6.3

Insight® + LUNA

Installation and Configuration Guide

6.3 Revision

Insight® + LUNA

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Welcome to Insight and LUNA

This document is intended mainly for system administrators and secondarily for Insight administrators to provide context and information on how to Install & Configure Insight and LUNA. Readers are expected to have a basic knowledge of the UNIX / Windows Operating Systems, Microsoft SQL Server / Oracle Databases / MySQL, and Apache Tomcat and Jboss JSP Server.

Please note that while references to Deploy Director and Browser Insight remain in this document, Deploy Director is no longer supported beyond 5.6 and Browser Insight is no longer supported beyond 6.2.

Figure 1: Insight and LUNA Component Diagram
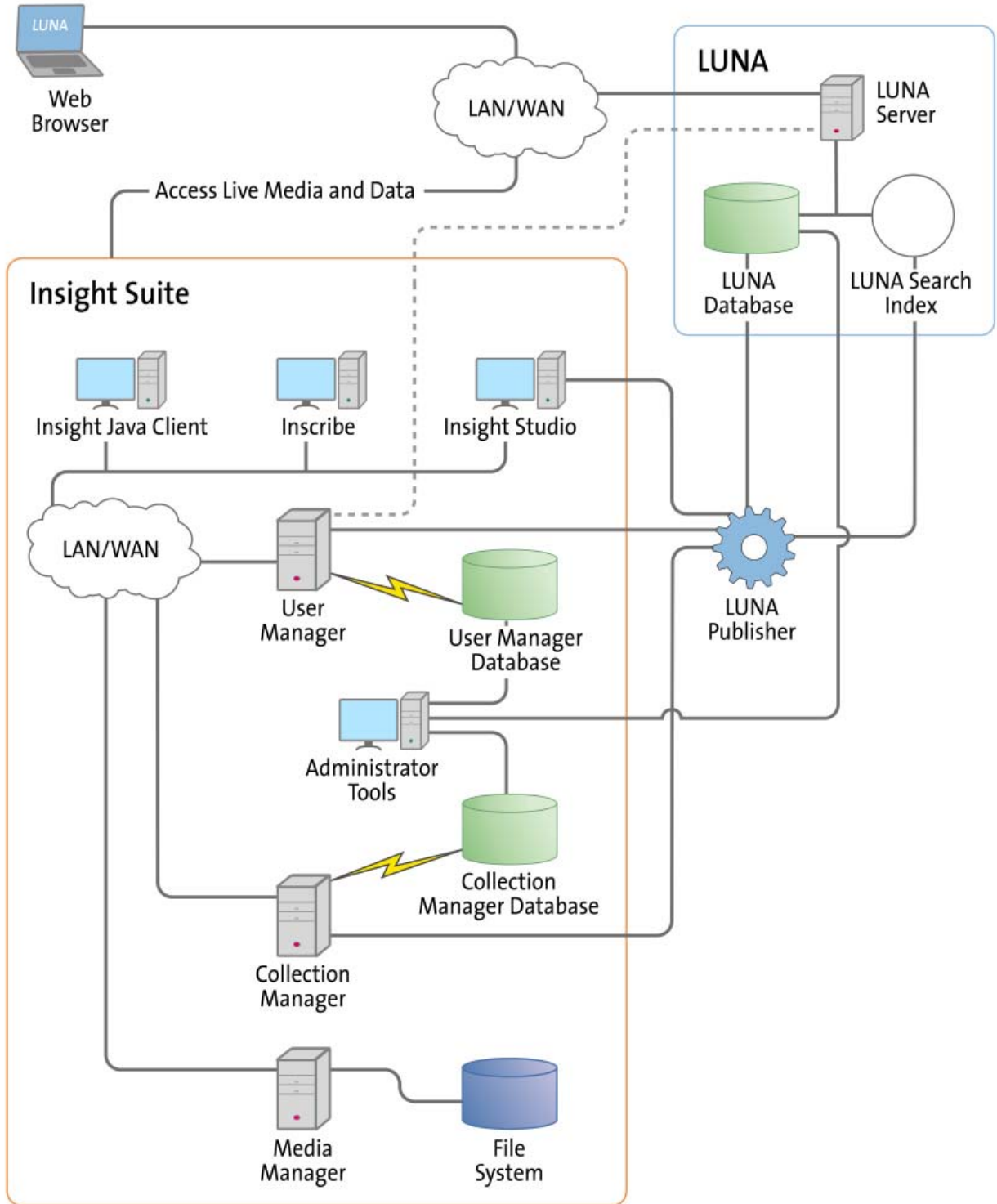
LUNA Components are as follow:

LUNA Publisher: Schedules and is used to pull data out of the Insight Collection Manager, storing it in an XML format. The LUNA Publisher then converts the archive data into a Lucene index for each collection and merges all Collection indexes into one single search index. Once merged, the LUNA Server is placed into a maintenance mode and the newly merged index replaces the existing one.

LUNA: LUNA is the dynamic web based front end to Insight collections. With LUNA, users can perform simple keyword searches as well as more complex structured queries, and control how they view, browse, and organize their results to create groups and presentations. LUNA includes the Web 2.0 tools your users are demanding which enable them to save and share their work by linking and embedding any view, image, group, or presentation.

LUNA Server: The LUNA Server is the server side component behind the LUNA client. Collections published to LUNA are indexed on the LUNA Server. The LUNA Publisher will automatically update the indexes based upon a schedule that you define.

Insight's Components are as follows:

User Manager: The User Manager functions as a single point of entry for all Insight Collections and Personal Insight Managers. It consolidates the functions of authentication and authorization for all shared resources within Insight and for LUNA. The User Manager can integrate with an existing security infrastructure if an institution already has a single sign-on solution in place. The User Manager also provides access to resources such as shared folders and groups within Insight. LUNA enables end-user management of viewing preferences, and storage folders for media groups and presentations.

Collection Manager: The Insight Collection Manager provides a common interface between client requests and the underlying data repository. Each Collection Manager may contain multiple collections and Virtual Collections of consistent or heterogeneous structures. The Collection Manager also functions as a broker between the clients (the Insight Java Client, Inscribe data editor, Studio (LUNA Publisher and XML Gateway) and the underlying database, coordinating search requests, and data updates.

Personal Insight Manager: The Personal Insight Manager is a specialized version of the Collection Manager which supports the creation of Personal Collections with the Insight Java Client.

Media Manager: The Insight Media Manager is built around a servlet, and manages access to Insight's media content. The Media Manager supports direct upload of processed content and also manages access to the JPEG2000 wavelet images that power Insight's Image Workspace.

Java Client: The Insight Java Client provides an additional interface for searching, viewing, and managing images, audio, video, and other media. The Java Client also provides end-user collection building tools with Personal Insight and the ability to create Virtual Collections – a subset of content with different access levels.

Inscribe®: The optional Inscribe data editor is an end-user cataloging tool designed to support all of an institution's cataloging needs. The Inscribe data editor includes built-in support for controlled vocabularies, date and numeric validation, and complex data relationships. Inscribe also supports an institution's workflow requirements by facilitating the publishing and review processes.

Studio: Studio provides collection administrators with the tools to build and manage collections. Studio is a wizard-based tool supporting batch processing of media, batch import of metadata, user management, catalog template creation and management, and other basic functions. The LUNA Publisher is accessible from within the Studio client.

Administrator Tools: The Insight Administrator Tools allow a collection administrator to dynamically manage collections. Components of the Insight Administrator Tools include tools for batch media processing, user and resource management, data indexing, and configuring of the search and user interface.

JPEG2000 Wavelet Encoder: The Administrator Tools and Studio include a JPEG2000 Wavelet Encoder. Wavelet encoded images improve performance when accessing large images, reduce storage requirements, and optimize network usage on image delivery.

Insight XML Gateway: The XML Gateway provides a web-services based interface for searching and retrieving content stored within Insight collections. The XML Gateway is middleware which allows backend interaction between Insight and other XML aware applications.

Finding Installers and Tools on the CDs

Insight 6.3 is available for download in the Support section of the Luna Imaging website. There is one CD for the general installers, one for the clients and one if you are upgrading Insight. Below is a list of the tools / installers available on each CD:

Table 1: Distribution CD Contents

	CD1 – Insight	CD2 – Clients	CD3 –Upgrade
Insight Suite Installer including installers for: User Manager, Collection Manager, Personal Insight Manager, BrowserInsight, XML Gateway, Media Manager, Insight Studio, Tomcat 5.0	X		
Insight Upgrade Installer including upgrade installers for: User Manager, Collection Manager, BrowserInsight, XML Gateway, Media Manager, Tomcat 5.0			X
Insight 6.3	X	X	X
Inscribe 6.3	X	X	X
Insight Studio 6.3	X	X	X
Insight Administrator Tools 6.3	X	X	X
Command Line Indexer	X		X
Background template	X		X
Browser background template	X		X
XML Gateway test application (with source code)	X		X
Log Analyzer	X		X
Insight Launch Manager	X		X
Insight client bundles for Deploy Director			X
Simple Search Servlet for the Insight XML Gateway	X		X
Collection Reporting Tools	X		X
Check Hostname	X		X

The LUNA Suite is contained on it's own DVD and is available for download at the Luna Imaging Inc Support website.

Locations of Commonly Used Components

The Suite installer for Insight 6.3 manages where all of the components are installed.

Platform	Location
Windows	C:\program files\LunaImaging\6.x
Solaris / Linux	/home/<username> /LunaImaging/6.x

Basic structure for the Insight Server Components

This structure may be useful in understanding where to find common components.

Figure 2: Insight Installation Directory
\<installation directory\>

```
|----- AdminTools
|         |
|----- user_manager
|         |----- InsightUserServer.dat              ← User Manager configuration file
|----- collection_manager
|         |----- <Collection Short Name1>
|         |        |----- InsightServer.dat          ← Collection Manager
|         |----- <Collection Short Name2>              configuration file
|         |----- …
|----- personal_insight_manager
|         |----- <Collection Short Name1>
|         |        |----- InsightServer.dat          ← Personal Insight
|         |----- <Collection Short Name2>              configuration file
|         |----- …
|----- tomcat
|         |----- bin
|         |----- conf
|         |        |----- server.xml                    where BrowserInsight,
|         |        |----- Catalina                   ← XML Gateway  and Media
|         |                 |----- localhost            Manager contexts are stored
|         |----- logs                                ← Tomcat Logs
|         |----- …
|----- License-Files                                 ← Where the Insight 6.3
|----- media_manager                                   license key is kept
|         |----- servlet
|         |        |----- WEB-INF
|         |        |----- themes                     ← where Insight saves background
|         |----- support                               images (themes)
|         |        |----- Tomcat_conf_additions.txt
|         |        |----- Resin_conf_additions.txt
|         |----- MediaManager.dat                    ← Media Manager configuration file
|----- browserInsight
|         |----- servlet
|         |----- support
|         |        |----- Tomcat_conf_additions.txt
|         |        |----- Resin_conf_additions.txt
|         |----- BrowserInsight.conf                 ← BrowserInsight configuration file
|----- xmlgateway
|         |----- servlet
|         |        |----- WEB-INF
|         |        |        |----- web.xml            ← XML Gateway configuration file
|         |----- support
|         |        |----- Tomcat_conf_additions.txt
|         |        |----- Resin_conf_additions.txt
|----- InsightStudio
|         |
|----- Utilities
|         |------check_server_version                ← a script to display the version
                                                       # of all server components
```

Basic Structure of the Media Manager Source File Directory

The Media Manager organizes files by size / file-type, collection, and batch. The top level directory is the size / filetype (one size for each JPEG derivative, then SID, Audio, Video, and JP2K). Content is organized in this sub-directory structure to ensure that the Media Manager can manage content from multiple collections as well as multiple Collection or Personal Insight Managers.

Figure 3: Media Manager Directory Organization

<media source directory>

```
|----- Size0
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- Size1
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- Size2
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- Size3
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- Size4
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- JP2k
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
|----- AUDIO
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Audio
|----- VIDEO
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Video
|----- QTVR
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- QTVR
|----- MISC
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Files
|----- SOURCE
|         |----- Collection-Triplet
|                  |----- BatchID
|                           |----- Images
```

The second piece of the directory structure is the Collection-Triplet, which is the combination of the InstitutionID, CollectionID, and Virtual CollectionID, separated by hyphens. The final directory is the Media Batch, which helps with the organization of

content based on processing logic – Media Batches are created by the end-user and may separate images digitized at one time, or simply imported at one time.

