

# ERDAS APOLLO

Installation and Configuration Guide

December 2010



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# Preface

## About this Manual

This guide explains how to use the ERDAS APOLLO single-installer system to install a basic, working instance of the following components of the ERDAS APOLLO system.

- ERDAS APOLLO Server (Advantage/Professional edition - includes the Web Client)
- ERDAS APOLLO Server (Essentials-SDI edition - includes the Web Client))
- ERDAS APOLLO Data Manager

## Documentation

This manual is part of a suite of online documentation that you receive with ERDAS APOLLO software. There are two basic types of documents, digital hardcopy documents which are delivered as PDF files suitable for printing or online viewing, and Online Help Documentation, delivered as HTML files.

The PDF documents are found in <APOLLO\_HOME>\help\hardcopy. Access the online help system from the Help drop-down menu in the application.

- The ***Installation and Configuration Guide*** provides instructions for installing a basic, working ERDAS APOLLO system, as well as instructions for upgrading or replacing an older system.
- The ***Data Manager Guide*** provides instructions for the ERDAS APOLLO Data Manager, which is the ERDAS APOLLO system component that you will be using to create and manage your imagery catalog and/or service providers.
- The ***User Guide*** gives instructions on using the ERDAS APOLLO Web Client and instructions on using HTTP requests to interact with your ERDAS APOLLO Server.
- The ***ERDAS APOLLO Administrator's Guides*** contain instructions for advanced installation, configuration, and optimization of the server component of ERDAS APOLLO. There are two books that cover this material:
  - **ERDAS APOLLO Administrator's Guide (Advanced/Professional edition)** provides information about the features that are unique to that level of the product, such as:

- The ERDAS APOLLO Imagery Catalog
- Clip, Zip, and Ship image downloading
- Geoprocessing (WPS)
- ERDAS APOLLO Administrator's Guide (Essentials-SDI edition) provides information about how to create and configure OGC-compliant service providers, how to use the different tools and utilities available in ERDAS APOLLO to help you work with your data, and how to use ERDAS APOLLO Style Editor.

## Document Conventions

In ERDAS APOLLO, the names of menus, menu options, buttons, and other components of the interface are shown in bold type. For example:

“In the Select Layer To Add dialog, click the **Fit to Frame** option.”

When asked to use the mouse, you are directed to click, double-click, Shift-click, middle-click, right-click, hold, drag, etc.

- click — click once with the left mouse button.
- double-click — click twice with the left mouse button.
- Shift-click — hold down the Shift key on your keyboard and simultaneously click the left mouse button.
- middle-click — click once with the middle mouse button.
- right-click — click once with the right mouse button.
- hold — press and hold the left (or right, as noted) mouse button.
- drag — drag the mouse while holding the left mouse button.

The following paragraphs are used throughout the ERDAS APOLLO documentation:




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*These paragraphs contain strong warnings or important tips.*




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*These paragraphs direct you to the ERDAS IMAGINE® software function that accomplishes the described task.*




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*These paragraphs lead you to other areas of this book or other manuals for additional information.*





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*These paragraphs provide information about Erdas products.*

*NOTE: Notes give additional instruction.*

**Flag Box**

Because you can choose where to install a program, the install folder is referred to `<APPNAME_HOME>`, where APPNAME represents the name of the program.



# Installation and Configuration

This chapter includes information on how to install and configure ERDAS APOLLO.

## System Components

An ERDAS APOLLO system includes a server computer and one or more client computers. Install the Server Installation on the server and the Data Manager on the client computers. The third part of the system is a database. APOLLO supports three databases: Oracle, PostgreSQL, and MS SQL Server 2008.

### Server

The server installation includes the following.

- ERDAS APOLLO Server 64-bit or 32-bit (Professional, Advantage, or Essentials)
- compatible application server (Tomcat included with Essentials and JBoss included with Advantage/Professional, Weblogic - you must install)
- Java Development Kit (JDK) 6.0 Update 20
- Apache Load Balancer (Windows only)
- ERDAS Native Core Raster Support
- IWS (Advantage/Professional Windows only)

If you select the bundled application server during installation, the installer also installs, configures, and deploys the ERDAS APOLLO Applications(s) into the application server.

There are three levels of the ERDAS APOLLO Server.

- **Professional** - add, edit, or retrieve data from an imagery data catalog, create and manage service providers, and work with geospatial processes.
- **Advantage** - add, edit, or retrieve data from an imagery data catalog and create and manage service providers.
- **Essentials-SDI** - create and manage service providers

### Weblogic

To use Weblogic, you must install, configure, and deploy it. Refer to the [WebLogic](#) chapter for complete instructions.

## Data Manager

The ERDAS APOLLO Data Manager installation is a separate, stand-alone installer. The ERDAS APOLLO Data Manager interacts with any level of the ERDAS APOLLO Server. This includes the Java Runtime Environment (JRE) 6.0 Update 20.

## Database

Create a database and a user account that the installer can use to access the database so it can create the necessary tables.



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*Follow the rules established by the database platform when you create the password for your "master" user account.*

*Do not include the dollar sign (\$) in the database password.*

You need the following information from the database for the Server installation.

- name of the database server
- listener port number
- SID/Database Name
- catalog user name
- catalog user password

## Oracle

If you are using an Oracle database, create a user who owns the catalog schema. Grant this user the "connect", "resource", and "Create View" roles and the "create view" and "analyze any" system privilege. The "connect" and "resource" roles have to be set as "default" roles (for TOAD users).

## PostgreSQL

You must have a working PostGIS database in your PostgreSQL instance. You can create a PostGIS database at installation time or later using the template 'template\_postgis'. Set up a user who has permission to create database objects and has a schema in the PostGIS database. The installation asks for the credentials of this user and the database administrator (usually 'postgres'), the actual database name, and the port number.

## Microsoft SQL Server

Inside your SQL Server instance, you need to create the following.

- log in with all server roles enabled
- user account that is associated with that login.  
The user should be a member of all the database roles
- blank database for ERDAS APOLLO that is owned by that user account.

Also enable XA transactions. Microsoft provides instructions for that in their SQL Server Developer Center, on the following web site.

<http://msdn.microsoft.com/en-us/library/aa342335.aspx>



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*If you install this ERDAS APOLLO system as a replacement for an older ERDAS APOLLO system, see **Upgrade** on page 3 before you begin.*

## ERDAS-Net Licensing

You must install ERDAS-Net Licensing on the same computer as your ERDAS APOLLO Server and configure it with valid licenses.



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*For more information see the **ErDas-Net Licensing** chapter.*

If you need additional assistance with licensing, e-mail [teamlicensing@erdas.com](mailto:teamlicensing@erdas.com)

## Antivirus Software Requirements

If you are using antivirus software that features real-time protection and it is scanning your geospatial data files or your ERDAS APOLLO installation folder, it may cause your ERDAS APOLLO system to be unreasonably slow.

For best results, create an “exception rule” that excludes the data files and the installation folder from the scanning of the real-time protection feature.

## Upgrade

When you upgrade your ERDAS APOLLO installation, make a copy of all the files in the installation folder or folders for your previous products, AND your ERDAS APOLLO database or databases.

- The installer upgrades your database schema so that it is compatible with the new version of ERDAS APOLLO. For Oracle, you must add the "create view" system privilege to the schema.
- The installer places a link in the database that allows ERDAS APOLLO to locate your existing thumbnails and ISO metadata files.
- Any thumbnails and ISO metadata files that are created by ERDAS APOLLO will be stored in the folder specified in the `global.server.properties` file.
- (See "Centralization of Metadata, Thumbnails, Pyramids, and WPS Outputs" in the *ERDAS APOLLO Administrator's Guide: Advantage/Professional Edition* for more information).
- Make sure the customizations you made to your older product are applied to your new product. Follow the instructions for existing ERDAS APOLLO users in the section, **After Installation** on page 19 of this guide.

## Stop an Application Server

The procedure for doing this varies depending on what kind of application server you are using.

### JBoss application server

1. Open the **Control Panel**.
2. Select **Administrative Tools > Services**
3. Find **JBoss Application Server 4.2** in the grid, right-click it, and select **Stop** in the menu.

### Apache Tomcat application server

#### If Apache Tomcat is running as a Windows service:

1. Open the control panel.
2. Select **Administrative Tools > Services**
3. Find **Apache Tomcat** in the grid, right-click it, and select **Stop** in the menu.

#### If Apache Tomcat was not running as a Windows service:

1. Go to the open command line window that was used to start the `startup.bat` file and press Ctrl-C on the keyboard or close the command line window.

### WebLogic application server

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **Oracle > Weblogic > User Projects > apollo\_domain > Stop Admin Server**.
4. A command line window will open.  
Enter the user name `weblogic` and the password `weblogic1` to log in to the domain.

## Uninstall a Windows Service

### JBoss Windows service

1. Open a command line window.
2. Navigate to the `<JBOSS_HOME>/bin` folder.
3. At the prompt, type `service.bat uninstall` and press Enter.

### Apache Tomcat Windows service:

1. Open a command line window.
2. Navigate to the `<TOMCAT_HOME>/bin` folder.
3. At the prompt, type `service.bat remove` and press Enter.

## Server Installation - Windows

This installation program installs any version of ERDAS APOLLO Server. You will only be able to run the version for which you have a valid license.

1. Insert the ERDAS Software DVD and the ERDAS Master Installer Autorun dialog opens.
2. Click **ERDAS APOLLO**.
3. Select **Install ERDAS APOLLO version Server** in the Installation Options list. The Introduction dialog opens.
4. Read the instructions and click **Next**. A Warning message reminds you to read this guide.
5. Click **OK** and the ERDAS APOLLO License Agreement dialog opens.
6. Read the agreement and then click **I Accept** the terms of the License Agreement.
7. Click **Next** and the Select ERDAS APOLLO product tier to install dialog opens.
8. Select one of the server installations. Click **Next**.  
If you have a 64-bit machine, the Select System Architecture dialog opens.  
OR  
If you do not have a 64-bit machine, continue with [step 12](#).
9. Select 32-bit or 64-bit capability.
10. Click **Next**.
11. The Select Install Type dialog opens.
  - **Standalone** - one server and one database
  - **Create New Cluster** - a group of servers on different computers that share incoming requests from ERDAS APOLLO Data Manager and ERDAS APOLLO Web Client users so that your system can handle a higher user volume and even larger requests. This system includes a load balancer that receives requests and assigns the request to a server. If the server fails, the load balancer requests reauthentication from the user and then reassigns the request to a different server. Be sure to enter the Load balancer host and port number later in this installation.
  - **Add to Existing Cluster** - you can add servers to an existing cluster



12. Choose your system, click **Next**, and the Choose Local Install Directory dialog opens.
13. Click **Choose** to browse to and select a different install folder.

OR

Click **Restore Default Folder** to return the install folder to the default setting (C:/ERDAS/APOLLOversion).



---

*Make sure the shared location is accessible over the network (with READ/WRITE access for every computer that runs on a cluster node) for the user account that will be set as impersonation on the JBoss/Weblogic service.*

*Do not use a folder name with spaces.*

*Do not install the ERDAS APOLLO products in the same folder as the application server.*

OR

Click **Next**.

If you are installing a standalone system, the Choose shortcut folder dialog opens. Continue with [step 15](#).

OR

If you are installing a Cluster, the Choose Shared Install Directory dialog opens.

14. Choose the folder to install shared configuration and resource files for the cluster. Use the full UNC path to the location; do not use a mapped network drive. The Choose shortcut folder dialog opens.
15. Choose the method to launch ERDAS APOLLO and click **Next**. The Install Sample Data? dialog opens.
16. The Sample Data is approximately 100 MB. If you do not need sample contexts and services, do not install the sample data.
17. Select the type of database to connect to the server.
  - Oracle 10g/11g
  - Postgres
  - SQL Server

The Database Info dialog opens.

**18.** Enter the Database Info settings.

**Server** server where the database is located

**Port** listener port number (default is set to 1521)

**SID/Database Name** database server ID

**Catalog User Name** database user name

**Catalog User Password** database user password

**19.** Click **Next**. If you are setting up a cluster, the Enter Clustering Setup Details dialog opens. Otherwise, continue with [step 22](#).

**20.** Enter Cluster Setup Details.

**Node Name** name of the cluster computer. This must be an alias to the current node, and is mainly used for sticky session setup in the cluster. The cookie named "JSESSIONID" will have this "Node Name" value appended to its value.

**Load Balancer Host** name or IP address of the computer (load balancer) on which Apache httpd is installed

**Load Balancer Port** port number that the load balancer is using. (If you accepted the default settings when you installed Apache httpd, it is using port 80.)

**Cluster Multicast Address** IP address of the cluster. The default cluster multicast address is 230.0.0.1. Use the default address unless you are installing multiple clusters on your network. If you have multiple clusters, make sure each cluster has a unique IP address. The multicast address is used in two places.

- To synchronize the nodes in the cluster (for JBoss it is in cluster-service.xml) used by Jgroups configuration of JBoss cluster setup.
- Used by distributed ehcache, which is used for both Hibernate second level cache and the configuration setup.



---

*This information tells each ERDAS APOLLO Server node how to connect to the cluster. Use the same Host, Port, and Address each time you run the installer to set up another node.*

**Syslog Daemon Host** URL of the tool (syslog daemon) that consolidates the logs from all nodes. (default is localhost) This tool simplifies troubleshooting.

**Syslog Daemon Port** port number of the syslog daemon that consolidates the logs from all nodes. (default is 514)

21. Click **Next**.

22. If you are installing a cluster, JBoss is automatically installed. Continue with **step 24**.

OR

If you are installing a stand-alone system, then the Select Application Server dialog for your version opens.

23. Essentials SDI is compatible with the following application servers.

- Apache Tomcat 6.0 (bundled) - included in the installer
- JBoss (bundled) - included in the installer
- WebLogic - you must install and configure
- Generic - use for any application server not listed - you must install and configure

Advantage/Professional is compatible with the following application servers.

- JBoss - included in the installer
- WebLogic - you must install and configure

24. Click **Next** and the HTTP Server Settings dialog opens.

25. Enter the hostname and port number.

**HTTP Server Hostname** name of the computer on which you are installing ERDAS APOLLO Server or the static IP address of that computer

**HTTP Server Port** port number used to access the service. The default server port number is 80.

**Application Server Admin Port** use the default port number unless you need to avoid a conflict with a another server or service

26. Click **Next** and If you selected Advantage/Professional the SMTP Settings dialog opens. Otherwise, continue with [step 28](#).
27. The Simple Mail Transfer Protocol (SMTP) is required for APOLLO Professional and defines the location to send e-mails. For other versions, continue with [step 29](#).

#### **SMTP Hostname**

#### **SMTP Port**

#### **SMTP User**

*NOTE: Windows Firewall and other antivirus programs may block outgoing e-mail. Add your application server to the list of applications allowed to send e-mail from the server.*

28. Click **Next** and the Create Windows Service dialog opens.
29. There are two Windows services required for APOLLO: Apache HTTP (load balancer) and JBoss.

Click **Yes** to install a Windows service.

OR

Click **No** if you have multiple copies of APOLLO and do not need to install the Windows services again.

The Bing Maps panel opens.

30. Select one of the Bing Maps options. You must obtain a Microsoft Bing Maps key under agreement with Microsoft if you intend to use this option externally. You can change this setting after installation through the bingmaps.key parameter of the apollo-client.properties file.

#### **Do not enable Microsoft Bing Maps**

#### **Enable Microsoft Bing Maps for internal use**

#### **Enable Microsoft Bing Maps for external use - Please provide user key**

The Preinstallation Summary dialog opens.

31. Review the summary and click **Install** when ready. The Installing ERDAS APOLLO dialog opens. The installation process takes several minutes. Several dialogs and messages display during installation. The Install Complete dialog indicates the process has completed.

If you selected to set up services, a dialog prompts you to reboot to update the created services.

## Server Installation - Linux - Essentials-SDI

The following instructions explain how to install ERDAS APOLLO Server (Essentials-SDI) on a Linux computer in console mode.

You can also install ERDAS APOLLO Server (Essentials-SDI) on a Linux machine using the graphical user interface for Linux. If you use the graphical interface for Linux, the installation steps are basically the same as the ones for installing ERDAS APOLLO Server on a Windows computer.



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*ERDAS APOLLO Server (Advantage/Professional) cannot run on Linux. If you need to install the Advantage or Professional levels of the ERDAS APOLLO Server, see [Server Installation - Windows](#) on page 6.*

1. Open a console (local or Telnet/SSH) then start the installer using the command `sh install.bin -i console`. The `i console` option indicates that you are running the installer in the console mode.

*NOTE: Use the `chmod u+x` command on the `install.bin` file to be able to execute it.*

*NOTE: The installer requires sufficient temp space while executing. You can either clean up your default temp folder (typically the default temp directory is `/tmp`) or set the environment variable `IATEMPDIR` using the export command. For example, `export IATEMPDIR=/your/temp/space/directory`.*

### Introduction

2. Press Enter to continue. A warning message reminds you to read the Quick Start Guide.



---

*You can cancel the installation at any prompt by entering "quit".*

*You can change an entry in a previous step by entering "back".*

3. Press Enter. The Licence Agreement begins. The console displays the license agreement in several parts, press Enter after each part to continue reading the agreement.

**DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT?  
Y/N**

4. Type Y to continue with installation.

**Choose Product to Install**

5. Press Enter to accept the default (Essentials).

**Get User Input**

6. You can set up a standalone system or a cluster. Enter any number of 1,2, or 3 or press Enter to accept the default (Standalone).

**Choose Local Install Folder**

**ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT  
THE DEFAULT**

7. Enter the full path for the installation or press Enter to accept the default (/user/local/erdas/)APOLLO*version*.

**INSTALL FOLDER IS: /usr/local/erdas/ERDAS/APOLLO*version* IS  
THIS CORRECT? (Y/N)**

8. Type Y to continue.

**Choose Link Location**

9. Choose the location of the links to the application.

**Install Sample Data?**

10. The Sample Data is approximately 100 MB. If you do not need sample contexts and services, do not install the sample data.

**Choose a type of database to link to your installation**

11. Enter the number corresponding to database you set up for APOLLO.

1 - Oracle: **Oracle connection and modules tests**

2 - PostgreSQL: **PostgreSQL connection tests**

3 - SQL Server: **Database Settings - Database host**

12. For any database, enter the computer name on which the database is installed.

**Enter the port of the database server**

13. Enter the port number for the database server of press Enter to accept the default for the database.

**Enter the SID of the database server**

14. Enter the database server ID or accept the default.

**Enter the database Catalog user name**

15. Enter database user name.

**Enter the database Catalog user password**

16. Enter database user password. You cannot use a dollar sign (\$).

**Essentials SDI - Select Application Server** if you installing a standalone system.

17. Select the application server to use with Essentials - SDI.

**Configure Server Host - Server Hostname**

18. Enter the server host computer name or the IP address.

Tomcat and JBoss: **Server Port**

OR

All other configurations, continue with [step 22](#).

19. Enter the port number of the server.

Tomcat: **Admin Port**

JBoss: continue with [step 22](#).

20. Enter the port number used to manipulate Tomcat remotely.

The Bing Maps panel opens.

**Do not enable Microsoft Bing Maps**

**Enable Microsoft Bing Maps for internal use**

**Enable Microsoft Bing Maps for external use - Please provide user key**

21. Select one of the Bing Maps options. You must obtain a Microsoft Bing Maps key under agreement with Microsoft if you intend to use this option externally. You can change this setting after installation through the `bingmaps.key` parameter of the `apollo-client.properties` file.

### **Pre-installation Summary - Please review the following before Continuing**

22. Press Enter to continue with the installation. Wait for the message *ERDAS APOLLO version* has been successfully installed to *installdirectory*.

## **Deployment**

### **Adv/Pro - JBoss**

If you selected JBoss as your application server while you were running the ERDAS APOLLO Server installer, JBoss has already been installed on your server and ERDAS APOLLO Server has been deployed for you. You must reboot the server after installation to start the JBoss service.

The server installation includes `install_services` and `uninstall_services` batch files. The installation runs the `install_services` batch file.

If you are using a mapped network drive for crawling, be sure to log in and run JBoss with the same user as the machine running the Data Manager. Otherwise, the mapped network drive will not appear as one of the drives available for browsing in the Data Manager Browse dialog.

### **Essentials-SDI Deployment**

If you select Apache Tomcat or JBoss as your application server when you install ERDAS APOLLO Server (Essentials-SDI), the installer automatically installs your application server and deploys ERDAS APOLLO Server. After your installation is complete, start ERDAS APOLLO Server by doing **one** of the following:

- reboot your computer
- install JBoss or Apache Tomcat as a Windows service and start the service

### **Apache Tomcat 5/6**

Before you can connect with the Data Manager, open the `tomcat-users.xml` file and add the following lines.

```
<role rolename="esp_administrator"/>
```



```
<user username="admin" password="apollo123"
roles="esp_administrator"/>
```

## Apache Tomcat 5

To deploy ERDAS APOLLO Server on Apache Tomcat 5 follow these basic steps then you can start Apache Tomcat.

Copy the ERDAS APOLLO Server Web ARchive (WAR) files from the folder where you installed ERDAS APOLLO Server and place them in the folder where you installed Apache Tomcat.

1. Open the `<APOLLO_HOME>\dist` folder.
2. Copy the files `apollo-client.war` and `erdas-apollo.war`.
3. Open the `<TOMCAT_HOME>\webapps` folder and paste the files you just copied into it.

Increase the memory settings for Apache Tomcat.

1. Open the `<TOMCAT_HOME>/bin` folder.  
If you are installing ERDAS APOLLO Server on a Windows machine, find the file named `catalina.bat`.  
If you are installing ERDAS APOLLO Server on a machine with a UNIX-based operating system, find the file named `catalina.sh`.
2. Open the `catalina` file for editing.
3. If you are installing on Windows, add the following line at the beginning of the file:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms512m -Xmx512m -XX:PermSize=128m -
XX:MaxPermSize=256m
```

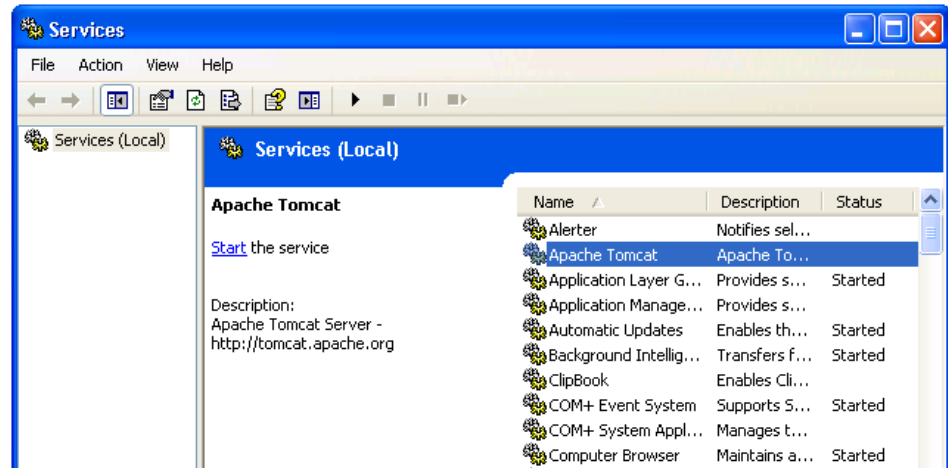
If you are installing on a UNIX-based operating system, add:

```
JAVA_OPTS="$JAVA_OPTS -Xms512m -Xmx512m -XX:PermSize=128m -XX:MaxPermSize=256m"
```

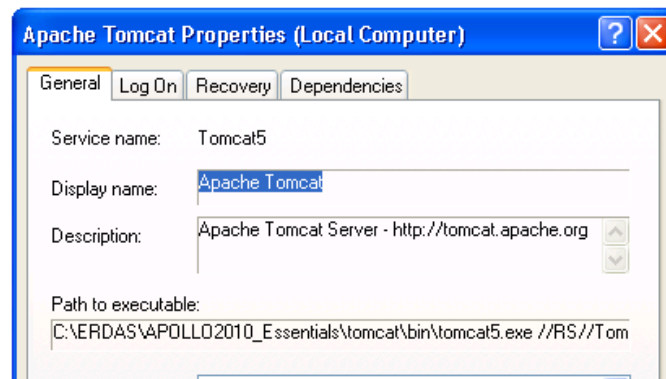
To install Apache Tomcat as a Windows service and start the service follow these instructions.

1. Open a command line window.
2. Navigate to the `<TOMCAT_HOME>/bin` folder.

3. At the prompt, type `service.bat install` and press Enter.
4. Open the Windows Services by opening your Windows Control Panel and selecting Administrative Tools > Services.



5. Right-click Apache Tomcat in the list of services and select Properties on the menu that appears. The Apache Tomcat Properties dialog box opens.



6. Change the Startup type to **Automatic** if you want the application to start automatically when Windows starts.
7. Click the **Start** button under the **Service status** field. The Service status should change to **Started**.
8. Close the Apache Tomcat Properties dialog box and the Services window.

## WebLogic

To deploy ERDAS APOLLO Server (Essentials-SDI) on WebLogic, you first need to install and configure WebLogic using the instructions in the sections [Installation](#) on page 54 and [Configuration - Essentials-SDI](#) on page 69.

*NOTE: It is assumed that ERDAS APOLLO Server will be deployed in a fresh new domain. Deployment of ERDAS APOLLO Server in an existing domain will also work provided it has been configured with the requirements of the product.*

To deploy ERDAS APOLLO Server on WebLogic:

1. Open the WebLogic Administration Console.
2. In the domain structure tab on the left, choose **Deployment**.
3. Click the **Install** button.
4. Navigate to the `<APOLLO_HOME>\dist\weblogic` folder and click on the **Next** button.
5. Choose to install the deployment as an application and click on the **Next** button.
6. In the Security configuration, choose the **Custom Roles** option and click the **Finish** button.

After you have deployed ERDAS APOLLO Server, you need to start it.

To start ERDAS APOLLO Server:

1. Click on the **Activate Changes** button which will redirect you to the list of applications installed on the server.
2. In the list, check the ERDAS APOLLO Server application (ERDAS APOLLO Server by default).
3. Click on the **Start** button, then click **Servicing all requests**. Confirm your selection in the next screen

## Testing Your Installation

The ERDAS APOLLO products come with a web tools welcome page that is installed and published when you install any version of the ERDAS APOLLO Server.

If you have successfully installed the product, you will see the welcome page when you visit the following web address

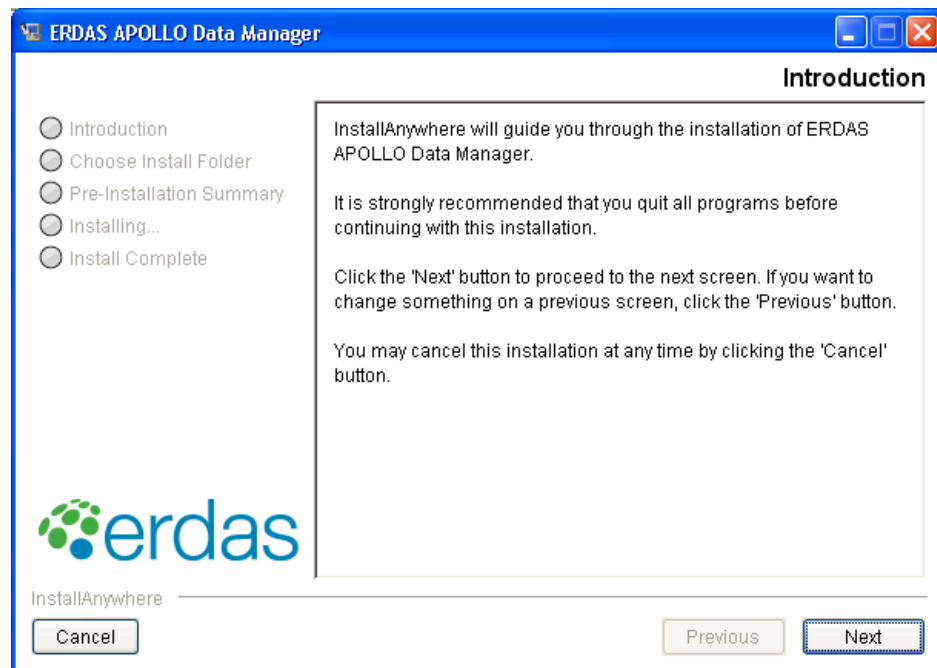
[http://<server\\_name>:<portnumber>/erdas-apollo.](http://<server_name>:<portnumber>/erdas-apollo.)

## Data Manager Installation

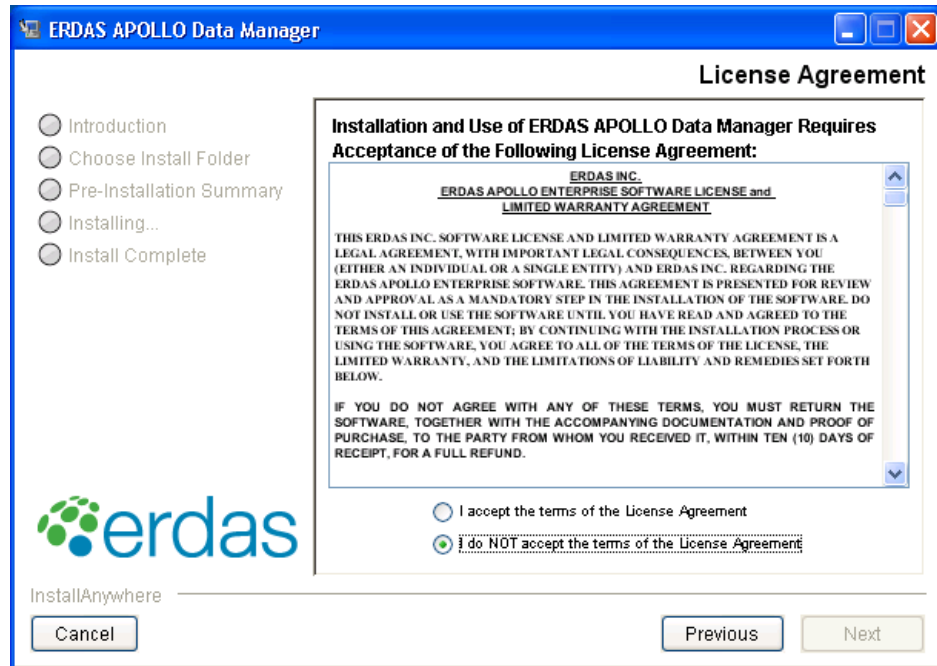
After you have installed the ERDAS APOLLO Server and you have verified that it is running, install the ERDAS APOLLO Data Manager. Install ERDAS APOLLO Data Manager on one or more separate computers that have a network connection to the ERDAS APOLLO Server computer.

1. Insert the ERDAS Software DVD into your DVD drive. The ERDAS Master Installer Autorun dialog opens.
2. Click **ERDAS APOLLO**.
3. Select **Install ERDAS APOLLO Data Manager** in the installation options list.

The installer has to prepare for the installation procedure. This can take a few minutes. When ready, the ERDAS APOLLO Data Manager - Introduction dialog opens.



4. Click **Next** and the License Agreement dialog opens.



5. Accept the License Agreement and click Next. The Choose Install Folder dialog opens.
6. Click **Choose** to browse to and select a install locations OR  
Click **Next** to accept the default install location.  
The Choose Shortcut Folder dialog opens.  
If a version of the ERDAS APOLLO Data Manager is already installed in that folder, it will be uninstalled.
7. Choose one of the locations for the shortcut. You can also choose to create icons for just for the Windows user who is currently logged in or for all of the people who have Windows users accounts on that computer.
8. Click **Next** and the Pre-Installation Summary dialog opens.
9. Review the summary and then click **Install** to begin the installation. Several messages display and the Install Complete dialog signifies that the installation has successfully completed.
10. Click **Done** to exit the installation.

## After Installation

## Upgrade from 9.3.x/2010 to 2011

If you were using a previous version of ERDAS APOLLO, follow the appropriate instructions for the upgrade. If you have a new version, you can begin using the product.

If you are upgrading from 9.3.x/2010, complete the appropriate tasks for your installation.

- **ERDAS APOLLO Image Manager** - complete [Keeping Your Existing Customizations](#) on page 24 immediately after you complete installation.
- **ERDAS APOLLO Server** - complete [Migrating Service Providers](#) on page 20 and [Keeping Your Existing Customizations](#) on page 24 immediately after you complete installation.
- **ERDAS APOLLO Server and ERDAS APOLLO Image Manager** - complete [Migrating Service Providers](#) on page 20, [Migrating Data](#) on page 23, and [Keeping Your Existing Customizations](#) on page 24 immediately after you complete installation.

If you are upgrading from 2010.x, complete the following tasks for your installation

- Complete [Migrating Service Providers](#) on page 20 and [Keeping Your Existing Customizations](#) on page 24 immediately after you complete installation.

### Migrating Service Providers

The service providers in your previous ERDAS APOLLO Server are not automatically moved into your new ERDAS APOLLO. If you want to use your existing service providers, use the Service Provider Migration Tool.

The service provider migration tool is a simple command line tool. You provide a path to the location of the existing service providers and a path to the new location.

When the tool runs, it reads the definitions for your existing service providers from the following files in your ERDAS APOLLO Server installation folder (<OLD\_APOLLO\_HOME>):

- <OLD\_APOLLO\_HOME>/config/erdas-apollo/providers/coverage/providers.fac
- <OLD\_APOLLO\_HOME>/config/erdas-apollo/providers/map/providers.fac

- <OLD\_APOLLO\_HOME>/config/erdas-apollo/providers/vector/providers.fac

It copies the definitions from each file into a corresponding file named `migrated.fac`. Any paths that are copied into `migrated.fac` that point to a location in the ERDAS APOLLO Server installation folder are automatically converted so that they point to the corresponding location in the ERDAS APOLLO folder. All other paths are copied "as is".

These `migrated.fac` files are then placed in the following directories in your new ERDAS APOLLO folder, alongside your new `providers.fac` files:

- <APOLLO\_HOME>/config/erdas-apollo/providers/coverage
- <APOLLO\_HOME>/config/erdas-apollo/providers/map
- <APOLLO\_HOME>/config/erdas-apollo/providers/vector

The service provider migration tool also copies the configuration files that are located in the folder <ERDAS APOLLO Server\_HOME>/config/erdas-apollo/storage and places the copies in <APOLLO\_HOME>/config/erdas-apollo/storage.

The styles for vector providers are copied to the new installation. The styles for coverage service providers are not copied.

For coverage providers, the index files in GML for the index and list providers are copied but the dataset paths contained in those files are copied "as is". If you move the datasets, you will need to edit the index files and change the paths.

For map providers, the image provider definitions are copied into <APOLLO\_HOME>/config/erdas-apollo/providers/coverage/migrated.fac. The other provider definitions (proxy, portray, ArcSDE raster, pyramid, context, ...) are copied into <APOLLO\_HOME>/config/erdas-apollo/providers/map/migrated.fac. Any paths that are copied into `migrated.fac` that point to a location in the ERDAS APOLLO Server installation folder are automatically converted so that they point to the corresponding location in the ERDAS APOLLO folder. All other paths are copied "as is".

The migration tool will not copy any of the sample service providers that are included with your ERDAS APOLLO Server. ERDAS APOLLO contains sample providers, however. Your ERDAS APOLLO installer gives you the option to install these files when the product is installed.

The migration does not affect any of the service providers that you may have already created in ERDAS APOLLO.

### To use the service provider migration tool:

1. Open a command line window.
2. Navigate to the folder <APOLLO\_HOME>/tools/provider-migrator.
3. At the prompt, type  

