
- Run the ArcIMS post-install

Notes

- Both the servlet and Java Connector must be installed.
- Install Gazetteer Data with ArcIMS if running ArcIMS 9.1. For ArcIMS 9.2, gazetteer data comes on a separate media CD
- Optional connectors are Z39.50, and OAI.

Step 7: Install ArcEditor Single Use or Higher

- Install ArcEditor single use or higher.
- Apply any applicable patches.

Note: ArcEditor is used for cleaning and accessing the ArcSDE database. It has been noticed that the Metadata Services may not always be created and, thus, created tables need to be removed. You need ArcEditor level for this.

Level of Effort

Estimated time to set up the system:

- SQL Server on Windows: 4–6 hours
- Oracle on Windows: 7–9 hours
- DB2 on Windows: Up to two days

2.2 Environment Verification

The purpose of this section is to ensure that the software installation requirements of the ESRI GIS Portal Toolkit have been met. The ESRI GIS Portal Toolkit makes use of several third-party technologies, which you need to have available and running, in addition to ArcIMS and ArcSDE. Doing a system verification is very important when you are working with a client's system.

As part of the environment verification (section 2.2.1), you will also start preparing your system to host the GIS portal. Included in this section is setting up supporting ArcIMS image services (section 2.2.2) for your GIS Portal Toolkit.

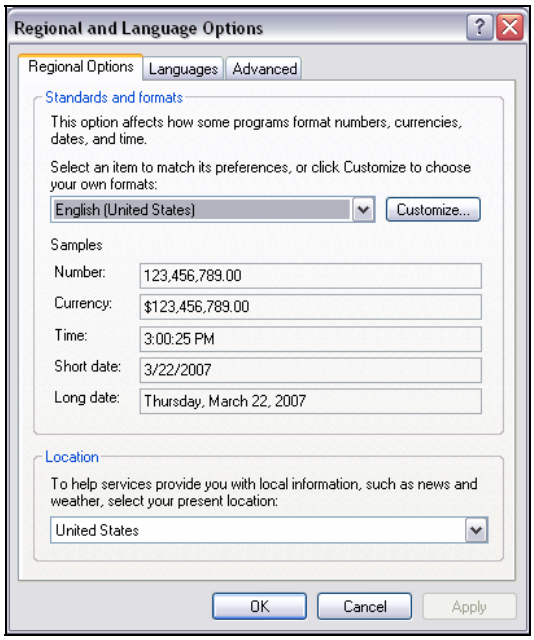
2.2.1 Installation and Verification

Step 1: Set the Regional and Language Options (Non-U.S. Computers Only)

In this guide, you will install ESRI GIS Portal Toolkit on a system that utilizes the U.S. English settings. Differences between the United States and other countries include the use of commas as the decimal separator instead of the decimal point. To change/verify your regional settings:

- ☐ Open the Control Panel. Start>Settings>Control Panel>Regional and Language Options (see image below).
- ☐ Set the Standards and formats to English (United States).
- ☐ Click OK.

Figure 2-1
Regional and Language Options



If you are using non-Germanic languages on your computer, ensure that you have the UTF-8 module installed with your database.

Step 2: Verifying Availability of ArcSDE and the Database

In the following steps, you will verify that the ArcSDE environment is installed and interacts with your database.

- ☐ Start ArcCatalog.
- ☐ Create a new Spatial Database Connection to the SDE database (default parameters: port 5151, Username sde, and Password sde).
- ☐ Click "Test Connection". A box that says "Connection succeeded" should pop up. Click "OK". Click "OK" again to establish the spatial database connection. Double Click on the connection and type in a new meaningful name for it.
- ☐ If the "Test Connection" does not succeed, then there may be a problem in either the password/username in the account authentication details in the proceeding Spatial Database Connection dialogue box, or there is a problem with the database itself.
- ☐ When you have a successful test connection, close ArcCatalog.

You can use the SDEMON command to check if SDE is up and running.

- ☐ Open the command console: Start>Run>cmd
- ☐ Type the following command, omitting the brackets and carrots to put in the name of your service and your own server's name (if you have problems, try your IP address): sdemon -o status [-i <service>] [-s <server_name>]
    - Example: sdemon –o status –i esri_sde –s yourServersName

Successful results will look similar to this:

```
ArcSDE Instance <service> Status on <server_name> at Thu Apr 05 15:12:50 2007
--------------------------------------------------------------------------
Server Connection Mode:         Accepting Connections
Active Server Processes:        0
```

If your results are not successful, your service may not be turned on. Go to "Services" (Start>Control Panel>Administrative Tools> Services) and make sure that the "Status" of the "ArcSde Service(servicename)" says "started". If it does not, highlight that service and click "start the service" to the left. Try the SDEMON command again.

Step 3: Verifying Availability of the ArcIMS Site

In this first step of the environment verification, you will do a series of tests that ensure that the ArcIMS environment is properly configured.

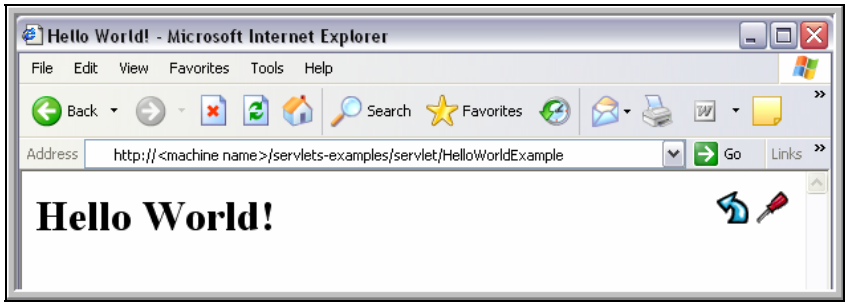
Verify your Server

- ☐ Start Internet Explorer.
- ☐ Type "http://localhost" in the address bar.

You will see either an Internet Information Server (IIS) welcome message or an Apache welcome message.

Verify your Servlet

- ☐ Type "http://<machine name>/servlets-examples/servlet/HelloWorldExample". This tests if the servlet is running properly under IIS or Apache. If your servlet is running properly under IIS or Apache, you should see a message like the one below.



If you do not see this message, then there is a problem with your servlet. Double check that you have configured the servlet correctly (for example, if you use Tomcat, that you've followed installation instructions, see the following help article: http://support.esri.com/index.cfm?fa=knowledgebase.techArticles.articleShow&d=31252).

For Oracle Database Users

If you are running the Web server and Oracle on the same machine, you may want to change the default port of the Tomcat servlet. The default port is 8080. Oracle often uses its own HTTP server, which runs on port 8080 as well and causes issues when configuring the portal.

To change the default Tomcat port

- ☐ Open Windows Explorer.
- ☐ Navigate to the <tomcat installation directory>\conf (e.g., C:\Tomcat5028\conf).
- ☐ Open the Server.xml file in notepad or an XML editor program.
- ☐ Find the text: <Connector port="8080" maxThreads="150" minSpareThreads="25" maxSpareThreads="75" enableLookups="false" redirectPort="8443" acceptCount="100" debug="0" connectionTimeout="20000" disableUploadTimeout="true" />
- ☐ Change the port number to 8081 or 8181 (e.g., <Connector port="8181").
- ☐ Save the file and exit.
- ☐ Restart Tomcat.

If you have properly configured ArcIMS with the redirector, you can omit the port number. The portal can run properly without the port number specified. Keep in mind that port numbers also need to be removed in the various properties files.

Verify ArcIMS Installation and CS-W Connector Deployment

The CS-W Connector is used by the Portal Toolbar for ArcMap. This toolbar allows you to search any CS-W catalog. By default, the GIS Portal uses the ArcIMS CS-W Connector.

- ☐ Verify that the ArcIMS Java Connector and Servlet Connectors are installed: Start> Control Panel>Add or Remove Programs>ArcGIS ArcIMS>Change.
- ☐ Select the Modify button.
- ☐ Click Next.

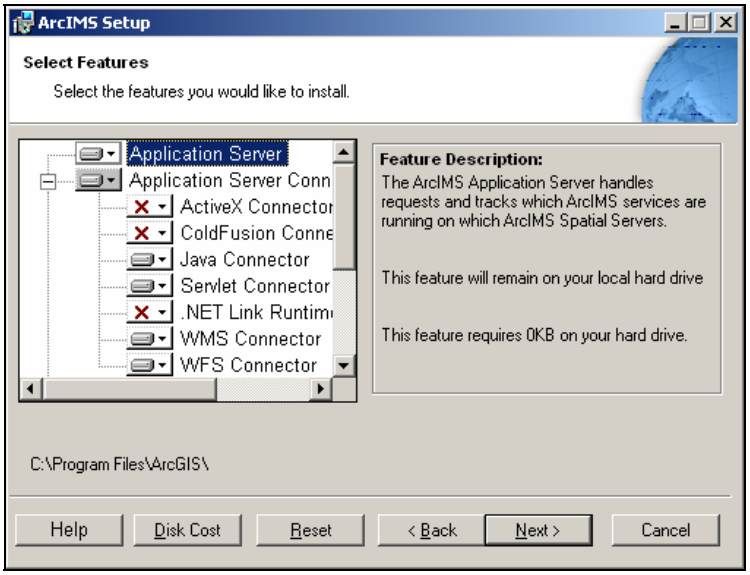
☐ Follow the steps below to verify the installation of ArcIMS and the CS-W connector based on the version running on your machine:

ArcIMS 9.1 systems:

☐ Click the plus sign to the left of ArcIMS Application Server Connector

The following connectors must be installed:

- Java Connector (used for authentication)
- Servlet Connector (used for GIS Portal administration)



☐ Click the plus sign to the left of Metadata. The following connectors should be installed:

- CS-W Connector (used for Portal Toolbar)
- Z39.50 (optional) Connector
- Gazetteer Data (required when you set up a gazetteer service)

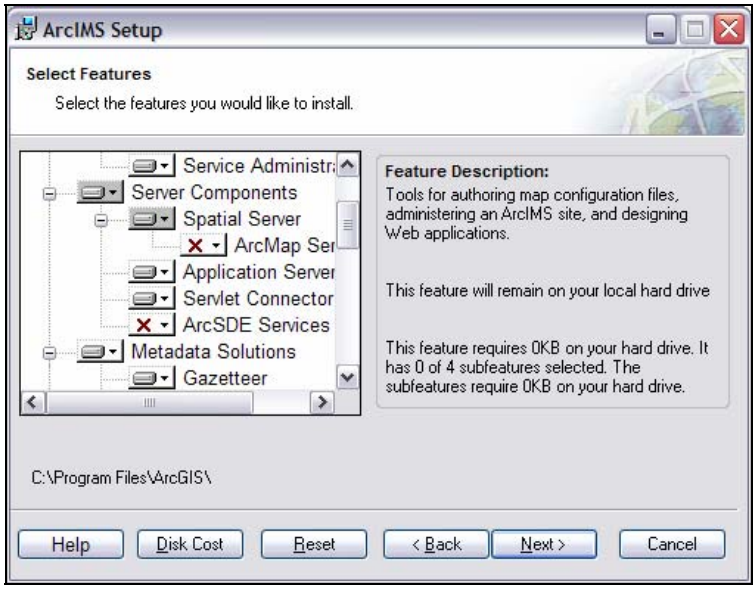
Tip: If there is an x to the left of the name, the connector has not been installed. To install the missing server connectors, select the connector and follow the installation instructions. You need to run the post-installation of ArcIMS again.

ArcIMS 9.2 systems:

☐ Click the plus sign to the left of Server Components.

The following connectors must be installed:

- Servlet Connector (used for GIS Portal administration)



☐ Click the plus sign to the left Metadata Solutions. The following connectors should be installed:

- CS-W Connector (used for Portal Toolbar)
- Z39.50 (optional) Connector
- Gazetteer Data (required when you set up a gazetteer service)

Tip: If there is an x to the left of the name, the connector has not been installed. To install the missing server connectors, select the connector and follow the installation instructions. You need to run the post-installation of ArcIMS again.

Running Diagnostics for Both ArcIMS 9.1 and 9.2 Systems

NOTE: Internet Explorer 7.0 will not properly display diagnostics, so you need to use an alternate browser (like IE 6.0 or Firefox). Also, you will need to allow popups for these tests.

☐ Open the ArcIMS diagnostics: Start>Programs>ArcGIS>ArcIMS>Diagnostics.
☐ Click *Check ArcIMS Servlet Connector.*
☐ Click *Check ArcIMS Application Server.*

Both tests should return a message Test Successful. If the test is not successful, consult the error message and update the ArcIMS installation.

After Running the Diagnostics
Now that ArcIMS is installed and functional, you will create services to verify that you can generate an ArcIMS service.

- ☐ Open ArcIMS Administrator: Start>All Programs>ArcGIS>ArcIMS>Administrator.
- ☐ Enter your user name and password, for example admin / admin.
- ☐ Click the Services link in the table of contents, or the Services Manager button in the toolbar. 
- ☐ Create an image map service called SearchMap. To do this:
  - o Click the New Service button. 
  - o Type "SearchMap" in the Name field.
  - o For the map file field, navigate to the searchmap.axl file
    ArcIMS 9.1: C:\ArcIMS\Axl\Metadata\searchmap.axl
    ArcIMS 9.2: C:\Program Files\ArcGIS\ArcIMS\Samples\MetadataServices\searchmap\SearchMap.axl
  - o Click the *Virtual Server* drop-down menu and select *ImageServer1*.
  - o Click OK.

Step 4: Create and Verify Your Metadata Services

 **Tip:** Use the "Creating and Using Metadata Services" document from ESRI, available in your ArcIMS installation Help File, under the "Metadata" Content Heading.

SQL Server users should start at page 2-12.

For Oracle Database Users
In the following steps, you will create a test metadata service using the SDE user. To do this**:**

- ☐ Open the C:\ArcIMS\Axl\Metadata\MetadataServer.axl file in Notepad.

- ☐ Update the following text to match your machine's configuration:

  <SDEWORKSPACE name="sde0" server="<your machine name>" instance="port:5151" database="" user="sde" password="<sde password>" />

  Note: If you are running your database on another port, update the port accordingly.

- ☐ Click Save and exit the MetadataServer.axl file.

- ☐ Open ArcIMS Administrator.
  Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator.

- ☐ Choose the Service menu and select New.

- ☐ Enter the Service Name imsmetadata.

- ☐ Enter the Source AXL File (e.g., C:\ArcIMS\Axl\Metadata).

- ☐ Select the Virtual Server from the drop down menu (e.g., MetadataServer1).

- ☐ Save the ArcIMS Site configuration and exit Administrator. File> Save Configuration.

- ☐ Ensure that all required tables for the metadata server are in place.

  - Open the Oracle Enterprise Manager console. Start>All Programs>Oracle-OraHome92>Enterprise Management Console.
  - Log in to Oracle.
  - Click the drop-down menu and select *sysdba.*
  - In the left window, expand the "Network" node, then the "Databases" node, and then the node for your database. Expand the "Schema" node.
  - Open the SDE schema, and expand "Tables".
  - Verify that the following tables exist under the Tables folder:

    - IMSMETADATA
    - IMSMETADATAD
    - IMSMETADATADR
    - IMSMETADATAR
    - IMSMETADATAU

  - Log out.

For SQL Server Database Users

In the following steps, you will create a test metadata service using the SDE user. To do this you will first verify that there is a Full-Text Catalog called SDE_DEFAULT_CAT in SQL Server.

Before you can verify or add this Full-Text Catalog, you must ensure that you have installed SQL Server with Full-Text Search capability correctly. To check this for ArcGIS 9.2, go to this link: http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Configuring a database to support text indexing and follow the instructions. To check this for ArcGIS 9.1, go to the "Creating and Using Metadata Services" pdf file in the Documentation\Other folder on the CD, and see the section on "Configuring ArcSDE for SQL Server." If you do not have Full-Text Search capability, then uninstall SQL Server and reinstall it with the capability.

To check for and add the SDE_DEFAULT_CAT Full-Text Catalog in SQL Server:

- ☐ First, it is necessary to ensure that the database is enabled for full-text in order to avoid problems depending on how the database was created. Open SQL Server Enterprise Manager, click on "Databases" in the left navigation window to expand it, and open the "sde" database. Check if there is an icon for the Full-Text Catalog.

- ☐ Check to see if the SDE_DEFAULT_CAT is present. In SQL Server 2005, you will need to expand the "Storage" folder and then the "Full-Text Catalog" folder to see this.

- ☐ If the full-text catalog SDE_DEFAULT_CAT is not present, you must add it. Do the following:
    - Under the sde database folder, navigate to the Full-Text Catalog folder and right click. Select "New Full Text Catalog".
    - Provide 'SDE_DEFAULT_CAT' as the full-text catalog name.
    - Click OK.

- ☐ Close SQL Server Enterprise Studio (2000) or Management Studio (2005)

In the following steps, you will create a test metadata service using the sde user. To do this**:**

- ☐ Open the C:\ArcIMS\Axl\Metadata\MetadataServer.axl file in Notepad.

- ☐ Update the following text to match your machine's configuration:

  <SDEWORKSPACE name="sde0" server="<your machine name>" instance="port:5151" database="sde" user="sde" password="<sde password" />

  Note: If you are running your database on another port, update the port accordingly.

- ☐ Save your file and close Notepad.

- ☐ Open ArcIMS Administrator.
  Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator.

- ☐ Create a metadata service called imsmetadata that points to the MetadataServer.axl file.

- ☐ Save the ArcIMS Site configuration and exit Administrator. File>Save Configuration.

- ☐ Ensure that all required tables for the metadata server are in place.

    - Open SQL Server Enterprise Manager (2000) or Management Studio (2005).
    - Open the sde database.
    - Navigate to the tables and verify that the following tables exist:

        - IMSMETADATA
        - IMSMETADATAD
        - IMSMETADATADR
        - IMSMETADATAR
        - IMSMETADATAU

    - Log out.

Step 5: Verify Data Delivery Extension Installation (Optional)

As an optional feature, ESRI ArcIMS Data Delivery extension can be used with the GIS Portal Toolkit. The GIS Portal Toolkit can operate without the Data Delivery extension. To verify that the Data Delivery extension is installed on your machine, please check the following:

- ☐ Open a Web browser.

- ☐ Type in the following URL: "http://<Machine name>/safeViewerHTML/indexmap.html"

    - o A map is displayed.

This test only verifies that the Data Delivery extension is working; it does not inform you which layers have been loaded. Below is a second test you can conduct:

- ☐ Type in the following URL:
  "http://<machine_name>/Scripts/DDE/spatialDirect.pl?SSFunction=prepareFetch"

    - o The order data form is displayed.

Note: Update the above URL accordingly if you have different CGI script root directory (in this example 'Scripts') and/or subdirectory name for DDE-specific CGI script files (in this example 'DDE').

The Data Delivery extension requires a separate install. For installation instructions, see the Data Delivery extension installation guide.

Step 6: Download ArcGIS Explorer

ArcGIS Explorer is a freely downloadable lightweight client for ArcGIS Server. It can be used to access, integrate, and utilize GIS services, geographic content, and other Web services. It can also be used in conjunction with a "Find Services" tool provided in Exercise 10 to locate and view metadata records, and preview the metadata on a digital globe.

- ☐ Go to http://www.esri.com/software/arcgis/explorer/index.html and click the link on the main menu under the "Free Download" heading that says "Download ArcGIS Explorer".
- ☐ If you have an ESRI global account, you will need to use it to login on the next page. If you do not have an ESRI global account, you will need to create one, and then login.
- ☐ After logging in, you will be directed to a page where you can download ArcGIS Explorer. Click on the "Download ArcGIS Explorer" button.
- ☐ Save the file, and then run the installation by double-clicking "ArcGISExplorerDownload.exe".
- ☐ Follow the instructions in the installation wizard.
- ☐ Open the ArcGIS Explorer application to verify that it is installed and runs.

Step 7: Verifying Availability of Third-Party Technologies

Please ensure that the technologies listed below (table 2-1 at the end of this chapter) are available for this workshop. You may want to store them in temporary folders that you create on your computer, for example:

- ☐ Portal library files can be stored in C:\temp\Portal\lib
- ☐ Map Viewer library files can be stored in C:\temp\MapViewer\lib

Tip: Some of these technologies require that you obtain a license, even when they are offered free of charge or as open source. When your portal implementation is delivered to clients, they will have to do the same with respect to obtaining these technologies.

If you have checked the availability of all the technology requirements listed in table 2-1, you are ready to start installing ESRI GIS Portal Toolkit.

Tip: In addition to the above-mentioned required software components, you may want to download DB Visualizer as well. This is a tool that can help you troubleshoot Java Database Connectivity (JDBC) connections. You can download the DB Visualizer application from the following URL: http://www.dbvis.com/products/

2.2.2 Setting Up Supporting Map Services

The GIS Portal and the Map Viewer rely on different map services to support data searches and view maps. In this step, you will set up three map services (table 2-2) that the GIS Portal and the Map Viewer will use.

Below are the instructions for creating map services during the Portal Toolkit training class. The training class provides map service files and data showing a map of the world. For your own installation, select the data most appropriate for your portal. You can use AXL or MXD files for your services.

Table 2-2
Supporting Map Services for the Portal Toolkit

Service Name	*Source AXL File*	*Service Type*
PortalSearchMap	PortalSearchMap.axl	Image Service
PortalBaseMap	PortalBaseMap.axl	Image Service
PortalAcetateMap	PortalAcetateMap.axl	Image Service

- ☐ Create three AXL files according to the specifications in the table above using ArcIMS Author. Follow the guidelines and steps below.
- ☐ Files to create in Author:
    - PortalSearchMap.axl: this map will constitute the IMS map users see when the open the search page. Example data layers you could use in this map:
        - A background grid coordinate system layer
        - World country polygons
        - World administrative boundaries
        - Major rivers of the world
    - PortalBaseMap.axl: this map will constitute the IMS map users see when they open the MapViewer. Example data layers you could use in this map:
        - A background grid coordinate system layer
        - World country polygons
        - World administrative boundaries
        - Major rivers of the world

- PortalAcetateMap.axl: this map is used to hold acetate layers in the mapping services, such as north arrows and scalebars. Example data layers you could use in this map:
  - A background grid layer.

- ☐ Create the corresponding ArcIMS services. Open ArcIMS Administrator, select: Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator.
- ☐ Login to ArcIMS Administrator with your User name and Password, for example admin/admin.
- ☐ Create the three image services as specified above. For example:

  - Enter the Service Name: PortalSearchMap
  - Select the Browse button  to locate the Map File, or Source AXL File, on your machine (e.g., C:\ArcIMS\Axl\PortalSearchMap.axl).
  - Select the Virtual Server from the drop down menu as ImageServer1

  Repeat this process to create image services for the PortalBaseMap.axl and the PortalAcetateMap.axl files.

- ☐ Save your configuration.