Installing Insight

This section will walk you though every step of installing and configuring the Insight server components from scratch. (For information about installing the client applications, see [Repackaging & Advanced Configuration of the Insight Client Applications](#).) By the end of this section, you should have a fully working version of Insight and be able to build collections.

> **NOTE:** Please note that there is plenty of useful information throughout this document, so you will most likely want to use it as a reference in the future.

Installation Process

The installation process is broken down into five stages:

1. Create Databases
2. Install Insight
3. Configure & Test Installation
4. Configure components to run as services
5. Run Insight Studio

Prerequisites

Before installing Insight, you should make sure that you have reviewed this entire section and completed the pre-install checklist, prepared your database, and planned for the disk storage requirements for Insight.

Choosing the Features you Plan to Install

If you have not already, please decide which features you plan to install. By default the installer will install the following:

- Insight User Manager
- Insight Collection Manager
- Tomcat 5
- BrowserInsight
- Insight Media Manager
- Insight Administrator Tools

Optionally, the installer allows you to separately install:
- Insight Studio
- Personal Insight Manager
- Insight XML Gateway

Suggested Installation Methodology

As the Suite Installer will configure all of the Insight server components as it runs, it is suggested that for ease of configuration in the future you install ALL components, even if you do not plan to implement them right away.

> **NOTE:** After Installation you will be required to activate the product by obtaining a license key and copying it into the main License-Files directory.

Space Requirements

There are three main disk storage requirements for the Insight server components. Storage must be allocated for:
- The installed application
- The database
- The media (Images, Video and Audio).

Space for Installation

Depending on the specific features installed, the Insight server components will use between 200MB and 500MB.

Space for Images and Multimedia

Before you install Insight, ensure that you have enough storage set aside for images to support the growth of your collection. Insight uses a set of JPEGs for lower resolution images and a wavelet compressed image format to manage its high-quality images. Wavelet images are compressed with a ratio that varies from 15:1 to 30:1, based on the size and other qualities of the image. To estimate the space necessary for images in a collection, assume that a 20MB TIFF file (containing detail roughly equivalent to a 35mm slide) will take up 1-2MB of space, while a 70MB TIFF file (roughly equivalent to a 4x5 Color Transparency) will take up 5-7MB.

> **NOTE:** Multimedia files (Audio, Video, & QTVR) will not be altered during processing and will remain the same size on your server.

Space for the Database

We suggest that you start by allocating 500MB per Insight collection or Personal Insight database, and 50MB for the Insight User Manager database.

Pre-Installation Checklist

Below is a checklist for all of the information necessary to perform a complete installation of the server. It is **strongly** suggested that you complete the checklist before beginning your installation.

> **NOTE:** Topics discussed in the checklist will be covered throughout this chapter. It may be helpful to print out the checklist and keep it for future reference and ease of completion.

Obtaining the Hostname

Insight comes with a simple utility that will allow you to obtain the hostname of your server. The utility is located in \utilities\check_hostname. Please execute checkHostname.cmd (for Windows) or checkHostname.sh (for UNIX/Linux) on the server where you will be installing the Insight server components.

Table 2: Pre-Installation Checklist

General Information	
Installation Location:	
Insight Administrator Username:	
Insight Administrator Password:	
NOTE: This username and password will be needed to administer the User Manager, Collection Manager, and Personal Insight Manager. It will also be used in Insight Studio and the Administrator Tools. You may want to Choose a name that reflects this privilege level.	
Institution ID:	
User Manager	
User Manager Address:	
NOTE: This should be a fully qualified Hostname, not an IP	
Database Type:	MSSQL Server 7+ __ Oracle 8, Oracle 9+ __ MySQL 4.1 ____
Database Hostname / IP:	
Database Port:	
Common Ports (MSSQL 1433, Oracle: 1521, MySQL 3306)	
Database Username:	
Database Password:	
Database Name / SID Name	
(SID is for oracle)	
Database Service Name (Windows only):	
Collection Manager	
Database Type:	MSSQL Server 7+ __

	Oracle 8, Oracle 9+ __ MySQL 4.1 _____
Database Hostname / IP:	
Database Port:	
Common Ports (MSSQL 1433, Oracle: 1521, MySQL 3306)	
Database Username:	
Database Password:	
Database Name / SID Name:	
(SID is for oracle)	
Database Service Name (Windows only):	
Personal Insight Manager	
Database Type:	MSSQL Server 7+ __ Oracle 8, Oracle 9+ __ MySQL 4.1 _____
Database Hostname / IP:	
Database Port:	
Common Ports (MSSQL 1433, Oracle: 1521, MySQL 3306)	
Database Username:	
Database Password:	
Database Name / SID Name:	
(SID is for oracle)	
Database Service Name (Windows only):	
Tomcat	
Tomcat Hostname:	
***NOTE:** This is commonly the same as the User Manager Address*	
Tomcat Port	
Media Manager:	
Media Storage Location:	
***NOTE:** The Hostname information for Collection Manager will be used for registering your license key.*	

Setting up your Database

Please ensure that your database server is installed and is running properly before you continue. During Insight's installation process, the Suite Installer will create the database tables, indexes, and keys necessary to run Insight. Therefore, you must create the databases and tablespaces for Insight's server components before running the installer. Please review the following section for information on creating the Insight Databases.

Microsoft SQL Server

For Microsoft SQL Server, you will need to create a database for each component of Insight you plan to install. To run the installer, the **MSSQLSERVER** and **SQLSERVERAGENT** services must be running. It is also highly recommended that you create a Login in Microsoft SQL Server for Insight and grant the Login the following roles in the Insight Database:
- **public**
- **db_owner**

Table 3: Microsoft SQL Server Database Creation Worksheet

Component	Database Name	Insight User
Insight User Manager		
Insight Collection Manager		
Personal Insight Manager		

Enabling SQL Authentication

By default, Microsoft SQL Server ships with "OS based authentication", i.e. authenticating using Windows-based authentication. Insight, however, **requires SQL Authentication** to be enabled. Prior to enabling SQL Authentication, check with your DBA to ensure that this will not affect other systems.

To enable SQL Authentication on Microsoft SQL Server:
1) Launch the Microsoft SQL Server Enterprise Console.

2) Locate the entry for your server (if you have more than one).

3) Right-click on your server in the tree and choose Properties.

4) Select the security settings tab and change the default authentication method from "Windows Only" to "SQL Server and Windows" (supporting both Windows and SQL authentication methods).

5) Restart SQL server.

Figure 4: Enabling SQL Server & Windows Authentication for Microsoft SQL Server
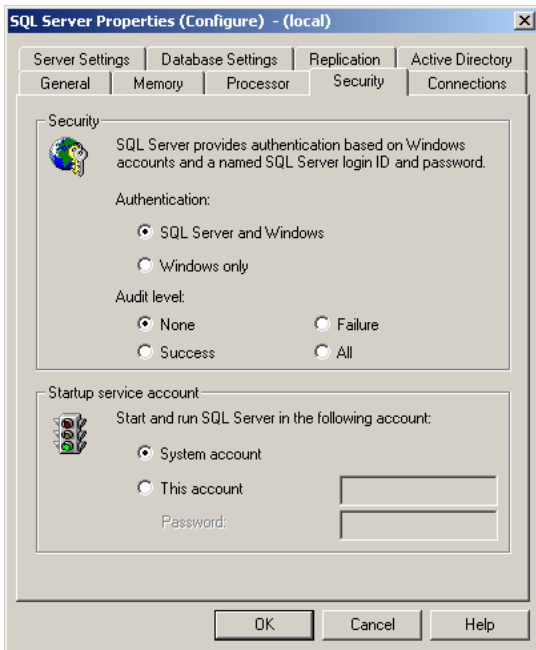
Oracle

For Oracle, you will need to create a **tablespace,** a **temporary tablespace** and a **user** for each of the Insight server component you wish to install. You can create the tablespaces in Oracle's "Enterprise Manager Console". If you do not have access or do not know about creating tablespaces, please contact your Oracle DBA.

For the User Manager, the tablespace should be 50MB in size with equal temporary space. For the Collection Manager and Personal Insight Manager, the tablespace and temp tablespace should be 500MB in size to start.

Once you have created the tablespaces, create a user for each tablespace, grant the user default access to the corresponding tablespace, and also grant the user the following role: **Connect.**

> **NOTE:** If you need to access your database tables via Oracle's Enterprise Manager, you will need to add the **Select Any Dictionary** system privilege to the user.

> **NOTE:** Once you have Insight system up and running and have added some data to the system, it is recommended that you perform **analysis** to **generate statistics** on your database and do this periodically as your database grows. This will help to ensure your insight platform is operating in an optimal environment.

> **NOTE:** Future upgrade scripts may require the **Resource** role as well. Optionally, you may choose to grant the user this role to simplify the process in the future.

Table 4: Oracle Database Creation Worksheet

Component	Oracle User	Oracle Tablespace	Tablespace Size	Temp Tablespace
Insight User Manager			50MB (suggested)	
Insight Collection Manager			1GB (suggested)	
Personal Insight Manager			1GB (suggested)	

> **NOTE:** Be aware of the default character set and collation of your oracle instance. We suggest either ISO8859-1, LATIN-1, or Unicode by default as it will properly support special characters and other content in Insight.

UNICODE (UTF-8) Support

If you intend to catalog content in other languages than English, you will need to setup Oracle to use the UTF Character Set. Specifically, the Oracle Instance should be setup with the **NLS_CHARACTERSET** value of "**UTF8**". This will ensure that the database is properly configured and setup.

> **NOTE:** Unicode characters take up twice as much space as Non-Unicode characters, hence, you will need to allocate extra space.

MySQL 4.1

For MySQL 4.1, you will need to create a schema for each Insight server component you wish to install. It is also strongly suggested that you create a user specifically for Insight to use to connect to the database.

Table 5: MySQL Database Creation Worksheet

Component	Schema Name	Insight User
Insight User Manager		
Insight Collection Manager		
Personal Insight Manager		

Backing Up Your Databases

It is good practice to back up your databases on a regular basis. We suggest using the following procedure:
- daily backup of the database is rotated on a 3 day cycle
- once a week, a backup is set aside and saved for a month
- the first backup of every month is saved for a year
- perform specific backups before major operations such as applying patches or major data import / update procedures.

> **WARNING:** It is important to run regular backups and to test your backup system.

Installing on Windows

It is suggested that you run the installer while on console. If you are running the installer through PC Anywhere, VNC, or Terminal Services, the installer may not launch properly.

Installing on Solaris or Linux

It is suggested that you create a specific user in a Linux or Solaris environment for Insight and run the application as that user. As Insight contains a number of components, all of which interact with each other, this simplifies rights issues as well as provides organization to the installation.

> **NOTE:** It is **STRONGLY** recommended that you install and configure Insight as the **SAME USER** that will be running Insight on the server.

Running the Insight Suite Installer

All Insight 6.3 Server components are installed from a single Suite Installer. Individual components may be included or excluded from the installation process via checkboxes. If you need to install components later, then you can run the Suite

Installer again, choose "Custom" installation and select the specific components you wish to install.

> **NOTE:** Plan to spend approximately an hour running the installer. Complete the checklist before running the installer.

Where to Find the Installer

The Insight Suite Installer can be found in the suite_install directory of CD1. The installers are platform-specific and separated into directories specific to each platform.

Running the Installer

To run the installer, double-click on the installServerSuite executable appropriate to your platform. Please note, the installer is around 100MB, so it may take a few minutes to initially load.
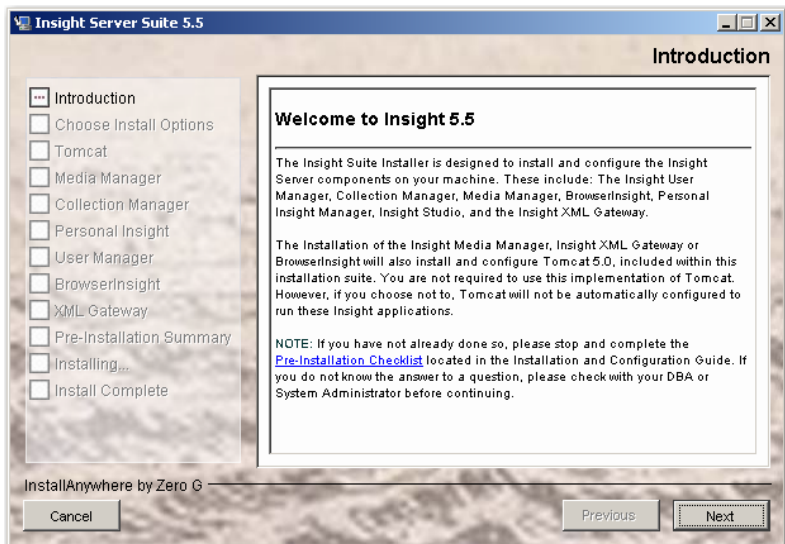
> **NOTE:** The Installer is GUI-based and will require an X-Windows environment on any UNIX based system.