```
runmigrate <source_path> <targetpath> -v
```

<source\_path> = ERDAS APOLLO Server old home folder

<target\_path> = ERDAS APOLLO home folder

-v is a command that tells the tool to display information about what it is doing. This command is optional, but recommended.

You must use the correct case when specifying the path.

If the paths contain blank spaces, enclose them in quotation marks.

4. Press **Enter**.

### After you run the service provider migration tool, you need to:

1. Copy the legend icons and thumbnails located in <OLD\_APOLLO\_HOME>/config/erdas-apollo/legend and place the copies in <APOLLO\_HOME>/storage/legend.
2. Copy the metadata files located in <OLD\_APOLLO\_HOME>/config/erdas-apollo/metadata and place the copies in <APOLLO\_HOME>/storage/metadata.
3. If you have been storing your data inside <OLD\_APOLLO\_HOME> you need to move the data to the corresponding folder inside <APOLLO\_HOME>, or you need to change the paths to the data inside the `migrated.fac` files.
4. Test your old service providers in APOLLO to make sure they work as expected.

If they do not, you should first check the definition for that provider in the `migrated.fac` file to make sure the paths to the data are accurate.

If the service providers are still not working properly, or if you have some other reason to believe that the migration failed, you can delete the `migrated.fac` files in the <APOLLO\_HOME>/config/erdas-apollo/providers folder and run the service provider migration tool again. The tool may display messages to indicate that some of the target directories already exist, but the tool will perform all of the migration tasks again.



## Migrating Data

If you are upgrading to ERDAS APOLLO from a single ERDAS APOLLO product (ERDAS APOLLO server, ERDAS APOLLO Image Manager, or ERDAS APOLLO 2010.x), then the installer has already connected ERDAS APOLLO to your existing APOLLO database and upgraded it.

If you are upgrading to ERDAS APOLLO and you were using both ERDAS APOLLO Server and ERDAS APOLLO Image Manager (EAIM) before, you should have the installer connect to your existing EAIM database and upgrade it. This will serve as the database for ERDAS APOLLO. You can then migrate the data from your ERDAS APOLLO Server database into the upgraded database that you are using for ERDAS APOLLO.



---

*Even after your EAIM 9.3.2 database is upgraded to ERDAS APOLLO, the pyramid paths within it are still set for the 9.3.2 version, and are still pointing to the absolute 9.3.2 installation location (unless you customized your EAIM 9.3.2 installation to store the pyramids outside the <EAIM932\_HOME>folder).*

*You need to move your pyramids out of the <EAIM932\_HOME>folder and upgrade these paths in the database before you uninstall EAIM 9.3.2 version, or you will lose your existing pyramids. ERDAS provides a script for Oracle users to make this task easier. Contact your support representative.*

To migrate information from your ERDAS APOLLO Server 9.3.2 database to your ERDAS APOLLO database:

1. Make sure that ERDAS APOLLO Server is running.
2. Open your internet browser and go to the URL **http://<host>:<port>/apollo-catalog/rest/services.txt?maxresults=1000**

Where:

**<host>** is the name of the computer on which ERDAS APOLLO Server is installed

**<port>** is the HTTP port for the application server used by ERDAS APOLLO Server 9.3.2

3. This URL will return a list of service URLs. Save the file from your browser in the <APOLLO\_HOME>/tools/harvester-console folder as `services.txt`.

4. Open a command line window.
5. Navigate to the **<APOLLO\_HOME>/tools/harvester-console folder**.
6. At the prompt, type `edit build.properties` and press Enter. An editor will open inside the command line window and the contents of the file `build.properties` will be shown inside the editor.
7. Check the **catalog.url** property to make sure it is set to the correct URL to the ERDAS APOLLO catalog.
8. Check the **catalog.user** and **catalog.password** properties to make sure they are set to a user who has permission to write to the ERDAS APOLLO database.
9. Save and close the `build.properties` file.
10. To run the harvester tool, type `ant run` at the prompt and press Enter.

After the harvesting is complete, the harvester will display the number of OGC service providers that were harvested and the number that were unable to be harvested. A list of the services that could not be harvested is displayed, along with a message to indicate the reason that the harvesting failed.

If you are able to correct any of the situations that caused these services to not be harvested, you can try to harvest these services again. The tool places the list of the services that failed to harvest in the file `services-exceptions.txt`. You can run the tool to just try to harvest these services by typing the following at the prompt and pressing Enter:

```
ant run -Dservices.path=services-exceptions.txt
```

## Keeping Your Existing Customizations

After you have installed the new version of ERDAS APOLLO Server, you will need to make sure the customizations to your ERDAS APOLLO system are retained in the newer version of the software.

Because there are many different combinations of customizations that you could have made to your ERDAS APOLLO system, an administrator who knows what files were changed will need to open the changed files in the previous installation and use them as a guide to change the files in the new installation.

For more information about the possible customizations for the ERDAS APOLLO system, see the appropriate ERDAS APOLLO Administrator's Guide for your product level.



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*It is especially important that you make sure you add any custom SRSs back to the system before you begin using it. The chapter entitled "Adding a New SRS" in the ERDAS APOLLO Administrator Guide: Advantage /Professional Edition contains complete instructions on how to add your custom SRSs back to the system.*



---

*If you were using geoprocessing (WPS) in the previous version of your software, you may need to move the WPS models or change the folder where the newest installation of ERDAS APOLLO will look for them. By default, ERDAS APOLLO expects to find the models in the folder <APOLLO\_HOME>\storage\wps.*

*For more information, see the section entitled "Specifying the Storage Directories for WPS Models and Outputs" in the ERDAS APOLLO Administrator Guide: Advantage /Professional Edition.*

## **New ERDAS APOLLO Users**

If you need to customize your installation, see the **ERDAS APOLLO Administrator's Guide** - (Advanced/Professional or Essentials-SDI edition)

To begin using the system, you will use the ERDAS APOLLO Data Manager to either create a catalog and/or create service providers for your data (depending on which edition of ERDAS APOLLO that you purchased). The **ERDAS APOLLO Data Manager Guide** provides information about the interface in that program as well as instructions for using it.

After you have created a catalog and/or service providers, refer to the **ERDAS APOLLO User Guide** for instructions for setting up the web client for your end users and for using the web client.



# ERDAS-Net Licensing

## Licensing the Software

All ERDAS software requires a license to operate. Software licenses are based on the ERDAS products and number of seats you purchased. The ERDAS-Net Licensing tools set up and manage the software licenses needed to run all ERDAS software. You can monitor license and module usage and borrow a floating license from the license server so you can use the product(s) when your computer is disconnected from the server. For certain desktop products, end users can borrow a floating license and run ERDAS products while disconnected from the server.

ERDAS-Net Licensing is based on FLEXnet Publisher from Acreoso Software. FLEXnet supports advanced security technologies and provides an easy and flexible method to request and use licenses for all ERDAS software. FLEXnet works in a similar manner across several operating system platforms.

- You need a new license each time you upgrade to a new release of any ERDAS software. A new license supersedes any existing license; you do not merge or delete any older license files.
- Any older versions of ERDAS software (such as IMAGINE 9.2 or ER Mapper 7.1) that used the FLEXIm licensing does not work directly with ERDAS-Net Licensing, but both systems can be operated on the same machine simultaneously.
- A dongle is an optional hardware key that provides a unique identifier for your computer. Other forms of unique identification are available, but a dongle makes it simpler to transfer a license from one computer to another. ERDAS-Net Licensing supports SafeNet (Windows only) and FlexNet ID dongles.
- You must have a unique system ID for each computer on which you install ERDAS software. Access **System** -> **ERDAS-Net Show System ID** to determine your unique system ID(s).
- ERDAS-Net Licensing supports both node-locked and floating licenses.
- You can install ERDAS-Net Licensing on a machine that has no other ERDAS products in order to operate a stand-alone floating license server.



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*For more information on using FLEXnet License Administration, from the **Start** menu -> **All Programs** -> **ERDAS** -> **ERDAS-Net Licensing** -> **FLEXnet Administration Guide**.*



*You must have administrative privileges to set or change the licensing settings on a Windows operating system.*

## Supported Platforms

ERDAS-Net Licensing supports the following operating systems.


- Windows XP (32 and 64-bit)
- Windows Vista Enterprise (32 and 64-bit)
- Windows 7 (32 and 64-bit)
- Windows Server 2003 (32 and 64-bit)
- Windows Server 2008 (32 and 64-bit)
- Red Hat Enterprise 5.x (32-bit x86)
- CentOS 5.x (32-bit x86)
- SPARC Solaris 10 (only ERDAS-Net 2009.02 is available on SPARC Solaris, and can be used as a license server for all ERDAS 2010 products.)

## Install ERDAS-Net Licensing - Windows

This section includes the following instructions.

- install files to set up and maintain a stand-alone Windows license server that serves ERDAS floating licenses
- enable licensing for an application that requires ERDAS-Net
- upgrade from a version of ERDAS-Net Licensing

If you have an existing ERDAS-Net License Server, the installer stops and restarts the server during installation. Applications using the ERDAS-Net License Server may be disrupted during installation.

1. Double-click on the ERDAS-Net Licensing installer icon  to launch the installer. After the install unpacks and initiates, the Welcome dialog opens.
2. Click **Next** to continue and the ERDAS Software License Agreement dialog opens.

3. Accept the License terms and click **Next** and the Ready to Install the Program dialog opens.
4. Click **Install**. When the install completes, the Install Completed dialog opens.
5. Click **Finish** to complete the installation.

## Command Line Installation

ERDAS-Net Licensing for Windows can be installed and uninstalled from the command line. This is useful for unattended or "Silent" installations and uninstallations, removing specific features, generating installation logs, and batching multiple product installations.

In order to install ERDAS software products in unattended mode, you must agree to the terms of the End-User License Agreements (EULAs) that apply to the ERDAS products, and you must be authorized to bind your company or agency to these terms.

You must possess a strong knowledge of Windows command line scripting techniques and be familiar with both Windows environment variables and the concepts of variables and properties to install from the command line.

Use the following information to install/uninstall from the Command Line.

### Product Code

This install product code is required for command line removal of Windows Installer-based setups.

2008.02 - {8140DA5E-0381-4F7D-AD24-F9B5944FD043}

2009.02 - {AEC1AB94-1AC8-44CC-B0EC-F1887F7DE794}

10 - {64F574FE-D3D2-437A-9F4A-B274AA0A503E}

11 - {DCF27946-D8D8-4D25-8F3C-A1BB6C5A6226}

### Feature Table

Windows Installer-based setups can be arranged internally by "Features." Features selectively install or remove portions of an install setup.

Feature ID	Description	Required
Licensing	Files related to ERDAS-Net Licensing	Yes
Borrowing	A utility for checking out FLEXnet floating licenses.	No
SafeNet	SafeNet Sentinel dongle driver installer	No
FLEXid	FLEXnet FLEXid dongle driver installer	No
Java	A Java runtime. Required to operate the License Administration tools.	No

### Setting INSTALLDIR

ERDAS-Net Licensing files are used by multiple products and are designed to install to the `[ProgramFiles]\ERDAS\Shared` folder. (Where `[ProgramFiles]` is either "Program Files" or "Program Files (x86)" as specified by the operating system.) Do not set the Windows Install property, `INSTALLDIR`, to change the default installation location.

### Examples

#### Silent Install - Install All Features

```
ERDAS-Net_Licensing.exe /S /V"/qn"
```

#### Silent Install - Install Some Features

```
ERDAS-Net_Licensing.exe /S /V"/qn ADDLOCAL=Licensing,Java"
```

#### Silent Uninstall of 2008.08 with Full Logging Enabled

```
msiexec.exe /x {8140DA5E-0381-4F7D-AD24-F9B5944FD043} /lvx\* "C:\temp  
folder\uninstall2345.txt"
```

### Files and Folders

This section includes important files and folders related to ERDAS-Net Licensing. Consider `[ProgramFiles]` as `[Program Files (x86)]` on 64-bit Windows Installations.



erdasnet\_LICENSE\_PATH

File created by the License Admin tools to store the license sources entered into the Admin tool.

(Windows Vista/2008/7)

C:\Users\All Users\ERDAS\shared\licensing\erdasnet\_LICENSE\_PATH

(Windows XP/2003)

C:\Documents and Settings\All Users\Application Data\ERDAS\shared\licensing\erdasnet\_LICENSE\_PATH

erdasnet.log

Log file produced by the ERDAS-Net License server executable.

(Windows Vista/2008/7)

C:\Users\All Users\ERDAS\shared\licensing\erdasnet.log

(Windows XP/2003)

C:\Documents and Settings\All Users\Application Data\ERDAS\shared\licensing\erdasnet.log

[ProgramFiles]\ERDAS\Shared

The primary installation folder of the License Admin tool and ERDAS-Net Licensing server.

[ProgramFiles]\ERDAS\Shared\jre1.6.0\_20

The Java Runtime recommended for use with the ERDAS-Net License Admin Tools.

[ProgramFiles]\ERDAS\Shared\licensing\config\mappings

File used for translating license file feature codes into standard application feature names.

[ProgramFiles]\ERDAS\Shared\licensing\floating-licenses\erdasnet.opt

Configuration file used to disable license borrowing. For more information on enabling license borrowing refer to the online help for the License Admin Tools.

## Registry Keys

The following registry key is created during setup so ERDAS-Net Licensing applications can locate and update configuration files required for proper operation.

## Uninstallation

Use the MS Add/Remove programs tool from the Control Panel to uninstall ERDAS-Net Licensing.

If an existing ERDAS-Net License Server has been configured and is running on the target system, the ERDAS-Net Licensing uninstall attempts to remove the ERDAS-Net License Server Windows service. Reload your floating license file to recreate the Windows service.

Some files may remain after uninstallation. Files shared with other products such as ERDAS IMAGINE, LPS, and ER MAPPER will not be removed until those products are also uninstalled.

Other licensing files created post installation are not removed. These files do not affect usability and include the following.

userhome\erdasnet\_licensing

Configuration information generated by the License Admin tool generated in the user's home folder.

(Windows Vista/2008/7)

C:\Users\

(Windows XP/2003)

c:\Documents and Settings\\  
erdasnet\_licensing

erdasnet\_LICENSE\_PATH

File created by the License Admin tools to store the license sources entered into the Admin tool.

(Windows Vista/2008/7)

C:\Users\All Users\ERDAS\shared\licensing\erdasnet\_LICENSE\_PATH

(Windows XP/2003)

C:\Documents and Settings\All Users\Application  
Data\ERDAS\shared\licensing\erdasnet\_LICENSE\_PATH

## License File Folder

C:\Users\All Users\ERDAS\shared\licensing\licenses

(Windows Vista/2008/7)

C:\Documents and Settings\All Users\Application Data\ERDAS\shared\licensing\licenses

(Windows XP/2003)

Folder created by the License Admin tools when license files have been loaded. A copy of the original license is stored here and used by the tool to serve both floating and node-locked licenses.

## **Install ERDAS-Net Licensing - Unix/Linux (supported platforms)**

Follow these instructions to install files to set up and maintain a stand-alone license server that serves ERDAS floating licenses.

### **Root User Required**

To prevent multiple copies of ERDAS-Net Licensing tools from being installed, the license tools must be installed and uninstalled by the root user.

If root privileges are carefully controlled on your system, the sudo utility is an effective way to emulate the root user in order to install ERDAS-Net Licensing. To use sudo to install the tools, add the user account to the sudoers table.

### **Environment Variables**

ERDAS-Net Licensing for UNIX is designed to be a single component shared by all applications on that machine. If you install ERDAS-Net Licensing to the default location, you do not need to change the ERDASNET\_LICENSING\_HOME environment variable.

If you do not install in the default location, define the ERDASNET\_LICENSING\_HOME variable to point to the new location.

The following example shows the environment variable being set to the custom location of `/usr/mydir/erdas/licensing`.