Table 2-1
Third-Party Libraries

	Vendor	JAR	Version	Shipped With	Location
	Portal - Database Libraries				
1	Oracle 9i /10g JDBC Driver	ojdbc14_g.jar	9i/10g	Oracle	<Oracle installation directory>\<OraHome>\jdbc\lib
2	IBM DB2 driver	db2jcc.jar	1.3.1	IBM	http://www-128.ibm.com/developerworks/db2/downloads/jcc/index.html
3	IBM DB2 driver	db2jcc_license_cu.jar	1.3.1	IBM	http://www-128.ibm.com/developerworks/db2/downloads/jcc/index.html
4	SourceForge JTDS	jtds-1.2.2.jar	1.2.2	Download	http://sourceforge.net/project/showfiles.php?group_id=33291&package_id=25350&release_id=534076
	Portal - Other Libraries				
5	Apache Axis	axis.jar	1.2.1	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
6	Apache Axis	axis-ant.jar	1.2.1	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
7	Apache Axis	jaxrpc.jar	1.2.1	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
8	Apache Axis	log4j-1.2.8.jar	1.2.8	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
9	Apache Axis	saaj.jar	1.2.1	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
10	Apache Axis	wsdl4j-1.5.1.jar	1.5.1	Download	http://archive.apache.org/dist/ws/axis/1_2_1/axis-bin-1_2_1.zip
11	Apache Commons Beanutils	commons-beanutils.jar	1.6	Download	http://archive.apache.org/dist/jakarta/commons/beanutils/binaries/commons-beanutils-1.6.zip
12	Apache Commons Collections	commons-collections-3.0.jar	3.0	Download	http://archive.apache.org/dist/jakarta/commons/collections/binaries/commons-collections-3.0.zip
13	Apache Commons DBCP	commons-dbcp-1.2.1.jar	1.2.1	Download	http://archive.apache.org/dist/jakarta/commons/dbcp/binaries/commons-dbcp-1.2.1.zip
14	Apache Commons Digester	commons-digester.jar	1.5	Download	http://archive.apache.org/dist/jakarta/commons/digester/binaries/commons-digester-1.5.zip
15	Apache Commons Discovery	commons-discovery.jar	0.2	Download	http://archive.apache.org/dist/jakarta/commons/discovery/binaries/commons-discovery-0.2.zip

	Vendor	JAR	Version	Shipped With	Location
16	Apache Commons Fileupload	commons-fileupload-1.0.jar	1.0	Download	http://archive.apache.org/dist/jakarta/commons/fileupload/binaries/commons-fileupload-1.0.zip
17	Apache Commons Lang	commons-lang-2.0.jar	1.0.1	Download	http://archive.apache.org/dist/jakarta/commons/lang/binaries/commons-lang-2.0.zip
18	Apache Commons Logging	commons-logging.jar	1.0.3	Download	http://archive.apache.org/dist/jakarta/commons/logging/binaries/commons-logging-1.0.3.zip
19	Apache Commons Pool	commons-pool-1.2.jar	1.2	Download	http://archive.apache.org/dist/jakarta/commons/pool/binaries/commons-pool-1.2.zip
20	Apache Commons Validator	commons-validator.jar	1.0	Download	http://archive.apache.org/dist/jakarta/commons/validator/old/v1.0/validator-1.0.zip
21	Apache Struts	struts.jar	1.1	Download	http://archive.apache.org/dist/jakarta/struts/binaries/jakarta-struts-1.1.zip
22	Apache Velocity	velocity-dep-1.3.1.jar	1.3.1	Download	http://archive.apache.org/dist/jakarta/velocity/velocity-1.3.1/velocity-1.3.1.zip
23	Apache Xalan	xalan.jar	2.7	Download	http://apache.osuosl.org/xml/xalan-j/xalan-j_2_7_0-bin.zip
24	Apache Xalan	xercesImpl.jar	2.7	Download	http://apache.osuosl.org/xml/xalan-j/xalan-j_2_7_0-bin.zip
25	Apache Xalan	xml-apis.jar	2.7	Download	http://apache.osuosl.org/xml/xalan-j/xalan-j_2_7_0-bin.zip
26	Sun JAF	activation.jar	1.1	Download	http://java.sun.com/products/javabeans/jaf/downloads/index.html
27	Sun JavaMail	mail.jar	1.2	Download	http://java.sun.com/products/javamail/downloads/index.html
28	***Unknown***	junit.jar	1.4	Download	http://java.freehep.org/jcvslet/JCVSlet/zip/freehep/freehep/tools/tools.zip
21	Apache Struts	struts.jar	1.1	Download	http://archive.apache.org/dist/jakarta/struts/binaries/jakarta-struts-1.1.zip
	Portal – Other Libraries – provided with ArcIMS installation				
29	ESRI	arcims_jconnect.jar	1.0	ArcIMS 9.1. & 9.2	C:\Program Files\ArcGIS\ArcIMS\Administrator\esriadmin\WEB-INF\lib
	Portal – Other Libraries – provided with Portal installation				
30	ESRI	esri-translator.jar		Portal	Needed for ISO 19139 -> ESRI ISO translation
31	ESRI	isglobal.jar	1.0	Portal	Developed by ESRI (Geographynetwork), not required when not connecting to GN

	Vendor	JAR	Version	Shipped With	Location
32	ESRI	jxcb.jar		Portal	Developed for the GPT
	Map Viewer - Database Libraries				
1	Oracle 9i/10g JDBC Driver	ojdbc14_g.jar	9i/10g		Portal/WEB-INF/lib
2	IBM DB2 driver	db2jcc.jar	1.3.1		Portal/WEB-INF/lib
3	IBM DB2 driver	db2jcc_license_cu.jar	1.3.1		Portal/WEB-INF/lib
4	SourceForge JTDS	jtds-1.2.2.jar	1.2.2		Portal/WEB-INF/lib
	Map Viewer Drivers that can be copied from the Portal lib folder (Portal/WEB-INF/lib)				
5	Apache Axis	log4j-1.2.8.jar	1.2.8		Portal/WEB-INF/lib
6	Apache Commons	commons-collections-3.0.jar	3.0		Portal/WEB-INF/lib
7	Apache Commons	commons-fileupload-1.0.jar	1.0		Portal/WEB-INF/lib
8	Apache Commons	commons-dbcp-1.2.1.jar	1.2.1		Portal/WEB-INF/lib
9	Apache Commons	commons-pool-1.2.jar	1.2		Portal/WEB-INF/lib
10	Apache Xalan	xercesImpl.jar	2.7		Portal/WEB-INF/lib
11	Apache Xalan	xml-apis.jar	2.7		Portal/WEB-INF/lib
	Map Viewer drivers on your local machine				
12	Sun Microsystems	jai_core.jar	1.4 (or higher)		C:\Program Files\Java\jre1.5.0_06\lib\ext
13	Sun Microsystems	jai_codec.jar	1.4 (or higher)		C C:\Program Files\Java\jre1.5.0_06\lib\ext
	Map Viewer drivers that you must download				
14	Apache Batik	batik-awt-util.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
15	Apache Batik	batik-bridge.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
16	Apache Batik	batik-css.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
17	Apache Batik	batik-dom.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
18	Apache Batik	batik-ext.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
19	Apache Batik	batik-extension.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip

	Vendor	JAR	Version	Shipped With	Location
20	Apache Batik	batik-gvt.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
21	Apache Batik	batik-parser.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
22	Apache Batik	batik-script.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
23	Apache Batik	batik-svg-dom.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
24	Apache Batik	batik-transcoder.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
25	Apache Batik	batik-util.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
26	Apache Batik	batik-xml.jar	1.6	Download	http://www.eu.apache.org/dist/xmlgraphics/batik/batik-1.6.zip
	Map Viewer Libraries - Distributed with Portal				
27	ESRI	esriCWebDbAuth.jar		Portal	
28	ESRI	iscore.jar		Portal	
29	ESRI	isother.jar		Portal	

End

3.0: Windows-Based Portal Database Installation

The purpose of this section is to ensure that the GIS Portal database is properly installed and configured.

SQL Server users, please skip ahead to section 3.2 page 3-15 titled "Database Installation for SQL Users."

3.1 Database Installation for Oracle Users

Steps 1 & 2 below are for new GPT 3.1 installs only. If you are migrating an existing GPT 3.0 database to GPT 3.1, skip to Step 3.

Step 1: Setting Up the Table Space

If you have an existing instance of the meta database that you no longer wish to keep, please delete this schema before running the new scripts.

- ☐ Delete the TOOLKIT_META tables from the old install using ArcCatalog.
- ☐ Delete the meta schema using the Oracle Enterprise Manager:
  Click Security>Users and delete the META user.
- ☐ Click Storage and delete the PTK table space.

Failure to do the above may result in your not being able to create metadata services.

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

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

- ☐ sqlplus /nolog
- ☐ SQL>connect sys/sys as sysdba;
- ☐ SQL>create tablespace ptk datafile 'C:\oracle\oradata\ptk.dbf' size 500M;
- ☐ SQL>create user meta identified by meta default tablespace ptk temporary tablespace temp;
- ☐ SQL>commit;
- ☐ SQL>quit.

Step 2: Setting Up the Database Schema (New GPT 3.1 installs only!)

Database setup uses two scripts that are independent of the system user. The scripts are:

- Grants.cmd—This script sets the user permissions for the create meta database.
- Create_toolkit_Schema.cmd—This script creates the table structure and triggers and populates tables in the meta schema.

The scripts are located in <CDROM>\Supporting Files\Database Scripts\Oracle. Copy them to a location on your machine, because they will need to be edited.

Running Grants.cmd

- ☐ Inside the local directory where you have saved the files, right-click the script grants.cmd file and select Edit.
- ☐ Edit the following line to match your sys user, meta user, and sde user: SQLPLUS/nolog @Grants.sql ***sys_username sys_password meta_username sde_username*** >> grants.txt

Syntax of the @Grants.sql.cmd

- Sys_username—Oracle database sys user name. Default = sys
- Sys_password—Password of the Oracle database sys user. Default = sys
- Meta_username—The user name of the main meta schema owner. Default = meta
- Sde_username—The user name of the SDE user. Default = sde

- ☐ Save the file. File>Save.
- ☐ Open a command prompt window. Start>Run>cmd
- ☐ Navigate to the directory where you have saved the edited file, for example you can enter “cd C:\Data\Database Scripts\Oracle”.
- ☐ Run the grants.cmd file from the command prompt window by typing "grants.cmd".
- ☐ Review the grants.txt file and ensure that you do not get any insufficient privileges messages.

Do not proceed if you received any errors in your grants.txt file. Fix the errors first!

Running Create_Toolkit_Schema.cmd

The create_toolkit_schema script will create the necessary tables in Oracle to support the Portal application. Run this script if you are installing a new instance of the Portal, or have started with a clean database. If you run this script on top of an existing Portal installation, you will overwrite your existing Portal database!

- ☐ Inside the directory where you saved the files for editing, right-click the file create_toolkit_schema.cmd and select Edit.

- ☐ Edit the following line to match your settings:
  SQLPLUS/nolog @Create_toolkit_schema.sql ***meta_username meta_password sde_username*** >> Toolkitschema.txt

Syntax of the @create_toolkit_schema.sql statement:

- Meta_username—The user name of the main meta schema owner. Default = meta
- Meta_password—The password of the meta user. Default = meta
- Sde_username—The user name of the SDE user. Default = sde

- ☐ Save the file. File>Save.

- ☐ Open a command prompt window. Start>Run>cmd.

- ☐ Navigate to the directory where you have saved the edited file, for example you can enter “cd C:\Data\Database Scripts\Oracle”.

- ☐ Run the create_toolkit_schema.cmd file from the command prompt window by typing "create_toolkit_schema.cmd".

- ☐ Review the create_toolkit_schema.txt file and ensure that you do not get any error messages. Error messages and a warning stating that Table or view does not exist can be ignored. It simply means that the script was trying to delete a nonexistent table.

Running the Create_Thesaurus_Util.cmd Script

The next set of scripts sets up a thesaurus in your Oracle installation for use with the Portal.

The scripts are located in <CDROM>\Supporting Files\Database Scripts\Oracle\thesaurus. Copy them to a location on your machine, because they will need to be edited.

- ☐ Inside the directory where you have saved your file for editing, right-click the file Create_Thesaurus_Util.cmd and select Edit.

- ☐ Edit the following line to match your settings:
  SQLPLUS/nolog @Create_Thesaurus_Util.sql ***meta_username meta_password@OracleSID*** >> Create_Thesaurus_Util.txt

- ☐ Save the file. File>Save.

- ☐ Open a command prompt window. Start>Run>cmd.

- ☐ Navigate to the directory where you have saved the edited file, for example you can enter “cd C:\Data\Database Scripts\Oracle\thesaurus”.

- ☐ Run the create_thesaurus_util.cmd file from the command prompt window by typing "Create_Thesaurus_Util.cmd".

- ☐ Review the Create_Thesaurus_Util.txt file and ensure that you do not get any error messages that deal with insufficient permissions.

Note: The Oracle SID is a required entry. If you run this script remotely, the correct syntax will also include the machine name after the SID and an underscore: <sid>_<Oracle Server>.

Load the Thesaurus Data

- ☐ Inside your file directory, right-click the file LoadThesaurus_Test.cmd and select Edit.

- ☐ Edit the following line to match your users:
  ctxload -thes -user meta/meta@**OracleSID** -name Thesaurus_Test -file Thesaurus_Test.txt

- ☐ Save the file. File>Save.

- ☐ Open a command prompt window. Start>Run>cmd.

- ☐ Navigate to the directory where you have saved the edited file, for example you can enter “cd C:\Data\Database Scripts\Oracle\thesaurus”.

- ☐ Run the LoadThesaurus_Test.cmd file from the command prompt window by typing "LoadThesaurus_Test.cmd".

Repeat these steps for the NOAA thesaurus.

Step 3: GPT 3.0 to GPT 3.1 migration

This step is intended only for those users who are migrating a GPT 3.0 Portal database to a GPT 3.1 database.

Running migrate_v30v31_oracle.sql

You must have an existing GPT 3.0 database in order to run this script. It will *not* work with GPT 2.x databases. The migrate_v30v31_oracle.sql script will update your existing GPT 3.0 database to a GPT 3.1 database.

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

- ☐ sqlplus /nolog

- ☐ SQL>connect sys/sys as sysdba;
- ☐ Run the file migrate_v30v31_oracle.sql by typing: "@migrate_v30v31_oracle.sql"

 Tip: There are a few more steps involved in migrating a GPT 3.1 instance, but they have to be done after the GPT application is deployed, in the next section.

Step 4: Verify Database Connection

Verify that you can connect to the Portal Toolkit database using ArcCatalog.

- ☐ Start ArcCatalog. Start>All Programs>ESRI>ArcGIS>ArcCatalog.
- ☐ Extend the Database Connections heading in the table of contents.
- ☐ Double click Add Spatial Database Connection to create a new spatial database connection.
- ☐ Server: <your machine name>.
- ☐ Service (Port) = 5151.
- ☐ Enter *meta* for the user name (or whatever user name you specified in Step 2).
- ☐ Enter *meta* for the password (or whatever user name you specified in Step 2).
- ☐ Click the Test Connection button.
- ☐ A popup box saying the connection succeeded displays. Dismiss the box.
- ☐ Click OK
- ☐ Verify that you can see the GIS Portal Toolkit tables in the ArcCatalog database connection by double-clicking on the "meta" connection.
- ☐ Exit ArcCatalog.

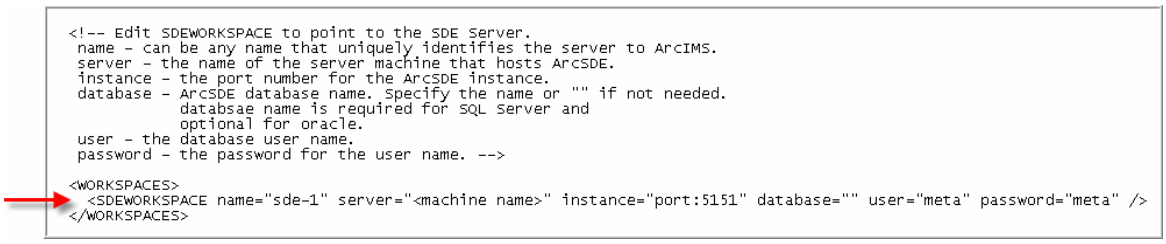
 *If at some point during the installation the database becomes corrupt and you need to remove your metadata tables, use ArcCatalog instead of Oracle to do so.*

Step 5: Setting Up Metadata Services

In this step, you will install and configure two metadata services required for ESRI GIS Portal Toolkit; these metadata services are used to browse and publish metadata.

- ☐ Copy the following ArcIMS XML structure (AXL) files (below) from <CDROM>\Supporting files\Axl\Oracle to the C:\ArcIMS\Axl directory on your local computer:
  - o toolkit_browse_metadata.axl
  - o toolkit_publish_metadata.axl

- ☐ Edit the SDEWORKSPACE tag in the AXL files listed above to modify the server name, instance, user name, and password as stated in Step 4.



```
<!-- Edit SDEWORKSPACE to point to the SDE Server.
 name - can be any name that uniquely identifies the server to ArcIMS.
 server - the name of the server machine that hosts ArcSDE.
 instance - the port number for the ArcSDE instance.
 database - ArcSDE database name. Specify the name or "" if not needed.
            databsae name is required for SQL Server and
            optional for oracle.
 user - the database user name.
 password - the password for the user name. -->

<WORKSPACES>
  <SDEWORKSPACE name="sde-1" server="<machine name>" instance="port:5151" database="" user="meta" password="meta" />
</WORKSPACES>
```

- ☐ In both files, verify the table prefix for the metadata services in ArcCatalog or ArcSDE. The current default is TOOLKIT_META. You need to verify that this table prefix does not already exist in the database. If the prefix already exists, you can either use a different prefix such as TOOLKIT_META1 or delete the existing TOOLKIT_META.

```
<TABLE_NAME prefix="TOOLKIT_META" />
```

Next, create two metadata services using the ArcIMS Administrator as defined by the two AXL files provided. The service parameters are listed below in table 3-1.

- ☐ Open the ArcIMS Administrator.
  Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator

- ☐ Choose the Service menu and select New.

- ☐ Enter the Service Name (e.g., TOOLKIT_Browse_Metadata). *Note: ArcIMS is case-sensitive. Enter the service name *exactly* as it is specified in Table 3-1

- ☐ Enter the Source AXL File (e.g., C:\ArcIMS\Axl\Toolkit_browse_metadata.axl).

- ☐ Select the Virtual Server from the drop down menu (e.g., MetadataServer1).

- ☐ Repeat the steps above until you create a Service for both the TOOLKIT_Browse_Metadata and the TOOLKIT_Publish_Metadata files.

Table 3-1
ESRI GIS Portal Toolkit Metadata Service Names

Service Name	*Source AXL File*	*Service Type*
TOOLKIT_Browse_Metadata	Toolkit_browse_metadata.axl	Metadata Service
TOOLKIT_Publish_Metadata	Toolkit_publish_metadata.axl	Metadata Service


Tip: You may not be able to create the metadata services using the defined prefix TOOLKIT_META. You can test setting up the metadata services in the META schema using a different prefix (e.g., TOOLKIT_META2). If you can create a metadata service using this prefix, it is safe to use the predefined prefix.

- ☐ Verify that the map service names in ArcIMS Administrator match those you created above: TOOLKIT_Browse_Metadata and TOOLKIT_Publish_Metadata.
- ☐ Save the site configuration. File>Save Configuration.

The metadata service generates a root document when setting up the services. To verify that the configuration of the metadata services is correct, compare the DOCUUIDs of the root document in two locations.

- ☐ Open Oracle Enterprise Manager. Start>All Programs>Oracle>Enterprise Manager Console
- ☐ Navigate to Schema>META>Tables.
- ☐ Open the TOOLKIT_META table. Right-click> View/Edit Contents.
- ☐ Open the ASEARCHXMLDOC table. Right-click> View/Edit Contents.
- ☐ Compare the DOCUUID for the root document. You should have the same DOCUUIDs in both the TOOLKIT_META table and the ASEARCHXMLDOC table.


If the DOCUUID is the same in both tables, you can proceed with installation of GIS Portal Toolkit. If you do not have the same DOCUUIDs in both tables, you must remove the metadata tables using ArcCatalog and re-create the metadata services. If you delete the table using Oracle, then you also need to remove records from the SDE database and table. ArcCatalog does this for you automatically.

After running the create_toolkit_schema script and setting up the metadata services, a large number of tables have been created in the META schema. Table 3-2 below lists the created tables and the source of the creation (script or ArcIMS).

Table 3-2
GIS Portal Database Tables

#	Table	Created By	Description
1	APUBLISHOUTPUTS	Script	Deprecated table. Not used.
2	APUBLISHRESULTS	Script	Deprecated table. Not used.
3	ASEARCHXMLDOC	Script	Table used for storing the XML and metadata record information. Main search table.
4	JOB_TABLE	Script	Indexing history.
5	TOOLKIT_ADDRESSTYPE	Script	Type of address specified in a user's profile.
6	TOOLKIT_CHANNELS	Script	Channels in the portal.
7	TOOLKIT_CHANNELS_HISTORY	Script	Channel history records.
8	TOOLKIT_CHANNELUSERS	Script	Channel stewards
9	TOOLKIT_GROUP_MEMBERS	Script	Members of a metadata security policy group.
10	TOOLKIT_GROUP_MEMBERTYPES	Script	Types of members of groups
11	TOOLKIT_GROUPS	Script	Metadata security policy groups
12	TOOLKIT_HARVEST_HISTORY	Script	History of each repository's harvest
13	TOOLKIT_HARVESTING	Script	Metadata repositories
14	TOOLKIT_MAPSERV_PERM	Script	Stores all the individual authentication rules for each ArcIMS service.
15	TOOLKIT_META	ArcIMS	Business table associated with the metadata service's feature class. Contains one record for each folder or document.
16	TOOLKIT_METAD	ArcIMS	Records which documents have been deleted from the metadata service.
17	TOOLKIT_METADR	ArcIMS	Records which relationships no longer exist in the metadata service.
18	TOOLKIT_METAR	ArcIMS	Stores the relationships between documents, folders, and the metadata service.
19	TOOLKIT_METAU	ArcIMS	Stores the names of all users who have sent requests to the metadata service users.
20	TOOLKIT_MV_COORDSYS	Script	List of coordinate systems/projections eligible to be used by Map Viewer.
21	TOOLKIT_MV_LINKS	Script	Saved user maps created when saving map "as a link".
22	TOOLKIT_MV_SAVED	Script	Saved user maps.

#	Table	Created By	Description
23	TOOLKIT_MV_SERVICES	Script	Map services that have been accessed with the MapViewer.
24	TOOLKIT_PUBPOLICY_ACCESSCODES	Script	The various states for setting a publisher's policy.
25	TOOLKIT_PUBPOLICY_MEMBERS	Script	Members of a given publisher's policy
26	TOOLKIT_SEARCHCRITERIA	Script	Saved user search criteria.
27	TOOLKIT_SEL_CHNLUSERS	Script	Stewards for all channels
28	TOOLKIT_USERS	Script	The authentication database's users table. The users table stores all the user names and passwords.
29	TOOLKIT_USERS_ROLES	Script	The various roles a user can have.

The preloaded default values for selected key database tables are listed at the end of this section.