Selecting an Installation Type

The Insight Suite Installer allows you to perform either a "Typical" or a "Custom" installation.
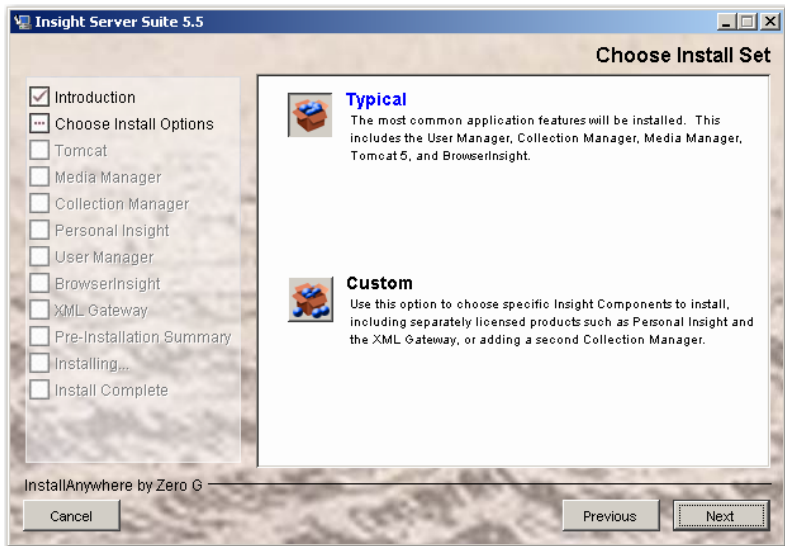
Performing a Typical Installation

"Typical" installation includes User Manager, Collection Manager, Media Manager, Insight Studio, an optimized version of Tomcat, and BrowserInsight.

Performing a Custom Installation

"Custom" installation allows you to choose a subset of the above components, and allows selection of the XML Gateway and Personal Insight products.
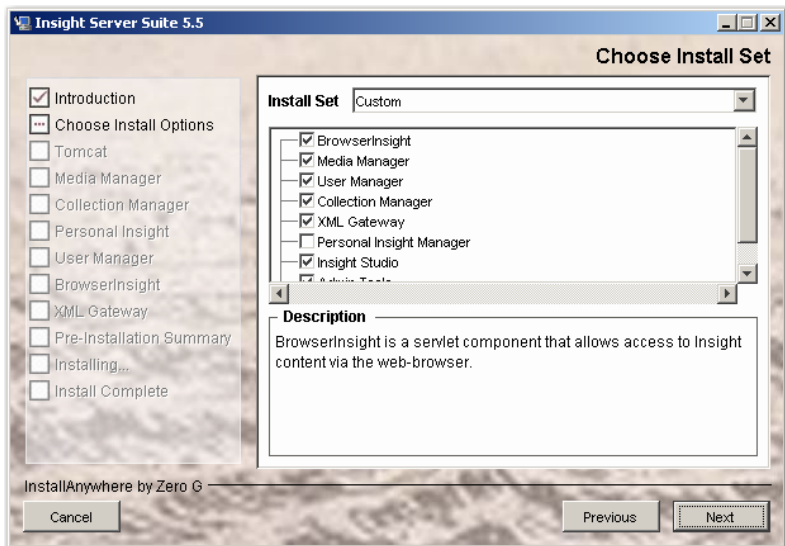
Choosing an Installation Location

The Installation of the Insight server components can take up to 300MB, please plan accordingly when installing the server components.
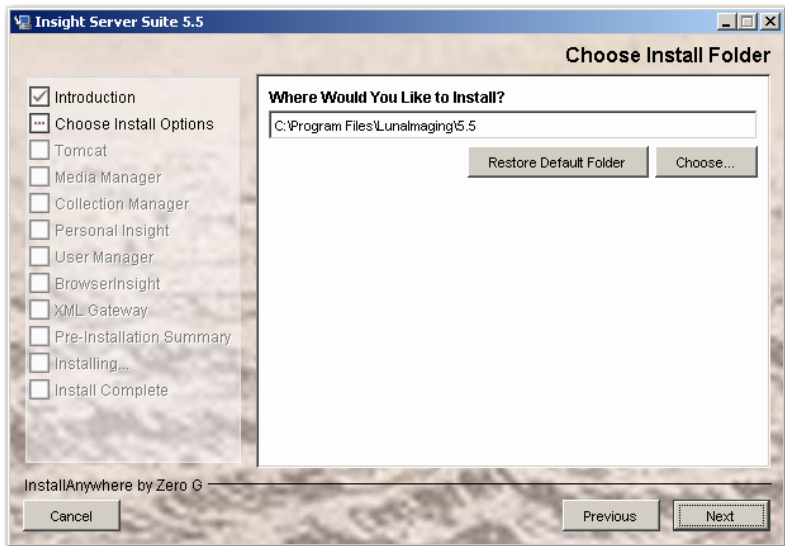
Creating a Shortcut Folder

The installer can create a series of links to the server components and documentation on install. Please choose the location you would like to create these in. On Windows, the default is a "Luna Imaging" program group.
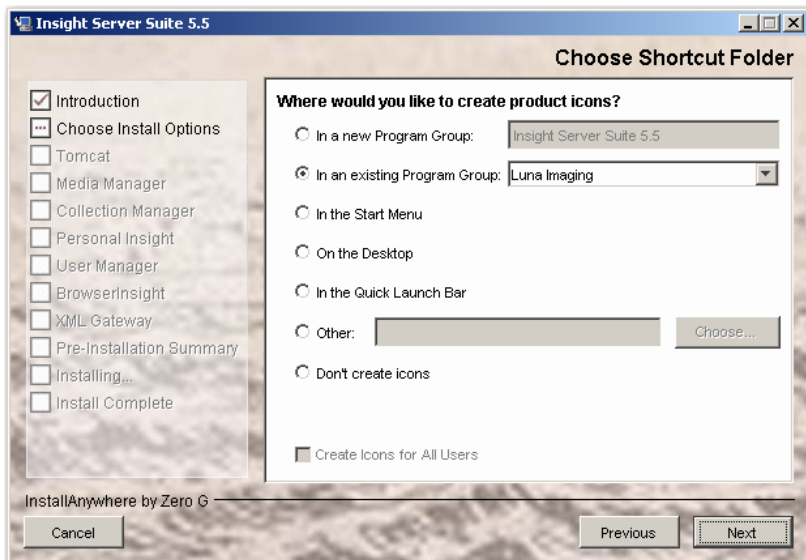
Configuring the Server Components

The installer will now walk you through configuring the insight server components. Before proceeding, you should have:

- Created the databases for the insight server components
- Completed the installation checklist
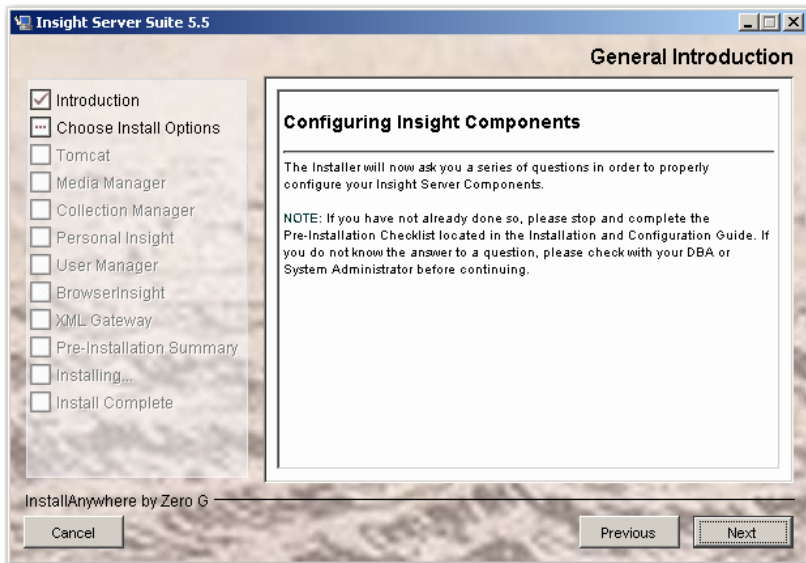
Selecting a User Manager Address

The Insight User Manager provides authentication and authorization services for all of the Insight Components. In order to run properly, many of these components, including BrowserInsight and the Java Clients need to communicate with the Insight User Manager. The User Manager Address, therefore, should be a **Fully-Qualified Domain Name** address that anyone can access from anywhere. The User Manager Address identified here will be used throughout the installer to configure the rest of your components.
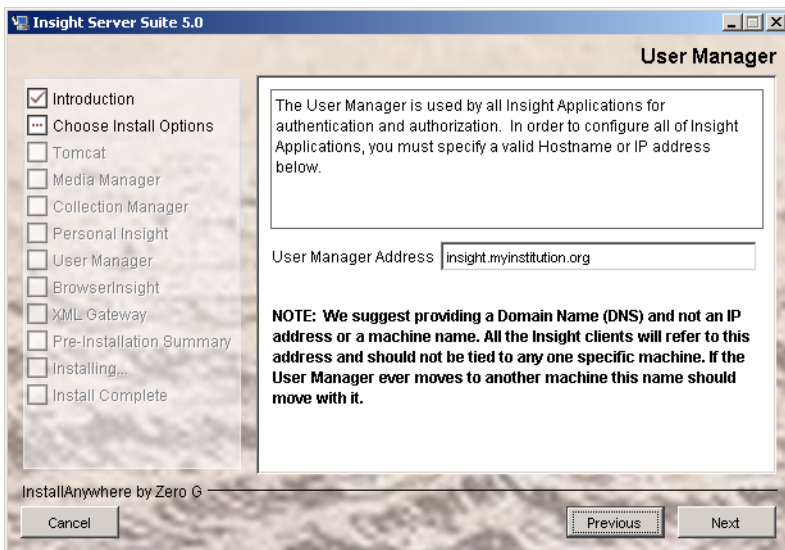
NOTE: Luna suggests you choose a fully-qualified DNS resolvable Hostname as opposed to an IP Address to provide more flexibility in the installation and management.

Specifying an Administrative Username and Password for Insight

Insight requires you to specify an administrative username and password. This username and password will be used for authentication within the Insight Administrator Tools and Insight Studio. Users with this username and password have access to tools that can create / delete collections and make major modifications to Insight's configuration, so be careful who it is shared with.

> **NOTE:** This password is not encrypted. Do not use your network or system administrator password.

Specifying an Institution ID

The Institution ID is used in the User Manager to help differentiate shared collections.   Specify a value that would be unique to your institution. This is commonly your institution's name or an abbreviation (up to 8 characters).

Choosing a Database Type

The installer is designed to connect to your database server, create database tables, fields and indexes for your Collection Manager, User Manager, and Personal Insight Manager. Please choose the database type you wish to use. The information you identify here will be used to configure Insight.
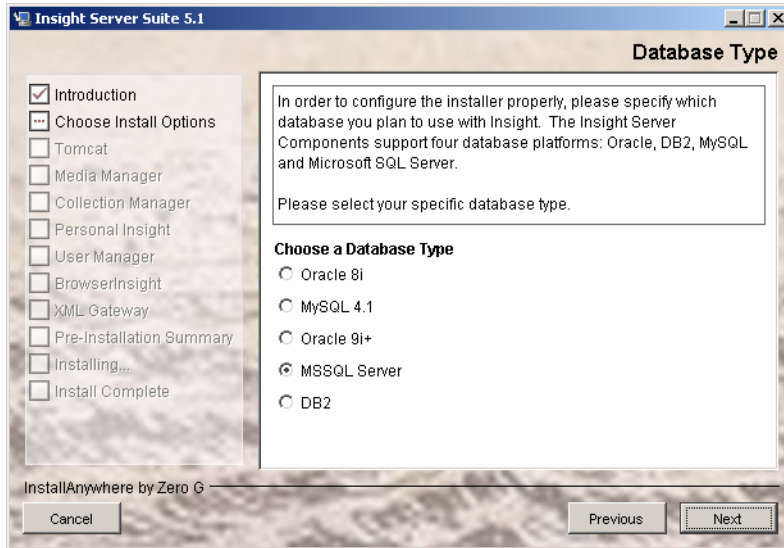
> **NOTE:** If you have not yet created the databases for the Insight server components you plan to Install, please review "Setting up your Database on page 20" for more information.