```
ERDASNET_LICENSING_HOME =/usr/mydir/erdas/licensing
```

You must ensure that the variable is defined for any user profile that needs to work with the ERDAS-Net Licensing tools or to operate applications on Unix/Linux platforms that rely upon ERDAS-Net Licensing (via startup, login, service scripts, etc.).

## Launch Installer

The installer name is erdasnet-licensing.bin. Launch it by double-clicking the installer icon or by entering the installer name in a shell window.

```
./erdasnet_licensing.bin
```

## Installation Modes

The installer has multiple installation/uninstallation modes of operation: User Interface (GUI), Console, and Silent mode.

- GUI mode presents installation interactive dialogs and messages. This is the default mode for the installer. To use GUI mode, set the DISPLAY variable and export it for the user launching the installer.
- Console mode is a text-based interface for installation that can be performed in a console or shell window without DISPLAY variable requirements.
- Silent mode allows for the application to be installed without any user interface. Silent installs require a response file (installer.properties) file. A default response file is provided with the installer. Refer to [Silent Installation/ Uninstallation](#) on page 35.

In order to install ERDAS software products in silent mode, you must agree to the terms of the End-User License Agreements (EULAs) that apply to the ERDAS products, and you must be authorized to bind your company or agency to these terms.

To perform a Console or Silent installation, launch the installer with the following options.

```
Console Mode: ./erdasnet_licensing.bin -i console
```

```
Silent Mode:  ./erdasnet_licensing.bin -i silent
```

## Installation

These instructions describe the GUI and Console installation modes.

1. Launch the erdasnet\_licensing.bin file and the Welcome dialog opens.
2. Press **Next** to continue and the ERDAS Software License Agreement dialog opens.
3. Accept the License terms and the Choose Install Folder dialog opens.

4. ERDAS-Net Licensing for UNIX is designed to be a single component that is shared by all applications on that machine. By default, it is expected to operate in `/usr/local`. If you install ERDAS-Net into the default location, no additional configuration is required. However, if you do not install into the default location, you must define the `ERDASNET_LICENSING_HOME` environment variable, so that all applications can find the licensing configuration and shared licensing components. This variable is also necessary to operate the ERDAS-Net Licensing Administration tools.
5. The default installation folder for the ERDAS-Net Licensing tools is `/usr/local`. Click **Choose** or type in the text field, to select an alternate install location. The install appends `"/erdas/licensing"` to the provided installation folder. The Pre- Installation Summary dialog opens.
6. Verify the installation information and click **Install** when the setup is correct. The Installing ERDAS-Net Licensing dialog opens and shows the progress of the install.
7. When the Install Complete dialog opens, click **Done** to close the dialog.

The files and folders in the "licensing" install folder have full read-write-execute permissions enabled. While licensing tasks should be performed by admin level users, this is done to allow any admin user the ability to work with ERDAS-Net Licensing files. One important aspect of ensuring that users other than root can work with the licensing tools, is the creation of the `ERDASNET_LICENSING_HOME` environment variable. See [Environment Variables](#) on page 32.

## Uninstallation

Use the uninstallation script that is copied by the installer to the "licensing" subfolder of the installation. If the default installation folder is accepted during install, the uninstall folder is:

```
/usr/local/erdas/licensing/Uninstall_ERDAS-Net_Licensing
```




---

*You must be logged on as a root user to uninstall ERDAS-Net Licensing.*

- If logged in as root, and the `DISPLAY` variable is set and exported, launch the uninstall in GUI mode by launching the `"Uninstall_ERDAS-Net_Licensing"` executable in the `"Uninstall_ERDAS-Net_Licensing"` folder.
  - The uninstall can be launched in console or silent mode using the `"-i"` installation option.
1. Launch the uninstaller as listed above and the Root User Required dialog opens.

2. If you are not logged on as root user, select **Cancel**. You do not have permissions to uninstall the application.  
If you are logged in as root user, click **OK** and the Uninstall ERDAS-Net Licensing dialog opens and shows the progress of the uninstall.
3. When the uninstall is complete, click **Done**.

## Reinstalling/Upgrading

When you reinstall/upgrade ERDAS-Net Licensing you must uninstall the application and then reinstall your license file. Be sure to locate your license file before you reinstall/upgrade your ERDAS-Net Licensing.

Take care when reinstalling or upgrading ERDAS-Net Licensing since the license service will stop during the reinstall/upgrade. Stopping the license service will stop any active applications and may require some start scripts to be adjusted.

The Existing Installation Detected dialog reminds you to uninstall the previous version if you try to reinstall/upgrade over an existing installation.

## Startup Scripts/Service Setup

ERDAS-Net Licensing automatically creates a service on Microsoft Windows, which restarts the license server every time the machine reboots.

On platforms other than Windows, follow these instructions to make the license server start automatically when your UNIX machine boots.

- For the supported Solaris operating systems (available in ERDAS-Net 2009.02 only), copy the `/usr/local/erdas/licensing/bin/S99erdasnetlicensing` script to the `/etc/rc3.d` folder.
- For supported Linux operating systems, copy the `/usr/local/erdas/licensing/bin/S99erdasnetlicensing` script to the `etc/init.d` folder.
- If you choose the default installation folder during setup (`/usr/local`), the scripts work together to start the ERDAS-Net Licensing server upon reboot.
- If you changed the installation folder during setup, you must edit the `S99erdasnetlicensing` and `erdasnetlm` scripts to reflect the correct installation path.

## Silent Installation/ Uninstallation

Silent installs require a response file which includes answers to questions presented during a GUI or Console driven installation.

- A default response file, named "installer.properties" is included next to the erdasnet\_licensing.bin file in the ERDAS-Net Licensing distribution. You can remove this file and not affect the ability of the install to deliver files.
- If the user has permissions to update or create files in the folder from where it is launched, and no response file exists, the response file is generated automatically by the installer when performing an install. If a response file exists in the folder where the installer was launched, it will be updated with the answers supplied during setup.
- By default, the installer searches for the response file in the same folder as the installer. An alternate location for the response file can be specified: `./erdasnet_licensing.bin -i silent -f <path to properties file>`. You may use a direct or relative path to the properties file.
- When the installer is launched, if the installer.properties file exists next to the installer file, or if its location is specified with the `-f` command line option, the contents of the response file will be used as default answers and will populate installer questions posed in either a GUI or Console mode installation.

For the ERDAS-Net Licensing installer, the response file includes a single property which defines the desired folder location of the install. The default install folder is `"/usr/local"`. You can edit this in the `installer.properties` file prior to installation.

```
USER_INSTALL_DIR=/usr/local
```

## Files and Folders

This section includes important files and directories related to ERDAS-Net Licensing.

```
/var/.com.zerog.registry.xml
```

Stores the version and folder location of the latest install. The installer checks this file to determine if an ERDAS-Net Licensing install exists. The install attempts to direct itself to the previous install's version and folder location stored in this file.

The `.com.zerog.registry.xml` file is written to the `/var` folder when installed by the root user.

If installs and uninstalls are not performed by the root user, the information in the file can become out of sync with the environment, which may cause incomplete installations. You can delete the file and reinstall ERDAS-Net Licensing to restore the installation, but be aware that all InstallAnywhere installations use the registry file. If you delete the file you could adversely effect the installation behavior of other installs.

```
/usr/local/erdas/jre1.6.0_20/
```

The Java Runtime recommended for use with the ERDAS-Net License Admin Tools.

```
/usr/local/erdas/licensing/bin
```

Scripts for starting the license service on reboot for nonWindows platforms. See [Startup Scripts/Service Setup](#) on page 35.

```
/usr/local/erdas/licensing/erdasnet_LICENSE_PATH
```

File created by the License Admin tools to store the license sources entered in the Admin tool. This file verifies to a new install that a current install is present.

```
/usr/local/erdas/licensing/licenses/
```

Folder created by the License Admin tools when license files have been loaded. A copy of the original license is stored here and used by the tool to serve licenses - both floating and node-locked licenses.

```
/usr/local/erdas/licensing/config/mappings
```

File used for translating license file feature codes into standard application feature names.

```
/usr/local/erdas/licensing/licenses/floating-licenses/erdasnet.opt
```

Configuration file deployed with the application to disable license borrowing. For more information on enabling license borrowing please see the online help included with the License Admin tools.

## Remaining Files

Some files created post installation may remain after uninstallation. These files do not affect usability and include the following.

```
/userhome/erdasnet_licensing
```

The License Admin tool generates configuration information in the user's home folder.



```
/usr/local/erdas/licensing/erdasnet_LICENSE_PATH
```

File created by the License Admin tools to store the license sources entered in the Admin tool.

```
/usr/local/erdas/licensing/licenses/
```

Folder created by the License Admin tools when license files have been loaded. A copy of the original license is stored here and used by the tool to serve floating and node-locked licenses.

## Additional Information

### Libgtk

On Red Hat Linux the license admin tools require GTK libraries that may not exist on the system. It may be necessary to locate and install libgtk-x11-2.0.so.0 to operate the admin tools on RedHat Linux platforms.

### iiimx IM Status Windows on Solaris

On versions of Solaris systems, when installing or running the License Admin Tools, one or more small windows may appear under the lower-left corner of the main active window. The small windows have the title "iiimx IM Status" and contain a line like "[Francais/European]" or "[English/European]". When clicking in the small window, a new one appears with title "Cygwin/X X" and contains a list of languages. You cannot remove the window without killing the main one.

Follow these steps to correct the problem.

1. 

```
$ gconftool-2 -s /desktop/gnome/interface/gtk-im-status-style -t string none
```
2. 

```
$ gconftool-2 -s /desktop/gnome/interface/gtk-im-preedit-style -t string none
```
3. 

```
$ gnome-accessibility-keyboard-properties
```
4. Switch the accessibility enhancements on  

```
$ iiim-properties
```
5. Set the iiim window to "none" in the GUI (by unchecking the "Activate the input method" box).

## Security-Enhanced SELinux

You cannot run ERDAS-Net or any licensed ERDAS application if default Security-Enhanced Linux (SELinux) policies are in effect. Licensing includes certain third-party binary code which is not compatible with the stringent requirements of SELinux. Either disable SELinux (see the following section) or relax the policies to allow ERDAS-Net utilities and the licensed ERDAS Applications to run without meeting the requirements for position-independent code.

### Disable SELinux

If the error message “./libjvm.so: cannot restore segment prot after reloc: Permission denied” displays, do the following.

1. `$ su root`
2. `# system-config-securitylevel`
3. In the window that appears, select the SELinux tab
4. Disable SELinux

## Acquire and Enable a Software License

1. Install the ERDAS software from DVD. To use ERDAS-Net Licensing on a machine that does not have other ERDAS products installed, install only ERDAS-Net Licensing from the Install DVD.
2. Determine your unique System ID. From the **Start** menu -> **All Programs** -> **ERDAS** -> **ERDAS-Net Licensing** -> **Show ERDAS-Net System ID**. Copy the ID to use it in the next step.
3. Request a License file from ERDAS using your unique System ID. From the Show ERDAS-Net System ID dialog, click **Request License** to access the ERDAS Product Licensing webpage and submit your unique system ID. ERDAS will e-mail you a zipped file containing the license file.



---

*If you purchased your ERDAS software from a distributor, contact your distributor to request your license file.*

4. Unzip the License file. Note the location of the unzipped license file.

5. Load the license file from ERDAS-Net License Administration dialog select **File -> Load License File**. Now you can manage your licenses from the ERDAS-Net License Administration dialog. See the online help for details.

## Floating Licenses and Firewalls

You may find that a floating license only works for the software on the license server machine itself. By default, Microsoft Windows (and several commercial vendors) provide firewall software which protects your computer system by blocking out requests that come from other machines. Often these firewalls cause legitimate requests for floating software licenses to fail.

Disabling your firewall completely is a good way to confirm if a firewall is preventing other machines from sharing floating licenses. If the firewall is blocking ERDAS-Net licensing requests, the following instructions describe how you can permit ERDAS-Net license requests, without leaving your license server vulnerable.

The ERDAS license server consists of two components; the license broker (lmgrd) and the vendor daemon. The client workstation sends a license request to the license broker, which queries the vendor daemon whether or not there is a valid license. The vendor daemon checks the license validity based on its own algorithm, and then sends the return back to the license broker, which lets license broker communicate with the client.

By default, the license broker uses TCP port 27000. If port 27000 is used by another program, the license broker will use another port available from range 27001-27009. Usually TCP port 27000 is open on most firewalls, but ports 27001-27009 are often blocked.

The vendor daemon also uses one (generally) unpredictable TCP port (e.g., port 1205) to communicate with the license broker, so that both the license broker and the vendor daemon have a distinct TCP port. The TCP port used by the vendor daemon can change every time the license server is restarted, and some firewalls block the ports which the vendor daemon uses.

In order to unblock the communication between the client, license broker, and vendor daemon, add the license broker, the vendor daemon, and their TCP ports to the Windows firewall exceptions list.

The general steps to open a firewall are as follows.

1. Select appropriate ports for use by the license broker and vendor daemon.
2. Configure the ERDAS license file to always use your selected ports.

3. Set up the firewall: add the license broker and the vendor daemon and their ports to the firewall exceptions list.

Refer to the following sections for the specific process for the ERDAS-Net and the FLEXlm license system. Each system includes instructions for Windows XP and the Vista version.

ERDAS version 9.3 and higher (released 10/6/2008) use the FLEXnet-based ERDAS-Net license manager. The FLEXlm instructions are for ERDAS versions 9.2. and earlier which use the FLEXlm-based license manager.

## Select the TCP Port

Select the appropriate TCP port for use by the license broker and vendor daemon.

- The license broker uses TCP port 27000 by default. This is the best choice for any system which uses a single license server.
- The vendor daemon picks the first available port, but the choice may be different every time the license server is restarted.
- One way to find a TCP port available for use is to start the license manager process and examine the license server log file:

For Windows XP:

```
C:\Documents and Settings\All Users\Application  
Data\ERDAS\Shared\licensing\erdasnet.log
```

For Windows Vista Enterprise:

```
C:\Users\All Users\ERDAS\Shared\licensing\  
erdasnet.log
```

This log file shows which ports were assigned at startup. For instance, in the following example log, you can see that the license broker TCP port is 27001, and the vendor daemon TCP port is 1205. (The number 2688 is a process identifier, and is not relevant to this procedure.)