Step 6: Starting the Index Scheduler

ESRI GIS Portal Toolkit 3.1 uses the native Oracle indexer to index the XML files. To ensure that your database is up-to-date, you must execute a process (job) to run the indexer periodically. ESRI accomplishes this using a stored procedure. Follow these steps to start this procedure:

- ☐ Open the command console, Start>Run>cmd
- ☐ sqlplus /nolog
- ☐ SQL> connect meta/meta
- ☐ Exec job_call
- ☐ SQL>quit

If the job call returns an error during startup, you may need to compile the stored procedure.

Follow these steps to verify what needs to be compiled:

- ☐ Open Enterprise Manager. Start>All Programs>Oracle>Enterprise Manager Console
- ☐ Schema>Meta>Sequences.
- ☐ Compile any sequence that has a red icon to the left of the name. Right-click> Compile.

Step 7: JDBC Authentication (Esrimap_Prop)

As part of setting up the metadata services for ESRI GIS Portal Toolkit, the Esrimap_prop file must be modified to work with JDBC connectors.

- ☐ Open the Esrimap_prop file in Notepad, which is located in your Tomcat home installation (e.g., C:\<Tomcat install directory>\webapps\servlet\WEB-INF\classes\Esrimap_prop).

- ☐ Modify the file to use the JDBC permission tables. Each of the parameters below must be updated to the specified values. For each parameter that is preceded with a "#", you must remove this character so as to 'uncomment' the parameter, thereby enabling it.

  - enable=True
  - appServerMachine=<machine name>
  - appServerClientPort=5300
  - failover=False
  - debug=False
  - authenticate=True
  - authMethods=Basic
  - useJdbc=True
  - jdbcDriver=oracle.jdbc.driver.OracleDriver
  - jdbcUrl=jdbc:oracle:thin:@<**Database Server Name**>:1521:<**Database instance name**>
  - jdbcUser=meta
  - jdbcPassword=meta
  - jdbcPermTable=TOOLKIT_MAPSERV_PERM
  - jdbcUserTable=TOOLKIT_USERS
  - jdbcUidColumn=USERID

- ☐ Save your changes. File>Save.

- ☐ Copy the Oracle JDBC driver file from C:\oracle\ora92\jdbc\lib\. to <Tomcat install dir>\webapps\servlet\WEB-INF\lib

  - ojdbc14_g.jar

Step 8: Gazetteer Metadata Service

ESRI GIS Portal Toolkit utilizes a gazetteer service for place-name lookup and defined spatial search extents. In this step, you will load the gazetteer, and then create a gazetteer metadata service. Loading the gazetteer requires running an ArcIMS .bat command which references gazetteer data. You may use the default gazetteer data provided on the ArcIMS gazetteer CD or use data of your own.

For more details, see the ***Creating and Using Metadata Services*** document.

Step 8a: Loading the Gazetteer
To load the gazetteer, follow the instructions below according to your version of ArcIMS.

- ☐ Go to "Services" and make sure that your ArcSDE Service (esri_sde) has been started.

- ☐ Open the command prompt Start>Run>cmd

ArcIMS 9.1:

- ☐ Navigate to the location of the gazetteer import .bat file (GazetteerImport_Ora.bat), found at: <ArcIMS Installation Directory>\Metadata\Data\Gazetteer\

- ☐ Type "GazetteerImport_Ora <sde_server_name> <sde_instance_port> <username> <password>". The script can take a while to run, so be patient.

  Note: The user name and password parameters reference the user who will own the gazetteer tables. This could be the SDE user, the meta user, or you may decide to separate the gazetteer data out into its own tablespace, in which case it would be your new "gazetteer" user. Should you decide to create the gazetteer in its own tablespace, you will have to create the gazetteer tablespace and user first before running this command. If this is the case, follow the instructions from Step 1, but with a new tablespace name and user credentials for the gazetteer user. You will also need to run the grants.cmd script for this new user.

- ☐ After the script finishes, check the command window output for errors. You should see "successfully created index" often. There may be a few errors related to deleting tables that don't exist. You can ignore those errors.

Now that the data is loaded, you must index the tables so that the gazetteer can be searched.

- ☐ Set your working directory in the command line window to the directory that houses the index command called "aimsmetaindx.exe". It is located under your <ArcIMS Installation Directory>\Metadata\Commands folder.

- ☐ Index the gazetteer data by typing "aimsmetaindx.exe <sde_server_machine> <sde_instance> <database> <username> <password> {table_name_prefix} {logfile} {indexNew | indexAll} {localcodepage}".

  ```
  example: aimsmetaindx <sde_server_machine> <sde_instance> #
  <username> <password> gazetteer # # #
  ```

  - By default, the table_name_prefix is "gazetteer". Make sure that in your case, it is the same as the 8th parameter of the gazImport command you ran above.
  - The last 3 parameters are optional. You can leave them out, or put # # # in their place.

- After the aimsmetaindx.exe file runs, it will ask you to check the log file to verify that all documents were successfully created. You will find the log file in the "Commands" directory and the filename is "aimsmetaindx.log". The log should read something similar to "[<Date> <Time>] [<numbers> <numbers> INFO1] Indexed successfully"

☐ Proceed to Step 8b.

ArcIMS 9.2:

☐ Navigate to the location of the gazetteer import script (gazImport.bat), found at: <ArcIMS Installation Directory>\Metadata\Gazetteer\

☐ Type "gazImport oracle <sde_server_name> <sde_instance_port> # <username> <password> # gazetteer <path to gazetteer data>".

- The "#" sign indicates that you are accepting a default value, and is considered one of the parameters to the script.
- If you are using default ArcIMS gazetteer data and you have copied it into the same directory as the gazImport command, the parameter for the "path to gazetteer data" will be "gazworld92" or "gazusa92". If this data resides elsewhere, make sure to precede the data name with the absolute path to the data. (i.e. C:\myData\gazetteerData\gazworld92)
- The script will take awhile to run, so be patient.

Note: The user name and password parameters reference the user who will own the gazetteer tables. This could be the SDE user, the meta user, or you may decide to separate the gazetteer data out into its own tablespace, in which case it would be your new "gazetteer" user. Should you decide to create the gazetteer in its own tablespace, you will have to create the gazetteer tablespace and user first before running this command. If this is the case, follow the instructions from Step 1, but with a new tablespace name and user credentials for the gazetteer user. You will also need to run the grants.cmd script for this new user.

☐ After the script finishes, check the command window output for errors. You should see "successfully created index" often. There may be a few errors related to deleting tables that don't exist. You can ignore those errors.

Now that the data is loaded, you must index the tables so that the gazetteer can be searched.

☐ Set your working directory in the command line window to the directory that houses the index command called "aimsmetaindx.exe". It is located under your <ArcIMS Installation Directory>\Metadata\Commands folder.

- ☐ Index the gazetteer data by typing "aimsmetaindx.exe <sde_server_machine> <sde_instance> <database> <username> <password> {table_name_prefix} {logfile} {indexNew | indexAll} {localcodepage}".

  ```
  example: aimsmetaindx <sde_server_machine> <sde_instance> #
  <username> <password> gazetteer # # #
  ```

  - By default, the table_name_prefix is "gazetteer". Make sure that in your case, it is the same as the 8th parameter of the gazImport command you ran above.
  - The last 3 parameters are optional. You can leave them out, or put # # # in their place.
  - After the aimsmetaindx.exe file runs, it will ask you to check the log file to verify that all documents were successfully created. You will find the log file in the "Commands" directory and the filename is "aimsmetaindx.log". The log should read something similar to "[<Date> <Time>] [<numbers> <numbers> INFO1] Indexed successfully"

- ☐ Proceed to Step 8b.

Step 8b: Creating the Gazetteer Metadata Service

Now that you have loaded the gazetteer data into the database, you will create an ArcIMS gazetteer service that will point to the loaded data.

- ☐ Open the C:\ArcIMS\Axl\Metadata\Gazetteer.axl file.

- ☐ Update the following text to match your machine's configuration:

  <SDEWORKSPACE name="sde0" server="<your machine name>" instance="port:5151" database="" user="<user name>" password="<password>"/>

  Note: If you are running your database on another port, update the port accordingly.

  Note: The user name and password correspond to the user that owns the tablespace into which you loaded the gazetteer data.

- ☐ Uncomment the line where the <CONFIG_PARAMETER> has its keyword set to IMS_GAZETTEER

- ☐ Save the Gazetteer.axl file and close it.

- ☐ Now, create a metadata service called Gazetteer:

- ☐ Open the ArcIMS Administrator. Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator
- ☐ Choose the Service menu and select New.
- ☐ Enter the Service Name "Gazetteer".
- ☐ Enter the Source AXL File (e.g., C:\ArcIMS\Axl\Metadata\Gazetteer.axl).
- ☐ Select the Virtual Server from the drop down menu (MetadataServer1).
- ☐ Save the ArcIMS site configuration and exit Administrator. File>Save Configuration.

Step 9: Restart Tomcat

You have made many changes, but they will not go into effect until you restart Tomcat.

- ☐ Open the Services panel. Start>Administrative Tools>Services.
- ☐ Highlight Apache Tomcat and select the Restart Service tool from the toolbar. You can also right-click on Apache Tomcat and select Restart.

Step 10: Run ArcIMS Diagnostics

To verify the configuration changes, you need to test the ArcIMS diagnostics.

- ☐ Open the ArcIMS Diagnostics. Start>All Programs>ESRI>ArcGIS>ArcIMS>Diagnostics
- ☐ Click the number 1 box to Check the ArcIMS Servlet Connector. You can view your Diagnostic Results at the bottom of the page.
- ☐ Click the number 2 box to Check ArcIMS Application Server. You can view your Diagnostic Results at the bottom of the page.

Note: If ArcIMS diagnostics fails, restart ArcIMS services (in the following order: turn off ArcIMS Tasker, turn off ArcIMS Monitor, turn off ArcIMS Applications; then turn on ArcIMS Applications, turn on ArcIMS Monitor, and turn on ArcIMS Tasker).

Note: If an ArcIMS Error 005 is returned, you need to verify your JDBC configuration and settings.

- ☐ Additionally, connect to ArcIMS from ArcCatalog to view the metadata services created. Make sure that there is a "write" or "pencil" icon on the TOOLKIT_Publish_Metadata service.

3.2 Database Installation for SQL Server Users

Steps 1 and 2 below are for new GPT 3.1 installs only. If you are migrating an existing GPT 3.0 database to GPT 3.1, skip to Step 3.

Step 1: Deleting Old Tables

In this step and step two, you will set up the database that will be used for the ESRI GIS Portal. The ESRI GIS Portal should run in its own schema or database. You will be using a SQL script to set up the database and a user for the portal using the names provided below. These values are sample values, but can be set to different values if necessary for your portal implementation. For example, SQL Server 2005 users need to set a different password than "meta" because by default SQL Server 2005 requires strong passwords containing numbers and/or special characters. When you choose different values than "meta", you will need to alter this value in some of the configuration files:

- ☐ Database Name: meta
- ☐ Database User: meta
- ☐ Database User Password: meta
- ☐ Example Database User Password for SQL Server 2005: m1e2t3a

Note: If you have an existing instance of a database called "meta" that is no longer in use, please delete this database before running the new scripts. Failure to do so may result in not being able to create metadata services. Follow these steps to delete an existing "meta" database:

- ☐ Delete the TOOLKIT_META tables from the old install using ArcCatalog.
- ☐ Delete the "meta" database using the SQL Server Enterprise Manager.

Step 2: Creating the ESRI GIS Portal Toolkit Database Using the Script

The SQL script for creating the GPT schema is called "create_toolkit_schema.cmd" and assumes that SQL Server has been installed under C:\Program Files\Microsoft SQL Server\MSSQL for SQL Server 2000 and C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL for SQL Server 2005. The portal database MDF file is hard-coded to be created under these directories in the "\data\meta_log". If you installed SQL Server in a different folder or would like to create the portal database in a different location on your machine then you must edit the path in the script before running the script file.

To accept the default filepaths and proceed:

- ☐ Open a command window. Start>Run>cmd.
- ☐ For SQL Server 2000, change the directory to <CDROM>\supporting files\Database Scripts\SQLServer. For SQL Server 2005, change the directory to <CDROM>\supporting files\Database Scripts\SQLServer_2005.
- ☐ For SQL Server 2000, run the script create_toolkit_schema.cmd and for SQL Server 2005, run the script create_toolkit_schema_05. Use the following parameters:

- Usage : Create_toolkit_schema [DBServer] [Database] [GPTUserLogin] [GPTUserPwd] [SDEUser]

Where
- [DBServer] is the SQL Server Name.
- [Database] is Portal database.
- [GPTUserLogin] is Portal user.
- [GPTUserPwd] is Portal password.
- [SDEUser] is the SDE user.

Sample input for SQL Server 2000:

Create_Toolkit_Schema.cmd gpt4 meta meta meta sde

Sample input for SQL Server 2005:

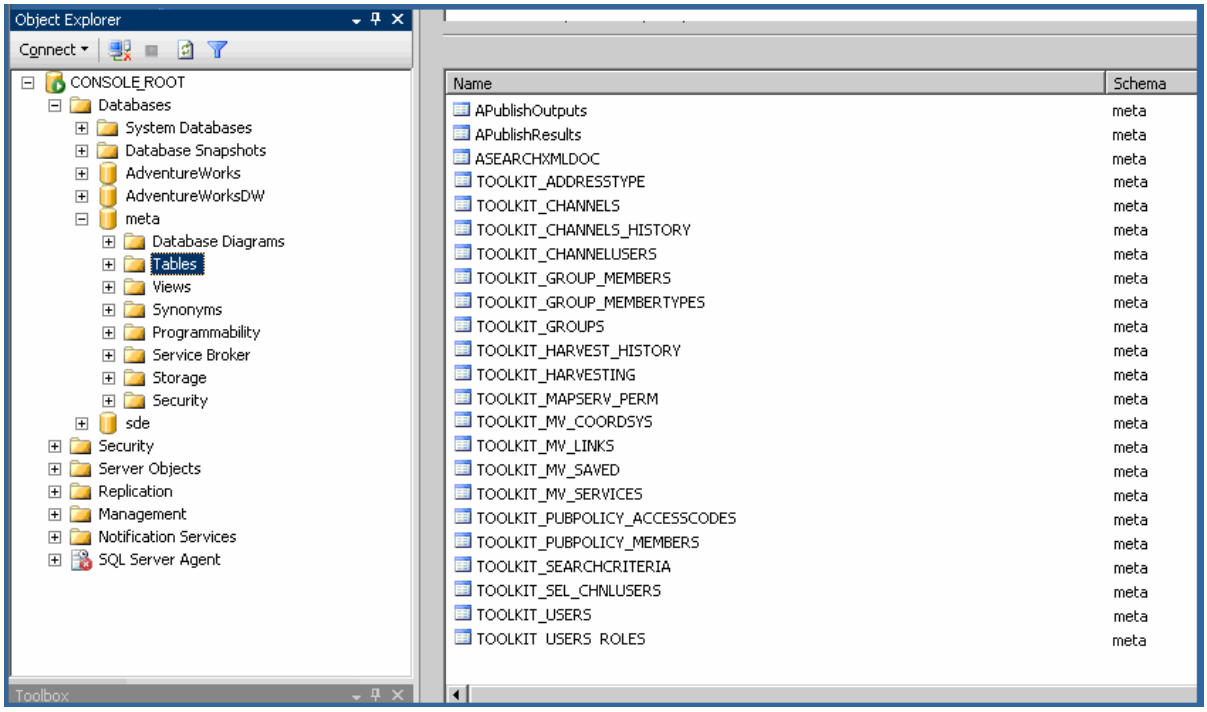
Create_Toolkit_Schema_05.cmd gpt4 meta meta m1e2t3a sde

- ☐ When the script finishes executing, you will be returned back to the command prompt. Check the command prompt window for a possible message of "Building Database Failed" to indicate if something went wrong during script execution.

- ☐ Review the build_schema.log, build_sp.log, and build_ft.log files and ensure that you do not get any 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.

The SQL scripts insert several records into the tables. These tables can be created under a different SQL Server user; that is, they do not have to belong to the same user as the metadata tables. This depends on the database policy defined by the client. Normally, the system database account does not own application tables, so a separate account is created. Note that these are not the same accounts as when connecting to the portal. The accounts mentioned here (and above) are necessary to set up the databases.

- ☐ Open SQL Server Enterprise Manager or Management Studio and refresh the Databases folder from the table of contents. The meta database should be present.



Step 3: GPT 3.0 to GPT 3.1 migration

This step is intended only for those users who are migrating a GPT 3.0 Portal database to a GPT 3.1 database.

Running migrate_v30v31_sqlserver.sql

You must have an existing GPT 3.0 database in order to run this script. It will *not* work with GPT 2.x databases. The migrate_v30v31_sqlserver.sql script will update your existing GPT 3.0 database to a GPT 3.1 database.

- ☐ Open a command window. Start>Run>cmd
- ☐ Change directory to <CDROM>\supporting files\Database Scripts\SqlServer
- ☐ Run the script Update_toolkit_schema.cmd using the following parameters:
  - o Usage : Update_toolkit_schema [DBServer] [Database] [GPTUserLogin] [GPTUserPwd] [SDEUser]

  Where

  - o [DBServer] is the SQL Server Name.
  - o [Database] is Portal database.
  - o [GPTUserLogin] is Portal user.
  - o [GPTUserPwd] is Portal password.

- [SDEUser] is the SDE user.

Sample input:

Update_toolkit_schema.cmd MyMachine MyDatabase meta meta sde

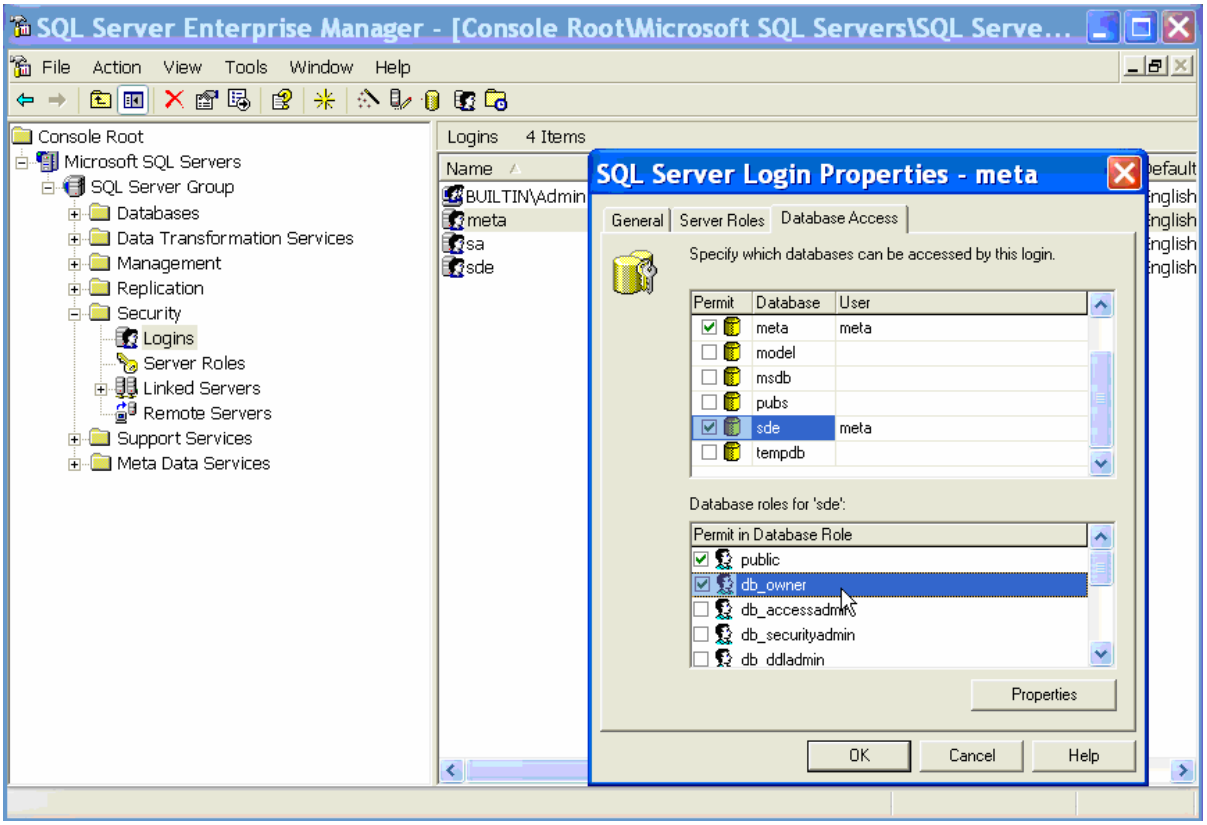
Tip: There are a few more steps involved in migrating a GPT 3.1 instance, but they have to be done after the GPT application is deployed, in the next section.

Step 4: Verify Database Permissions for SQL Users

In this step of the database configuration, you will set database ownership.

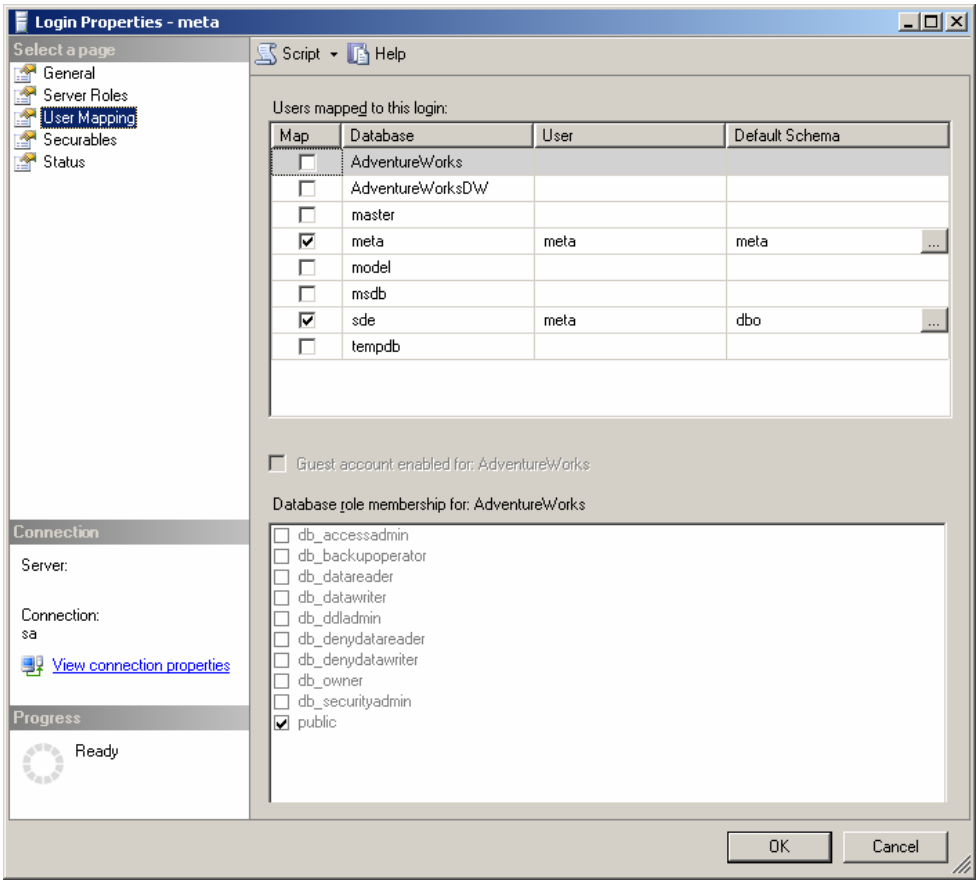
☐ For SQL Server 2000:

- Open SQL Server Enterprise Manager if not already open.
- Open the Security folder and select Logins.
- Right-click the meta login from the right-hand pane and choose Properties.
- Select the **Database Access** tab.
- In the list of databases, check the box next to the sde database and select **db_owner** in Database roles for sde (see graphic below).
- Similarly, grant db_owner privileges to sde user for meta database.