Configuring Tomcat 5.0

Insight is bundled with a customized version of Apache's Tomcat 5. This version of Tomcat has been configured with most of the default servlets disabled and a customized set of configuration files.
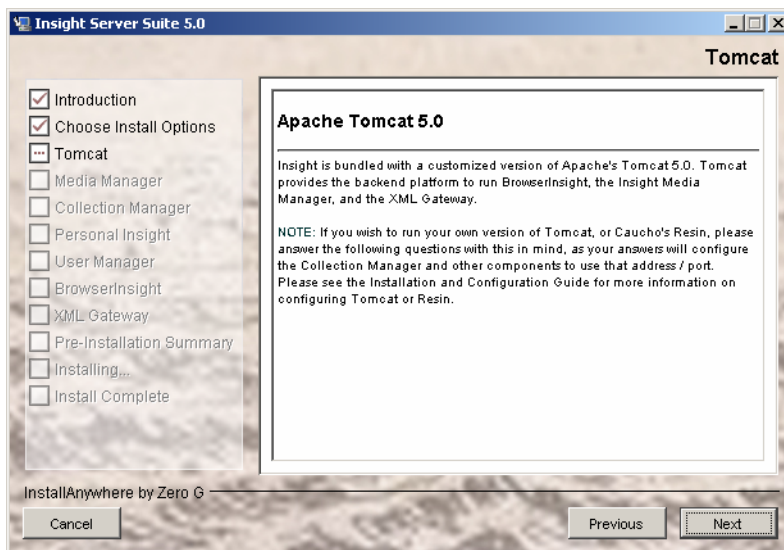
If you would like to use your own version of Tomcat (or Caucho's Resin), please enter the HOSTNAME and PORT for your version of Tomcat or Resin so that the installer can configure all Insight Components with this information. When you have completed your installation, please see the "Using a Standalone Application Server with the Insight Servlet Components" document for more information.

Choosing a Hostname and Port for Tomcat

To properly configure Tomcat, you must specify the port you wish Tomcat to run on. The default is port 8081 – but if you are currently running Tomcat or another application on port 8081 you will need to choose another port to avoid a conflict.
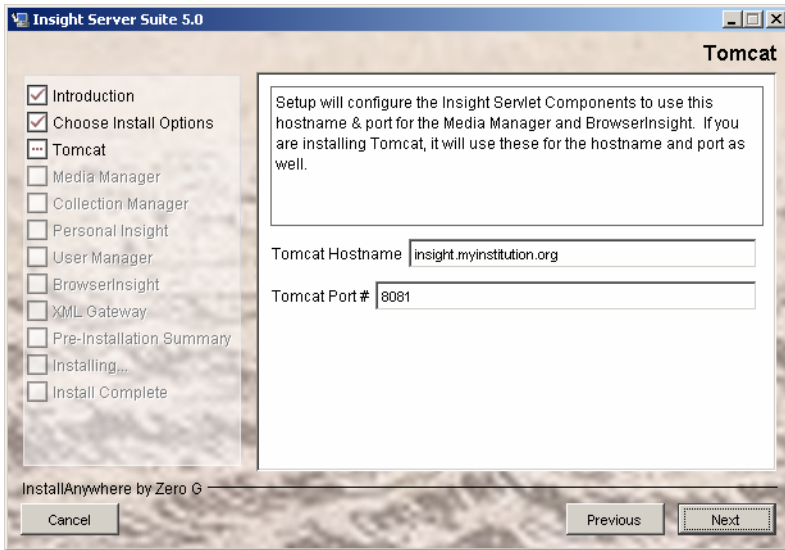
Review your Tomcat & User Manager Settings

Please review your Tomcat and User Manager hostnames and ports. This information is populated throughout all of Insight's configuration files.
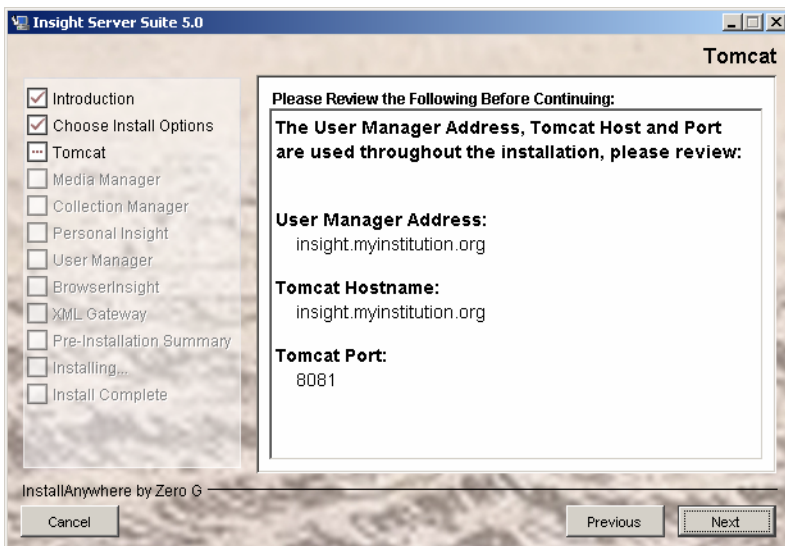
Configuring the Media Manager

The Insight Media Manager provides access to all of Insight's media and runs as a servlet within Tomcat. To configure the Media Manager, you must specify the location where you wish to store all of your media.
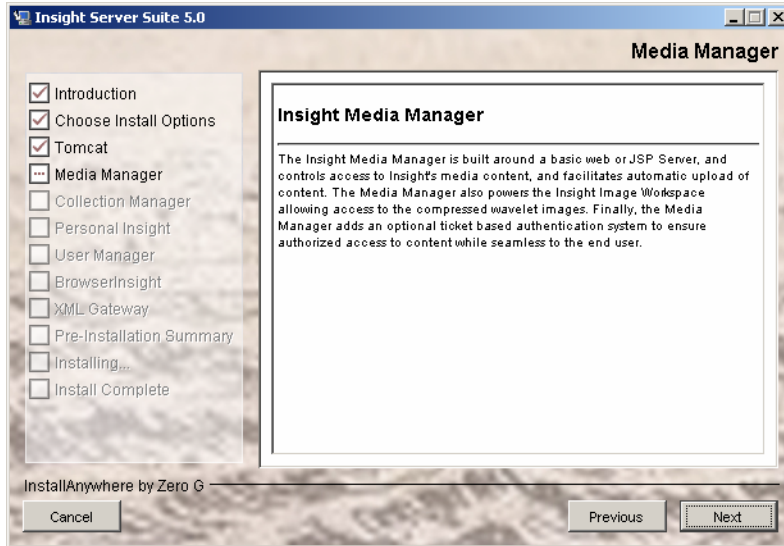
Specifying a Media Directory

Specify a directory for media content. The Media Manager will place all processed media files from Personal Insight and Insight Studio in this directory.
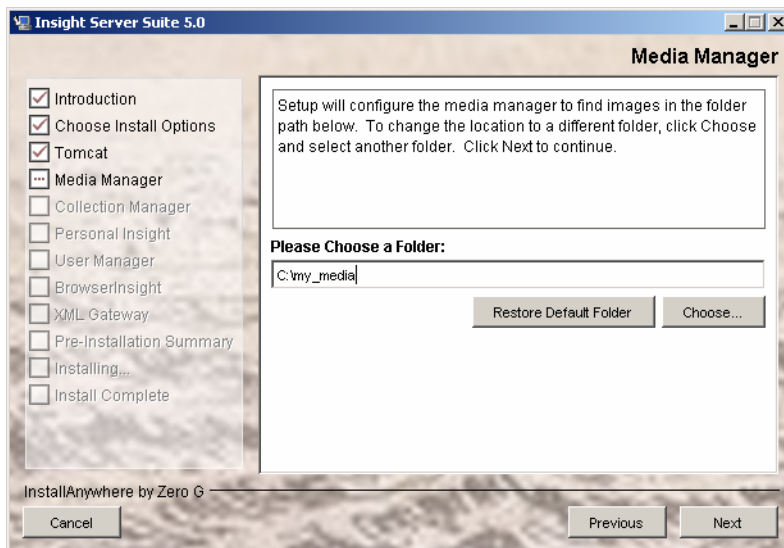
Configuring the Collection or Personal Insight Manager

To configure the Collection Manager or Personal Insight Manager, you must first specify the appropriate information so that the installer can connect to the database.

This information will be saved in the Insight Collection Manager and/or Personal Insight Manager's configuration file (InsightServer.dat).
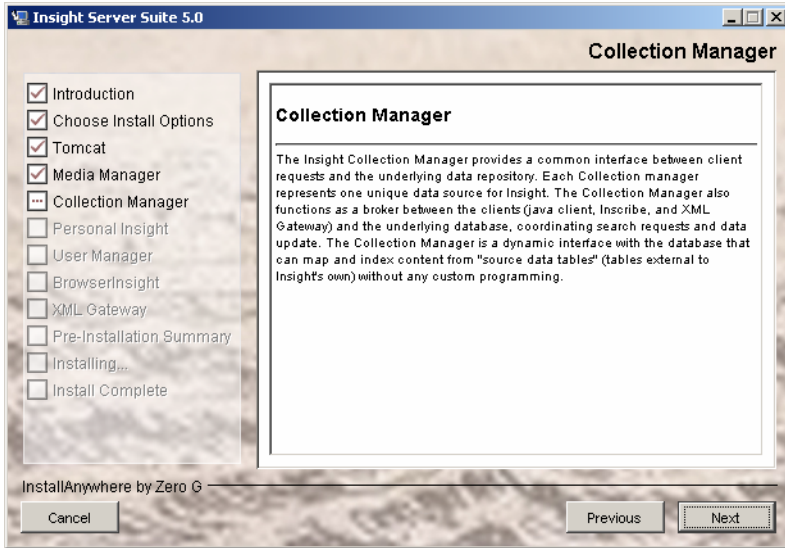
NOTE: Each Collection Manager or Personal Insight Manager has its own InsightServer.dat file.

Choosing Catalog Template(s)

The installer can optionally install a set of catalog templates based on the VRA Core v3 and Dublin Core Data Models.
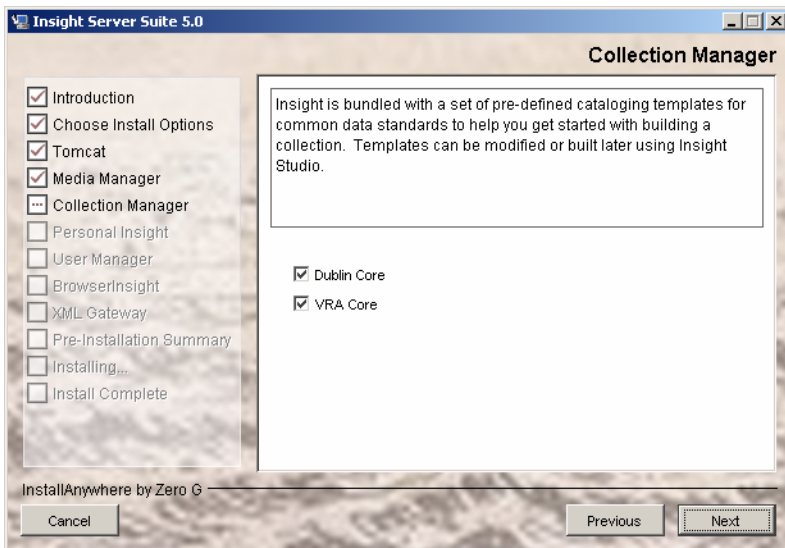
Database Information