```
16:43:24 (lmgrd) License file(s): C:\Program  
Files\ERDAS\Shared\licensing\licenses\floating-  
licenses\LocalServerLicense.elf  
16:43:24 (lmgrd) lmgrd tcp-port 27001  
16:43:24 (lmgrd) Starting vendor daemons ...  
16:43:24 (lmgrd) Started erdasnet (pid 2688) ...  
11:12:16 (lmgrd) erdasnet using TCP-port 1205
```

## Configure the ERDAS License File

Follow these instructions to configure the ERDAS license file to always use your selected ports

You can control the port number used by the ERDAS-Net license server by editing the first two lines of the floating license file at:

```
[ProgramFiles]\ERDAS\Shared\licensing\licenses\floating-  
license\LocalServerLicense.elf.
```

You may only modify the first two lines of the file. Do not edit the main encrypted body (from the word INCREMENT onward) of the license file or you will invalidate the license. For example:

```
SERVER this_host erdasnet=3ad21234 27001  
VENDOR erdasnet port=1205  
USE_SERVER  
INCREMENT...>
```

Adding 27001 after the “this\_host erdasnet=3ad21234” on the SERVER line ensures that the license broker always uses port 27001. This can be helpful when you are running multiple license servers on the same machine, by ensuring that each software vendor’s license broker gets the same port every time the machine starts up.

Adding port=1205 on the VENDOR line ensures that the vendor daemon always uses port 1205.

## Open the Windows XP Firewall

Follow these instructions to set up the Windows XP firewall by adding the license broker, vendor daemon, and their TCP/IP ports to the exception list.

1. Select **Start -> Control Panel -> Security Center -> Windows Firewall**.
2. Make sure the **Don’t allow exceptions** check box is unchecked.
3. Select **Exceptions -> Add Program...** and the Add a Program dialog opens.
4. Select **Browse** and a file chooser dialog opens.
5. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **Imgrd.exe**, then click **Open**. The Add a Program dialog opens with the “ERDAS” entry selected by default.
6. Click **OK**.
7. Select the **Add Program...** button again and the Add a Program dialog opens.

8. Click **Browse** and a file chooser opens.
9. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **erdasnet.exe**, and click **Open**. The Add a Program dialog opens with the “ERDAS” entry selected by default.
10. Click **OK**.
11. Click **Add Port...** and the Add a Port dialog opens.
12. Enter “Imgrd tcp port” as the name and enter the port number for the Imgrd license broker (e.g., 27001).
13. Click **OK** to close the Add a Port dialog.
14. Click **Add Port...** again. Enter “erdas tcp port” as the name and enter the port number for the vendor daemon (e.g., 1205).
15. Click **OK** to close the Add a Port dialog.
16. Click **OK** to close the Windows Firewall dialog. This makes the license server visible to all clients.

### Open the Windows Vista Firewall

Follow these instructions to set up the Windows Vista firewall by adding the license broker, vendor daemon, and their TCP/IP ports to the exception list.

1. From the Windows Control Panel -> **Security** -> **Windows Firewall** -> **Allow a program through windows firewall**. A new dialog named “windows firewall settings” opens.
2. Select **Exceptions** -> **Add Program...** and the Add a Program dialog opens.
3. Select **Browse** and a file chooser opens.
4. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **Imgrd.exe**, then click **Open**. The Add a Program dialog opens with the ERDAS entry selected by default.
5. Click **OK**.
6. Select **Exceptions** -> **Add Program...** and the Add a Program dialog opens.
7. Click **Browse** and a file chooser opens.
8. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **erdasnet.exe**, then click **Open**. The Add a Program dialog, opens with the “ERDAS” entry selected by default.

9. Click **OK**.
10. Click **Add Port...** and the Add a Port dialog opens.
11. Enter “Imgrd tcp port” as the name and enter the port number for the Imgrd license broker (e.g., 27001).
12. Click **OK** to close the Add a Port dialog.
13. Click **Add Port...** again. Enter “erdas tcp port” as the name and enter the port number for the vendor daemon (e.g., 1205).
14. Click **OK** to close the Add a Port dialog.
15. In the Windows Firewall dialog, click **OK** to close the Windows Firewall dialog. This makes the license server visible to all clients.

### Open the Windows 7 Firewall

Follow these instructions to set up the Windows 7 firewall by adding the license broker, vendor daemon, and their TCP/IP ports to the exception list.

1. From the Windows Control Panel -> **System & Security** -> **Windows Firewall** -> **Allow a program through Windows firewall**. A new dialog named “windows firewall settings” opens.
2. Click **Settings**.
3. Click **Allow another program** and the Add a Program dialog opens.
4. Select **Browse** and a file chooser opens.
5. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **Imgrd.exe**, then click **Open**. The Add a Program dialog opens with the ERDAS entry highlighted.
6. Click **Add**.
7. Select **Exceptions** -> **Add Program...** and the Add a Program dialog opens.
8. Click **Browse** and a file chooser opens.
9. Browse to `[ProgramFiles]\ERDAS\Shared\licensing\bin\ntx86`, highlight **erdasnet.exe**, then click **Open**. The Add a Program dialog opens with the “ERDAS” entry highlighted.
10. Click **Add**.

11. From the Control Panel select **System & Security** -> **Windows Firewall** -> **Advanced Settings** -> **Windows Firewall with Advanced Security** -> **Inbound Rule** -> **New Rule** and the New Inbound Rule Wizard dialog opens.
12. Select **Protocol & Ports** and click the **TCP** and **Specific Local Port** radio buttons.
13. Enter 27002 in the **Specific Local Port** field.
14. Click **Next** -> **Allow the Connection** -> **Next** and the Profile dialog opens.
15. Select the profile(s) that best fits your deployment and click Next.
16. Enter Imgrdtcp port as the Name and click Finish.
17. Repeat for Outbound Rule.
18. Repeat inbound and outbound for the other port.

### **Using Floating Licenses over a VPN or WAN**

If you have difficulty connecting to an ERDAS-Net Licensing Server on a slow or wide-area network specify a fixed port number and/or adjust the time-out value to improve the connection reliability.

#### **Specify a Fixed Port Number**

Using a fixed port number for a license server speeds up all requests made to the license server, since FLEXnet does not have to scan the default port range of 27000 to 27009. Follow the instructions in the previous section, [Configure the ERDAS License File](#) on page 41 to specify a fixed port number for the ERDAS-Net license broker; otherwise the number can vary depending on what other license servers are running on your machine.

Even when the port is in the default range, the connection will be faster if you set the specific port number rather than just increasing the FLEXLM\_TIMEOUT (see below).



## Increase the Time-out Value

If you cannot specify a port number, you can increase the FLEXLM\_TIMEOUT to give each possible port a chance to respond. On Microsoft Windows clients, adjust the FLEXLM\_TIMEOUT variable if you have difficulty connecting to a slow or wide-area network. The default time-out value is 100,000 (measured in microseconds, this is equivalent to one tenth of a second). Adjusting this value to 200,000 or 300,000 improves the likelihood of connecting to a distant license server, but it also increases the time required for the software to fail when the license server is not available, particularly if you have not specified a fixed port number.



---

*When specifying the FLEXLM\_TIMEOUT, include the number of microseconds without any quotes or commas. A value of "500000" corresponds to a half second, which might only be necessary for an extremely slow network.*

# Cluster Computing

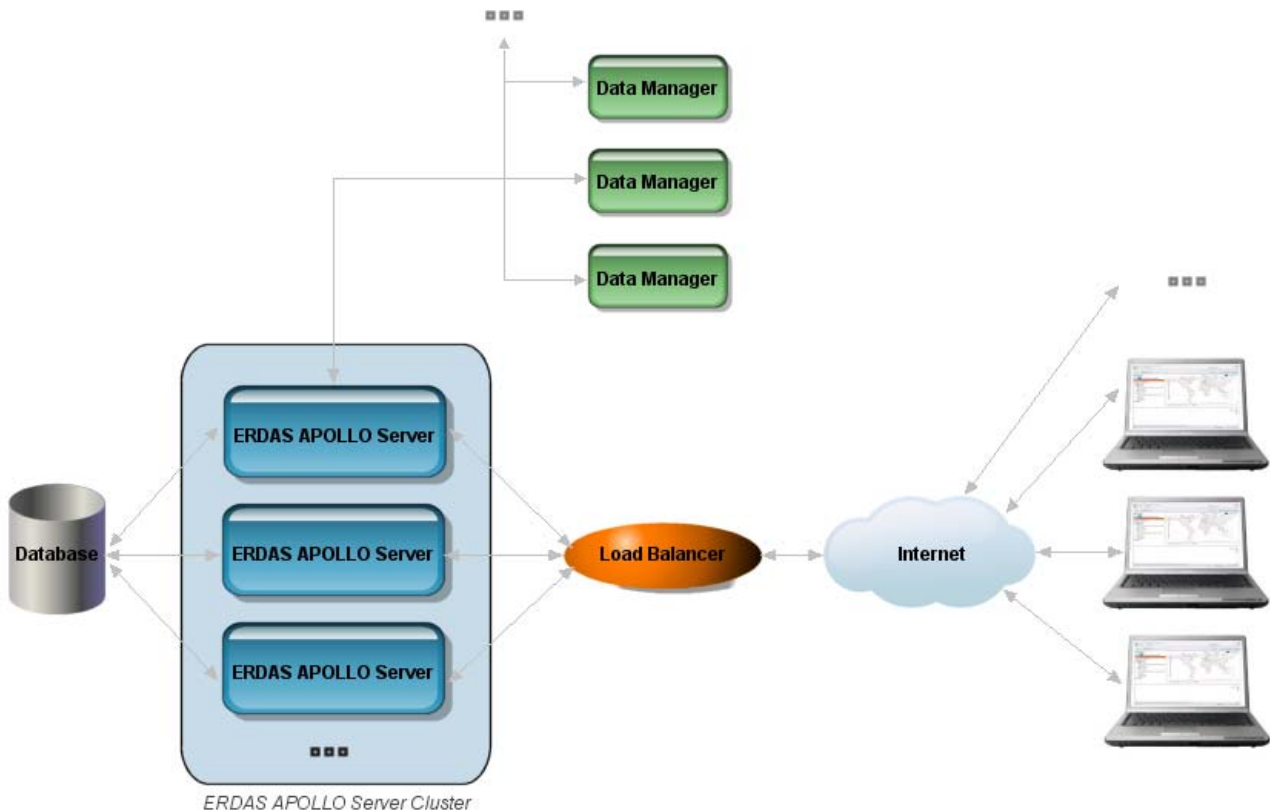
ERDAS APOLLO provides high performance with a large number of users. You can increase the performance using cluster computing. The servers in this cluster share the incoming requests from the Data Manager and the Web Client users so that your system can handle a higher user volume and even larger requests.

A computer cluster consists of linked computers, each serving a specific function and sharing the computational load of processing to improve performance and availability over using a single computer. Cluster computing is highly configurable and depends on your available hardware. This section gives one example of a cluster setup; describing all possible configurations is outside the scope of this document.

Refer to the following diagram for a description for the example computer cluster.

The workhorses of the cluster are the servers, each installed with the Server application. All servers are connected to the same database. You can have an unlimited number of Servers (nodes) in a cluster.

The cluster of Servers interact with the Web Client end users through a load balancer . When an end user begins a session with the Web Client, the load balancer receives the initial request and assigns it to one of the computers (nodes) in the cluster. The load balancer assigns all of the requests the end user makes during that session to that same server, as long as that server is running. If that server fails, the end user is asked to reauthenticate and the load balancer reassigns the requests to another server.



## Setup

Before you install the application server on the servers, designate each computer for a specific function and map all computers to each other. Make the database shared by all the server computers. Decide how many nodes will be in a cluster and which node will server as Load Balancer.

## Servers

Designate any number of computers as servers and install the ERDAS APOLLO server installation on each. The server installation includes the cluster setup and the Web Client and you must know the name and IP address of the load balancer and the server when you install the application server.



Refer to [Server Installation - Windows](#) on page 6 for instructions on installing the application server.

## Startup

After you install the cluster with the server installation, complete two startup tasks.

- Run the batch file `lbsetup` on the Load Balancer node to create the workers file and to configure the node as the load balancer in the cluster. From `<APOLLO_HOME>\tools\loadbalancer type lbsetup.bat`.
- Use MS Windows to start the Apache service on each node.

## Configuration

### Change Multicast Address

After you install the cluster you can change the multicast address manually. Make these changes on every node in the cluster.

1. Navigate to `<APOLLO_HOME>/jboss/server/cluster/deploy/erdas-apollo.ear/erdas-apollo.war/WEB-INF/classes`.
2. Open `ehcache.xml`.
3. Change the address in the string: `multicastGroupAddress`.
4. Save the file.
5. Navigate to `<APOLLO_HOME>/jboss/server/cluster/deploy`.
6. Open `cluster-service.xml`.
7. Change the address in the string: `${jboss.partition.udpGroup}`.
8. Save the file.
9. Restart the nodes.

### Centralized Logging

In a clustered installation, an additional appender is defined in each of the cluster nodes to ensure a unified and centralized logging for the whole cluster. This is done using the `SyslogAppender`, a network appender that sends logging information to any `syslog` daemon on the network.

Using that appender, all JBoss nodes send their log message to a `Syslog` daemon (which must be started and listening on the network). That `Syslog` daemon is able to display in real-time messages coming from every node, and can redirect that centralized log to a single log file.

To be fully functional, the Syslog appender has to be configured within the ERDAS APOLLO logging configuration file. This step is done during the Cluster section of the installation process, when you are asked for the following information.

- **Syslog Daemon Host**
- **Syslog Daemon Port**

The Syslog daemon itself, which will receive all messages sent by the log4j Syslog Appender, is not installed/configured during the Installation process. Syslog daemons are available on almost all servers (there is 'syslogd' on Linux, and there are several free or commercial implementations of Windows syslog daemon as well).



---

*For more information on Logging, see the ERDAS APOLLO Administrator's Guide - Essentials-SDI Edition..*



# ORACLE Considerations

The ORACLE 10g database is one database option to store the ERDAS APOLLO catalog. ORACLE installation and setup requires an ORACLE expert. This section outlines specific ERDAS APOLLO information needed for the setup and installation.

- ERDAS APOLLO supports ORACLE 10g2 and 11g

## Before Installation

Consider these points before you install ORACLE.

- Determine your needs for the quantity and scope of your catalog for a least one year.

## Instance Creation

During Instance Creation remember these points.

- Take care to record the passwords when creating ORACLE internal accounts. This information is not available in the DB Summary.
- If you are installing on a laptop (with one physical disk) you will not improve performance by selecting the D drive as your Database File Location.
- If your system has large, redundant storage choose to Use a Common Location for all Database Files.
- If you are using a computer cluster database use Oracle-managed files.
- If you have a a small-medium catalog, run the database at a minimum of 256 MB total memory.
- Set the Block Size to 8192 bytes.
- For a single-user system, set the PROCESSES to 300. OPEN\_CURSORS to 550, and SESSIONS to 330. For a 50-user system, set the PROCESSES to 1,500. OPEN\_CURSORS to 3,000, and SESSIONS to 1655. For larger systems, increase the values appropriately.
- Shared server mode must have a multiple-CPU server.

## Listener Creation

When you create the Listener, consider the following.

- ERDAS APOLLO uses TCP connections to the Oracle database.

- Do not enable Auto Extend; make temporary table spaces a fixed size.
- Create an Oracle user to be the Owner of the Catalog database objects.



# WebLogic

To use the WebLogic application server for your ERDAS APOLLO Server installation, [install ERDAS APOLLO Server](#) first, but do not deploy it. Then, install, configure, and deploy WebLogic. Finally, deploy ERDAS APOLLO Server on the WebLogic application server.

## Installation

Follow the directions from WebLogic to install the software. Use these notes for customizing the install for ERDAS APOLLO.

- If you are using the latest edition (11g/10.3.3.0) choose the default installation directory of `C:\ORACLE\Middleware`.
- Select **Custom** when the installer asks for the type of installation.
- Select the component WebLogic Server (everything except Server Examples).
- Accept the default directories for product installation.
- Do not install the Node Manager as a Windows Service.
- Accept the default option, **"All Users" Start Menu folder** for the selected WebLogic shortcuts.

## Configuration - Advantage & Professional

The procedure to configure WebLogic application Server to work with ERDAS APOLLO Server (Advantage/Professional) has these basic parts:

- [Create the Domain](#)
- [Create the JDBC Data Sources](#)
- [Configure the Java Message Service \(JMS\)](#)
- [Configure WebLogic Security](#)

### Create the Domain

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **ORACLE > WEBLOGIC > WEBLOGIC SERVER 11gR1 > Tools > Configuration Wizard**.

4. When the configuration wizard opens, it will ask whether you want to create a new domain or extend an existing one. The default option is **Create a new WebLogic Domain**. Leave this option selected and click **Next**.
5. The wizard asks you to select the domain source. The default option is **Generate a domain configured automatically to support the following products** and the **WebLogic Server** is the only product selected. Accept the default selections and click **Next**.
6. Type `apollo_domain` in the **Domain name** box. Do not change the path in the **Domain location** box. Click **Next** when you are finished.
7. The wizard asks you to create a user who will be the domain administrator. Accept the default user name of `weblogic` and set the password to be `weblogic1`. Click **Next** to continue.
8. The next panel asks you to specify the server start mode and JDK to be used for the domain.
  - In the WebLogic Domain Startup Mode section, select **Development Mode** only if you are a developer. All other types of users, including customers, should select **Production Mode**.
  - In the JDK Selection section, select the **Other JDK** option. Click the **Browse** button and navigate to the directory where you installed the Java JDK. If you accepted the default installation location when you installed it, it will be located in  
`<APOLLO_HOME>\tools\jdk\jdk1.6.`

*NOTE: WebLogic will not recognize a JDK path with parentheses.*

9. The next panel asks you if you want to select an optional configuration. If you need to change the WebLogic port number in order to avoid a port conflict on your machine, select Administration Server - Modify Settings. click **Next**.

Type your new port number in the **Listen Port** box. Your network administrator can help you find a new number that is not being used already. After you type in your new port number, click **Next**.

*NOTE: The WebLogic port number can also be changed after the installation process.*

If you want to change the WebLogic port number after installation:

- Open the file directory  
C:\ORACLE\Middleware\user\_projects\domains\apollo\_domain\config\config.xml.
- *If you used the default port number at install time, you will be able to find a block of text in your file that looks similar to the following (the line in blue will only be there if you tried to set the port number to something other than the default value of 7001 when you first installed WebLogic):*

```
<server>
  <name>AdminServer</name>
  <listen-port>1234</listen-port>
  <listen-address></listen-address>
</server>
```

- To change the port number, add the line with the listen-port tags if it is not there already and type the port number you want to use between the tags.

10. The Configuration Summary page opens. Click **Create**.

11. The configuration wizard notifies you when the domain has been created successfully. Click **Done** to close the wizard.

### Start Admin Server for the WebLogic Server Domain

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **ORACLE WebLogic > User Projects > apollo\_domain > Start Admin Server for WebLogic Server Domain**.
4. A command line window will open. If you are installing in Production mode, enter the user name `weblogic` and the password `weblogic1` to log in to the domain.
5. You will know the server has started successfully when the text stops scrolling in the window and you see the notice "Server started in RUNNING mode".



*Do not close the command line window that opened while you were starting WebLogic.*

### Install PostgreSQL Drivers

If you are using a PostgreSQL database, install the PostgreSQL database drivers before you create the JDBC Data Sources.

1. Find the `commEnv.cmd` file inside the folder  
<WEBLOGIC\_HOME>/wlserver\_10.3/common/bin.
2. Right-click on the file and select the **Edit** option in the menu that appears.
3. Find the following line of the `commEnv.cmd` file:

```
if NOT "%PATCH_CLASSPATH%"=="
```

4. *and add the following before this line. Be sure to change <APOLLO\_HOME> to the directory where you installed ERDAS APOLLO Server.*

```
set PATCH_CLASSPATH=<APOLLO_HOME>dist\weblogic\erdas-apollo.ear\erdas-apollo.war\WEB-INF\lib\postgresql-8.3-603.jdbc3.jar
```

5. Save and close the `commEnv.cmd` file.

## Create the JDBC Data Sources

1. Restart WebLogic.
2. Launch the **WebLogic Server Administration Console** by opening your browser and typing  
`http://localhost:7001/console` in the address bar.
3. Enter the user name `weblogic` and the password `weblogic1` to log in to the WebLogic server.
4. Locate the **Services** node in the Domain Structure box on the left of the page and expand it by clicking the plus sign next to it.
5. Find the **JDBC** node inside the Services node, and expand it by clicking the plus sign next to it.
6. Click **Data Sources** under the JDBC node.
7. Click **New**.
8. Type `WL_MQDS` in the **Name** box.
9. Type `WL_MQDS` in the **JNDI Name** box.
10. Select the type of database you will be using for ERDAS APOLLO Server in the **Database Type** list.
11. Click **Next**.

12. Select the database driver to be used in the **Database Driver** list.

If you are using an Oracle database, select

**\*Oracle's Driver (Thin XA) Versions:9.0.1,9.2.0,10**

If you are using PostgreSQL, select

**PostgreSQL's Driver (Type 4) Versions:Any**

If you are using a Microsoft SQL Server database, select

**Microsoft's MS SQL Server Driver (Type 4 XA) Versions 2000, 2005**

*NOTE: If you need to select the PostgreSQL database driver and do not see it in the list, you will need to [install the PostgreSQL database driver](#).*

13. Click **Next**.

14. Read the Transaction Options statement, accept the defaults, and click **Next**.

15. Type the name of the database you are using for ERDAS APOLLO Server in the **Database Name** box.

16. Type the name or the IP address of the server where the database is located in the **Host Name** box.

17. Do not change the port number in the **Port** box.

18. Type the name of the database user to log in to the database in the **Database User Name** box.

19. Type the password for that user in the **Password** box, and again in the **Confirm Password** box.

20. Click **Next**.

21. Click the **Test Configuration** button on the top left corner of the page to make sure you can connect using the information you typed. Click **Next** after you know you can connect with this information.

*NOTE: If you cannot connect, click the Back button and make sure you typed the information correctly. If you typed your information correctly and still cannot connect, speak with your database administrator to make sure you have the correct database type, database name, server name, user name, and password.*

22. Check the **AdminServer** option on the Select Targets page and click **Finish**.

## Configure the Java Message Service (JMS)

There are four steps in the process of configuring the Java Message Service:

- [Create Persistent Stores.](#)
- [Configure a JMS Server](#)
- [Configure a JMS System Module](#)
- [Configure the Resources for the System Module](#)

### Create Persistent Stores

1. Find the configuration file that contains all of the settings for this domain.  
It is named `config.xml` and is located in the directory `C:\ORACLE\Middleware\user_projects\domains\apollo_domain\config`
2. Copy the file and paste it in the same directory so you have a backup copy of the working `config.xml` file.
3. Highlight the original file and right-click it.
4. Select **Open With...** in the menu.
5. In the **Programs** list in the Open With dialog, select **NotePad**.
6. Click **OK**.
7. Select the following block of text that is appropriate for your database platform and copy it. Remember that `<APOLLO_HOME>` represents the complete path of your installed APOLLO product.

#### Oracle

```
<jdbc-store>
  <name>APOLLO-JDBCStore</name>
  <data-source>WL_MQDS</data-source>
  <target>AdminServer</target>
  <deletes-per-batch-maximum>20</deletes-per-batch-maximum>
  <inserts-per-batch-maximum>20</inserts-per-batch-maximum>
  <deletes-per-statement-maximum>20</deletes-per-statement-maximum>
</jdbc-store>
```

## PostgreSQL

```
<jdbc-store>
  <name>APOLLO-JDBCStore</name>
  <create-table-ddl-file>
    <APOLLO_HOME>\dist\weblogic\erdas-apollo.ear\erdas-apollo.war\WEB-
      INF\weblogic-postgres.ddl
  </create-table-ddl-file>
  <data-source>WL_MQDS</data-source>
  <target>AdminServer</target>
</jdbc-store>
```

## Microsoft SQL Server

```
<jdbc-store>
  <name>APOLLO-JDBCStore</name>
  <data-source>WL_MQDS</data-source>
  <target>AdminServer</target>
</jdbc-store>
```

8. Place your cursor at the beginning of the line that contains the following text:

```
<admin-server-name>AdminServer</admin-server-name>
```

Press Enter to move this line down one line.

9. Place your cursor in the blank line before the line

```
<admin-server-name>AdminServer</admin-server-name>
```

and paste the copied text into this location in the `config.xml` file.

10. Save the file and close it.
11. You must stop the WebLogic Admin Server and then restart it so that WebLogic will recognize the change to the file.

### Stop WebLogic:

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **ORACLE > WebLogic > User Projects > apollo\_domain > Stop Admin Server**.

4. A command line window will open. If this is Production mode, enter the user name `weblogic` and the password `weblogic1` to log in to the domain.

#### Restart WebLogic:

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **ORACLE > WebLogic > User Projects > apollo\_domain > Start Admin Server for WebLogic Server Domain**.
4. A command line window will open. If this is Production mode, enter the user name `weblogic` and the password `weblogic1` to log in to the domain.
5. You will know the server has started successfully when the text stops scrolling in the window and you see the notice “Server started in RUNNING mode”.



---

*Do not close the command line window that opened while you were starting WebLogic.*

### Configure a JMS Server

1. Locate the **Messaging** node under the Services node and expand it by clicking the plus sign next to it.
2. Click **JMS Servers** under the Messaging node.
3. Click **New**.
4. Type `APOLLO-JMServer` in the **Name** box.
5. Select **APOLLO-JDBCStore** in the **Persistent Store** list and click **Next**.
6. Select **AdminServer** in the **Target** list. It will be the target on which you will deploy the JMS Server.
7. Click **Finish**.

### Configure a JMS System Module

1. Click **JMS Modules** under the Messaging node.
2. Click **New**.



3. Type `APOLLO-SystemModule` in the **Name** box.
4. Leave the **Descriptor File Name** and **Location in Domain** boxes blank and click **Next**.
5. Select **AdminServer** as the target on which you want to deploy this JMS system module and click **Next**.
6. Check the box next to the question "Would you like to add resources to this JMS module?"
7. Click **Finish**.

### Configure the Resources for the System Module

1. Click **New**.
2. Select **Topic** as the type of resource you want to create and click **Next**.
3. Type `ApolloEventTopic` in the **Name** box.
4. Type `topic/ApolloEventTopic` in the **JNDI Name** box.
5. Do not change the selection in the **Template** list. Click **Next**.
6. Click the **Create a New Subdeployment** button located to the right of the Subdeployment box.
7. Type `ApolloEventTopicSubdeployment` in the **Subdeployment Name** box and click **OK**.
8. **ApolloEventTopicSubdeployment** should now be selected in the **Subdeployments** list box.
9. Select **APOLLO-JMS Server** in the **Targets** list and click **Finish**.
10. Click the **New** button on the **Summary of Resources** tab.
11. Select **Connection Factory** as the type of resource you want to create and click **Next**.
12. Type `APOLLO-TopicConnectionFactory` in the **Name** box.
13. Type `TopicConnectionFactory` in the **JNDI Name** box and click **Next**.
14. Leave the Admin Server checked (default).
15. Click the **Advanced Targeting** button.

## Configure WebLogic Security

16. Select **ApolloEventTopicSubdeployment** in the **Subdeployments** list.

17. The **Targets** list will appear and **APOLLO-JMSServer** will be selected for you. Accept this selection and click **Finish**.

Create one more connection factory, using the name `ConnectionFactory` for the **Name** and the **JNDI Name** fields.

When you install ERDAS APOLLO and use the bundled JBoss application server, the roles and default users (with predefined user names and passwords) are already set up in the system by the installer, and you have the option of changing the default user names and passwords later. Most customers do change the user names and passwords of the default **admin** and **public** users, because it makes their installations much more secure.

If you are using the WebLogic application server, you will need to create roles and users when you set up WebLogic. Set up the users with the user names and passwords that you want to use rather than the default ones. To make this process a little easier, read about how ERDAS APOLLO security works in the “Security” section in the *ERDAS APOLLO Administrator’s Guide: Advantage/Professional Edition*.

### Open the Security Settings

1. In the WebLogic Server Administration Console, find **Security Realms** in the Domain Structure pane on the left of the page and click it.
2. In the grid on the middle of the page, click **myrealm**.

### Create New Groups

1. Click the **Users and Groups** tab.
2. Click the **Groups** tab.
3. Click the **New** button.
4. Type `esp_administrator` in the **Name** box.
5. Type `esp_administrator` in the **Description** box.
6. Leave the option **DefaultAuthenticator** selected in the **Provider** box.
7. Click **OK**.

Create four more groups by following steps 3-7 again, and typing the following names and descriptions in steps 4 and 5.

- esp\_data\_manager
- esp\_data\_analyst
- esp\_consumer
- esp\_anonymous

## Create New Users

The default users for the ERDAS APOLLO system are shown in the following table.

The instructions for this section will use these default user names and passwords; however, you should substitute your own user names and passwords for the admin and public users in order to make your installation more secure.

**Table 1: Default User Names and Passwords in ERDAS APOLLO**

User Name	Password
admin	apollo123
dm	apollo123
da	apollo123
consumer	apollo123
public	public123

If you use a different user name or password for the admin or public accounts, then you need to open the `global-server.properties` file and change some things in there as well. You can change the `global-server.properties` file either before or after you set the user accounts up in WebLogic.

To create the users:

1. Click the **Users** tab.
2. Click the **New** button.
3. Type `admin` in the **Name** box.
4. Type `admin` in the **Description** box.
5. Leave the option **DefaultAuthenticator** selected in the **Provider** box.

6. Type `apollo123` in the **Password** box, and again in the **Confirm Password** box. You must use `apollo123` as the password for this user.
7. Click **OK**.

Create three more users by following 2-7 again, and typing the following as the names and descriptions in 3 and 4. Your passwords must be at least 8 characters.

- `dm`
- `da`
- `consumer`

Create one more users by following 2-7 again, and typing `public` for the name and description in steps 3 and 4, and typing `public123` as the password for this user.

To edit the security settings in the `global-server.properties` file:

1. Navigate to the `global-server.properties` file and open it.

If you are using a WebLogic application server, you will be able to find it in the following location:

```
<APOLLO_HOME>\config\erdas-apollo
```

2. If you changed the **admin** user name or password, find the properties shown in the figure below. Change the values of those properties so that they match with the Admin user you created.

```
# set it to true to enable password encryption in the system
#password.encryption.enabled=true

# Crawler Credentials
com.lggi.esp.crawlers.login.userid=admin
com.lggi.esp.crawlers.login.password=apollo123
#encrypted password for 'sample'
#com.lggi.esp.crawlers.login.password=V/k60b1615I=

# to provide anonymous access..
anonymous.access.enabled=true
# Anonymous user credentials
anonymous.login.userid=public
anonymous.login.password=public123
```

3. If you changed the **public** user name or password, find the properties shown in the figure below. Change the values of those properties so that they match with the public user you created.

```
# set it to true to enable password encryption in the system
#password.encryption.enabled=true

# Crawler Credentials
com.lggi.esp.crawlers.login.userid=admin
com.lggi.esp.crawlers.login.password=apollo123
#encrypted password for 'sample'
#com.lggi.esp.crawlers.login.password=V/k60b1615I=

# to provide anonymous access..
anonymous.access.enabled=true
# Anonymous user credentials
anonymous.login.userid=public
anonymous.login.password=public123

#encrypted password for 'sample'
#anonymous.login.password=V/k60b1615I=
```

4. Save and close the `global-server.properties` file.

### Specify Group Membership for Users

1. Click **admin** in the **Users** table.
2. Click the **Groups** tab.
3. Find **esp\_administrator** in the **Available** list in the **Parent Groups** section and highlight it.
4. Click the right-pointing arrow to move **esp\_administrator** from the **Available Parent Groups** list to the **Chosen Parent Groups** list.
5. Find **esp\_consumer** in the **Available** list in the **Parent Groups** section and highlight it.
6. Click the right-pointing arrow to move **esp\_consumer** from the **Available Parent Groups** list to the **Chosen Parent Groups** list.
7. Click **Save**.
8. At the top of the page, there is a breadcrumb trail that tells you what you clicked in order to arrive at the page you are on. Click **Users and Groups** in the breadcrumb trail.
9. Specify group memberships for the rest of the users you created in the domain by following steps 1-6 again and using the following user name and available parent group names in steps 1 and 3.
  - User *dm* belongs to the parent groups *esp\_data\_manager* and *esp\_consumer*.

- User *da* belongs to the parent groups *esp\_data\_analyst* and *esp\_consumer*.
- User *consumer* belongs to the parent group *esp\_consumer*.
- User *public* belongs to the parent group *esp\_anonymous*.

### Create Roles and Specify Role Membership for Groups and Users

1. Find **Security Realms** in the Domain Structure pane on the left of the page and click it.
2. In the grid on the middle of the page, click **myrealm**.
3. Click the **Roles and Policies** tab.
4. In the Roles table on the Realm Roles sub tab, expand the **Global Roles** node by clicking the plus sign next to it.
5. Click the word **Roles** in the Global Roles node.
6. Click **New**.
7. Type `esp_administrator` in the **Name** box.
8. Leave the option **XACMLRoleMapper** selected in the **Provider** box.
9. Click **OK**.
10. Click **esp\_administrator** in the Global Roles grid.
11. Click the **Add Conditions** button located in the Role Conditions section.
12. Select **Group** in **Predicate List** and click **Next**.
13. Type `esp_administrator` in the **Group Argument Name** box and click **Add**.
14. Click **Finish**.
15. Click the **Add Conditions** button located in the Role Conditions section.
16. Select **User** in **Predicate List** and click **Next**.
17. Type `admin` in the **User Argument Name** box and click **Add**.
18. Click **Finish**.

19. In the dropdown box between the User and Group labels, select **And**.
20. Click **Save**.
21. Click **Global Roles** in the breadcrumb trail at the top of the page.
22. Specify the rest of the role memberships by following steps 6-21 again and using the following roles in steps 7 and 10, groups in step 13, and users in step 17.
  - The role *esp\_data\_manager* has the *esp\_data\_manager* group and *dm* user as its members.
  - The role *esp\_data\_analyst* has the *esp\_data\_analyst* group and *da* user as its members.

Now, specify the role memberships for the *esp\_consumer* group. There are more members in this role, so there are a few extra steps you will need to follow.

1. Click **New**.
2. Type *esp\_consumer* in the **Name** box.
3. Leave the option **XACMLRoleMapper** selected in the **Provider** box.
4. Click **OK**.
5. Click **esp\_consumer** in the Global Roles grid.
6. Click the **Add Conditions** button located in the role conditions section.
7. Select **Group** in **Predicate List** and click **Next**.
8. Type *esp\_consumer* in the **Group Argument Name** box and click **Add**.
9. Click **Finish**.
10. Click the **Add Conditions** button located in the Role Conditions section.
11. Select **User** in **Predicate List** and click **Next**.
12. Type *admin* in the **User Argument Name** box and click **Add**.
13. Type *dm* in the **User Argument Name** box and click **Add**.
14. Type *da* in the **User Argument Name** box and click **Add**.

15. Type `consumer` in the **User Argument Name** box and click **Add**.
16. Click **Finish**.
17. In the dropdown box between the User and Group labels, select **And**.

After you have finished creating the roles and specifying their conditions, the WebLogic application server is configured to work with ERDAS APOLLO Server (Advanced/Professional).

## Configuration - Essentials-SDI

Configuring WebLogic for ERDAS APOLLO Server (Essentials-SDI) consists of the following basic steps:

- Create a new WebLogic domain in the WebLogic configuration wizard tool.
- Change the default memory settings.
- Configure the security.

To open the WebLogic Configuration Wizard:

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **ORACLE > WebLogic > Tools > Configuration Wizard**.

## Create the Domain

1. Choose **Create a new WebLogic domain** and click **Next**.
2. Choose **Generate a domain configured automatically to support the following products** and click **Next**.

*NOTE: It is not necessary to activate WebLogic Workshop.*

3. Specify a password for the WebLogic administrator user.
4. In the next step, you are asked to specify a domain startup mode and the folder where the JDK is installed. Choose the domain startup mode that best fits your need and make sure to choose the SUN JDK 1.6 version.



5. The next step asks you to customize options for the domain. If you are satisfied with the default options, leave the default option of No selected and click **Next**.

If you need to change the WebLogic port number to avoid conflicts with another application, then select Yes and click Next.

If you select **Yes** because you need to change the WebLogic port number, the wizard will show you four more panels.

The first of these additional panels will appear after you click Next. In this screen, you should type your new port number in the **Listen Port** box. Your network administrator can help you find a new number that is not being used already. After you type in your new port number, click **Next**.

The second additional panel shows each instance of WebLogic that you have installed on this computer already. The instance of WebLogic that you are currently installing will not appear in this screen. You can click **Next** to advance past this panel.

The third additional panel shows information about configuring machines. Click **Next** to advance past this panel.

The final additional panel shows some review information. Click **Next** to advance past this panel and continue with the next numbered step in this guide.

*NOTE: The WebLogic port number can also be changed after the installation process.*

If you want to change the WebLogic port number after installation:

- Open the directory  
C:\ORACLE\Middleware\user\_projects\domains\apollo\_domain\config
- Copy the `config.xml` file and paste it in the same directory so you have a backup copy of the working `config.xml` file.
- Highlight the original file and right-click it.
- Select **Open With...** in the menu.
- In the **Programs** list in the Open With dialog, select **NotePad**.
- Click **OK**.

- If you used the default port number at install time, you will be able to find a block of text in your file that looks similar to the following (the line in blue will only be there if you tried to set the port number to something other than the default value of 7001 when you first installed WebLogic):