☐ For SQL Server 2005:

- Open SQL Server Management Studio if not already open.
- There is a Security folder in the main catalog tree just below the "Databases" folder, and also separate Security folders under each database when you expand their nodes (ex: you click "Databases", then "meta", and there will be a Security folder under the meta directory). Open the Security folder that is NOT under your meta database, but is just below the first "Databases" folder.
- Select Logins.
- Right-click the meta login from the right-hand pane and choose Properties.
- Select the **User Mapping** option on the left (see graphic below).
- In the "Mapped to this login" window, check the box next to the "sde" database and "meta" database.
- In the "database role membership" window, check the box next to "db-owner".
- Click OK.



Step 5: Verify a Connection to the "meta" Database with ArcCatalog

- ☐ Start ArcCatalog
- ☐ Add a spatial database connection
- ☐ Server: Your machine
- ☐ Port: 5151
- ☐ Database: meta.
- ☐ User: meta
- ☐ Password: meta (or whatever password you set in Step 1)

- ☐ Click "test connection". If the button becomes unavailable after a few moments, then the connection was successful. If the connection was unsuccessful, make sure your ArcSDE Service has been started. Go to the "services" menu under your "computer management" options in the "administrative tools" section of your computer's control panel, and manually start the service.

- ☐ Click OK.

- ☐ Exit ArcCatalog.

If you can see a list of tables in the meta database, then you have successfully connected to the database.

If at some point during the installation, the database becomes corrupt and you need to remove your metadata tables, use ArcCatalog instead of SQL Server to do so.

Step 6: Creating/Verifying and Indexing Full-Text Catalogs

A full-text catalog stores and searches your catalog content. It is important that the content is kept up to date. After you create/verify the full-text catalog, you will enable SQL Server to automatically update it.

First, you will verify that all required full-text catalogs are present. If they are not, then you must create these catalogs.

- ☐ In SQL Server Enterprise Manager (2000) or Management Studio (2005), open the meta database.

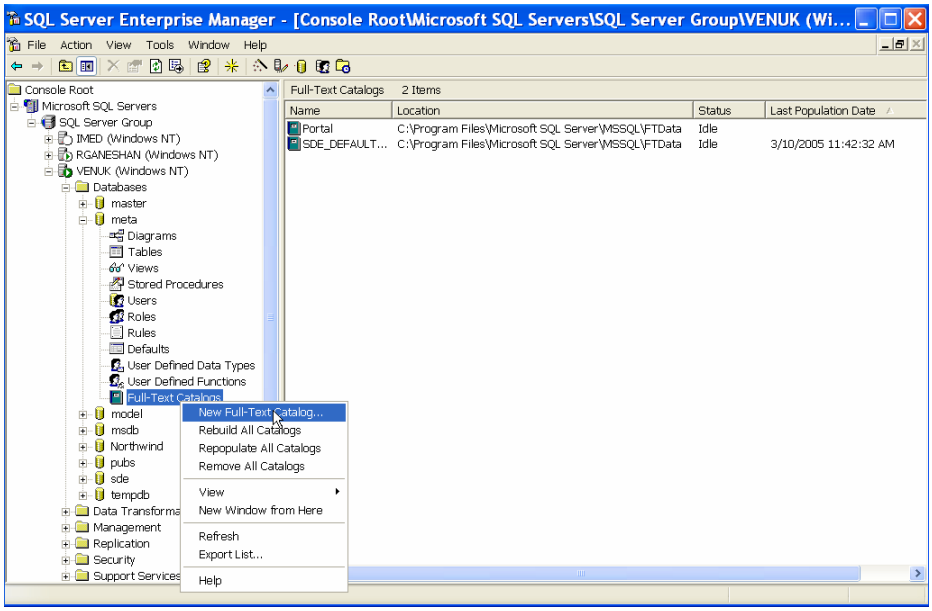
- ☐ Click Full-Text Catalogs (2000) or click "Storage" then Full-Text Catalogs (2005).

- ☐ Verify that two full-text catalogs are present.

    - o SDE_DEFAULT_CAT
    - o Portal

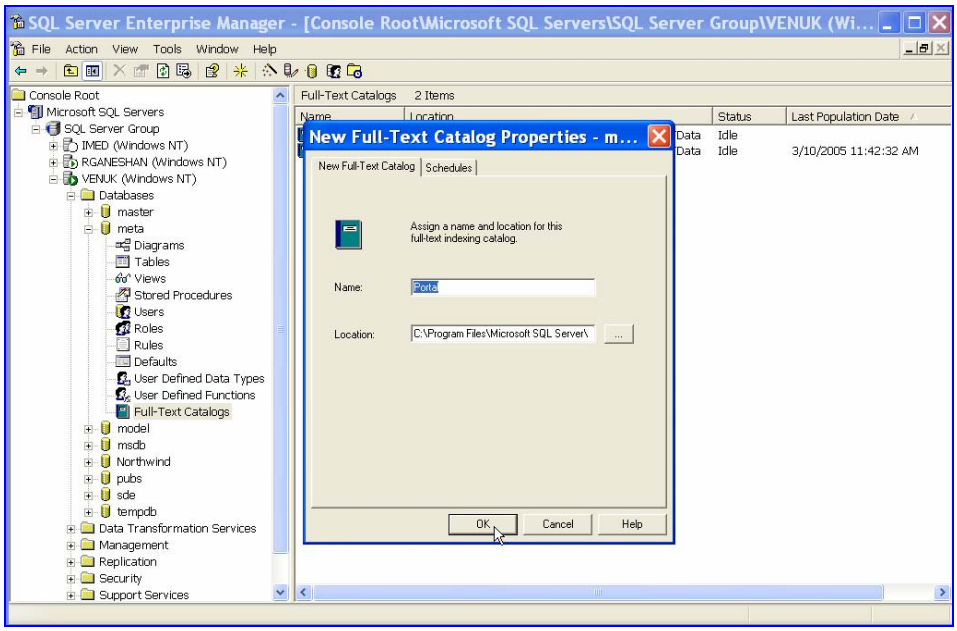
If the catalogs are not present, follow these steps to create a new full-text catalog.

- ☐ Right-click Full-Text Catalogs under the meta database and click New Full-Text Catalog.



- ☐ Type "SDE_DEFAULT_CAT" in the Name field.
- ☐ Click OK.
- ☐ Repeat these steps to create the Portal catalog as well.

Note that you can change the location of the full-text catalog by clicking the Location button.



Starting the SQL Server Agent Services

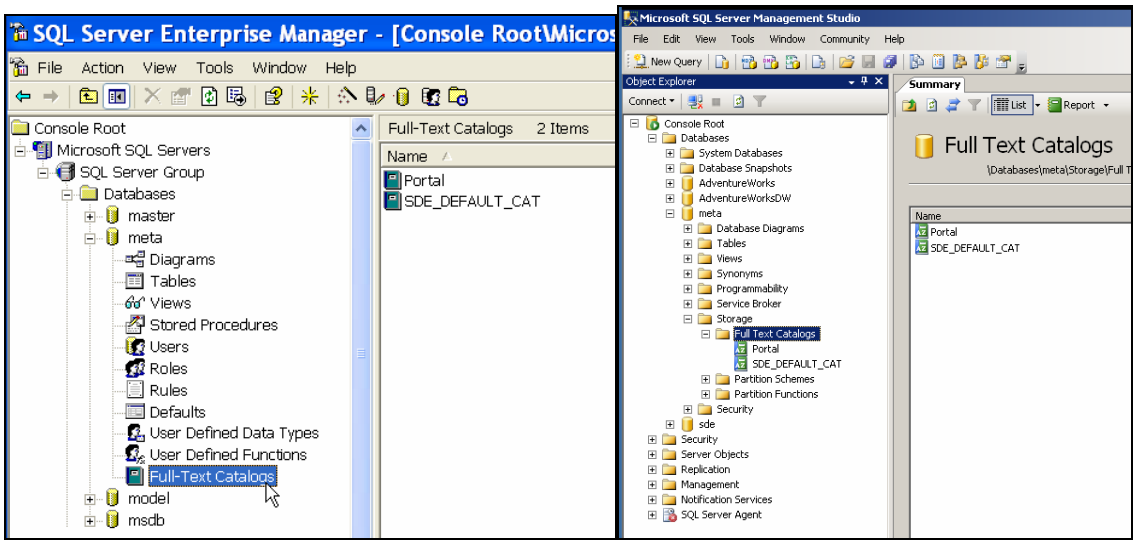
SQL Server Agent is a Microsoft Windows service that executes scheduled administrative tasks, and you will use it to regularly update – or "index" – your full-text catalogs.

- ☐ In SQL Server Enterprise Manager (2000), click Management. For SQL Server 2005, in the Object Explorer Window in Management Studio there is a node below "Notification Services" that says "SQL Server Agent".
- ☐ Right-click SQL Server Agent.
- ☐ Click Start.
- ☐ When it asks if you are sure you want to start the SQL Server Agent service on your computer, say "yes".

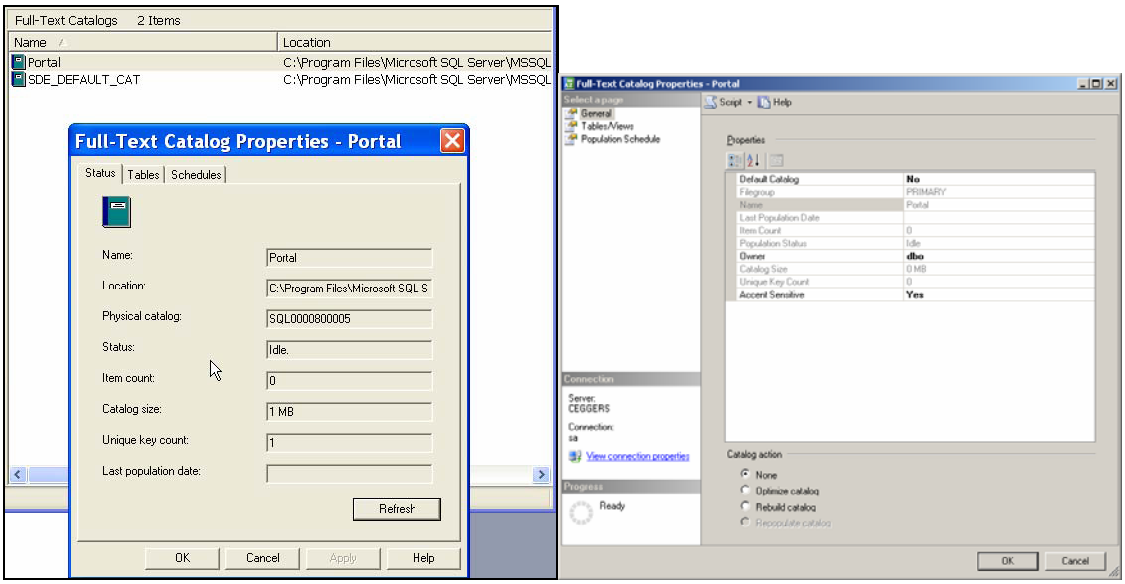
Indexing SQL Server Full-Text Catalogs

Indexing enables faster metadata searches in the GIS Portal Toolkit. In the screenshots below, SQL Server 2000 is shown to the left and Server 2005 to the right.

- ☐ In SQL Server 2000 Enterprise Manager select the meta database on your machine and click Full-Text Catalogs. For SQL Server 2005 Management Studio, click meta, then Storage, then Full-Text Catalog.

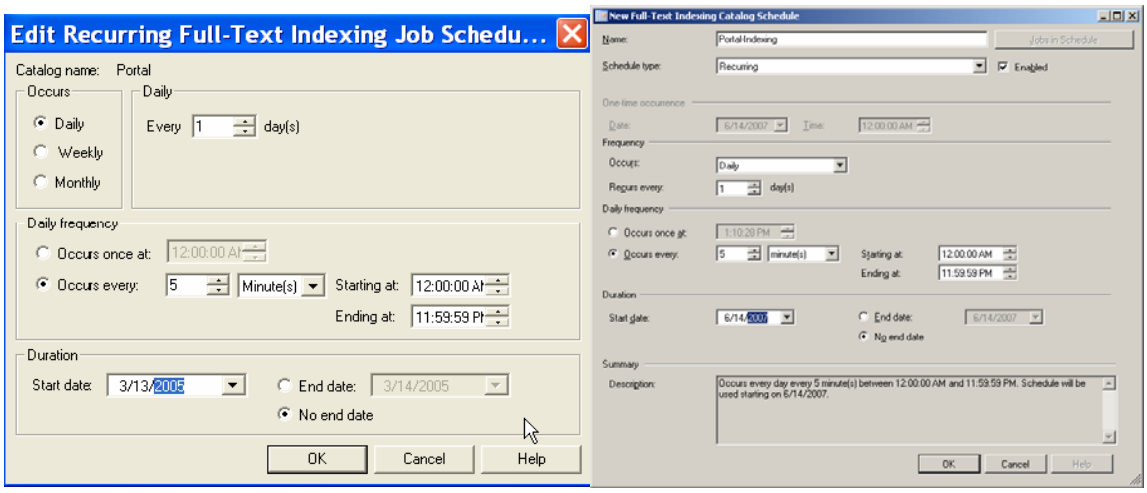


- ☐ On the right panel, double-click Portal. The Full-Text Catalog Properties-Portal dialog box will appear.



- ☐ SQL Server 2000:
  - Click the Schedules tab and click New Catalog Schedule.
  - Type an indexing name in the Name text box (e.g., Portal-Indexing).
  - Under Job type, choose Full population.
  - Choose Recurring under Schedule frequency and click Change.
  - Make changes as suggested in the table that follows.
- ☐ SQL Server 2005:
  - Click the Population Schedule heading in the left window. Click "New" at the bottom of the window.
  - Type an indexing name in the Name text box (e.g., Portal-Indexing).
  - Under Schedule type, choose Recurring.
  - Under Frequency, make changes as suggested in the table that follows.

Name	**Value**
Occurs	Daily
Daily	Every "1" day(s)
Daily Frequency	Occurs every "5" Minutes
Duration	Start date: Yesterday's date



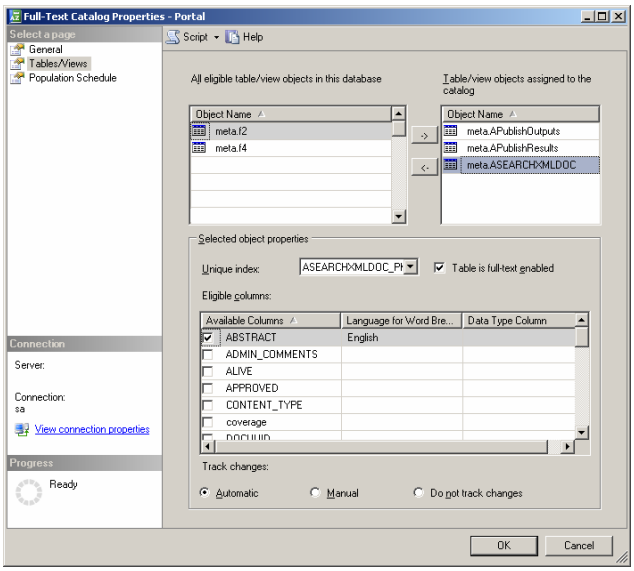
☐ Leave the remaining values set to default and click OK to close the dialog box.

☐ Click OK to close the New Full-Text Indexing Catalog Schedule dialog box.

☐ In SQL Server 2000, click OK to close the Full-Text Catalog Properties-Portal dialog box and finish this step.

☐ In SQL Server 2005, there are a couple additional steps before exiting the Full-Text Catalog Properties-Portal dialog box (see graphic below):

- Click “Tables/Views” in the “Select a Page” window at the left.
- In the “Table/View objects assigned to the catalog” box, highlight the ASEARCHXMLDOC file.
- Click on the “automatic” radial button at the bottom of the box under “Track Changes”.
- Click OK to close the Full-Text Catalog Properties box and finish.



Step 7: Setting Up Metadata Services

In this step, you will create and configure two metadata services required for the GIS Portal Toolkit; these metadata services are used to browse and publish metadata.

- ☐ Copy the AXL files below from <CDROM>\supporting files\AXL\sqlserver to the C:\ArcIMS\Axl directory on your local computer.

  - Toolkit_browse_metadata.axl
  - Toolkit_publish_metadata.axl

Using Notepad, make the following changes to the AXL files for the Browse and Publish metadata services:

- ☐ Edit the following SDEWORKSPACE tag attributes to match values for your system: server, instance, database, user name, and password. Note that the database attribute is optional for Oracle but required for SQL Server. For example:

  <SDEWORKSPACE name="sde-1" server="<database>"
  instance="port:<sdePort#>" database="" user="<user name>"
  password="<password>" />

- ☐ In both files, verify the table prefix for the metadata services, the default is TOOLKIT_META. You need to verify this table prefix does not already exist in the database. If the prefix already exists, you can either use a different prefix such as TOOLKIT_META1 or delete the existing TOOLKIT_META use ArcCatalog or ArcSDE.

  ```
  <TABLE_NAME prefix="TOOLKIT_META" />
  ```

Next, create two metadata services (**TOOLKIT_Browse_Metadata** and **TOOLKIT_Publish_Metadata**) in ArcIMS Administrator using these AXL files. The service parameters are listed in table 3-3.

- ☐ Open the ArcIMS Administrator.
  Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator
- ☐ Choose the Service menu and select New.
- ☐ Enter the Service Name (e.g., TOOLKIT_Browse_Metadata) *Note: ArcIMS is case-sensitive. Enter the service name *exactly* as it is specified in Table 3-3
- ☐ Enter the Source AXL File (e.g., C:\ArcIMS\Axl).
- ☐ Select the Virtual Server from the drop down menu (e.g., MetadataServer1).
- ☐ Repeat the steps above until you create a Service for both the TOOLKIT_Browse_Metadata and the TOOLKIT_Publish_Metadata files.

Table 3-3
ESRI GIS Portal Toolkit Metadata Service Names

Service Name	*Source AXL File*	*Service Type*
TOOLKIT_Browse_Metadata	Toolkit_browse_metadata.axl	Metadata Service
TOOLKIT_Publish_Metadata	Toolkit_publish_metadata.axl	Metadata Service

- ☐ Verify that the map service names in ArcIMS Administrator match those you created above: TOOLKIT_Browse_Metadata and TOOLKIT_Publish_Metadata.
- ☐ Save the site configuration in ArcIMS Administrator. File>Save Configuration.

When setting up the services, the metadata service generates a root document. To verify that the configuration of the metadata services is correct, compare the content and DOCUUID of the root document in the two locations.

- ☐ Open SQL Server Enterprise Manager.
- ☐ Open the meta database.
- ☐ Click tables.
- ☐ Open the TOOLKIT_Meta table.
- ☐ Open the ASEARCHXMLDOC table.

- ☐ Compare the DOCUUID of the root document in the two tables..

If the DOCUUIDs are the same, you can proceed with installation of ESRI GIS Portal Toolkit. If not, you must remove the metadata tables using *ArcCatalog* and re-create the metadata services. You could delete the table using the SQL Server Enterprise Manager, but you will also need to remove records from the SDE database and table. With ArcCatalog, this is automatically done for you.

After running the create_toolkit_schema script and setting up the metadata services, a large number of tables have been created. Table 3-4 below lists the created tables and the source of the creation (script or ArcIMS). Start ArcCatalog and verify that these tables have been created.

Table 3-4
GIS Portal Database Tables

#	Table	Created By	Description
1	APUBLISHOUTPUTS	Script	Deprecated table. Not used.
2	APUBLISHRESULTS	Script	Deprecated table. Not used.
3	ASEARCHXMLDOC	Script	Type of address specified in a user's profile.
4	TOOLKIT_ADDRESSTYPE	Script	Channels in the portal.
5	TOOLKIT_CHANNELS	Script	Channel history records.
6	TOOLKIT_CHANNELS_HISTORY	Script	Channel stewards
7	TOOLKIT_CHANNELUSERS	Script	Members of a metadata security policy group.
8	TOOLKIT_GROUP_MEMBERS	Script	Types of members of groups
9	TOOLKIT_GROUP_MEMBERTYPES	Script	Metadata security policy groups
10	TOOLKIT_GROUPS		History of each repository's harvest
11	TOOLKIT_HARVEST_HISTORY	Script	Metadata repositories
12	TOOLKIT_HARVESTING	Script	Type of address specified in a user's profile.
13	TOOLKIT_MAPSERV_PERM	Script	Stores all the individual authentication rules for each ArcIMS service.
14	TOOLKIT_META	ArcIMS	Business table associated with the metadata service's feature class. Contains one record for each folder or document.
15	TOOLKIT_METAD	ArcIMS	Records which documents have been deleted from the metadata service.
16	TOOLKIT_METADR	ArcIMS	Records which relationships no longer exist in the metadata service.
17	TOOLKIT_METAR	ArcIMS	Stores the relationships between documents, folders, and the metadata service.

#	Table	Created By	Description
18	TOOLKIT_METAU	ArcIMS	Stores the names of all users who have sent requests to the metadata service users.
19	TOOLKIT_MV_COORDSYS	Script	List of coordinate systems/projections eligible to be used by Map Viewer.
20	TOOLKIT_MV_LINKS	Script	Saved user maps created when saving map "as a link".
21	TOOLKIT_MV_SAVED	Script	Saved user maps.
22	TOOLKIT_MV_SERVICES	Script	Map services that have been accessed with the MapViewer.
23	TOOLKIT_PUBPOLICY_ACCESSCODES	Script	The various states for setting a publisher's policy.
24	TOOLKIT_PUBPOLICY_MEMBERS	Script	Members of a given publisher's policy
25	TOOLKIT_SEARCHCRITERIA	Script	Saved user search criteria.
26	TOOLKIT_SEL_CHNLUSERS	Script	Stewards for all channels
27	TOOLKIT_USERS	Script	The authentication database's users table. The users table stores all the user names and passwords.
28	TOOLKIT_USERS_ROLES	Script	The various roles a user can have.

The preloaded default values for selected key database tables are listed at the end of this section.

Step 8: JDBC Authentication (Esrimap_Prop)

As part of setting up the metadata services for ESRI GIS Portal Toolkit, the Esrimap_prop file must be modified to work with JDBC connectors.

- ☐ Open the Esrimap_prop file in Notepad, which is located in your Tomcat home installation (e.g., C:\<Tomcat install directory>\webapps\servlet\WEB-INF\classes\Esrimap_prop).