Provide the information necessary to connect to your database, including the hostname, database name (SID Name if you're using Oracle), and database port. The installer will offer default values based on information provided earlier. Review the defaults (and change them as needed).
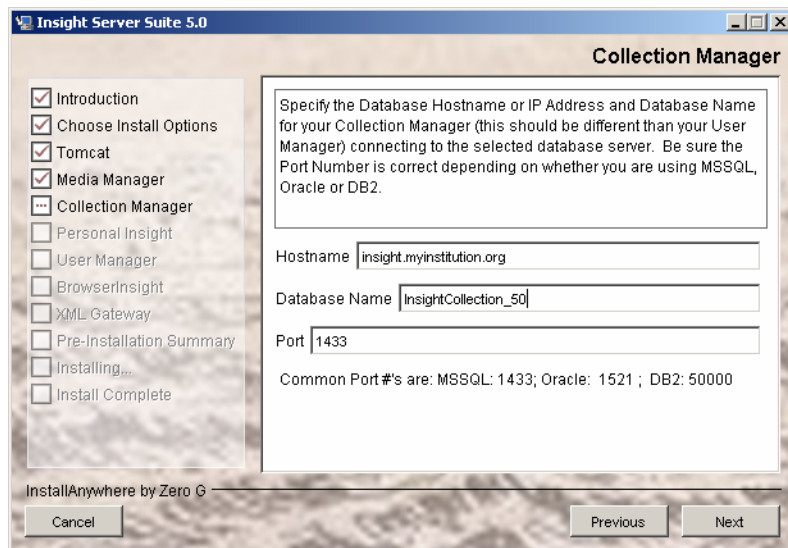
Database Username and Password

Please specify the username and password for your database. This is the username and password that Insight should use to connect to the database.
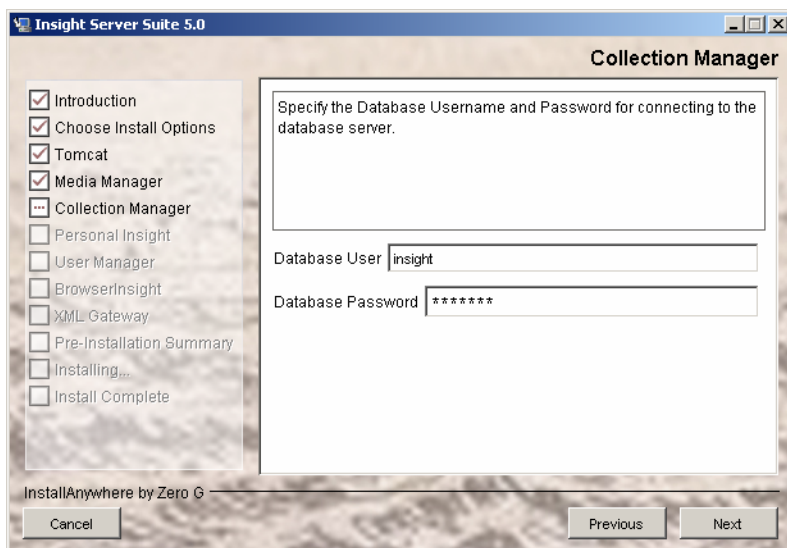
Name your Server and Choose a Port

Please provide a name and short name for your Collection Manager. The name will be used to identify the Collection Manager in the User Manager and will be visible to end-users. The short name is used internally to identify directories related to this Collection Manager. Choose a port for your Collection or Personal Insight. The Default port is **3070** for a Collection Manager and **3080** for Personal Insight. However, if you have more than one Collection Manager, you should increment the port on the new Collection Manager so that it does not match any other.
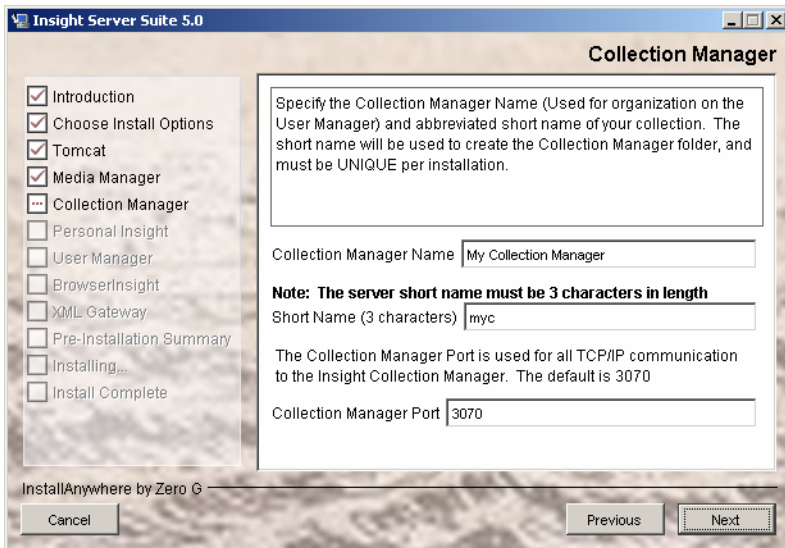
NOTE: The server short name is used to create the folder for the Collection Manager.

Testing the Database Connection

The installer will now test the database connection. If it can connect to the database, it will check for an existing installation of Insight.

> ⚠ **WARNING:** the installer will **DROP ALL INSIGHT TABLES** once it has connected, so be sure that you are not installing over an existing version of Insight. (The installer will warn you again before it actually drops any tables.)

Creating the Insight Collection Manager Database

Once the installer has tested the connection, it will present you with the database creation script window. Click "Run Script" to create the Insight tables and indexes.

NOTE: The installer will not let you continue until it has successfully created the database tables.

Once the installer has run, it will either print "SQL Executed Successfully" or print error messages in **RED**. Please review error messages before continuing. Common reasons for errors include:

- there is not enough **space** in the database
- the **tablespace**
- the user does not have **rights** to create tables, indexes and keys
- there are not enough **cursors** available in the Database (Oracle)

- **SQL Authentication** is not enabled (MSSQL). You may also see "**Not Associated with a Trusted SQL Server connection**" (might simply mean you need to restart SQL server).

NOTE: If you would like to maintain a log of the installer's database actions, or need to send an error to LUNA, you can copy the text from the installer log.

Configuring the User Manager

To configure the User Manager, you must first specify the appropriate information so that the installer can connect to the database. This information will be saved in the Insight User Manager's configuration files (InsightUserServer.dat).
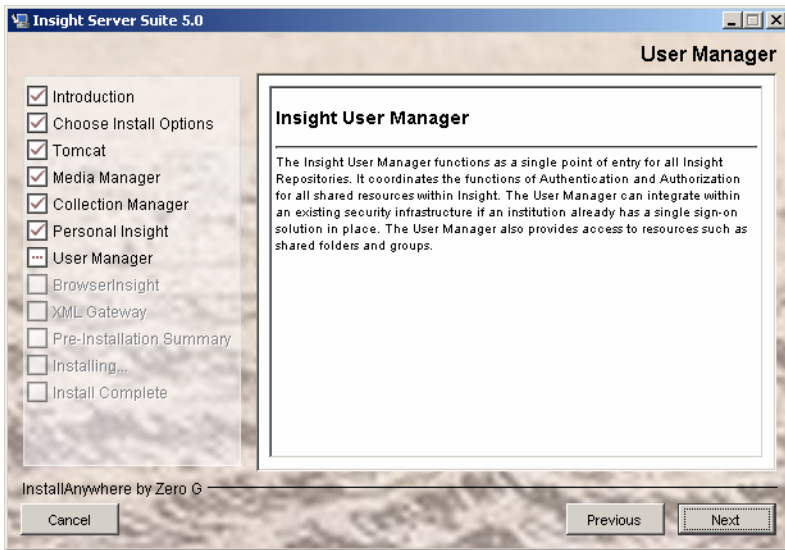
Database Information

Provide the information necessary to connect to your database, including the hostname, database name (SID Name if you're using Oracle), and database port. The installer will offer default values based on information provided earlier. Review the defaults (and change them as needed).
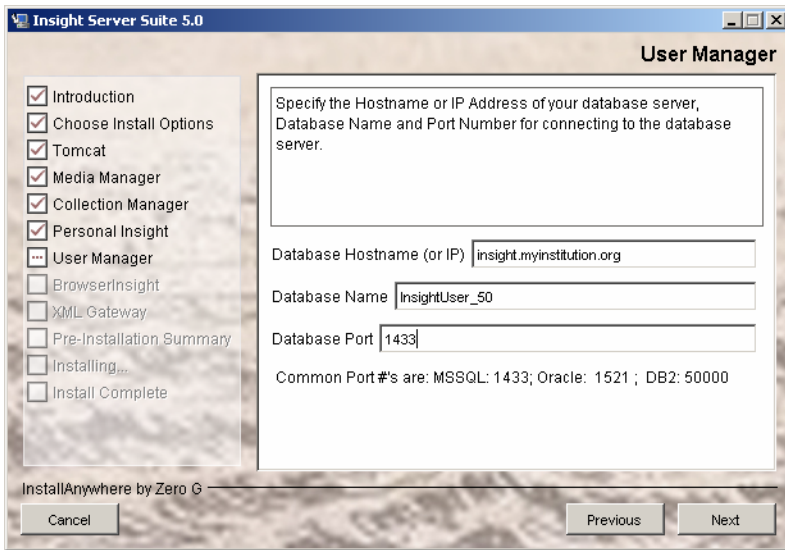
Database Username and Password

Please specify the username and password for your database. This is the username and password that Insight should use to connect to the database.

Testing the Database Connection

The installer will now test the database connection. If it can connect to the database, it will check for an existing installation of Insight.

☝ **WARNING:** the installer will **DROP ALL INSIGHT TABLES** once it has connected, so be sure that you are not installing over an existing version of Insight. (The installer will warn you again before it actually drops any tables.)

Creating the Insight User Manager Database

Once the installer has tested the connection, it will present you with the database creation script window. Click "Run Script" to create the insight tables and indexes.

NOTE: The installer will not let you continue until it has successfully created the database tables.

Once the installer has run, it will either print "SQL Executed Successfully" or print error messages in **RED**. Please review error messages before continuing. Common reasons for errors include:

- there is not enough **space** in the database
- the **tablespace**
- the user does not have **rights** to create tables, indexes and keys
- there are not enough **cursors** available in the Database (Oracle)
- **SQL Authentication** is not enabled (MSSQL). You may also see "**Not Associated with a Trusted SQL Server connection**"

Configuring BrowserInsight

BrowserInsight is the web interface for Insight and runs as a servlet within Tomcat. To configure BrowserInsight, you must specify the User Manager it should use for authenticating users. By default, this will be set to the address specified when you installed earlier.
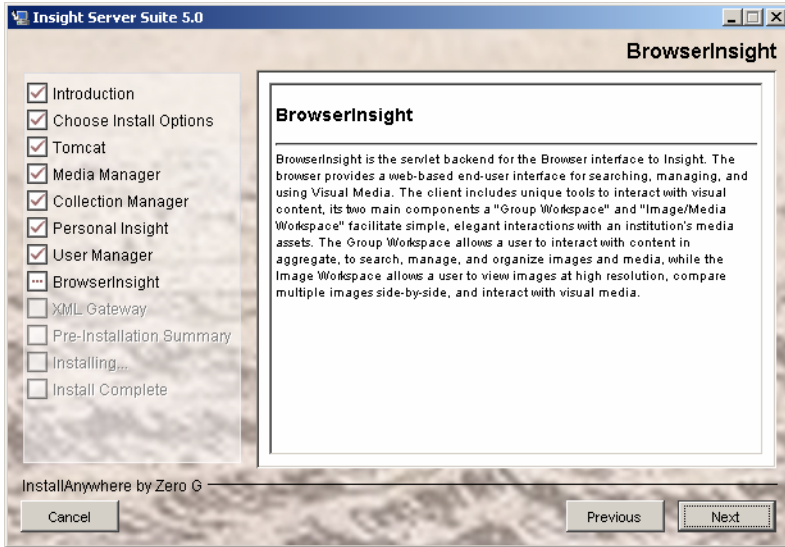
User Manager Address

Please enter your User Manager Address.
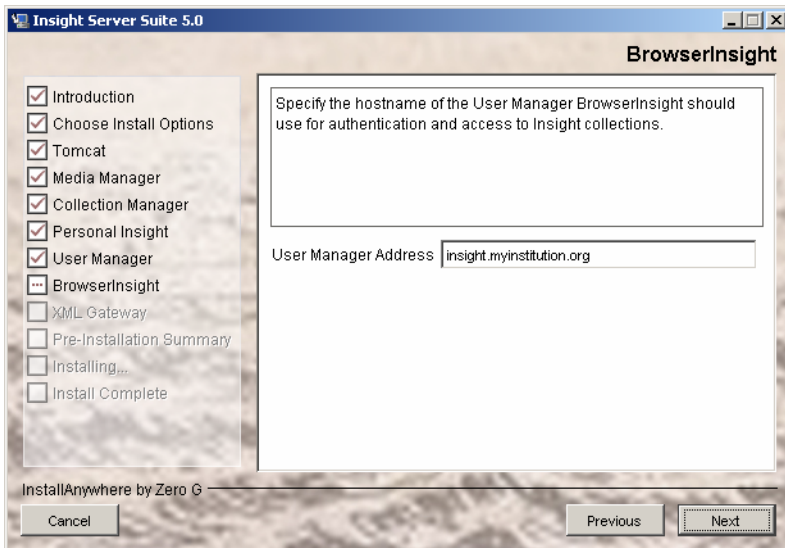
Configuring the XML Gateway