```
<server>
  <name>AdminServer</name>
  <listen-port>1234</listen-port>
  <listen-address></listen-address>
</server>
```

- To change the port number, add the line with the listen-port tags if it is not there already and type the port number you want to use between the tags.
  - Save this file and close it.
6. The final panel asks you to specify the name and location for the domain. Click Create when you are finished.
  7. The configuration wizard notifies you when the domain has been created successfully. Click **Done** to close the wizard.

## Configure Security

1. The role *esp\_administrator* needs to be assigned to the users that need to use the ERDAS APOLLO Data Manager to interact with an ERDAS APOLLO Server. On WebLogic, go first to the admin console (<http://<hostname>:<portnumber>/console>) and connect using the WebLogic administrator user that was created with the domain).
  2. Then, create a user by following these steps:
    - In the domain structure tab on the left, choose **Security Realms**.
    - Choose the realm that was used to initialize the security (*myrealm* by default).
    - Choose the **Users and Groups** tab.
    - Click on the **New** button and specify the information of the user you want to create. Click on the **OK** button.
  3. Once the user has been created, the next step is to register the *esp\_administrator* role and to assign it to the user:
    - In the domain structure tab on the left, choose **Security Realms**.

- Choose the realm that was used to initialize the security (*myrealm* by default).
  - Choose the **Roles and Policies** tab.
  - Expand the **Global Roles** node and click on **Roles**.
  - Click on the **New** button and specify *esp\_administrator* as the role name. Click on the **OK** button.
  - Click on the *esp\_administrator* role.
  - On the role **Roles conditions** row, click on the **Add conditions** button
  - In the predicates list, choose **User** then click on the **Next** button.
  - In the **User Argument Name** field, specify the name of the user that was created, then click on the **Add** button.
  - Once this is done, click on the **Finish** button.
  - Click on the **Save** button to apply your changes.
4. At this point, ERDAS APOLLO Server is ready to be deployed. The deployment instructions can be found in the ERDAS APOLLO Server installation section.

## Deployment

After you install and configure WebLogic, following these instructions to deploy ERDAS APOLLO Server (Advantage/Professional) on WebLogic.

### Set Environment Variable

Follow these instructions to place a line in the startup script of the application server that creates an environment variable called **IMAGINE\_HOME\_PATH** with the value **SET**.

1. Open the folder  
C:\oracle\middleware\user\_projects\domains\apollo\_domain\bin
2. Right-click the file `startWebLogic.cmd` and select **Edit** in the menu.
3. Find the line that says

```
for %%i in ("%DOMAIN_HOME%") do set DOMAIN_HOME=%%~fsi
```

4. Just above that line, add the following new line:

```
set LOG4J_CONFIG_FILE=<APOLLO_HOME>\dist\weblogic\log4jConfig.xml
```

Be sure to change <APOLLO\_HOME> to the full path of the directory where you installed ERDAS APOLLO Server. Also note that the command is on different lines here, but should be on a single line in your file.

5. Just after the line you just added, but before the line

```
for %%i in ("%DOMAIN_HOME%") do set DOMAIN_HOME=%%~fsi
```

add the line

```
set JAVA_OPTIONS=%JAVA_OPTIONS%-Djava.security.auth.login.config  
=<APOLLO_HOME>\dist\weblogic\auth.conf
```

Be sure to change <APOLLO\_HOME> to the full path of the directory where you installed ERDAS APOLLO Server. Also note that the command is on different lines here, but should be on a single line in your file.

6. Save the file and close it.

## Increase Memory Settings

Increase the memory settings for WebLogic and set the startup script for FME.

1. Access the file:

```
<WebLogic_HOME>\user_projects\domains\apollo_domain\bin\setDomainEnv.cmd
```

2. Find the line:

```
set MEM_PERM_SIZE_32BIT=-XX:PermSize=48m
```

3. Change the PermSize to 96.

```
set MEM_PERM_SIZE_32BIT=-XX:PermSize=96m
```

4. Find the line:

```
set MEM_MAX_PERM_SIZE_32BIT=-XX:MaxPermSize=128m
```

5. Change the MaxPermSize to 256.

```
set MEM_MAX_PERM_SIZE_32BIT=-XX:MaxPermSize=256m
```

## 6. Find the following

```
if "%JAVA_VENDOR%"=="Sun"
    set WLS_MEM_ARGS_64BIT=-Xms256m -Xmx512m
    set WLS_MEM_ARGS_32BIT=-Xms256m -Xmx512m
else
    set WLS_MEM_ARGS_64BIT=-Xms512m -Xmx512m
    set WLS_MEM_ARGS_32BIT=-Xms512m -Xmx512m
```

## 7. Increase the Xms values as shown.

```
if "%JAVA_VENDOR%"=="Sun"
    set WLS_MEM_ARGS_64BIT=-Xms1024m -Xmx4096m
    set WLS_MEM_ARGS_32BIT=-Xms512m -Xmx1024m
else
    set WLS_MEM_ARGS_64BIT=-Xms1024m -Xmx4096m
    set WLS_MEM_ARGS_32BIT=-Xms512m -Xmx1024m
```

## 8. Add the following lines to the end of the file:

```
@REM Set APOLLO FIO
set PATH=<APOLLO_HOME>\tools\native\fmw;%PATH%
set IMAGINE_HOME_PATH=SET
```

## Bundled JDK

Follow these instructions to use ERDAS APOLLO's bundled JDK with WebLogic.

1. Open the file named `setDomainEnv.cmd` under `<Your DOMAINS folder>/<your domain name>/bin`
2. Look for the command: `set SUN_JAVA_HOME= whatever ..`
3. Add a Comment line as follows.

```
@REM set SUN_JAVA_HOME=C:\Oracle\Middleware\jdk160_18
```

4. After the comment line, add the following.

```
set SUN_JAVA_HOME=<APOLLO_HOME>\tools\jdk
```

5. Look for the following paragraph.

```
if "%JAVA_VENDOR%"=="Oracle"
    set JAVA_HOME=%BEA_JAVA_HOME%
else (
    if "%JAVA_VENDOR%"=="Sun"
        set JAVA_HOME=%SUN_JAVA_HOME%
    else
        set JAVA_VENDOR=Sun
        set JAVA_HOME=C:\Oracle\Middleware\jdk160_18
```

6. Look for the following line in the paragraph.

```
set JAVA_HOME=C:\Oracle\Middleware\jdk160_18
```

7. Comment it out as follows.

```
@REM set JAVA_HOME=C:\Oracle\Middleware\jdk160_18
```

8. Add the following line below the commented-out line.

```
set JAVA_HOME=<APOLLO_HOME>\tools\jdk
```

## Restart WebLogic

After you edit the `startWebLogic.cmd` file, restart WebLogic.

1. Click the **Windows Start** button.
2. Click **All Programs**.
3. Select **Oracle > WebLogic > User Projects > apollo\_domain > Start Admin Server for WebLogic Server Domain**.
4. A command line window will open. Enter the user name `weblogic` and the password `weblogic1` to log in to the domain.
5. You will know the server has started successfully when the text stops scrolling in the window and you see the notice "Server started in RUNNING mode".



*Do not close the command line window that opened while you were starting WebLogic.*

## Open Administration Console

1. Launch the WebLogic Server Administration Console by opening your browser and typing `http://localhost:7001/console` in the address bar.
2. Click **Deployments** in the Domain Structure box on the left of the page.

3. Click **Install**.
4. Navigate to the <APOLLO\_HOME>\dist\weblogic folder and click the radio button next to **erdas-apollo.ear** in the list of files in that folder.
5. Click **Next**.
6. The next step asks you to choose the targeting style and has the default option as **Install this deployment as an application**. Accept this option and click **Next**.
7. On the Optional Settings page, find the **Security** section and select the option that says, "**Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.**"
8. Click **Finish**.
9. Check the box to the left of **erdas-apollo.ear** in the Deployments table.
10. Click the **Start** button. A menu will appear below the button. Select **Servicing all requests** in the menu.
11. Click **Yes** to continue starting the deployment.
12. Click startRunning in the **State** field for the *erdas-apollo.ear* entry in the Deployments table. It will change to Active. *Erdas-apollo.ear* appears in the Deployments table.





# ERDAS APOLLO Feature Interoperability

ERDAS APOLLO Feature Interoperability is an add-on module included with the ERDAS APOLLO installation that lets you create a vector service provider (which includes WFS and WMS interfaces) that is attached to data in the V7 DGN and V8 DGN data formats.

ERDAS Feature Interoperability includes the FME Universal Viewer and FME Workbench. FME Universal Viewer lets you view ERDAS APOLLO data in any of the formats supported by FME. FME Workbench allows you to translate ERDAS APOLLO data.

ERDAS APOLLO Feature Interoperability, is compatible with ERDAS APOLLO version 10.1 or higher and Windows operating system.

ERDAS APOLLO Feature Interoperability requires a license separate from ERDAS APOLLO.



---

*Refer to the ERDAS-Net Licensing chapter for more information.*

*If you need additional assistance with licensing, e-mail [teamlicensing@erdas.com](mailto:teamlicensing@erdas.com)*

Launch both applications from the MS Start menu under the ERDAS APOLLO category.

Safe Software, the makers of the FME Workbench, provides online documentation for the application.



# Troubleshooting Your Installation

The ERDAS APOLLO system is designed to work with certain commonly used operating systems, third-party software packages, and network configurations and it is tested rigorously to make sure that its standard configuration options allow it to work well with them. It is also designed to be flexible enough so that it can work with many others that are not so commonly used.

However, due to the variety of ways in which you can configure an operating system or network, and the many other applications you can run alongside ERDAS APOLLO, there are occasions when you may need to make some slight changes to something on your computer system in order for everything to work well together.

## I just tried to connect my ERDAS APOLLO Data Manager to my ERDAS APOLLO Server for the first time.

There are a few different things that can cause this to appear.

First, check to make sure that you have installed the ERDAS-Net License Server and that you have it configured with valid licenses. There is a guide for that product that explains how to install and use it. If you have installed it correctly and are using it correctly, you should then check to make sure you have supplied all of the proper licenses.

If you are still having the problem after you have made sure the license server is running and has the correct licenses, you need to examine the application server.

If you are using JBoss, the ERDAS APOLLO installer placed it on your system, but you will need to start the application server.

To start your JBoss application server:

1. Open the **Control Panel**.
2. Select **Administrative Tools > Services**
3. Find **ERDAS APOLLO Apache Web Server** in the grid, right-click it, and select **Start** in the menu.

If you do not see JBoss in the list of services, you need to install JBoss as a Windows Service and then start it.

To install ERDAS APOLLO Server as a Windows service and start the service:

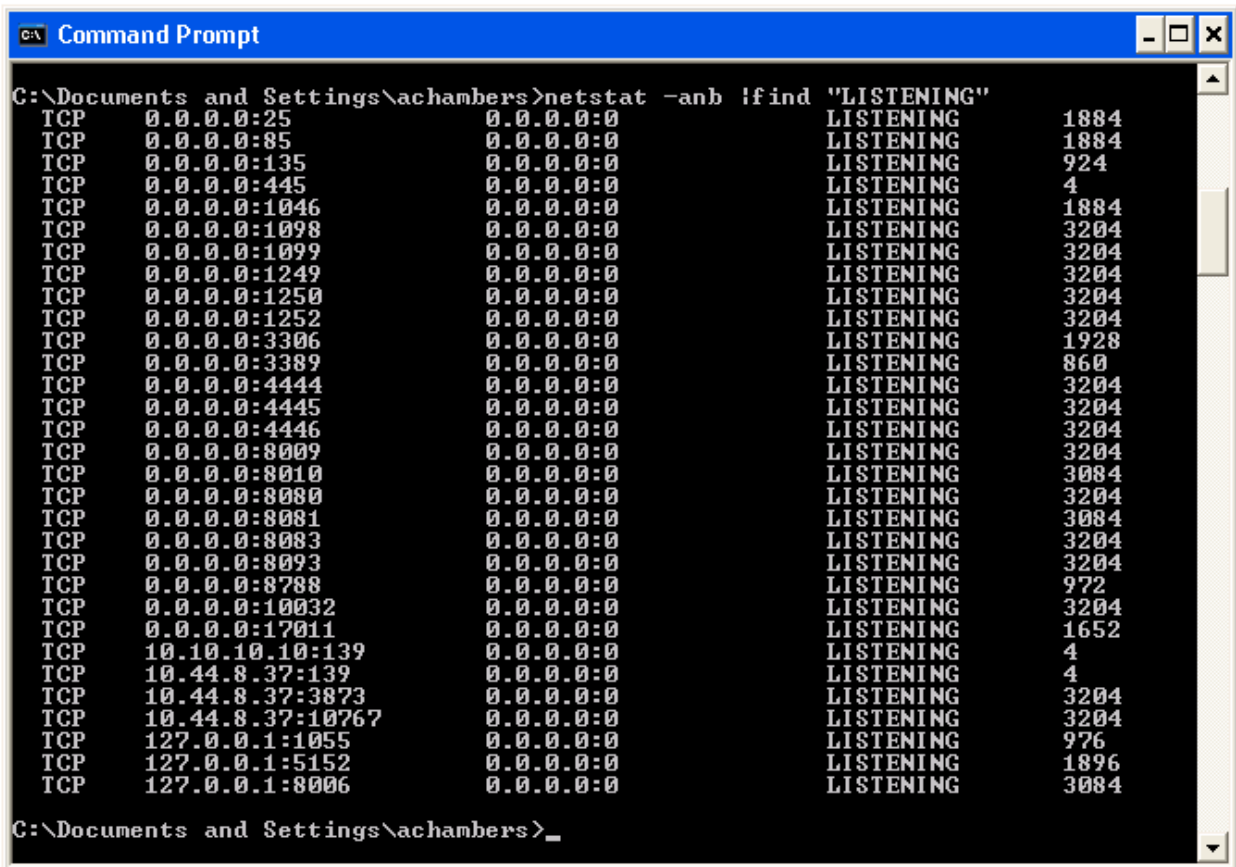
1. Open a command line window.
2. Navigate to the `<APOLLO_HOME>/tools/scripts/` directory.
3. At the prompt, type `uninstall_service.bat` and press Enter.
4. After that command finishes, type `install_service.bat` at the prompt.
5. Start the ERDAS APOLLO Apache Web Server service in the Windows Services dialog.

If you are still having the issue, then Windows may have allowed another application to use port number 1099, which is the one that JBoss needs.

**To see if another application is using JBoss' port 1099:**

1. Open a command line window.
2. At the prompt, type `netstat -anb | find "LISTENING"` and press Enter.  
You may not see anything right away, because it often takes a little while for the computer to complete this task.

When it finishes, it will look similar to what you see in the following figure.