- ☐ Modify the file to use the JDBC permission tables. Each of the parameters below must be updated to the specified values. For each parameter that is preceded with a "#", you must remove this character so as to 'uncomment' the parameter, thereby enabling it.
  - enable=True
  - appServerMachine=<localhost name>
  - appServerClientPort=5300
  - failover=False
  - debug=False
  - authenticate=True
  - authMethods=Basic
  - useJdbc=True

- jdbcDriver= net.sourceforge.jtds.jdbc.Driver
- jdbcUrl=jdbc:jtds:sqlserver://<**Database Server Name**>:1433/meta
- jdbcuser=meta
- jdbcpassword=meta
- jdbcpermtable=TOOLKIT_MAPSERV_PERM
- jdbcusertable=TOOLKIT_USERS
- jdbcuidcolumn=USERID

Note: If SQL Server was installed with a named instance, the jdbcURL variable needs to have a different format. (The deviation is italicized)
jdbc:jtds:sqlserver://<Database Server Name>:1433/meta*;instance=sqlserver_jou01*

For further instructions on how to define extra parameters when configuring the jdbcURL parameter, refer to: http://jtds.sourceforge.net/faq.html#urlFormat

☐ Copy the SQL Server JDBC driver (jtds-1.2.2.jar) to <Tomcat install dir>\webapps\servlet\WEB-INF\lib. The driver can be downloaded from http://jtds.sourceforge.net/.

Step 9: Gazetteer Metadata Service

ESRI GIS Portal Toolkit utilizes a gazetteer service for place-name lookup and defined spatial search extents. In this step, you will load the gazetteer, and then create a gazetteer metadata service. Loading the gazetteer requires running an ArcIMS .bat command which references gazetteer data. You may use the default gazetteer data provided on the ArcIMS gazetteer CD or use data of your own.

For more details, see the ***Creating and Using Metadata Services*** document.

Step 9a: Loading the Gazetteer

To load the gazetteer, follow the instructions below according to your version of ArcIMS.

☐ Go to "Services" and make sure that your ArcSDE Service (esri_sde) has been started.

☐ Open the command prompt Start>Run>cmd

ArcIMS 9.1:

☐ Navigate to the location of the gazetteer import .bat file (GazetteerImport.bat), found at: <ArcIMS Installation Directory>\Metadata\Data\Gazetteer\

☐ Type "GazetteerImport <sde_server_name> <sde_instance_port> <username> <password> database". The script can take a while to run, so be patient.

Note: The user name and password parameters reference the user who will own the gazetteer tables. This could be the SDE user, the meta user, or you may decide to separate the gazetteer data out into its own database, in which case it would be your new "gazetteer" user. Should you decide to create the gazetteer in its own database, you will have to create the gazetteer database and user first before running this command.

- ☐ After the script finishes, check the command window output for errors. You should see "successfully created index" often. There may be a few errors related to deleting tables that don't exist. You can ignore those errors.

Now that the data is loaded, you must index the tables so that the gazetteer can be searched.

- ☐ Start a full population on the full-text SDE_DEFAULT_CAT index in the gazetteer database to index the newly inserted data.

- ☐ Proceed to Step 9b.

ArcIMS 9.2:

- ☐ Navigate to the location of the gazetteer import script (gazImport.bat), found at: <ArcIMS Installation Directory>\Metadata\Gazetteer\

- ☐ Type "gazImport sqlserver <sde_server_name> <sde_instance_port> <database> <username> <password> # gazetteer <path to gazetteer data>".

    - The "#" sign indicates that you are accepting a default value, and is considered one of the parameters to the script.

    - If you are using default ArcIMS gazetteer data and you have copied it into the same directory as the gazImport command, the parameter for the "path to gazetteer data" will be "gazworld92" or "gazusa92". If this data resides elsewhere, make sure to precede the data name with the absolute path to the data. (i.e. C:\myData\gazetteerData\gazworld92)

    - The script will take awhile to run, so be patient.

  Note: The user name and password parameters reference the user who will own the gazetteer tables. This could be the SDE user, the meta user, or you may decide to separate the gazetteer data out into its own database, in which case it would be your new "gazetteer" user. Should you decide to create the gazetteer in its own database, you will have to create the gazetteer database and user first before running this command.

- ☐ After the script finishes, check the command window output for errors. You should see "successfully created index" often. There may be a few errors related to deleting tables that don't exist. You can ignore those errors.

Now that the data is loaded, you must index the tables so that the gazetteer can be searched.

- ☐ Start a full population on the full-text SDE_DEFAULT_CAT index in the gazetteer database to index the newly inserted data.

- ☐ Proceed to Step 9b.

Step 9b: Creating the Gazetteer Metadata Service

Now that you have loaded the gazetteer data into the database, you will create an ArcIMS gazetteer service that will point to the loaded data.

- ☐ Open the C:\ArcIMS\Axl\Metadata\Gazetteer.axl file.

- ☐ Update the following text to match your machine's configuration:

  <SDEWORKSPACE name="sde0" server="<your machine name>" instance="port:5151" database="<database name>" user="<gazetteer username>" password="<gazetteer password>"/>

  Note: If you are running your database on another port, update the port accordingly.

  Note: The user name and password correspond to the user that owns the database into which you loaded the gazetteer data.

- ☐ Uncomment the line where the <CONFIG_PARAMETER> has its keyword set to DEFAULTS

- ☐ Save the Gazetteer.axl file and close it.

- ☐ Now, create a metadata service called Gazetteer:

- ☐ Open the ArcIMS Administrator. Start>All Programs>ESRI>ArcGIS>ArcIMS>Administrator

- ☐ Choose the Service menu and select New.

- ☐ Enter the Service Name "Gazetteer".

- ☐ Enter the Source AXL File (e.g., C:\ArcIMS\Axl\Metadata\Gazetteer.axl).

- ☐ Select the Virtual Server from the drop down menu (MetadataServer1).

- ☐ Save the ArcIMS site configuration and exit Administrator. File>Save Configuration.

Step 10: Restart Tomcat

The final step in this section is to restart the servlet engine. You have made many changes, but they will not go into effect until you restart Tomcat.

- ☐ Open the Services panel. Start>Administrative Tools>Services.
- ☐ Highlight Apache Tomcat and select the Restart Service tool from the toolbar. You can also right-click on Apache Tomcat and select Restart.

Step 11: Run ArcIMS Diagnostics

To verify the configuration changes, you need to test the ArcIMS diagnostics.

- ☐ Open the ArcIMS Diagnostics.
  Start>All Programs>ESRI>ArcGIS>ArcIMS>Diagnostics
- ☐ Click the number 1 box to Check the ArcIMS Servlet Connector. You can view your Diagnostic Results at the bottom of the page.
- ☐ Click the number 2 box to Check ArcIMS Application Server. You can view your Diagnostic Results at the bottom of the page.

Note: If ArcIMS diagnostics fails, restart ArcIMS services (in the following order: turn off ArcIMS Tasker, turn off ArcIMS Monitor, turn off ArcIMS Applications; then turn on ArcIMS Applications, turn on ArcIMS Monitor, and turn on ArcIMS Tasker).

Note: If an ArcIMS Error 005 is returned, you need to verify your JDBC configuration and settings.

- ☐ Additionally, connect to ArcIMS from ArcCatalog to view the metadata services created. Make sure that there is a "write" or "pencil" icon on the TOOLKIT_Publish_Metadata service.

Default Values Loaded in Key Database Tables

The following is an excerpt from create_toolkit_schema.sql:

TOOLKIT_ADMIN USERS

(USERNAME, PASSWORD) VALUES ('admin','admin')

TOOLKIT_USERS

(USERID, USERNAME) VALUES (1, '*');
(USERID, USERNAME, PASSWORD, ROLEID) VALUES (2, 'author','author',0);
(USERID, USERNAME, PASSWORD, ROLEID) VALUES (3, 'admin','admin',0);
(USERID, USERNAME, PASSWORD, ROLEID) VALUES (4, 'gazetteer','gazetteer',0)

TOOLKIT_MAPSERV_PERM

(USERID, SERVICE, ACTIVE, ROLES) VALUES
(1,'TOOLKIT_Browse_Metadata',1,'metadata_browser_all');
(USERID, SERVICE, ACTIVE, ROLES) VALUES (2,'*',1,'Metadata_service_author');
(USERID, SERVICE, ACTIVE, ROLES) VALUES
(3,'TOOLKIT_Publish_Metadata',1,'metadata_administrator');
(USERID, SERVICE, ACTIVE) VALUES (1,'*',1);
(USERID, SERVICE, ACTIVE) VALUES (1,'TOOLKITMap',1)

End

4.0: Setting Up the GIS Portal Application

4.1 Installation

All database users (including DB2, Oracle, and SQL Server) must follow steps 1–7.

Step 1: Copy the WAR Files

In this step, you will copy the Portal.war and arcexplorer.war files from the source location to the <Tomcat installation folder>\webapps location. While Tomcat is running, the WAR files will automatically open and the content extracted into the appropriate directories:

The Portal.war file will automatically open and extract in:
<Tomcat installation dir>\ webapps\Portal

The arcexplorer.war file for Map Viewer will automatically open and extract in:
<Tomcat installation dir>\webapps\arcexplorer

- ☐ Open Windows Explorer.
- ☐ Navigate to the \Portal folder on the CD-ROM.
- ☐ Copy the Portal.war and arcexplorer.war files.
- ☐ Paste the WAR files in <Tomcat installation dir>\webapps.
- ☐ After a few moments, verify that two directories named Portal and arcexplorer were created in webapps.

Tip: You may need to refresh Windows Explorer to see the Portal and arcexplorer directory, or you may need to restart Tomcat to deploy the war files.

- ☐ Create a folder called c:/toolkit31. This folder will be used to store logs and validated metadata records, and provide a default data upload location.

Step 2: Copying the JAR Files

In this step, you will configure the GIS Portal Toolkit framework and copy all the required Portal JAR files to the <Tomcat installation dir>\webapps\Portal\WEB-INF\lib directory and all of the required MapViewer JAR files to the <Tomcat installation dir>\webapps\arcexplorer\WEB-INF\lib. The Portal\WEB-INF\lib and arcexplorer\WEB-INF\lib directories may already contain some JAR files. You will copy additional files into these directories. Do NOT delete the files that are already there.

Below is a list of JAR files required to install the GIS Portal and the Map Viewer. *Note that the JAR files below are taken from Section 2. Refer to Section 2 for the download locations of the following JAR files.*

Table 4-1
Third-Party Libraries

	Vendor	JAR
	Portal Database Libraries – you only need the ones that are appropriate to your database	
1	Oracle 9i/10g JDBC Driver	ojdbc14_g.jar
2	IBM DB2 driver	db2jcc.jar
3	IBM DB2 driver	db2jcc_license_cu.jar
4	SourceForge JTDS	jtds-1.2.2.jar
	Portal Libraries	
1	Sun JAF	activation.jar
2	ESRI	arcims_jconnect.jar
3	Apache Axis	axis.jar
4	Apache Axis	axis-ant.jar
5	Apache Commons Beanutils	commons-beanutils.jar
6	Apache Commons Collections	commons-collections-3.1.jar
7	Apache Commons DBCP	commons-dbcp-1.2.1.jar
8	Apache Commons Digester	commons-digester.jar
9	Apache Commons Discovery	commons-discovery.jar
10	Apache Commons Fileupload	commons-fileupload-1.0.jar
11	Apache Commons Lang	commons-lang-2.0.jar
12	Apache Commons Logging	commons-logging.jar
13	Apache Commons Pool	commons-pool-1.2.jar
14	Apache Commons Validator	commons-validator.jar
15	ESRI	esri-translator.jar
16	ESRI	isglobal.jar
17	Apache Axis	jaxrpc.jar
18	***Unknown***	junit.jar
19	ESRI	jxcb.jar
20	Apache Axis	log4j-1.2.8.jar
21	Sun JavaMail	mail.jar
22	Apache Axis	saaj.jar
23	Apache Struts	struts.jar
24	Apache Velocity	velocity-dep-1.3.1.jar
25	Apache Axis	wsdl4j-1.5.1.jar
26	Apache Xalan	xalan.jar
27	Apache Xalan	xercesImpl.jar
28	Apache Xalan	xml-apis.jar
	MapViewer Database Libraries – you only need the ones that are appropriate to your database	
1	Oracle 9i/10g JDBC Driver	ojdbc14_g.jar
2	IBM DB2 driver	db2jcc.jar
3	IBM DB2 driver	db2jcc_license_cu.jar

	Vendor	JAR
4	SourceForge JTDS	jtds-1.2.2.jar
	Map Viewer Libraries	
1	Apache Batik	batik-awt-util.jar
2	Apache Batik	batik-bridge.jar
3	Apache Batik	batik-css.jar
4	Apache Batik	batik-dom.jar
5	Apache Batik	batik-ext.jar
6	Apache Batik	batik-extension.jar
7	Apache Batik	batik-gvt.jar
8	Apache Batik	batik-parser.jar
9	Apache Batik	batik-script.jar
10	Apache Batik	batik-svg-dom.jar
11	Apache Batik	batik-transcoder.jar
12	Apache Batik	batik-util.jar
13	Apache Batik	batik-xml.jar
14	Apache Commons	commons-dbcp-1.2.1.jar
15	Apache Commons	commons-fileupload-1.0.jar
16	Apache Commons Collections	commons-collections-3.1.jar
17	Apache Commons Pool	commons-pool-1.2.jar
18	ESRI	esriCWebDbAuth.jar
19	ESRI	iscore.jar
20	ESRI	isother.jar
21	Sun Microsystems	jai_core.jar
22	Sun Microsystems	jai_codec.jar
23	Apache Axis	log4j-1.2.8.jar
24	Apache Xalan	xercesImpl.jar
25	Apache Xalan	xml-apis.jar

Step 3: Configuring Tomcat for JNDI

The GIS Portal uses Java Naming and Directory (JNDI) to access resources from the GIS Portal Toolkit; therefore, the Web application container (Tomcat) needs to be configured for JNDI use from the Portal and arcexplorer applications.

The Tomcat Web application container needs to be aware of the properties of the JNDI data resources. The resources could be shared or unique to each Web application deployed with the container.

- ☐ Navigate to the <CDROM>\supporting files\Configuration files directory.
- ☐ If you are using Oracle, you will be working with the "Portal_Ora_Tomcat.txt" file that corresponds to your Tomcat version (5.0.28 or 5.5.17). If you are using SQL Server, you will be working with the "Portal_SQLServer_Tomcat.txt" file that corresponds to your Tomcat version (5.0.28 or 5.5.17).

- ☐ Copy this file into the Tomcat\conf\Catalina\localhost directory
- ☐ Rename the text file to "Portal.xml" – ***note the capitalization of Portal!***
- ☐ Open the file in Notepad.
- ☐ Update the <Database_Server_Name> and <Database_Instance_Name> (Oracle) or <Database_Name> (SQLServer) to reflect your database server and database (instance) names.
- ☐ Save the file and close it.
- ☐ Navigate to the <CDROM>\supporting files\Configuration files directory.
- ☐ If you are using Oracle, you will be working with the "arcexplorer_Ora_Tomcat.txt" file that corresponds to your Tomcat version (5.0.28 or 5.5.17). If you are using SQL Server, you will be working with the "arcexplorer_SQLServer_Tomcat.txt" file that corresponds to your Tomcat version (5.0.28 or 5.5.17).
- ☐ Copy this file into the Tomcat\conf\Catalina\localhost directory.
- ☐ Rename the text file to "arcexplorer.xml"
- ☐ Open the file in Notepad.
- ☐ Update the <Database_Server_Name> and <Database_Instance_Name> (Oracle) or <Database_Name> (SQLServer) to reflect your database server and database (instance) names.
- ☐ Save the file and close it.

Step 4: Restart Tomcat

In this section thus far you have deployed the WAR files and configured your JNDI. You must now restart Tomcat for the changes to take effect.

- ☐ Open the Services panel. Start>Administrative Tools>Services.
- ☐ Highlight Apache Tomcat and select the Restart Service tool from the toolbar. You can also right-click on Apache Tomcat and select Restart.

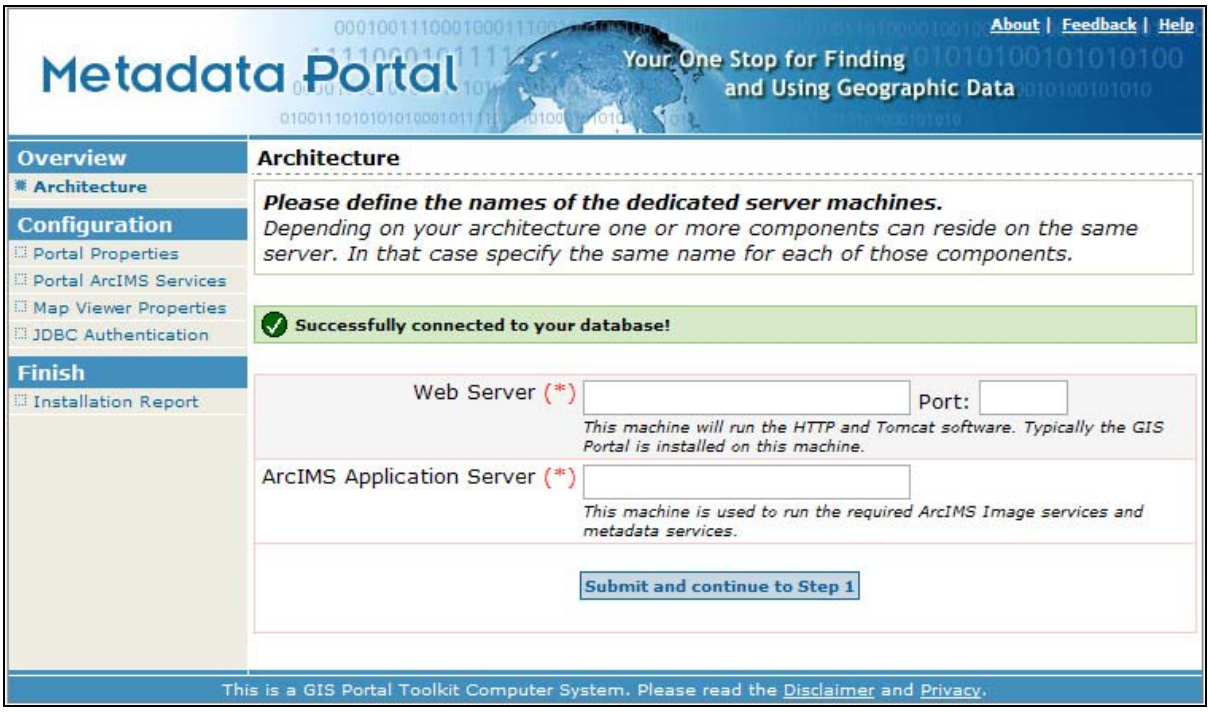
Step 5: Configuring the GIS Portal and Map Viewer

In this step, you will run the portal configuration wizard. This wizard will update the required configuration files for you.

- ☐ Open a Web browser.
- ☐ Enter the following URL: "http://<machine name>:<port>/Portal/config.do" to open the configuration wizard.

- ☐ Enter the Portal administrator user name "default = admin".
- ☐ Enter the Portal administrator password "default = admin".
- ☐ Read the license agreement, then click the “I accept the license” button.
- ☐ Click Login.

If the login is not successful, check the database connection in the <resource> part of the Portal.xml file or the arcexplorer.xml file located in <Tomcat installation dir>\ conf\ Catalina\localhost.



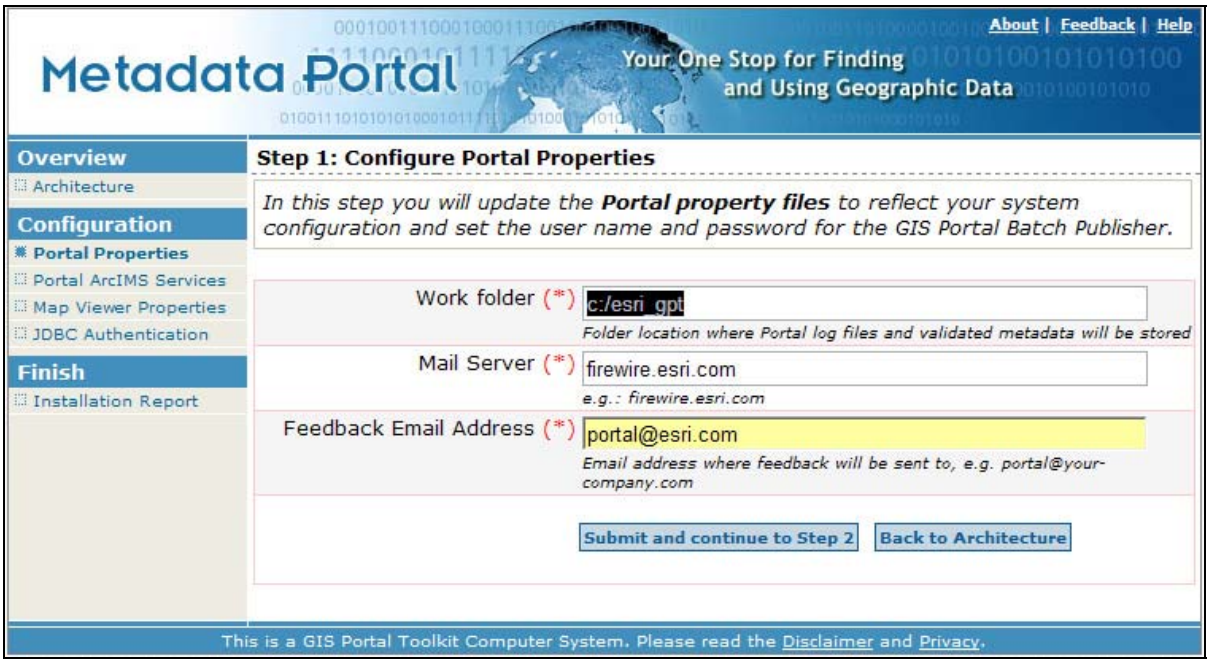
On the Architecture dialog box, you will need to specify the names of the machines you are using.

In a classroom install, the names of these two machines are the same. However, in a typical production environment, it is possible that all three components are installed on different machines.

Enter the following information:

- Web Server: Name of the Web server that hosts your Tomcat installation. (e.g. the machine name on which Tomcat is installed.)
- Port: Enter the port number that Tomcat is using.
- ArcIMS application server: Name of the machine on which the ArcIMS application server that you use for ArcIMS metadata services and image services is installed.
- Click Submit and continue to Step 1.

On the Configure Portal Properties dialog box, you will enter basic information such as a work folder name, mail server address and an email address of the person who will receive the Portal's feedback form.