The XML Gateway provides a method for accessing Insight content from any XML-aware application and runs as a servlet within Tomcat. Once the XML Gateway has been installed, you will need to configure with information about how to connect to your User Manager. For more information on configuring the XML Gateway, please see

Configuring the XML Gateway on page 141.
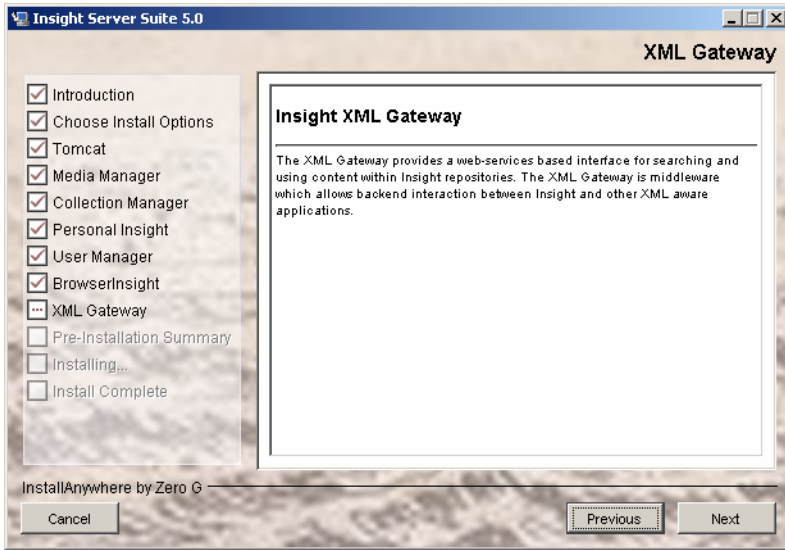
Final Review

Before continuing, please review the installation choices one last time.
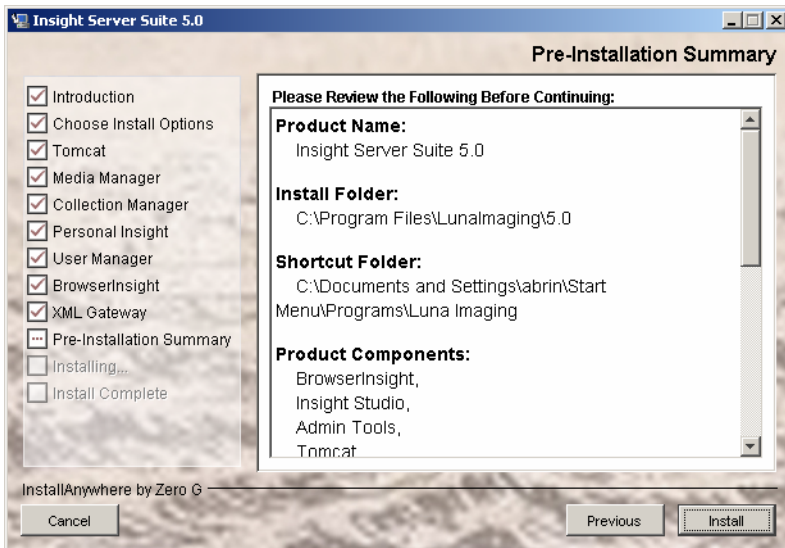
Installing Files

At this point, the Insight Database(s) have been created and configured, but no files have been installed. Press "Install" to install and configure the server components.

Registering Insight and Requesting Your License Key

Insight 6.3 integrates the licensing and registration of the server products into the installer.
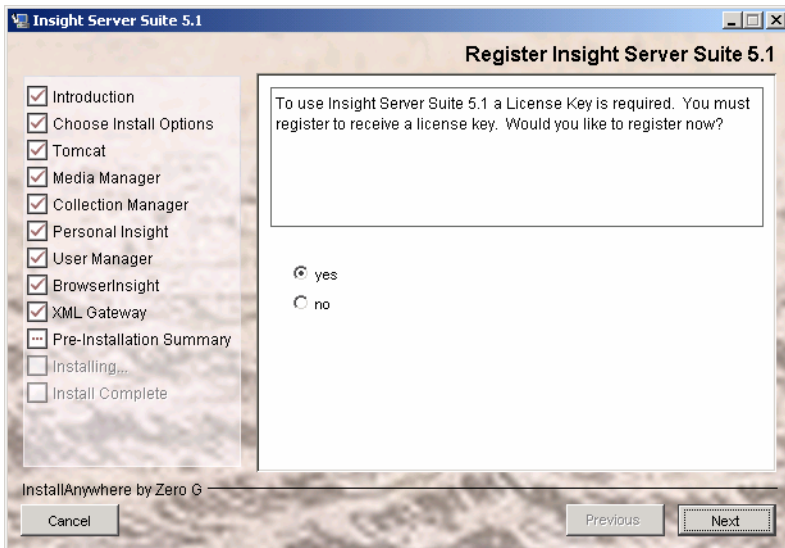
Complete the Registration Form

Registration Status

Once complete, the installer will present you with a registration ID. Luna will email you a license key for all of the products you installed within a short period of time.

Completing the Install

After the installer has finished, each of the installed server components should be started in console mode to ensure that they are working properly. Once you have logged-in successfully and tested the configuration, you will complete installation by configuring each component to run as a service.
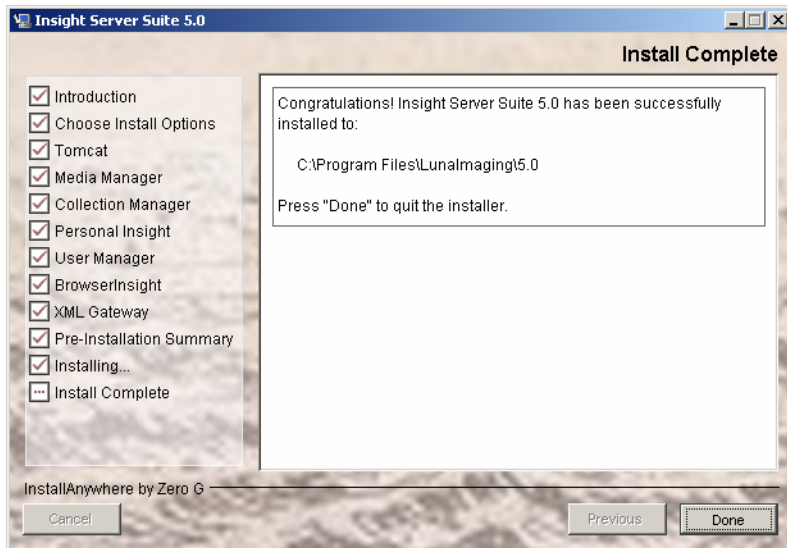
Licensing

If you did not complete registration during the installation and would like to register online, you can access the form at the following URL.

```
http://www.lunaimaging.com/support/register/55.html
```

Once you have completed the form with your contact information. Luna will contact you with a license key for your product. If you have any questions, please contact mailto:licensing@luna-img.com or call (800) 452-LUNA.

Installation Errors

If your installer has an error during the install process you will receive the following panel indicating an error has occurred. Press the Done button, and then go to the installation directory to review the **Insight_Server_Suite_6.3_InstallLog.log**. This log will indicate where a failure may have occurred. If you are unsure about what the error reported, please forward the report to Luna Imaging's Support department: mailto:LunaSupport@lunaimaging.com.

Next Steps for a New Installation

1) Testing the server components and connecting to the Collection and User Managers for the first time with Insight Studio (see page 103).

2) Configuring the server components to run as services under Windows and Linux (please see page 126).

3) Packaging and Distributing the Java Client (please see page 124).

4) Building your first collection (please see the Insight Administrative Guide)

Next Steps when adding a new Collection or Personal Insight Manager

1) Testing the server components and connecting to the Collection and User Managers for the first time with Insight Studio (please see page 103).

2) Adding a reference to a new Collection Manager or Personal Insight Manager in your User Manager.

3) Configuring the server components to run as services under Windows and Linux (please see page 126).

4) Packaging and Distributing the Java Client (please see page 124).

5) Building your first collection (please see the Insight Administrator Guide).

Installing LUNA

Introduction

LUNA is an additive component to Insight. You will need to have a working Insight installation and collection(s) to make full use of LUNA.

LUNA can be installed into any of the supported Insight configurations with the exception of Oracle 8. Add the necessary database and ensure you have a minimum of 512MB of free memory, or the recommended 1500MB of free memory, on your server.

There are two major components to LUNA, the LUNA Publisher and LUNA. Each item requires a database. Follow the same guidelines described in the Insight installation to prepare these databases. Both databases will only store user generated information and will not store contents of the collections. This means the storage requirements for these databases are fairly small. 100MB should be plenty of space.

> Create two databases. One for LUNA and one for the LUNA Publisher

Running the Installer

The LUNA installer, like the Insight installer, requires a GUI. If you are installing on Linux or Solaris, you will need X Windows to run the installer or other GUI interface.

Start the LUNA installer on your system and follow the prompts described in the following section.

Serial Number

The install requires a Serial Number to continue the installation process.

As a licensed institution, you should have been issued one. If not, contact our support department to obtain a valid licensed Serial Number.lunasupport@lunaimaging.com
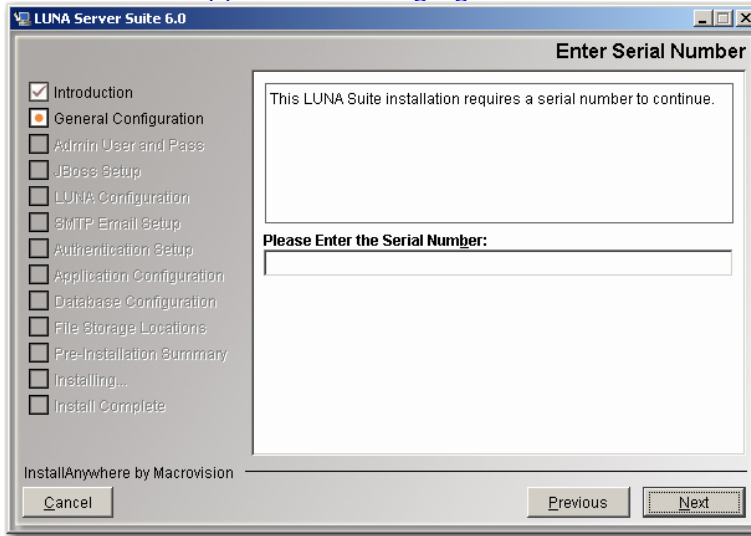
LUNA Application Configuration

If this is the first time you install LUNA, then you must choose the first option "Configure LUNA Applications and create database tables".

If this is a subsequent installation and you just want to **upgrade** or reconfigure the LUNA application without deleting any user generated information, then choose "Upgrade or Reconfigure LUNA (Do not create db tables)".

NOTE: If you are upgrading, Stop Jboss before running the installer

LUNA and the LUNA Publisher are deployed using Java WAR files. This option will just configure the WAR file and deploy it.
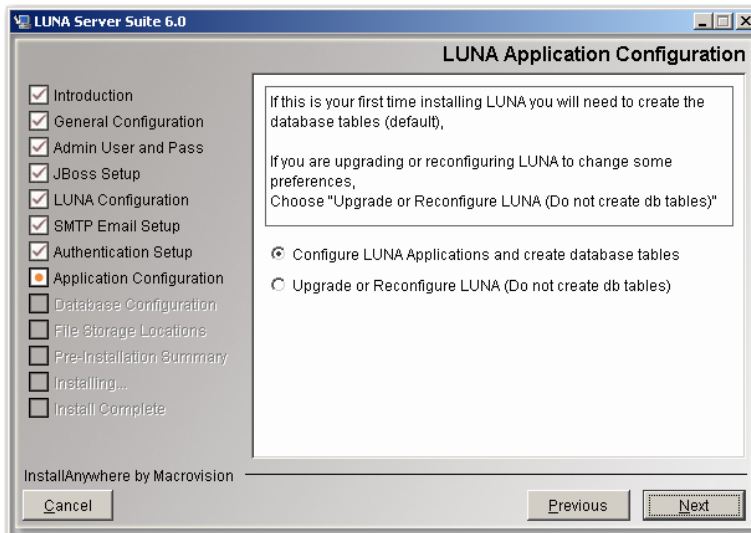
Choose Install Set

For the Initial installation, you will generally choose Typical. This will include all system components.