```
C:\Documents and Settings\achambers>netstat -anb | find "LISTENING"
TCP        0.0.0.0:25           0.0.0.0:*        LISTENING     1884
TCP        0.0.0.0:85          0.0.0.0:*        LISTENING     1884
TCP        0.0.0.0:135        0.0.0.0:*        LISTENING     924
TCP        0.0.0.0:445        0.0.0.0:*        LISTENING      4
TCP        0.0.0.0:1046       0.0.0.0:*        LISTENING     1884
TCP        0.0.0.0:1098       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:1099       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:1249       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:1250       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:1252       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:3306       0.0.0.0:*        LISTENING     1928
TCP        0.0.0.0:3389       0.0.0.0:*        LISTENING     860
TCP        0.0.0.0:4444       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:4445       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:4446       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:8009       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:8010       0.0.0.0:*        LISTENING     3084
TCP        0.0.0.0:8080       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:8081       0.0.0.0:*        LISTENING     3084
TCP        0.0.0.0:8083       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:8093       0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:8788       0.0.0.0:*        LISTENING     972
TCP        0.0.0.0:10032      0.0.0.0:*        LISTENING     3204
TCP        0.0.0.0:17011      0.0.0.0:*        LISTENING     1652
TCP        10.10.10.10:139    0.0.0.0:*        LISTENING      4
TCP        10.44.8.37:139    0.0.0.0:*        LISTENING      4
TCP        10.44.8.37:3873   0.0.0.0:*        LISTENING     3204
TCP        10.44.8.37:10767  0.0.0.0:*        LISTENING     3204
TCP        127.0.0.1:1055    0.0.0.0:*        LISTENING     976
TCP        127.0.0.1:5152    0.0.0.0:*        LISTENING     1896
TCP        127.0.0.1:8006    0.0.0.0:*        LISTENING     3084

C:\Documents and Settings\achambers>
```

3. In the second column from the left, find the entry that has 1099 at the end of it.

*NOTE: in the figure above, the entry is in the seventh row and looks like 0.0.0.0:1099.*

Locate the corresponding process ID in the last column of that row.

*NOTE: In the figure above, it is 3204.*

4. In the second column from the left, find the entry that has your ERDAS APOLLO Server port number at the end of it. Usually, the port number is 8080.

*NOTE: in the figure above, entry is in the eighteenth row and looks like 0.0.0.0:8080.*

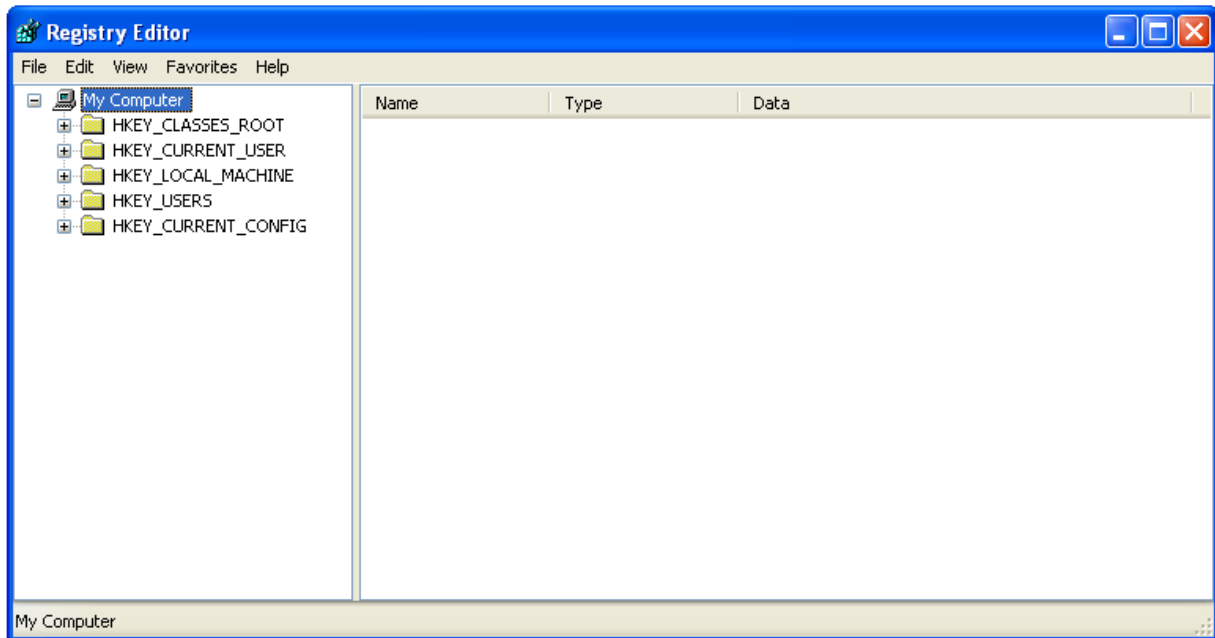
Locate the corresponding process ID in the last column of that row.

*NOTE: In the figure above, it is 3204.*

The process ID numbers that you found in steps 3 and 4 should be the same. If they are not, then you need to set 1099 as a reserved port in your Windows registry so that it will not allow other applications to use it.

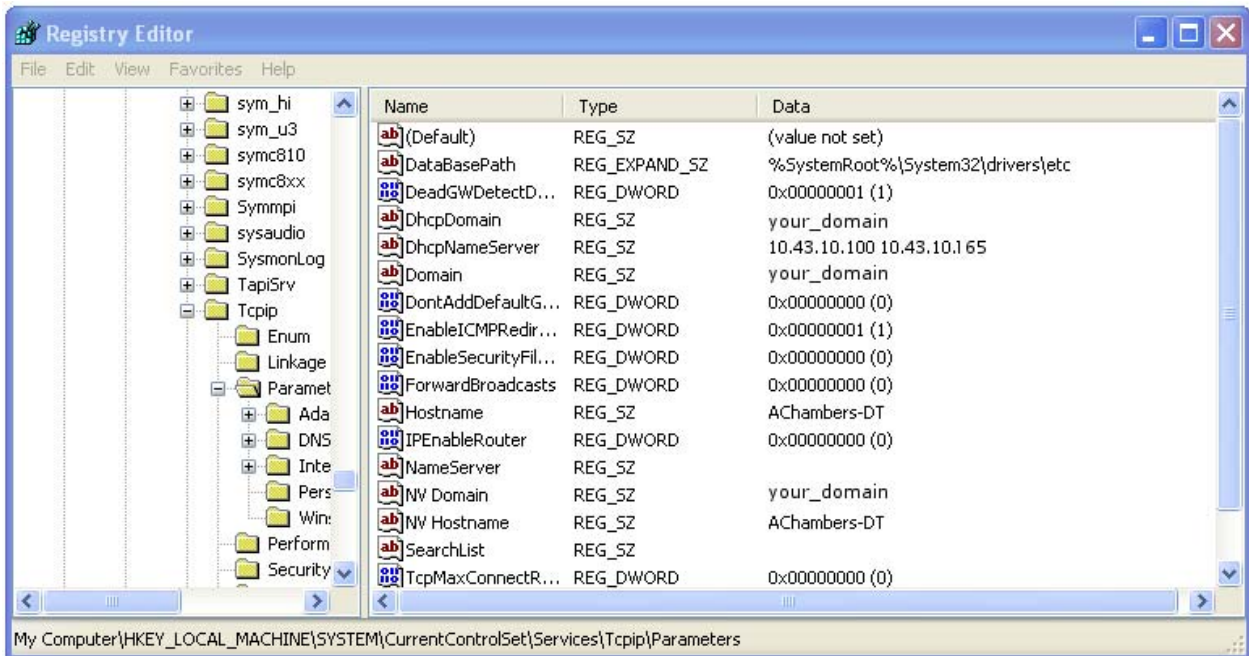
To set 1099 as a reserved port in Microsoft Windows:

1. Open the Windows Registry editor.
  - a. Click the **Windows Start** button
  - b. Click **Run...** in the Start menu.
  - c. Type `regedt32` in the box that appears.
  - d. Click **OK** on the box.  
The Registry Editor opens.



2. In the panel on the left side of the Registry Editor, you need to open `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters`. To do this:
  - a. Open the **HKEY\_LOCAL\_MACHINE** node by clicking the plus sign next to it.
  - b. Open the **System** node by clicking the plus sign next to it.
  - c. Open the **CurrentControlSet** node by clicking the plus sign next to it.
  - d. Open the **Services** node by clicking the plus sign next to it.

- e. Open the **Tcpip** node by clicking the plus sign next to it.
- f. Click on the word **Parameters** inside the Tcpip node. Your Registry Editor should look similar to the figure below. Notice the path in the status bar.



3. Select **Edit > New > Multi-String Value** in the main Registry Editor menu. A value named **New Value #1** appears at the bottom of the panel on the right side of the Registry Editor.
4. Right-click the New Value #1 entry and select **Rename** on the menu that appears.
5. Type `ReservedPorts` and press Enter on the keyboard.
6. Double-click the **ReservedPorts** value. The Edit Multi-String dialog box opens.
7. Type 1099-1099 in the **Value data** box and click **OK**.
8. Exit the Registry Editor.
9. Reboot the computer.

Microsoft Windows will now keep the 1099 port available so that JBoss will be free to use that port when it needs it.

If you are still having the problem after you have checked the ERDAS-Net License Server, make sure that the JBoss application server is started, and set 1099 as a reserved port, please contact ERDAS. Your technical support representative will be happy to provide you with further assistance.

**When I try to use the Data Manager to crawl National Imagery Transmission Format (NITF) data so that I can add it to my catalog, the crawling job fails.**

It's possible that one or more of the NITF datasets that you are trying to crawl doesn't conform completely to the official NITF standard, and is considered invalid.

To make sure that your data is fully compliant with the official NITF standard, you can use the CIVA tool, which is available from the Joint Interoperability Test Command's NITFS Compliance Test Facility. Information about the CIVA tool and how to get it can be found at <http://www.gwg.nga.mil/ntb/baseline/software/jitctest.html>.



# Glossary

The glossary terms defined in this guide are those used in all ERDAS APOLLO guides.

## A

### Ant

Apache Ant is a Java-based build tool from the [Jakarta Project](#).

### Applet

A component that typically executes in a web browser, but can also be executed in a variety of other applications or devices that support the applet application model.

### Area

Area is defined by a two dimensional (area) feature represented by a line that closes on itself to form a boundary.

## B

### Bounding Box

A bounding box is defined as the extent of the geographic area that you wish to display by using coordinate values of the chosen Spatial Reference System.

## C

### Connector

A class of connection to a specific type of data source.

### Coordinate

One of a sequence of N numbers designating the position of a point in N-dimensional space. In a coordinate reference system, the coordinate numbers must be qualified by units.

### Coordinate System

Set of rules for specifying how coordinates are to be assigned to points. One coordinate system may be used in many coordinate reference systems.

## **Coordinate Transformation**

Computational process of converting a position given in one coordinate reference system into the corresponding position in another coordinate reference system.

## **D**

### **Dimension**

A OGC-WMS 1.1.1 mechanism that allows the application of a Filter in a GetMap request.

## **E**

### **Elevation**

In the context of the OGC-WMS 1.1.1 interfaces, Elevation is a parameter that can be given in a GetMap request. It represents a given type of Dimension, a concept also explained in that specification.

### **Ellipsoidal**

An ellipsoidal surface is a geometric surface, all of whose plane sections are either ellipses or circles.

### **EPSG**

EPSG is defined as a type of geographic projection. The EPSG namespace makes use of the European Petroleum Survey Group tables, which define numeric identifiers (the EPSG "SRS code," corresponding to the field "COORD\_REF\_SYS\_CODE" in the EPSG database) for many common projections and which associate projection or coordinate metadata (such as measurement units or central meridian) for each identifier.

## **F**

### **Feature (geographic)**

Features are "abstractions of a real world phenomenon; it is a geographic feature if it is associated with a location relative to the Earth."

### **Feature Types**

The number and kind of properties a feature has describes its feature type.

## **Feature Mapping**

The mapping is the configuration that describes the link between the FeatureType definition and the objects returned by the underlying engine. The mapping document associated with a WFS service presents the necessary information for the WFS to convert client requests to queries understood by the data server. It also converts the result into a compliant collection of features. So, it makes the link between the internal data structure and the published information.

## **Feature Schema**

The XML Schema associated with a WFS service gives the GML Schema (structure) needed by the WFS to expose its feature types. The schema is the type descriptions structure for each feature type and for each property of those feature types.

# **G**

## **Get**

A GET request is an HTTP request for exchanging information with a server.

## **Geographic Information**

Geographic Information is data that is referenced to locations on the earth's surface, such as digital maps and sample locations.

## **Geographic Information System**

A Geographic Information System is an organized collection of computer hardware, software, geographic data, and personal information designed to efficiently capture, store, update, manipulate, analyze & display all forms of geographically referenced info.

## **GML**

GML is an open, non-proprietary language used to create geo-spatial objects for the purpose of data sharing. GML also serves as a data transport for geo-spatial objects as well as exists as a means for describing geo-spatial Web services.

## I

### ISO

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 140 countries, one from each country. ISO is a non-governmental organization established in 1947. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. ISO's work results in international agreements which are published as International Standards.

### Interoperability

Interoperability is the ability of systems, units, or forces to provide services to and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together. For example, interoperability describes the condition achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and/or their users. The degree of interoperability should be defined when referring to specific cases. Interoperability is the ability of a system or a product to work with other systems or products without special effort on the part of the customer. Interoperability becomes a quality of increasing importance for information technology products as the concept that "The network is the computer" becomes a reality.

## J

### JDBC

Java Database Connection. The Java interfaces to database connectivity.

### Java Virtual Machine

A software computer that interprets and executes the byte codes in Java class files like a microprocessor would execute machine code.

## L

### Layer

A layer is a usable subdivision of a dataset, generally containing objects of certain classes, for example rivers, roads or geology.

## M

### Metadata

Metadata is often textual descriptive data about GI or other types of data. This information will often include some of the following: What it is about? Where it is to be found? Who can access it? In what format it is available? What is the quality of the data for a specified purpose? What spatial location does it cover and over what time period? When and where the data were collected, and by whom and for what purposes the data have been used?

## O

### Open Geospatial Consortium (OGC)

OGC is an international industry consortium of more than 230 companies, government agencies and universities participating in a consensus process to develop publicly available geoprocessing specifications.

## P

### Point

A point is a zero-dimensional abstraction of an object represented by a single X,Y coordinate. A point normally represents a geographic feature too small to be displayed as a line or area; for example, the location of a building location on a small-scale map, or the location of a service cover on a medium scale map.

### Post

Post is an HTTP request for exchanging information with a server.

### Provider

An instance of a connector, for a given data source.

## R

### **Raster**

Raster defines a method for the storage, processing and display of spatial data. Each given area is divided into rows and columns, which form a regular grid structure. Each cell must be rectangular in shape, although not necessarily square. Each cell within this matrix contains an attribute value as well as location coordinates. The spatial location of each cell is implicitly contained within the ordering of the matrix, unlike a vector structure which stores topology explicitly. Areas containing the same attribute value are recognized as such, however, raster structures cannot identify the boundaries of such areas as polygons. Also raster structures may lead to increased storage in certain situations, since they store each cell in the matrix regardless of whether it is a feature or simply 'empty' space.

## S

### **Scalable Vector Graphics(SVG)**

SVG is an XML grammar for stylable graphics.

### **Service Oriented Architecture**

A service-oriented architecture is a way of connecting applications across a network via a common communications protocol. In theory, this lets developers treat applications as network services that can be chained together to create a complex business processes more quickly.

### **Servlet Engine**

An environment written by a Web server vendor in accordance with this specification that allows servlets to run with a particular Web server.

### **Shape File**

A shapefile stores non-topological geometry and attribute information for the spatial features in a data set. The geometry for a feature is stored as a shape comprising a set of vector coordinates.

### **Simple Features**

Simple Features are in essence a "Lite" version of the ISO model corresponding to the data model required to support basic GIS systems.

**Spatial Reference System (SRS)**

A SRS is a reference system provides a scale of measurement for assigning values “to a location, time or other descriptive quantity or quality” according to OGC.

**Styled Layer Descriptor (SLD)**

SLD is a styling language that the client and the server both understand, used to portray the output of the WMS, WFS and Web Coverage services.

**Stack Trace**

A list of what methods were called, in what order, to invoke the method in which the exception occurred (called a "stack trace" because it prints out a stack of method names).

**Struts (Apache Web Application Framework)**

Struts encourages application architectures based on the JSP Model 2 approach, a variation of the classic Model-View-Controller (MVC) design paradigm.

**Swing, the Java Foundation Classes**

The Java Foundation Classes (JFC) are a set of Java class libraries provided as part of J2SE™ to support building graphics user interfaces (GUI) and graphics functionality for Java technology-based client applications.

**U****Usability**

Usability is defined by the ease with which a user can learn to operate, prepare inputs for and interpret outputs of a system or component.

## V

### Vector

Vector defines one method of data type, used to store spatial data. Vector data is comprised of lines or arcs, defined by beginning and end points, which meet at nodes. The locations of these nodes and the topological structure are usually stored explicitly. Features are defined by their boundaries only and curved lines are represented as a series of connecting arcs. Vector storage involves the storage of explicit topology, which raises overheads, however it only stores those points which define a feature and all space outside these features is 'non-existent.'

## W

### WAR file

**Web Archive** file: a type of jar file used by servlets.

### Webapp

Webapp or Web Application: Groups of server-side Web resources that make up an interactive online application. The Web resources include Java servlets, JSPs, static documents (such as HTML documents), and applets that can be deployed in a client Web browser. Web applications must run in the context of an Application server or Servlet Engine.

### WFS

A WFS is an OGC specification for a Web Feature Server.

### WMS

A WMS is an OGC specification for a Web Map Server.

## X

### XML Schema

A language to express XML types. See <http://www.w3.org/XML/Schema>.