- Work folder: This is the folder that the GIS Portal uses to store log files and validated metadata and is a default location for uploaded metadata. Enter in the name of the folder you created at the end of Step 1 (e.g., c:/toolkit31)

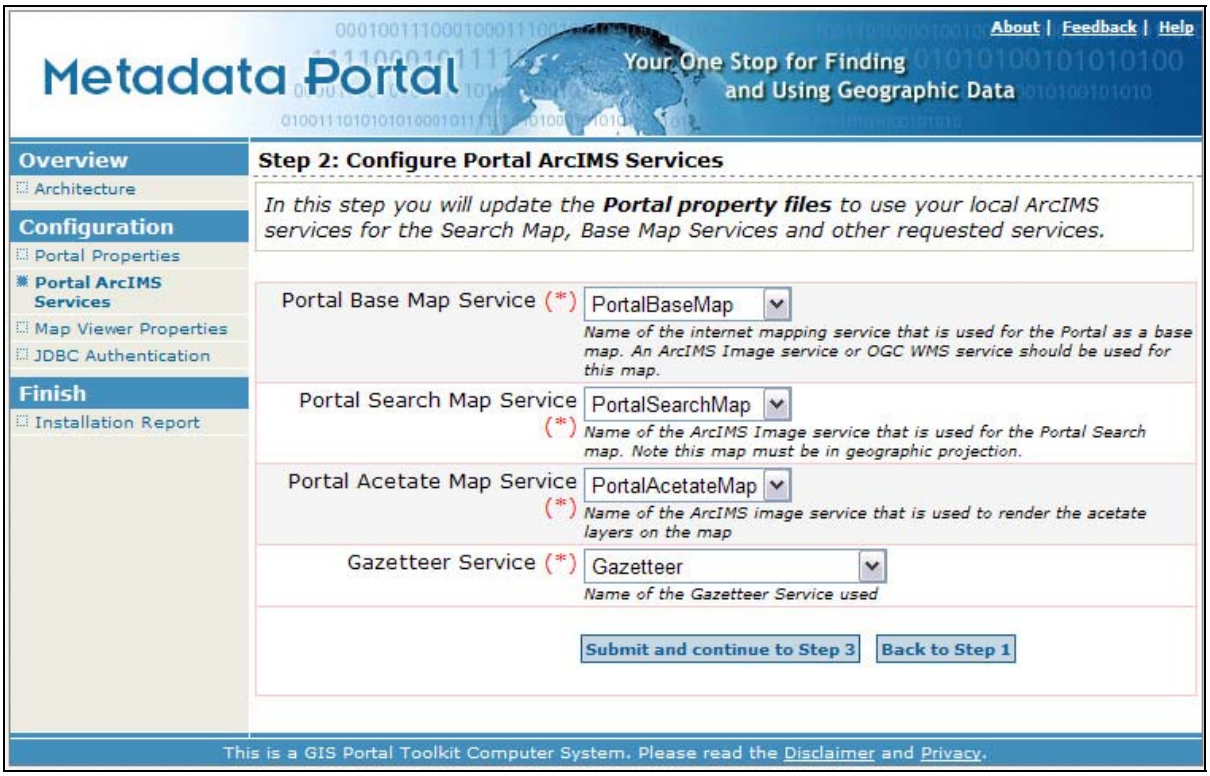
  IMPORTANT: You must specify the path name with *forward* slashes ("/")

- Mail Server: This is the address of your mail server that will be used to send email from the Portal to the specified feedback email address.

- Feedback Email Address: This is the email address of the person who is to receive all feedback submissions from the Portal site.

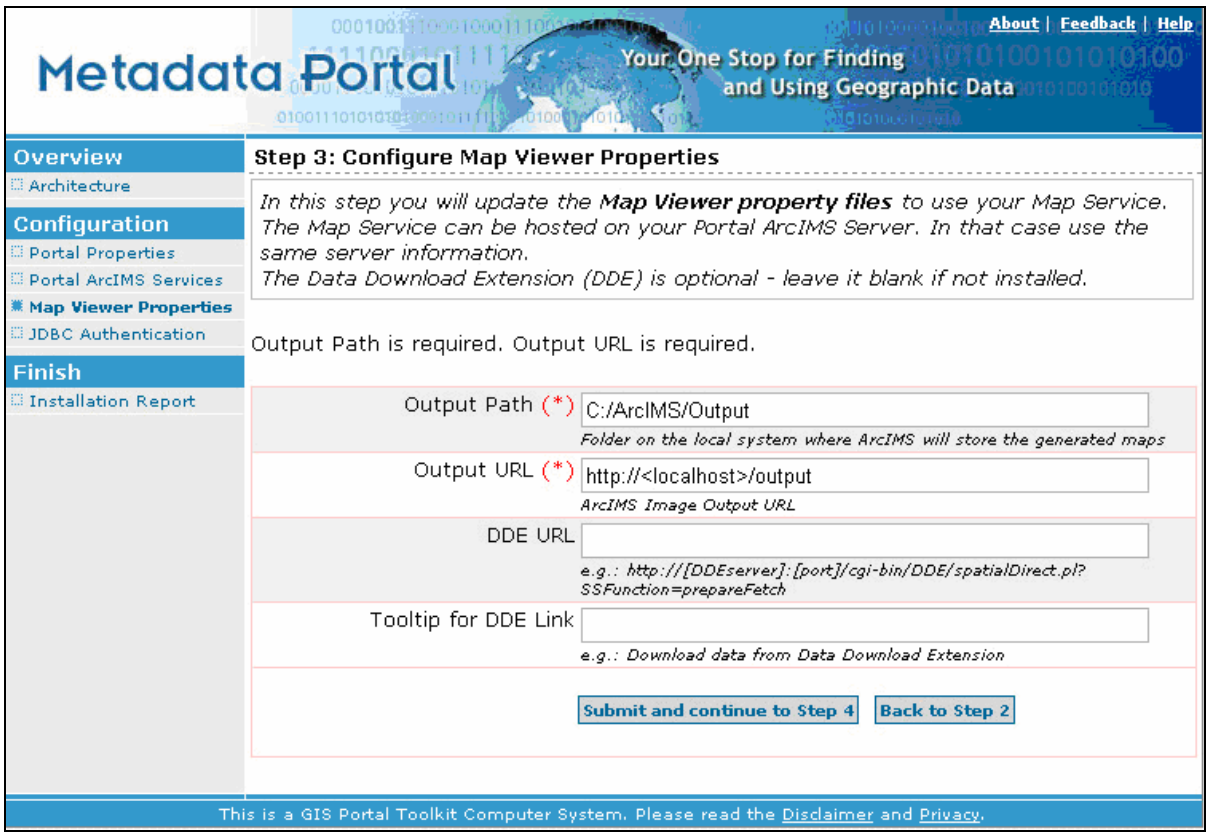
- Click Submit and continue to Step 2.

On the Configure Portal ArcIMS Services dialog box, you will specify map services that your GIS Portal and Map Viewer will use.



- ☐ For the Portal Base Map Service, select PortalBaseMap from the drop down menu.
- ☐ For the Portal Search Map Service, select PortalSearchMap from the drop down menu.
- ☐ For the Portal Acetate Map Service, select the PortalAcetateMap from the drop dowm menu.
- ☐ For the Gazetteer Service, select Gazetteer from the drop down menu.
- ☐ Click Submit and continue to Step 3.

On the Configure Map Viewer Properties dialog box, you will specify the output directory that the GIS Portal Map Viewer uses to store the merged images that are served to the end user. This could be any directory, but it is good practice to use the ArcIMS output path and URL.



- ☐ Enter an Output Path, which is a folder on the local system where ArcIMS will store the generated maps.

  IMPORTANT: You must specify the path name with *forward* slashes ("/")

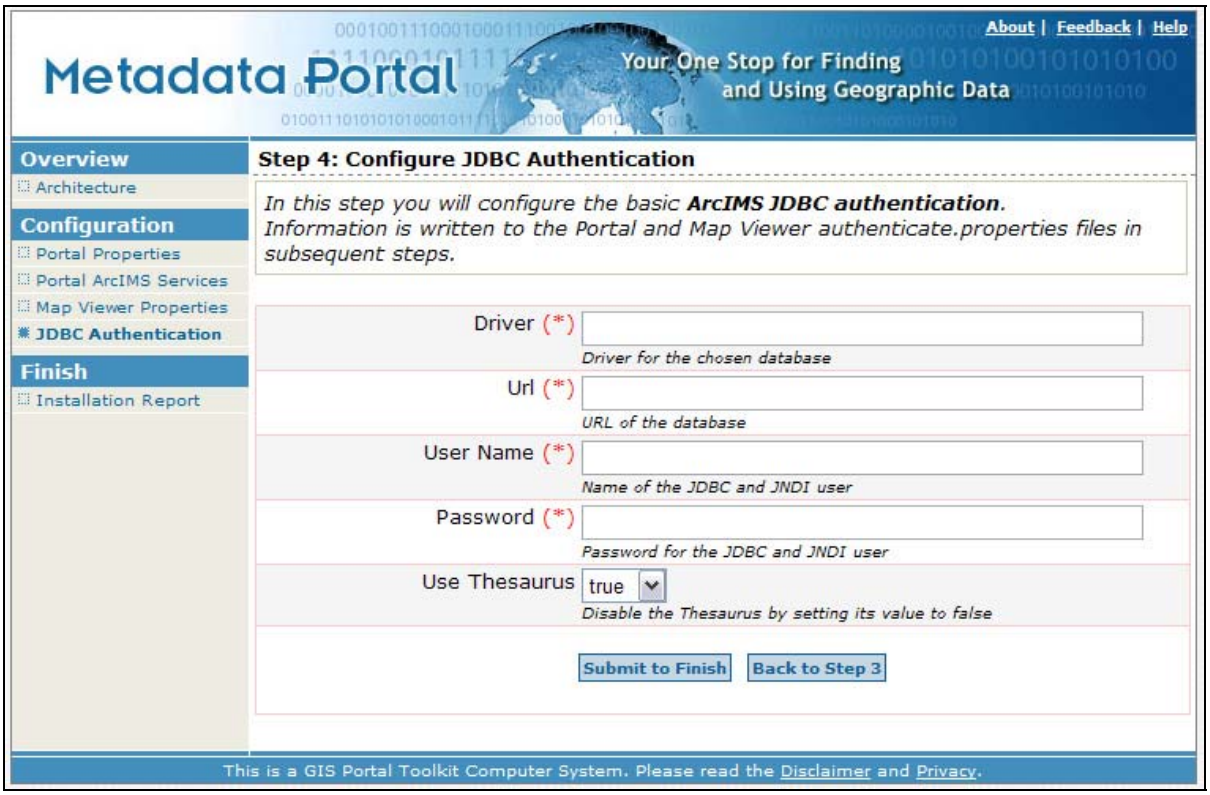
- ☐ Enter an Output URL, which is the URL equivalent to the output path.

- ☐ (Optional) Enter a DDE URL. This is the URL to your Data Delivery Extension service.

- ☐ (Optional) Enter a Tool tip for DDE Link. A Tool tip for DDE Link is a tip that is displayed when users hover over the data download button..

- ☐ Click Submit and continue to Step 4.

On the Configure JDBC Authentication dialog box, you will fill in the required JDBC connection parameters to reflect your system information.



It is best to copy and paste these values directly out of the esrimap_prop file that you modified in Section 3.

- ☐ Enter the Driver, which is the JDBC driver
  (e.g. jdbcDriver=oracle.jdbc.driver.OracleDriver)
  (e.g., jdbcDriver=net.sourceforge.jtds.jdbc.Driver)

- ☐ Enter the URL, which is the JDBC URL
  (e.g., jdbcUrl=jdbc:oracle:thin@<DB Server Name>:1521: <DB instance name>).
  (e.g., jdbcUrl=jdbc:jtds:sqlserver://<DB Server Name>:1433/<DB Name>).

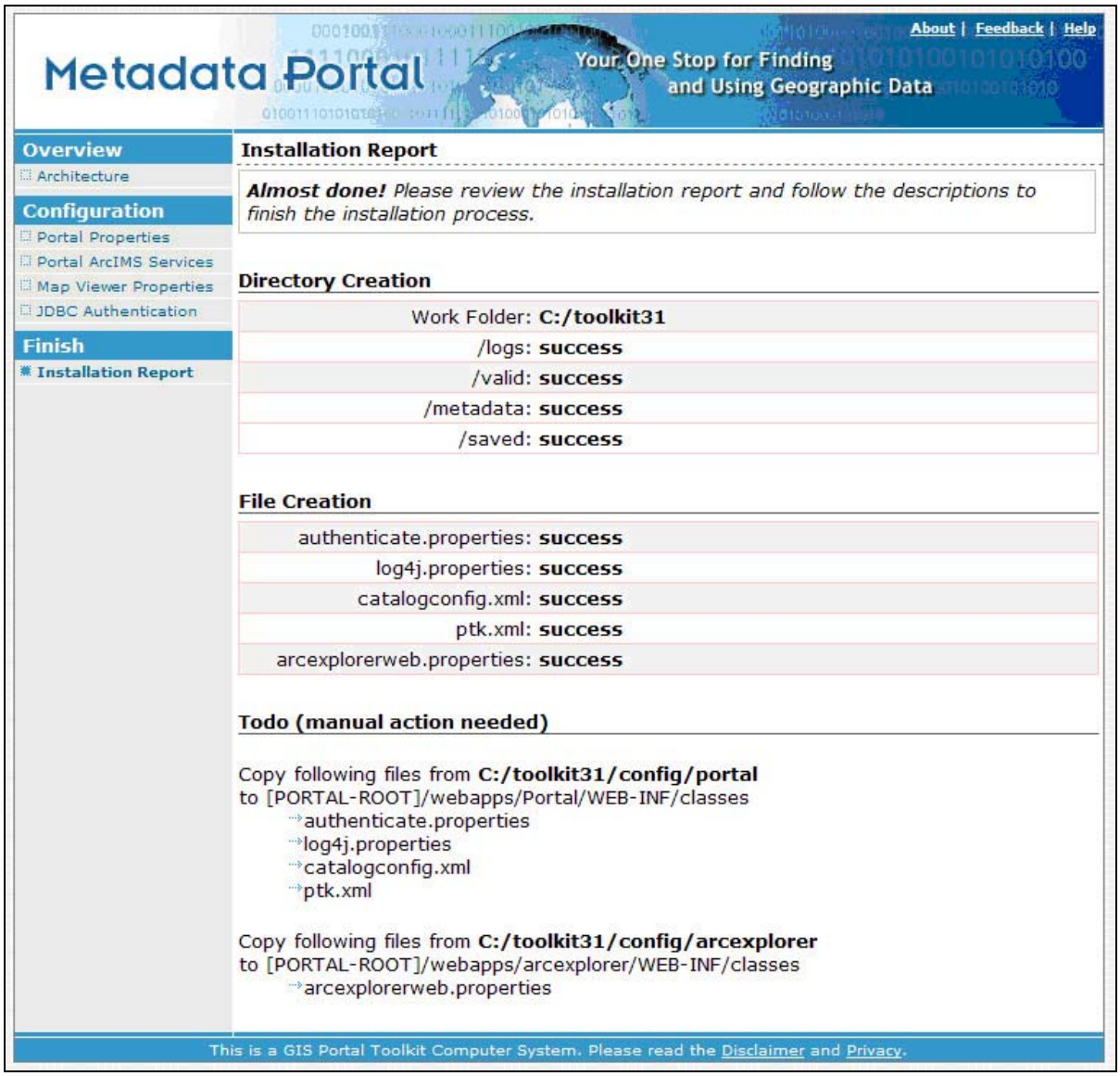
- ☐ Enter a User Name for the database user (default = meta).

- ☐ Enter the Password for the database user above (default = meta).

- ☐ (For Oracle database users only) Select the Use Thesaurus drop down menu to specify whether you want your Portal to offer a thesaurus.

- ☐ Click Submit to Finish.

The last screen of the configuration wizard is the Installation Report, which shows the status of your installation. An example is provided below.



Step 6: Copy the Updated Files

The updated configuration files must be copied to the correct locations.

- ☐ For the Portal application, copy the following files from C:\toolkit31\config\portal to <Tomcat installation dir>\webapps\Portal\WEB-INF\classes:

  - Authenticate.properties
  - log4j.properties
  - catalogconfig.xml
  - ptk.xml

- ☐ For the Map Viewer, copy the following files from C:\toolkit31\config\arcexplorer to <Tomcat installation dir>\webapps\arcexplorer\WEB-INF\classes:
  - o ArcExplorerWeb.properties

Tip: Example configuration files are provided at the end of this section for each of the files listed in this step. Use these example files to troubleshoot your installation (if required).

Step 7: Modify the Tomcat Configuration Files

If your Web Server is Internet Information Services (IIS) 6.0

- ☐ Open the uriworkermap.properties file in notepad located in <Tomcat installation directory>\conf.
- ☐ Add the following entries:

  /Portal/*=wlb
  /Portal=wlb

  /arcexplorer/*=wlb
  /arcexplorer=wlb

- ☐ Save the file and exit. File>Save.

If your Web Server is Apache 2.0.58

- ☐ Open in notepad the mod_jk.conf file located in the <Tomcat installation directory>\conf folder.
- ☐ Add the following entries:

```
JkMount /Portal ajp13
JkMount /Portal/* ajp13

JkMount /arcexplorer ajp13
JkMount /arcexplorer/* ajp13
```

- ☐ Save the file and exit.

Step 8: Restart

Now that you have configured all the required files, you need to restart Tomcat and IIS/Apache to activate these changes.

- ☐ Open the Services panel. Start>Control Panel>Administrative Tools>Services.
- ☐ Restart the Web Server on your system (e.g., Apache or IIS).
- ☐ Restart Tomcat.

Step 9: Testing the Portal Framework

After Tomcat has restarted, you are ready to do a few basic verification tests of the Portal application.

- ☐ Start your Web browser and enter the following URL: http://<machine name>/Portal
- ☐ The GIS Portal Toolkit home page opens.

Tip: If the portal home page does not appear, try typing in the URL with the Tomcat port, for example, http://<machine name>:8080/Portal. If the portal home page appears, then the restart of Tomcat did not result in all desired changes. You may need to restart the IIS services for the new application redirects to work. If the IIS/Apache services fail to restart, reboot your computer.

- ☐ Once you see the home page, click the Advanced Search link to open the Advanced Search page.
- ☐ Zoom in on the search map by clicking a location or drawing a search area on the search map.

Tip: If nothing happens or you get a broken image, check your settings for the ArcIMS image service. You may need to restart Tomcat and your Web server.

- ☐ Next, login to the Portal as the administrator. Enter the user name and password for the administrator, typically "admin/admin" to login to the Portal as the administrator. A successful login verifies that your database connections are configured correctly.

Step 10: Running the Portal Health Check

The Portal Health Check page is a quick verification script that checks the following:

1. Connectivity to the database, by attempting to execute a query against the ASEARCHXMLDOC table.

2. Ability to query the TOOLKIT_Browse_Metadata service.

3. Access to the TOOLKIT_Publish_Metadata service.

Run the Portal Health Check:

- ☐ Type the following URL in your browser: http://<machine name>/Portal/jsp/Admin/healthCheck.jsp

- ☐ If everything is ok, you should get a page simply stating "OK".

 **Tip:** If you get an error, the following sequence of service restarts should fix most problems. ***Do not proceed to use the Portal until the health check reports OK.***

  - Stop Tomcat
  - Stop your Web Server
  - Stop the ArcIMS services
  - Stop ArcSDE
  - Restart ArcSDE
  - Restart ArcIMS
  - Restart your web server
  - Restart Tomcat.

4.2 Additional Configuration Steps for Users Migrating GPT 3.0 Database to GPT 3.1 (Oracle & SQLServer)

By running the migration scripts in Section 3, the old GPT 3.0 database schema has been altered to account for database changes needed for GPT 3.1. Next, you need to update the existing data that is already present in your tables to match the format needed for GPT 3.1

To do this update, GPT 3.1 comes with a new JSP page that performs the necessary migration steps.

- ☐ Open the Portal homepage. http://<machine name>/Portal

- ☐ Log in as the Portal Administrator with the username and password admin/admin.

- In the URL of the browser, type:
  http://<GPT machine name>/Portal/ jsp/Admin/migrateV30V31.jsp

- Once on the page, click the "Migrate Records" button to update the existing data that is already present on your tables to match the format needed for GPT 3.0.