- LUNA
- LUNA Publisher
- JBoss
- Tomcat (New in 6.2.1)
- Media Manager & Media Processor
- Administrator Tools
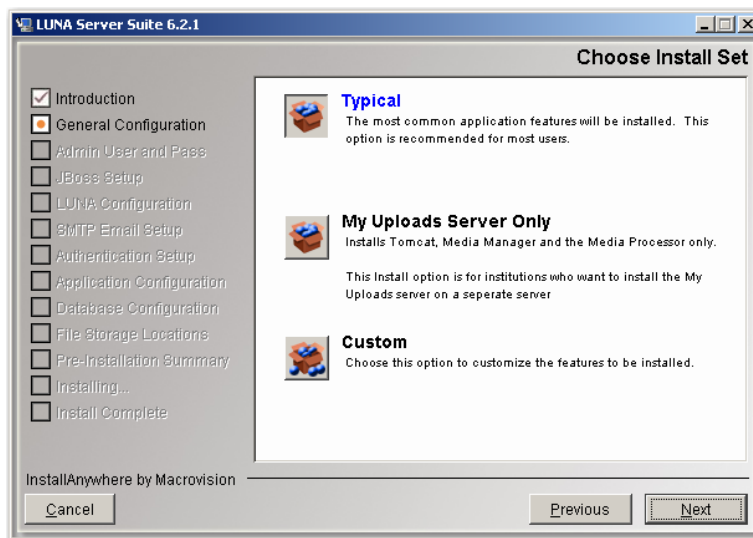
My Uploads Server Only

As of version 6.2.1+, LUNA supports uploading of end user's images and content. This feature requires a Media Manager and the Media Processor components.

Since these components place image processing on the server, you may want to separate this activity to another machine depending on the level of use expected.

If you choose to install the My Uploads Server independently, then you should install this component first. During the install of the LUNA component, you will be asked the server name and port of your My Uploads server.

This will install a Media Manager, Media Processor and Tomcat.

Custom Install

For subsequent installations, you may wish to choose to install a specific component. You can choose to install any of the following system components.

- LUNA
- LUNA Publisher
- JBoss
- Tomcat (New in 6.2.1)
- Media Manager & Media Processor
- Administrator Tools
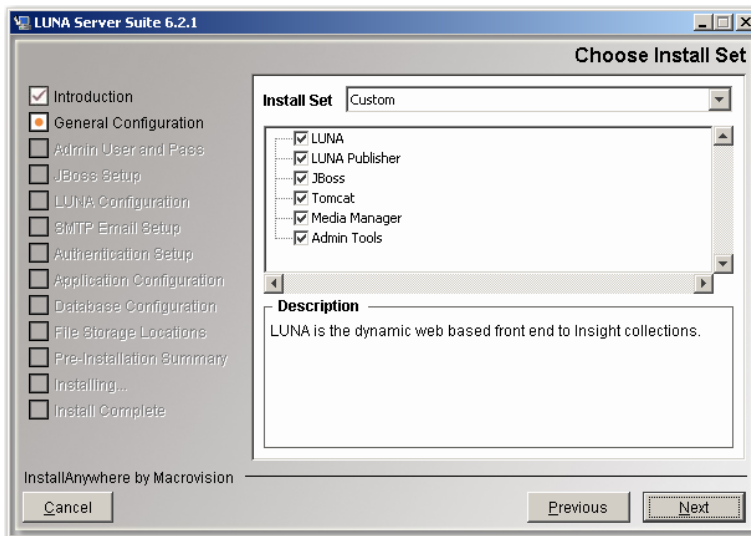
Install Location

This will be the base of all the LUNA components selected.
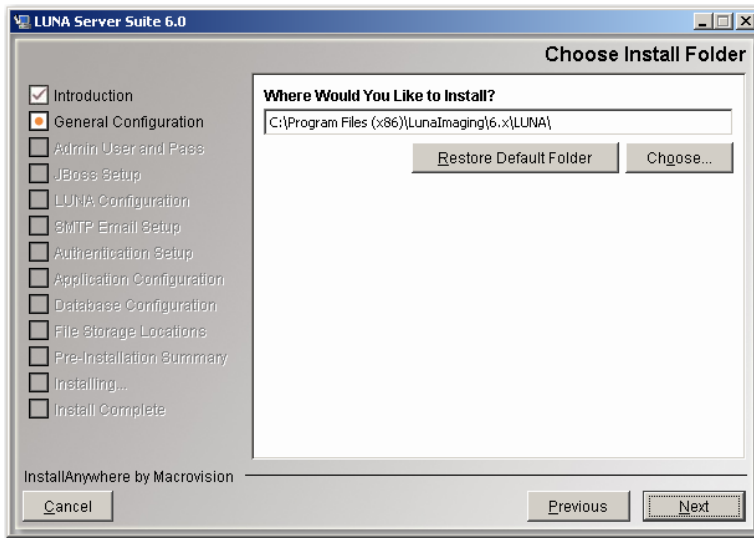
For Upgrade or Reconfigure Only
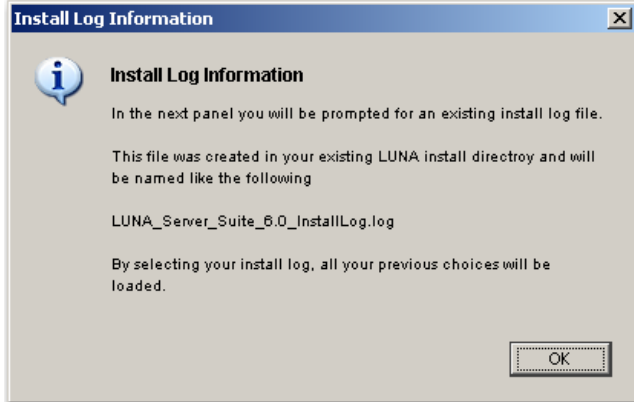
Since you are upgrading, your previous install log can be used to provide the installer with the same choices that you made the last time you installed.
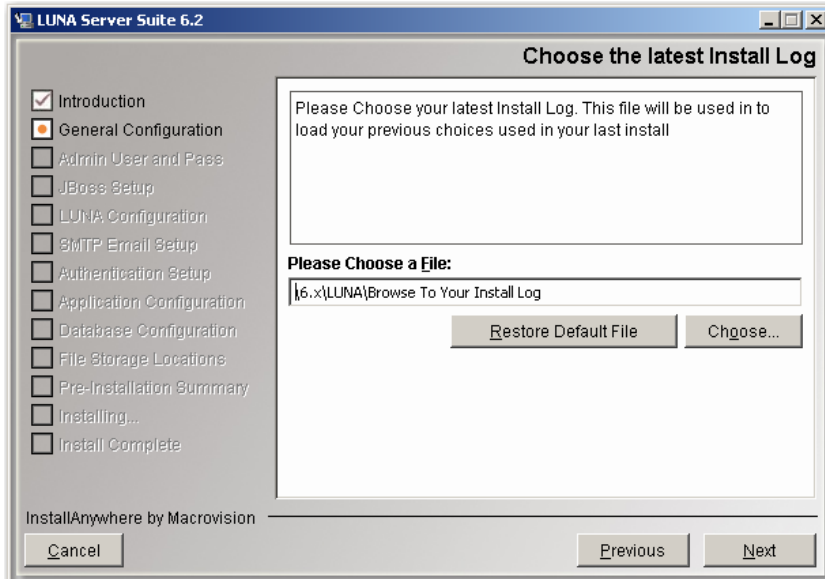
Choose your Install log. This should be located in the root directory of where you installed LUNA. The name should be something like LUNA_Server_Suite_6.0_installLog.log.

For Upgrade or Reconfigure Only
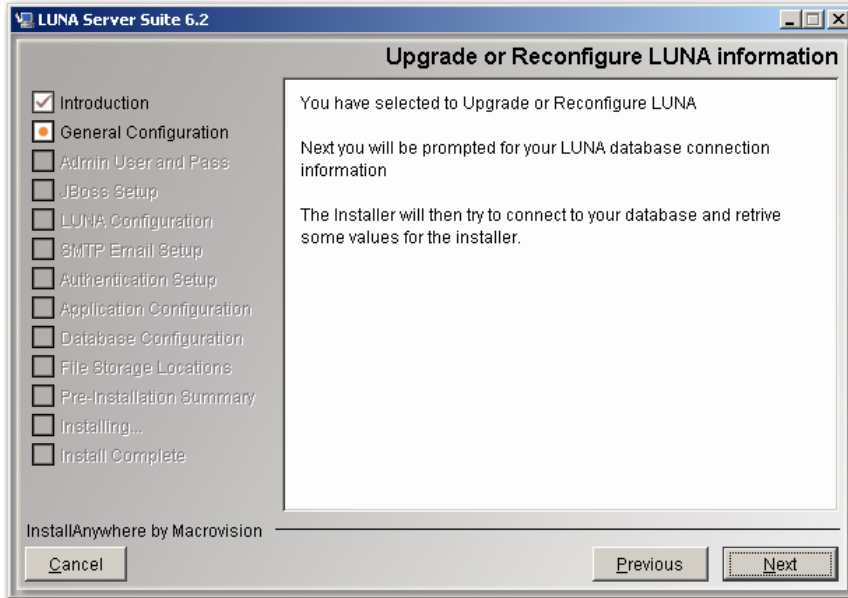
Since you are upgrading, you will now be asked how to connect to your database. Once connected, the installer will read some of your Application Configuration table to assist you in the rest of the upgrade. See Choosing a Database Type for more information on making choices for this section.
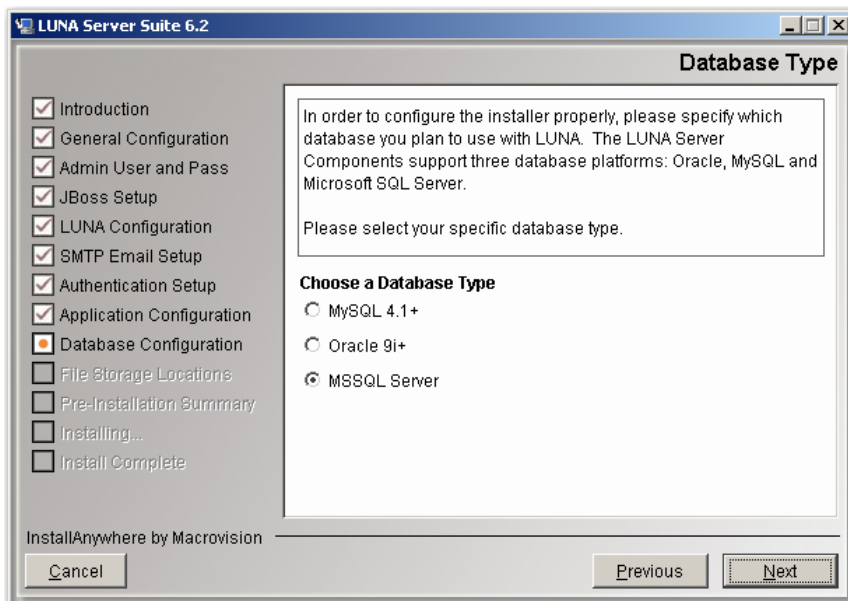
Specifying an Administrative Username and Password for LUNA

LUNA requires you to specify an administrative username and password. This username and password will be used for authentication within the Administrator Tools and for accessing the JBoss management consoles. Users with this username and password have access to tools that can manage LUNA collection access and Credentials and modify LUNA's configuration, so be careful who it is shared with.