Example Configuration Files

Authenticate.properties

```
# Enables authentication of requests processed by the ArcIMS Java Connector.
# Authentication allows restrictions to be placed on access to ArcIMS Services.
# True or False.
authenticate=true

# Set this to True if you desire additional debug information to be logged
debug=False

# Path and filename to the Access Control List file. Only used when
authenticate=True.
# aclFileName=aimsacl.xml
#aclFileName=aimsacl.xml

# The useJdbc property enables authentication using JDBC.  True of False.
# Only used when authenticate=True.
useJdbc=true

# Name of the JDBC driver to be used.  Only used when authenticate=True and
# useJdbc=True.  Example:  jdbcDriver=zyh.sql.dbf.DBFDriver
jdbcDriver=oracle.jdbc.driver.OracleDriver

# JDBC database URL to the database that contains the permissions and users
# table.  Only used when authenticate=True and useJdbc=True.
# jdbc:oracle:<database name>:@<machine name>.<domain>.<organizational code>
jdbcUrl=jdbc:oracle:thin:@10x:1521:ora10x

# Authentication databases username.  Only used when authenticate=True and
# useJdbc=True.  Example:  jdbcUser=user1
jdbcUser=meta

# Authentication databases password.  Only used when authenticate=True and
# useJdbc=True.  Example:  jdbcPassword=password1
jdbcPassword=meta

# Name of the authentication databases permissions table.  The permissions
# table stores all of the individual authentication rules for each ArcIMS Service.
# Only used when authenticate=True and useJdbc=True.
jdbcPermTable=TOOLKIT_MAPSERV_PERM

# Name of the authentication databases users table. The users table stores all
# of the user names and passwords.  Only used when authenticate=True and
# useJdbc=True.
jdbcUserTable=TOOLKIT_USERS

# Name of the userid column found in both the permissions and users tables.
# The userid column is the unique identifier between the users and permissions
# tables.  Only used when authenticate=True and useJdbc=True.
jdbcUidColumn=USERID
```

Log4j.properties

```
# Attach appender A1 to root.
#
# Note:
# Logging levels in order of priority are:
ALL;DEBUG;INFO;WARN;ERROR;FATAL;OFF
#
log4j.rootLogger=ERROR, A1

#log4j.appender.A1=org.apache.log4j.FileAppender
log4j.appender.A1=org.apache.log4j.DailyRollingFileAppender
log4j.appender.A1.File=C:/toolkit31/logs/global.log

#log4j.appender.A1.Threshold=ERROR
# Truncate 'global.log' if it aleady exists.
log4j.appender.A1.Append=false

log4j.appender.A1.layout=org.apache.log4j.PatternLayout
log4j.appender.A1.DatePattern='.' yyyy-MM-dd
log4j.appender.A1.layout.ConversionPattern=%-6p [%t] %c{2} (%M:%L) - %m%n

#Configure 'CONSOLE' logger
log4j.appender.CONSOLE=org.apache.log4j.ConsoleAppender
log4j.appender.CONSOLE.layout=org.apache.log4j.PatternLayout
log4j.appender.CONSOLE.layout.conversionPattern=%-6p %m%n

log4j.logger.ptk=error, gptapp
log4j.appender.gptapp=org.apache.log4j.RollingFileAppender
log4j.appender.gptapp.File=C:/toolkit31/logs/portal_root.log
log4j.appender.gptapp.Threshold=ERROR
log4j.appender.gptapp.MaxFileSize=1MB
log4j.appender.gptapp.MaxBackupIndex=1
log4j.appender.gptapp.layout=org.apache.log4j.PatternLayout
log4j.appender.gptapp.layout.ConversionPattern=[%d][%t %c %p] %m%n

log4j.logger.ptk_admin=error, ptkapp
log4j.appender.ptkapp=org.apache.log4j.RollingFileAppender
log4j.appender.ptkapp.File=C:/toolkit31/logs/ptk_admin.log
log4j.appender.ptkapp.Threshold=ERROR
log4j.appender.ptkapp.MaxFileSize=1MB
log4j.appender.ptkapp.MaxBackupIndex=1
log4j.appender.ptkapp.layout=org.apache.log4j.PatternLayout
log4j.appender.ptkapp.layout.ConversionPattern=[%d][%t %c %p] %m%n
```

Catalogconfig.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<catalog xsi:schemaLocation="http://www.esri.com/apps/catalog/catalog-
service ogc_catalog.xsd">

<cs:catalog-discovery>

   <ds:DBConfig>
      <ds:jndiName>jdbc/gisportal</ds:jndiName>
   </ds:DBConfig>

   <ds:MetadataSearch>
      <ds:MetadataIndexTableName>ASearchXMLDoc</ds:MetadataIndexTableName>
      <ds:MetadataResultSortUserInterface>
         gpt.searchAdvanced.sortResultsItems.Date;gpt.searchAdvanced.sortR
         esultsItems.Title;gpt.searchAdvanced.sortResultsItems.AreaAsc;gpt
         .searchAdvanced.sortResultsItems.AreaDesc
      </ds:MetadataResultSortUserInterface>

      <ds:MetadataResultSortOrderClause>
         Metadata_update DESC;Name ASC;Area ASC;Area DESC
      </ds:MetadataResultSortOrderClause>
   </ds:MetadataSearch>

   <ds:MetadataResult>
      <ds:MetadataResultTableName>APublishResults</ds:MetadataResultTableN
   ame>
      <ds:MetadataOutputTableName>APublishOutputs</ds:MetadataOutputTableN
   ame>
   </ds:MetadataResult>

   <ds:ResultSettings>
      <ds:RecordsPerPage>15</ds:RecordsPerPage>
      <ds:RecordsPerQuery>500</ds:RecordsPerQuery>
   </ds:ResultSettings>
</cs:catalog-discovery>

<cs:catalog-publish> <!-- schemas supported by the Publisher Service -->

   <schemas>
      <schema name="fgdc" schemaValidationLevel="off"/>
      <schema name="iso19115" schemaValidationLevel="off"/>
      <schema name="iso19139" schemaValidationLevel="off"/>
      <!-- To enable schema validation for ISO19139 Metadata Profile
      replace this line
        <schema name="iso19139" schemaValidationLevel="off"/>
        with this
      <schema name="iso19139" schemaValidationLevel="error"
      schemaLocation="http://www.isotc211.org/2005/gmd
      http://www.isotc211.org/2005/gmd/metadataEntity.xsd"/>
      -->
   </schemas>
```

```
   <publish-validate>false</publish-validate>
   <publish-log-to-tables>false</publish-log-to-tables>

   <publish-output>
      <output-name>VALIDATED</output-name>
      <output-description>Output Validated XML to Disk</output-
   description>
      <output-writer>VALIDATED</output-writer>
      <output-writer>TOOLKIT_Publish_Metadata</output-writer>
      <output-writer>dbwriter</output-writer>
   </publish-output>

   <publish-writer name="TOOLKIT_Publish_Metadata" url="http://10x"
type="ARCIMS"/>

   <publish-writer name="dbwriter" type="database" default="true">

      <DBConfig>
         <ds:jndiName>jdbc/gisportal</ds:jndiName>
      </DBConfig>
   </publish-writer>

   <publish-writer name="VALIDATED" type="folder">
      <writer-folder>c:/toolkit31/valid/validated</writer-folder>
      <writer-prefix>validated</writer-prefix>
      <writer-suffix>xml</writer-suffix>
   </publish-writer>
</cs:catalog-publish>
</catalog>
```

Ptk.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<PtkParams xsi:schemaLocation="http://www.esri.com/apps/ptk-service
portalToolkit.xsd">

<DBConfig>
   <DBConnection>
   <!--  JNDI datasource must be configured in the container; for Tomcat
in server.xml and web.xml -->
   <jndiName>jdbc/gisportal</jndiName>
   </DBConnection>

   <DBSchema>
      <PtkUsersTN>TOOLKIT_USERS</PtkUsersTN>
      <PtkUsersSN>TOOLKIT_USER_ID_SEQ</PtkUsersSN>
      <PtkMapservPermTN>TOOLKIT_MAPSERV_PERM</PtkMapservPermTN>
      <PtkSaveSearchTN>TOOLKIT_SEARCHCRITERIA</PtkSaveSearchTN>
      <PtkSaveSearchSN>TOOLKIT_SEARCHCRITERIA_SEQ</PtkSaveSearchSN>
      <PtkTextSearchTN>ASEARCHXMLDOC</PtkTextSearchTN>
      <PtkSavedMapTN>TOOLKIT_MV_SAVED</PtkSavedMapTN>
      <PtkLinksMapTN>TOOLKIT_MV_LINKS</PtkLinksMapTN>
      <PtkMetadataTablePrefix>TOOLKIT_META</PtkMetadataTablePrefix>
      <PtkMetadataAdminTN>asearchxmldoc</PtkMetadataAdminTN>
      <PtkHarvestingTN>TOOLKIT_HARVESTING</PtkHarvestingTN>
      <!-- this is used by metadata synchronizer for SQL server only -->
      <PtkSQLServerDBName>META</PtkSQLServerDBName>
      <PtkHarvestHistoryTN>TOOLKIT_HARVEST_HISTORY</PtkHarvestHistoryTN>
   </DBSchema>
</DBConfig>

<ArcIms>
   <PtkImsImageService>PortalSearchMap</PtkImsImageService>
   <PtkImsImageServer>http://10x</PtkImsImageServer>
   <PtkImsImageServerUsername/>
   <PtkImsImageServerPassword/>
   <PtkImsBrowseMetaService>TOOLKIT_Browse_Metadata</PtkImsBrowseMetaServi
ce>
   <PtkImsPublishMetaService>TOOLKIT_Publish_Metadata</PtkImsPublishMetaSe
rvice>
   <PtkImsMetaServer>10x:5300</PtkImsMetaServer>
   <PtkImsUseAppServerBroker>n</PtkImsUseAppServerBroker>
   <PtkImsAdminUsername>admin</PtkImsAdminUsername>
   <PtkImsBatchLimit>25</PtkImsBatchLimit>
   <PtkImsVelocityLogFile>c:/toolkit31/logs/MetadataAdminVelocity.log</Ptk
ImsVelocityLogFile>
   <PtkMetadataSyncFreqnency>120</PtkMetadataSyncFreqnency>
   <!-- unit: minutes, put -1 if syn is not needed -->
</ArcIms>

<Search>
   <PtkMaxSavedSearches>10</PtkMaxSavedSearches>
   <PtkMaxSearchResults>10</PtkMaxSearchResults>
   <PtkSearchMapWidth>250</PtkSearchMapWidth>
```

```
   <PtkSearchMapHeight>185</PtkSearchMapHeight>
   <PtkSearchMapMaxx>180</PtkSearchMapMaxx>
   <PtkSearchMapMaxy>90</PtkSearchMapMaxy>
   <PtkSearchMapMinx>-180</PtkSearchMapMinx>
   <PtkSearchMapMiny>-90</PtkSearchMapMiny>
   <PtkUseThesaurus>true</PtkUseThesaurus>
   <PTKThesaurusNames>Thesaurus_Test,NOAA_Short</PTKThesaurusNames>
   <PtkEnableViewWithArcGISExplorer>true</PtkEnableViewWithArcGISExplorer>
   <PtkEnableViewWithArcMap>true</PtkEnableViewWithArcMap>
</Search>

<Gazetteer>
   <!-- valid values are ArcIMS, ArcWeb-->
   <PtkGazetteerType>ArcIMS</PtkGazetteerType>

   <!-- PtkGazetteerServer: needed for ArcIMS type, this is the server
   name (with server:port or http://server:port) For ArcWeb, this is not
   needed -->
   <PtkGazetteerServer>http://10x</PtkGazetteerServer>

   <!-- PtkGazetteerServiceName is the service name for ArcIMS,
   or data source name for ArcWeb, e.g. ESRI.Gazetteer.World-->
   <PtkGazetteerServiceName>Gazetteer</PtkGazetteerServiceName>
   <PtkGazetteerUsername/>
   <PtkGazetteerPassword/>
   <PtkGazetteerMaxRecords>50</PtkGazetteerMaxRecords>

   <!-- value of PtkUseArcwebSvcForGazetteer should be either true or
   false -->
   <PtkUseArcwebSvcForGazetteer>false</PtkUseArcwebSvcForGazetteer>
</Gazetteer>

<Geocoding>
   <!-- valid values are ArcWeb, OpenLS, -->
   <PtkGeocodingType>ArcWeb</PtkGeocodingType>

   <!-- PtkGeocodingServer: For Open LS, this is the server URL e.g
   http://www.arcwebservices.com/services/v2006/servlet/LBSConnector.
   For ArcWeb, this is not needed -->
   <PtkGeocodingServer>http://arcweb.esri.com/services/v2/AddressFinder</P
tkGeocodingServer>

   <!-- PtkGeocodingServiceName is the service name for ArcIMS,
   or the service group for OpenLS, eg. XLS.TA.US, or data source name for
   ArcWeb, e,g. GDT.Streets.US -->
   <PtkGeocodingServiceName>GDT.Streets.US</PtkGeocodingServiceName>
   <PtkGeocodingUsername/>
   <PtkGeocodingPassword/>
</Geocoding>

<MapViewer>
   <ArcExplorerDomainPfx>http://10x:8150</ArcExplorerDomainPfx>
   <PtkBaseMapUrl>http://10x</PtkBaseMapUrl>
   <PtkBaseMapSvc>PortalBaseMap</PtkBaseMapSvc>
</MapViewer>
```

```
<Context>
   <EncriptionKey>PtkESRI</EncriptionKey>
   <Max_SavedMaps>10</Max_SavedMaps>
   <RecordsPerPage>25</RecordsPerPage>
   <UploadFileAllowed>TXT,txt,XML,xml,SGML,sgml</UploadFileAllowed>
   <UploadSizeLimit>2000000</UploadSizeLimit>
   <MailServer>firewire.esri.com</MailServer>
   <FeedbackToEmail>portal@esri.com</FeedbackToEmail>
   <LoginLength>5</LoginLength>
</Context>

</PtkParams>
```

ArcExplorerWeb.properties

```
#
#
# ArcExplorerWeb properties
#
#

# send debug messages to std out
debug=false

# Specify font which will be used y ArcIMS to generat legend
#legend.font=<FontName>

# merged images need to go somewhere ...
# outputurl=http://<host>/output/
outputpath=C:/ArcIMS/Output
outputurl=http://localhost/output/

# store links and saved maps in flat files or in any JDBC compliant
database tables with Blob support
# use storagetype=Oracle to save in any database
# storagetype=[file|Oracle]
storagetype=Oracle
jndi_name=jdbc/arcexplorer

# Basemap
basemap.name=GIS Portal Toolkit Basemap
basemap.server=http://10x
basemap.servertype=0
basemap.service=PortalBaseMap
basemap.username=
basemap.password=
basemap.logo=basemap_logo.gif

# Copyright text
map.copyright=

# Number of maps each user is allowed to save to portal database
maxsavedmaps=10

# saved maps need to go somewhere ...
# savepath=C:/<workDir>/saved/
savepath=C:/toolkit31/saved/

# the login servlet should really run on an https server and the main
servlet on an http server
# the main servlet then needs to know how to call the login servlet
#
secure_servlet_name=http://<host>/arcexplorer/servlet/ArcExplorerWeb_Login
secure_servlet_name=http://10x:8150/arcexplorer/servlet/ArcExplorerWeb_Log
in

# Place Finder URL
```

```
placefinder_url=http://10x:8150/Portal/ptk?command=findplace.jsp&caller=ex
plorer

# the login servlet should really run on an https server and the main
servlet on an http server
# the login servlet then needs to know how to call the login page from the
main application
returnpage=/arcexplorer/jsp/login.jsp

# the projection to be used as default projection on the viewer
# A valid projection id (integer) must be provided. Projection strings are
no longer supported!
# If not given, defaults to 4326
projection.id=4326
projection.available=4326:GCS_WGS_1984|4267:GCS_North_American_1927|4269:G
CS_North_American_1983|4135:GCS_Old_Hawaiian|32610:WGS_1984_UTM_Zone_10N|3
2611:WGS_1984_UTM_Zone_11N|32612:WGS_1984_UTM_Zone_12N|32613:WGS_1984_UTM_
Zone_13N|32614:WGS_1984_UTM_Zone_14N|32615:WGS_1984_UTM_Zone_15N|32616:WGS
_1984_UTM_Zone_16N|32617:WGS_1984_UTM_Zone_17N|32618:WGS_1984_UTM_Zone_18N
|32619:WGS_1984_UTM_Zone_19N|32620:WGS_1984_UTM_Zone_20N|32630:WGS_1984_UT
M_Zone_30N|102006:Alaska_Albers_Equal_Area_Conic|102007:Hawaii_Albers_Equa
l_Area_Conic|102008:North_America_Albers_Equal_Area_Conic|102010:North_Ame
rica_Equidistant_Conic|102009:North_America_Lambert_Conformal_Conic|102003
:USA_Contiguous_Albers_Equal_Area_Conic|102005:USA_Contiguous_Equidistant_
Conic|102004:USA_Contiguous_Lambert_Conformal_Conic

# empty ArcIMS service used for projections and acetate images (needs one
not visible layer)
# local connections are better if possible
# arcims.service=MyMapService
# arcims.server=http://myMapServer.com
# arcims.serverlocal=myMapMachine:5300
arcims.service=PortalAcetateMap
arcims.server=http://10x:8150
arcims.serverlocal=10x:5300

# ArcWeb login info, needed for PlaceFinder and AddressFinder
# if you do not use ArcWeb service for place/address finder, comment them
out or leave them blank
# arcweb.username=<username>
# arcweb.password=<password>
#arcweb.username=
#arcweb.password=
# the coordinate system in which the place/address finder results are
returned
# must be a valid integer projection id accepted by ArcIMS
placeAddressFinder.coordinateSystemId=4326

#wms
# Set prefered GetFeatureInfo response format for Identify features of WMS
services
# If not set the default format will be rendered from each WMS service
# MIME types are supported (text/xml, text/html, text/plain)
wms.infoFormat=text/xml
```

```
#wfs
# Do not make this large for performance reasons
wfs.maxfeatures=100
wfs.maxFeaturesDefault=50
# The values for color are expected to be valid SVG attributes values for
fill and stroke;
# linewidth is stroke-width. See SVG documentation.
wfs.defaultFeatureLayerColor=red
wfs.defaultFeatureLineWidth=0.96
wfs.defaultLabelStyle=font-size:10;fill:black
wfs.showLabels=false

# DDE data download
dde.orderformurl=
dde.orderformtip=

# table that contains service information (id, mapserver, mapservice)
# so the url and service name don't need to be send with the URL all the
time
gpt.table.services=TOOLKIT_MV_SERVICES

# table that tells us the map units for any projection
gpt.table.coordsys=TOOLKIT_MV_COORDSYS

# this is needed if we store saved maps and links in the database
gpt.table.saved=TOOLKIT_MV_SAVED
gpt.table.links=TOOLKIT_MV_LINKS
gpt.table.mapservperm=TOOLKIT_MAPSERV_PERM
gpt.table.users=TOOLKIT_USERS
```

End

5.0: Desktop Tools Installation

5.1 Channel Editor

This section of the installation guide provides you with basic installation instructions for the Channel Editor. Only those users assigned to manage a channel need to read this information.

The Channel Editor desktop tool requires that Microsoft XML 4.0 be installed on the machine.

- ☐ Ensure that you have Microsoft XML 4.0 installed on your machine. If you do not have Microsoft XML installed, download it from the following URL: http://www.microsoft.com/downloads/details.aspx?FamilyID=3144b72b-b4f2-46da-b4b6-c5d7485f2b42&DisplayLang=en

- ☐ If you do not know the version of Microsoft XML that is installed on your machine, search for "Microsoft XML version" in an Internet browser. You will find several online utilities that will be able to determine the Microsoft XML version that your machine has.

- ☐ If necessary, install Microsoft XML 4.0.

Now that you have confirmed the presence of Microsoft XML 4.0 on your machine, you can install the Channel Editor.

- ☐ Open Windows Explorer.

- ☐ Navigate to the Desktop Applications\ChannelEditor folder on the GIS Portal Toolkit CD-ROM.

To install the Channel Editor, simply follow the instructions on the screen. There is no need to change any of the default values.

- ☐ Double-click the setup.exe file.

- ☐ The GIS Portal Channel Editor—Install Wizard will appear.

- ☐ Click Next.

- ☐ Click the button to the left of I accept the terms in the license agreement.

- ☐ Click Next.

The Customer Information dialog box will appear. On this dialog box, you define who owns and uses the software.

- ☐ Enter customer information in the User Name and Organization text boxes.
- ☐ Under Install this application for, select Anyone who uses this computer (all users).
- ☐ Click Next.
- ☐ Click Next.
- ☐ Click Install.
- ☐ Click Finish to exit the installation program.

You are now ready to use Channel Editor and update the key resources for the channels you have been assigned.

5.2 Harvesting Tool

This section of the installation guide provides you with basic installation instructions for the Harvesting tool. Only those users assigned to harvest metadata repositories need to read this information.

Step 1a: Install ZMARCO (Optional)

If you will be harvesting from a Z39.50 repository, you must first install a third-party software component called ZMARCO.

- ☐ Open your Web browser.
- ☐ Navigate to the following location: http://zmarco.sourceforge.net/.
- ☐ Download ZMARCO to the temp folder on your machine.
- ☐ Install ZMARCO by double-clicking the setup file.

Step 1b: Install the Harvesting Tool

- ☐ Open Windows Explorer.
- ☐ Navigate to the Desktop Applications\HarvestingTool folder on the GIS Portal Toolkit CD-ROM.
- ☐ Run setup.exe.
- ☐ Follow the instructions on the screen.

5.3 GIS Portal Extensions for ArcGIS

The GIS Portal Extensions for ArcGIS include the following three components:

- CSW Client for ArcGIS Desktop
- CSW Client for ArcGIS Explorer
- WMC Opener for ArcMap

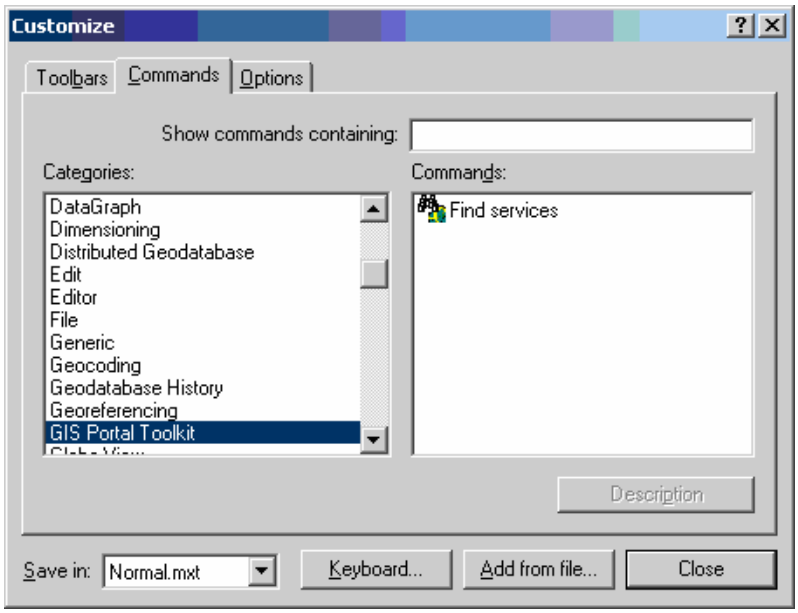
The two CSW Clients are bundled together into a single installer that installs both the CSW Client for ArcGIS Desktop and the CSW Client for ArcGIS Explorer in one operation. The WMC Opener has its own installer.

- ☐ Download the GIS Portal Extensions for ArcGIS from: http://www.esri.com/software/arcgis/extensions/gis-portal-extensions/index.html
- ☐ Open Windows Explorer.
- ☐ Navigate to the location where you saved the downloaded files.
- ☐ Run setup.exe.
- ☐ Follow the instructions in the wizard to carry out the installation.

Note: During installation, the installer checks for the presence of the ArcGIS .NET framework as well as the present of at least Service Pack 2 for ArcGIS Desktop 9.2. If either or both of these are 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 the user of the installation status.

Adding the CSW Client to a Toolbar in ArcMap

- ☐ Start ArcMap.
- ☐ Click Tools and select “Customize”
- ☐ Click on the “Commands” tab.
- ☐ Scroll down through the list of Commands and highlight “GIS Portal Toolkit”. The “Find Services” icon will appear in the Commands window to the right.

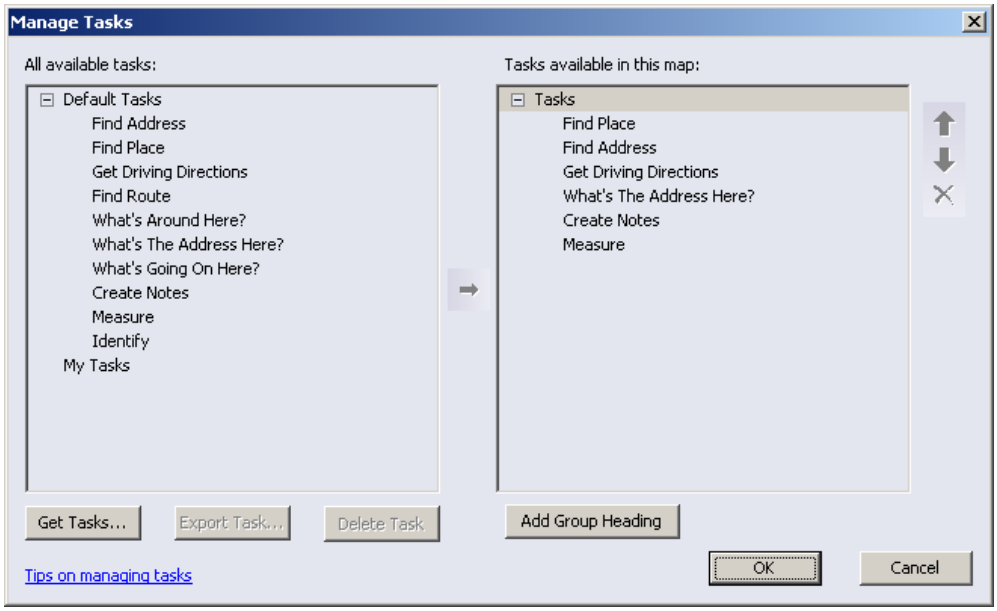


- ☐ Highlight the icon and drag it to any empty space on any toolbar you wish.
- ☐ Click Close.

Enabling the CSW Client (Find Services Task) in ArcGIS Explorer

- ☐ Open the ArcGIS Explorer application. Start>All Programs>ArcGIS>Explorer.
- ☐ At the top of the page, click on the "Tools" menu and select "Manage Tasks". A "Manage Tasks" popup window will appear.

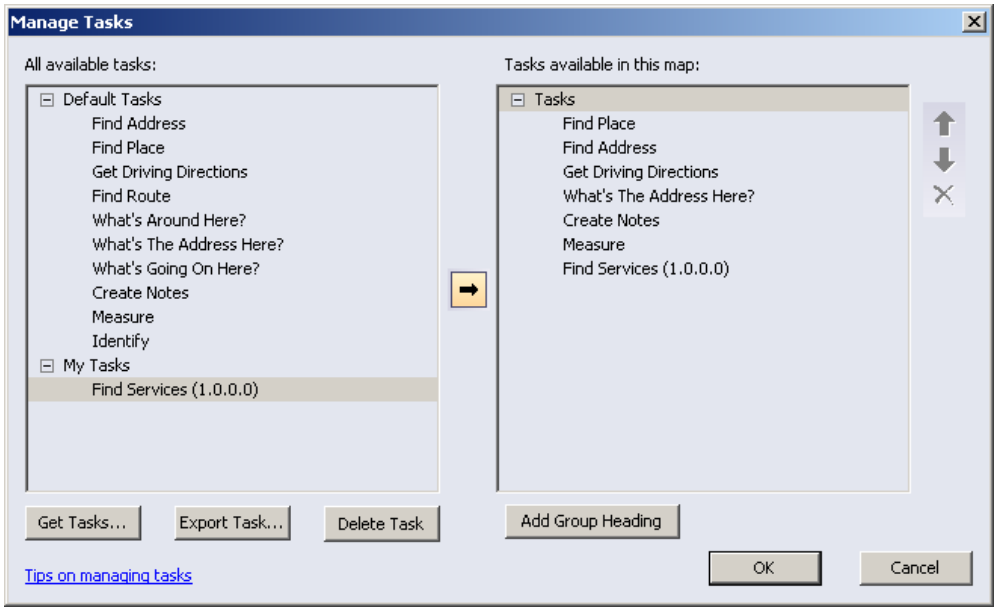
NOTE: If a previous version of the CSW Client for ArcGIS Explorer was installed, you will need to first delete the “Find Services” task (it will be listed in the “All available tasks” pane) before navigating to the new “CSWSearchTask.CustomTaskUI.nmf” file.



- ☐ Click on “Get Tasks...”
- ☐ Browse to the directory where the CSW Client files were installed. The default filepath is "C:\Program Files\ESRI\Portal\CswClients\".
- ☐ Select the "CSWSearchTask.CustomTaskUI.nmf" file and click "Open". A download box appears. Click "Download".

After the file has been downloaded into ArcGIS Explorer, the "Manage Tasks" window will have changed. It will now have the "Find Services" task listed in the left of the two boxes.

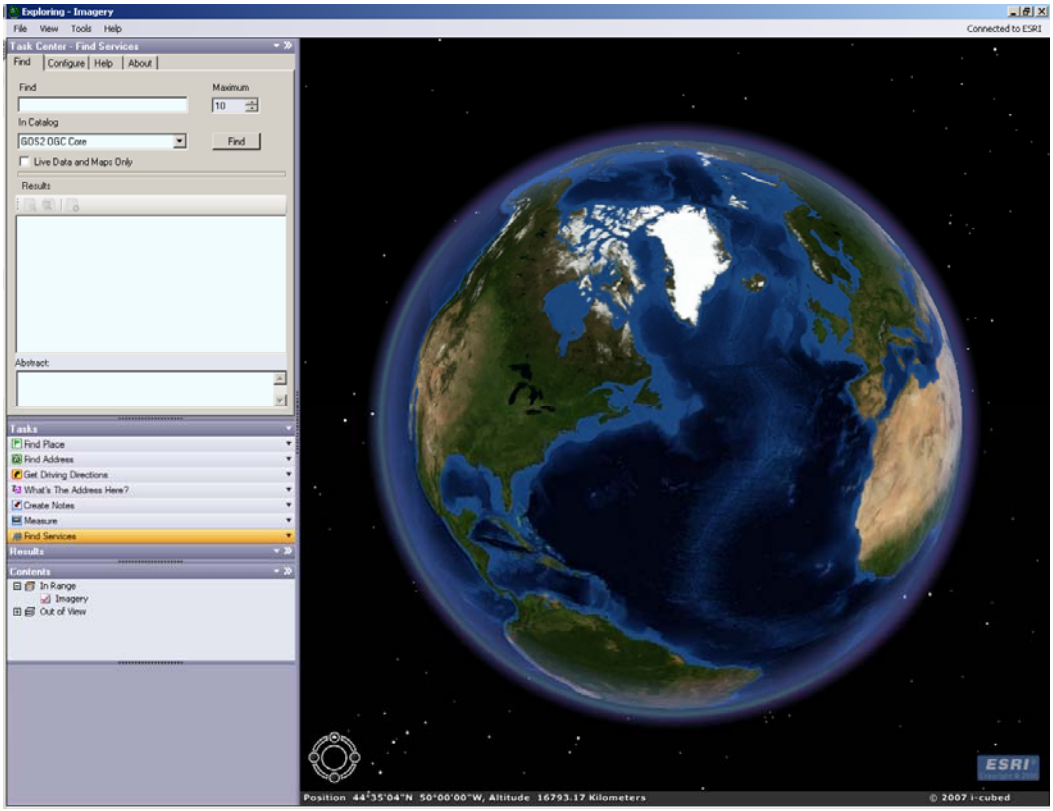
- ☐ Highlight the "Find Services" task
- ☐ Click on the arrow located between the two boxes. The "Find Services" task is added to the box on the right.



☐ Click "OK" to close the Manage Tasks window.

Notice that the "Find Services" task is now listed at the bottom of the Tasks menu.

☐ Click on the arrow to the far right of the Find Services task and select "Activate" to open it.

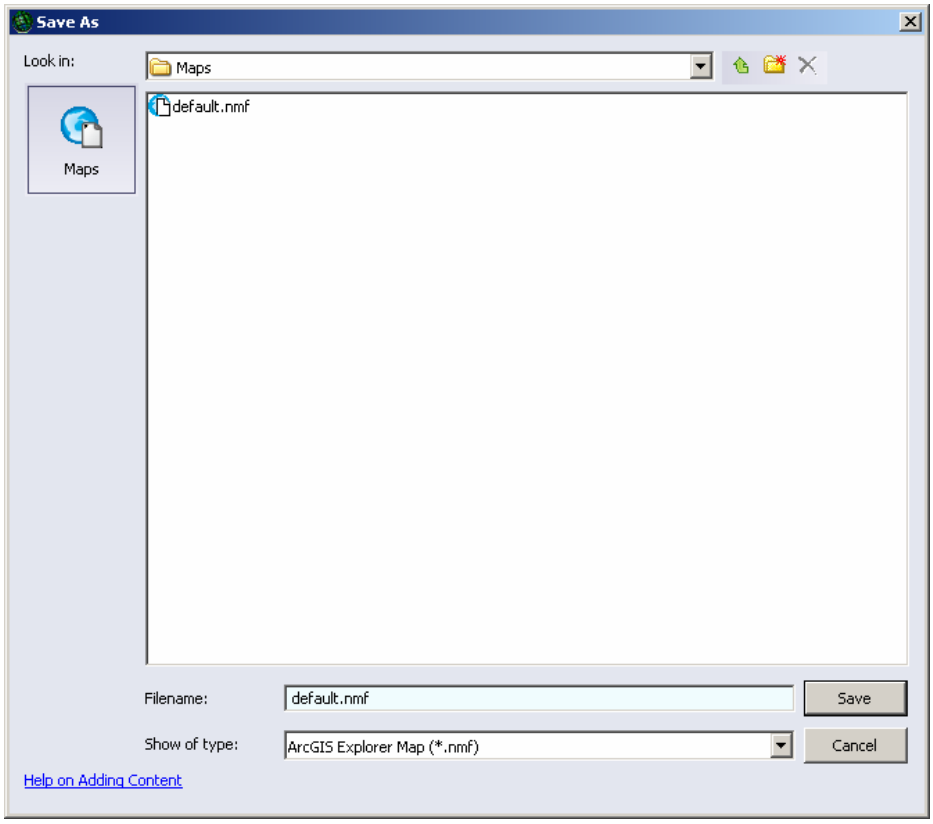


Displaying "Find Services" in the Default Map at Startup

If you want to have the CSW Client loaded into the default "Tasks" window upon loading ArcGIS Explorer, the current settings must be saved.

To save the current settings:

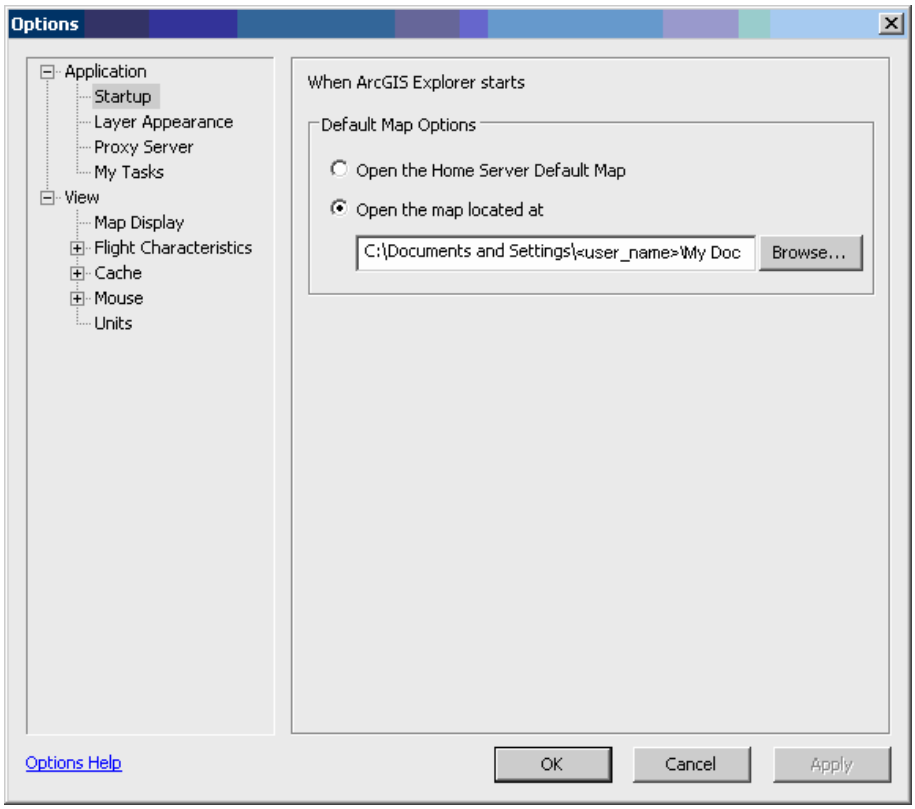
- ☐ Click on the File menu and select "Save As".
- ☐ Navigate to the ArcGIS Explorer\Maps folder on the local machine, usually located at C:\Documents and Settings\<user_name>\My Documents\ArcGIS Explorer Documents\Maps.
- ☐ Save the map as "default.nmf".



- ☐ Go to "Tools", and select "Options".

Under the "Application\Startup" heading, there is a dialog that allows users to select what map should open by default when ArcGIS Explorer starts.

- ☐ Select the "Open the map located at" radial button
- ☐ Navigate to the "default.nmf" file that you just saved.



☐ Click OK.

The next time you open ArcGIS Explorer, it will reference the "default.nmf" map, with the "Find Services" task already available.

Appendix A: Explanation of the Configuration Variables

Appendix A: Explanation of the Configuration Variables

PTK.XML

Variable	Description
Database	
<jndiName>jdbc/gisportal</jndiName>	Name of the JNDI instance as defined in server.xml.
<PtkUsersTN>TOOLKIT_USERS</PtkUsersTN>	Name of the GIS Portal Toolkit user table.
<PtkUsersSN>TOOLKIT_USER_ID_SEQ</PtkUsersSN>	Table storing the sequence ID for users.
<PtkMapservPermTN>TOOLKIT_MAPSERV_PERM</PtkMapservPermTN>	Name of the table handling the map service access permissions for each user and service on the GIS portal machine.
<PtkSaveSearchTN>TOOLKIT_SEARCHCRITERIA</PtkSaveSearchTN>	Table storing the search results.
<PtkSaveSearchSN>TOOLKIT_SEARCHCRITERIA_SEQ</PtkSaveSearchSN>	Table storing the sequence ID for the search criteria.
<PtkTextSearchTN>ASEARCHXMLDOC</PtkTextSearchTN>	Table used by GIS portal for full text search.
<PtkSavedMapTN>TOOLKIT_MV_SAVED</PtkSavedMapTN>	Table used for storing saved maps.
<PtkLinksMapTN>TOOLKIT_MV_LINKS</PtkLinksMapTN>	Table used for storing saved maps as URL (links).
<PtkMetadataTablePrefix>TOOLKIT_META1</PtkMetadataTablePrefix>	Prefix used by the GIS Portal Toolkit metadata services.
<PtkMetadataAdminTN>asearchxmldoc</PtkMetadataAdminTN>	Administrative table used by GIS portal.
<PtkHarvestingTN>TOOLKIT_HARVESTING</PtkHarvestingTN>	Table used for storing the sites registered for harvesting.
<PtkSQLServerDBName>META</PtkSQLServerDBName>>	SQL Server only: Name of the GIS portal database.
<PtkHarvestHistoryTN>TOOLKIT_HARVEST_HISTORY</PtkHarvestHistoryTN>	This is used by metadata synchronizer for SQL Server only.
ArcIMS	
<PtkImsImageService>PortalSearchMap</PtkImsImageService>	Name of the GIS portal search map. Must be in geographic.
<PtkImsImageServer>http://ghoogeweg</PtkImsImageServer>	Name of the ArcIMS service hosting the portal search map.
<PtkImsImageServerUsername/>	User name if the portal search map is a secure service.
<PtkImsImageServerPassword/>	Password if the portal search map is a secure service.
<PtkImsBrowseMetaService>TOOLKIT_Browse_Metadata</PtkImsBrowseMetaService>	Name of the Browse metadata service. This name can be changed.
<PtkImsPublishMetaService>TOOLKIT_Publish_Metadata</PtkImsPublishMetaService>	Name of the Publish metadata service. This name can be changed.
<PtkImsMetaServer>ghoogeweg:5300</PtkImsMetaServer>	ArcIMS server hosting the two metadata services.
<PtkImsUseAppServerBroker>n</PtkImsUseAppServerBroker>	

<PtkImsAdminUsername>admin</PtkImsAdminUsername>	Name of the GIS portal administrator.
<PtkImsBatchLimit>25</PtkImsBatchLimit>	Maximum number of documents you can batch publish at once.
<PtkImsVelocityLogFile>c:/toolkit2/logs/MetadataAdminVelocity.log</PtkImsVelocityLogFile>	Log file used by velocity. The path to this file must exist.
<PtkMetadataSyncFreqnency>120</PtkMetadataSync Freqnency>	Synchronization interval in minutes. Use only when you publish using ArcCatalog. Set to -1 if you do not want to synchronize.
Search	
<PtkMaxSavedSearches>10</PtkMaxSavedSearches>	Maximum number of searches a user can save.
<PtkMaxSearchResults>10</PtkMaxSearchResults>	Maximum number of maps a user can save.
<PtkSearchMapWidth>250</PtkSearchMapWidth>	Width in pixels of the search map image.
<PtkSearchMapHeight>185</PtkSearchMapHeight>	Height in pixels of the search map image.
<PtkSearchMapMaxx>180</PtkSearchMapMaxx>	Maximum extent of the search map. This is matched against the image size.
<PtkSearchMapMaxy>90</PtkSearchMapMaxy>	Maximum extent of the search map. This is matched against the image size.
<PtkSearchMapMinx>-180</PtkSearchMapMinx>	Minimum extent of the search map. This is matched against the image size.
<PtkSearchMapMiny>-90</PtkSearchMapMiny>	Minimum extent of the search map. This is matched against the image size.
<PtkUseThesaurus>true</PtkUseThesaurus>	Oracle only: Set to yes if you are using a thesaurus.
<PTKThesaurusNames>Thesaurus_Test,NOAA_Short</PTKThesaurusNames>	Oracle only: Names of the thesaurus that you are using.
<PtkEnableViewWithArcGISExplorer>true</PtkEnableViewWithArcGISExplorer>	Whether the View with Globe button should appear in search results for metadata that is of type Live Service.
<PtkEnableViewWithArcMap>true</PtkEnableViewWithArcMap>	Whether the Add to ArcMap button should appear in search results.
Gazetteer	
<PtkGazetteerType>ArcIMS</PtkGazetteerType>	The gazetteer type. Valid values are "ArcIMS" or "ArcWeb" for when the gazetteer is to directly hit the ArcWeb Gazetteer service.
<PtkGazetteerServer>http://ghoogeweg</PtkGazetteerServer>	Name of the ArcIMS server hosting the gazetteer service.
<PtkGazetteerServiceName>gazetteer</PtkGazetteerService>	Name of the gazetteer service.
<PtkGazetteerUsername/>	Optional user name if the gazetteer service is secure.
<PtkGazetteerPassword/>	Optional password if the gazetteer service is secure.
<PtkGazetteerMaxRecords>50</PtkGazetteerMaxRecords>	Maximum number of records returned by the gazetteer.

<PtkUseArcwebSvcForGazetteer>false</PtkUseArcwebSvcForGazetteer>	Determines if you are using ArcWeb Services for your gazetteer. Set to True if you use ArcWeb Services.
Geocoding	
<PtkGeocodingType>ArcWeb</PtkGeocodingType>	The type of service to be used by the address search functionality. Valid values are "ArcWeb" and "OpenLS".
<PtkGeocodingServer>http://arcweb.esri.com/services/v2/AddressFinder</PtkGeocodingServer>	When the value of the Geocoding type is "OpenLS", the location of the server hosting the geocoding service.
<PtkGeocodingServiceName>GDT.Streets.US</PtkGeocodingServiceName>	The name of the geocoding service.
<PtkGeocodingUsername/>	Optional user name if the geocoding service is secure.
<PtkGeocodingPassword/>	Optional password if the geocoding service is secure.
Map Viewer	
<ArcExplorerDomainPfx>http://[machineName]:[port]</ArcExplorerDomainPfx>	Name of the server hosting your GIS portal Map Viewer.
<PtkBaseMapUrl>http://[machineName]</PtkBaseMapUrl>	URL to the Map Viewer.
<PtkBaseMapSvc>PortalBaseMap</PtkBaseMapSvc>	Name of the service used in the Map Viewer.
Context	
<EncriptionKey>PtkESRI</EncriptionKey>	Internal key used for harvesting. Do not change.
<Max_SavedMaps>10</Max_SavedMaps>	Maximum number of maps users can have saved in their profile.
<RecordsPerPage>25</RecordsPerPage>	Maximum number of records to display on a search results page.
<UploadFileAllowed>TXT,txt,XML,xml,SGML,sgml</UploadFileAllowed>	The file types that are allowed for a file upload.
<UploadSizeLimit>2000000</UploadSizeLimit>	The maximum size of a file selected for file upload.
<MailServer>firewire.esri.com</MailServer>	The mail server used to send the feedback form.
<FeedbackToEmail>portal@esri.com</FeedbackToEmail>	The e-mail address to which a submitted feedback form is sent.
<LoginLength>5</LoginLength>	The minimum length allowed for a new user name.

CATALOGCONFIG.XML

Variable	Description
Database	
<ds:jndiName>jdbc/gisportal</ds:jndiName>	Name of the JNDI instance as defined in server.xml.
<ds:MetadataIndexTableName>ASearchXMLDoc</ds:MetadataIndexTableName>	Name of the table that is used by the full-text indexing.
<PtkUsersSN>TOOLKIT_USER_ID_SEQ</PtkUsersSN>	Table storing the sequence ID for users.
<PtkMapservPermTN>TOOLKIT_MAPSERV_PERM</PtkMapservPermTN>	Name of the table handling the map service access permissions for each user and service on the GIS portal machine.
<PtkSaveSearchTN>TOOLKIT_SEARCHCRITERIA</PtkSaveSearchTN>	Table storing the search results.
<PtkSaveSearchSN>TOOLKIT_SEARCHCRITERIA_SEQ</PtkSaveSearchSN>	Table storing the sequence ID for the search criteria.
<ds:MetadataResultSortUserInterface>gpt.searchAdvanced.sortResultsItems.Date; gpt.searchAdvanced.sortResultsItems.Title; gpt.searchAdvanced.sortResultsItems.AreaAsc; gpt.searchAdvanced.sortResultsItems.AreaDesc</ds:MetadataResultSortUserInterface>	The text options of the sort drop-down list found on the advanced search page.
<ds:MetadataResultSortOrderClause>Metadata_update DESC;Name ASC;Area ASC;Area DESC</ds:MetadataResultSortOrderClause>	The values corresponding to the text for the sort drop-down list found on the advanced search page.
<ds:MetadataResultTableName>APublishResults</ds:MetadataResultTableName>	Table for storing metadata results.
<ds:MetadataOutputTableName>APublishOutputs</ds:MetadataOutputTableName>	Table for storing publishing results.
<ds:RecordsPerPage>15</ds:RecordsPerPage>	Maximum number of records to display on a search results page.

<ds:RecordsPerQuery>500</ds:RecordsPerQuery>	Maximum number of records to retrieve in a single search query.
<schema name="fgdc" schemaValidationLevel="off"/>	Parameters for supporting FGDC schema validation.
<schema name="iso19115" schemaValidationLevel="off"/>	Parameters for supporting ISO 19115 schema validation.
<schema name="iso19139" schemaValidationLevel="off"/>	Parameters for supporting ISO 19139 schema validation.
<publish-validate>true</publish-validate>	True/False value for enabling/disabling content validation during publishing.
<publish-log-to-tables>false</publish-log-to-tables>	Whether publishing logs should be written to the database.
<output-name>VALIDATED</output-name>	The name of the output writer.
<output-description>Output Validated XML to Disk</output-description>	Description of the output writer.
<output-writer>VALIDATED</output-writer>	The name of the output file writer used by the publishing service.

<output-writer>TOOLKIT_Publish_Metadata</output-writer>	The name of the ArcIMS table writer used by the publishing service.
<output-writer>dbwriter</output-writer>	The name of the GPT table writer used by the publishing service.
<publish-writer name="TOOLKIT_Publish_Metadata" url="http://10x" type="ARCIMS"/>	Parameters of the ArcIMS table writer.
<publish-writer name="dbwriter" type="database" default="true">	Parameters of the GPT table writer.
<ds:jndiName>jdbc/gisportal</ds:jndiName>	Name of the JNDI instance as defined in server.xml.
<writer-folder>c:/toolkit31/valid/validated</writer-folder>	Folder details for the "validated" output file writer.
<writer-prefix>validated</writer-prefix>	Prefix for files written by the "validated" output file writer.
<writer-suffix>xml</writer-suffix>	Suffix for files written by the "validated" output file writer.