 NOTE: This password is not encrypted. Do not use your network or system administrator password.
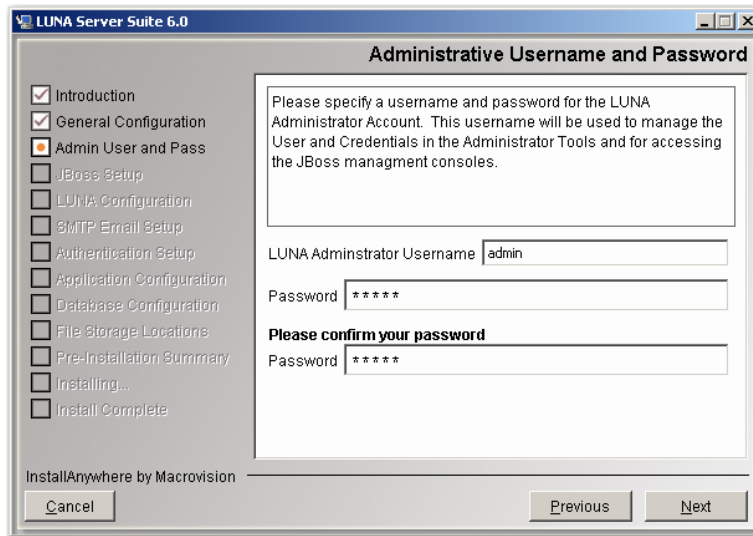
Institution Name

This name is used on the LUNA Collections page to indicate the owner of the local LUNA Collections.

The format is:
<institution name> Collections
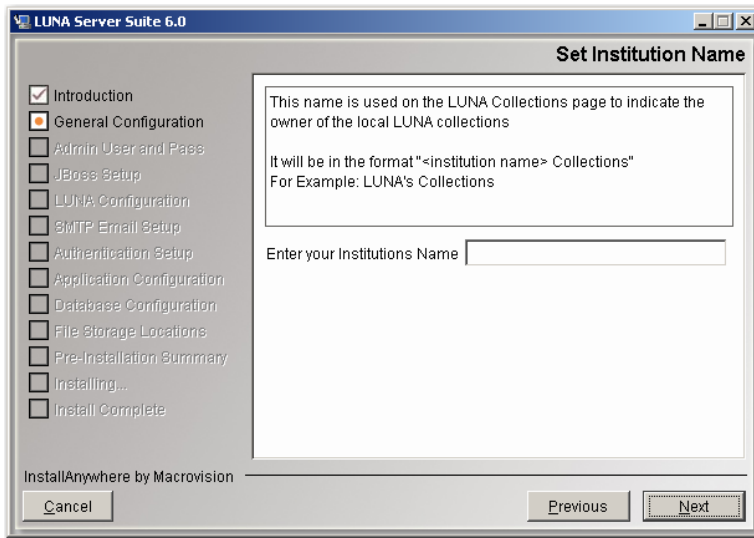
In the example below, it is set to **Luna**.

JBoss and Tomcat Setup

The LUNA application and LUNA Publisher are served via JBoss or Tomcat. The installation will take care of all major configurations with JBoss and Tomcat but you may choose to select different ports for the application to run on.

Note: You are also choosing how much memory to allocate to the application. Make sure this much memory is freely available or the server will have out of memory errors.
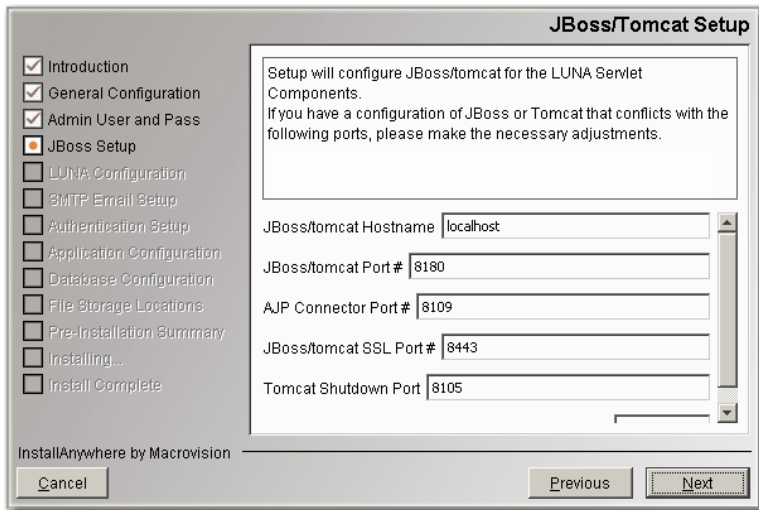
My Uploads Media Manager and Media Processor

My Uploads allows users to upload image and various other file types from their desktop directly into LUNA.

This address must be available to all end users who will be accessing this feature.

Important! This is not your Insight Media Manager

Typically this will be the same address and port as your LUNA and LUNA Publisher but it can be installed on a different server.
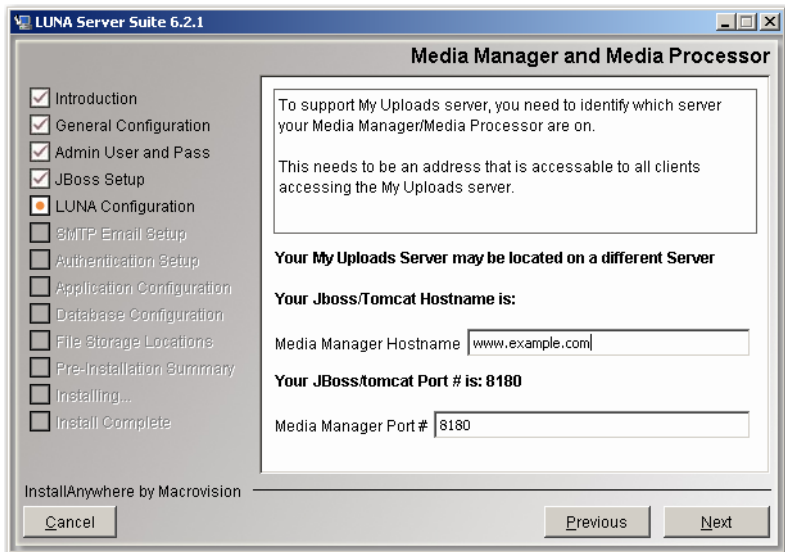
LUNA Configuration

This section allows you to choose how the LUNA application is generally configured.

Insight User Manager Address

LUNA can use your existing Insight User Manager to grant access to your collection resources. You do not need to create the accounts. As a user is logged in, the username is passed to the LUNA system (not including the password) and the user is granted access to the same collections that they had access to in Insight.

Header Graphic Hyperlink

You have the option to make a link in the Header Graphic go to a specific http address. By default the address will return to the LUNA collections Page (/luna/servlet).

This feature is useful if you want to create a launch page for the LUNA application and from LUNA the user can return to the launch page.
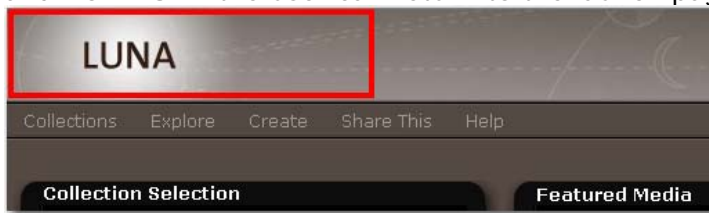
Personalized Footer

You have the option to add a personalized Footer in LUNA. This footer will be placed at the bottom of all LUNA pages.

Just create a simple web page with a black background and place it on a web server.

Click here to see a [Luna Footer Example](#)
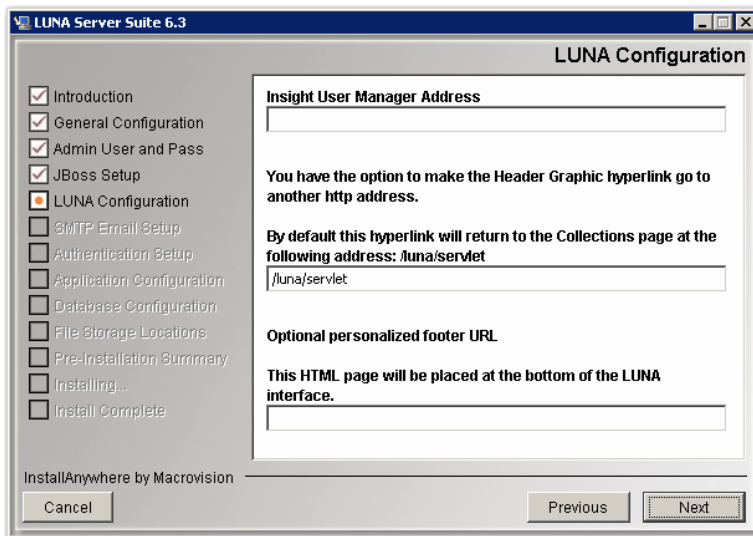
OAI-PMH Setup

If you would like to share some of your collections with OAI-PMH then enter a repository name and an Admin Email account. If not leave these fields blank.
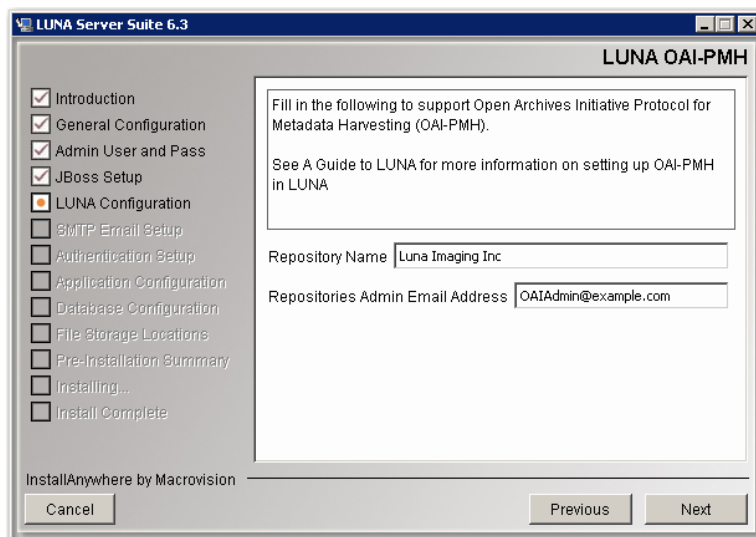
Enable Google ads

If you would like to place ads on the content of your site to generate potential revenue to support your collections, just check the ads box. The ads will be placed on the right side of the application. Go to http://www.google.com/intl/en/ads/ to sign up for an AdSense account. You will be prompted later in the installation to provide additional information specific to your AdSense account.

Enable End User Registration

LUNA has built in end user self management. If you would like your end users to manage their own accounts (allowing them to create Media Groups, presentations and search External Media), select this item. Later in the configuration you will be asked for your email server information for outgoing messages.

Access LUNA Commons Collections

Selecting this option indicates you want to receive free collections from the LUNA Commons. You will be required to provide additional information later in the installation process.

Share Select Collections with the LUNA Commons

Selecting this option indicates you want to share some of your collections with the LUNA community. You will be required to provide additional information later in the installation process.

Enable SSL for Login

To prepare your system to support SSL during login, select this item. You will also need to install a certificate to implement the SSL login capabilities.

Enable Google Analytics

Prepare your system to support Google Analytics. You will also need to have a Google Analytics account to make use of this option. See http://www.google.com/analytics

Include File Data at the bottom of the Media Information panel

This option allows you to disable the File Data contained at the bottom of the Media Information Panel. To show this information check the box, uncheck to hide it.
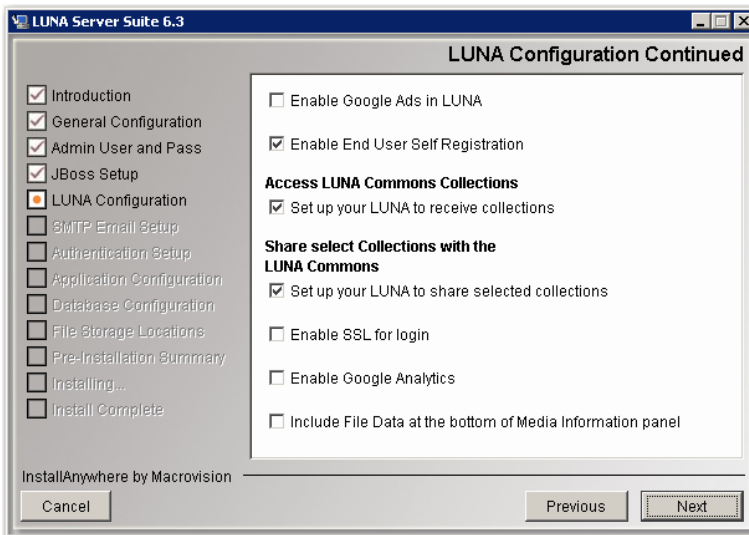
Facet Threshold

The Facet threshold determines the minimum number of items required before a facet value is displayed. If you want all values to display, set the value to 0.

Please note, this will affect the display performance of the Categories page. The lower the number the more values will need to load per category.

The default for this setting is 5
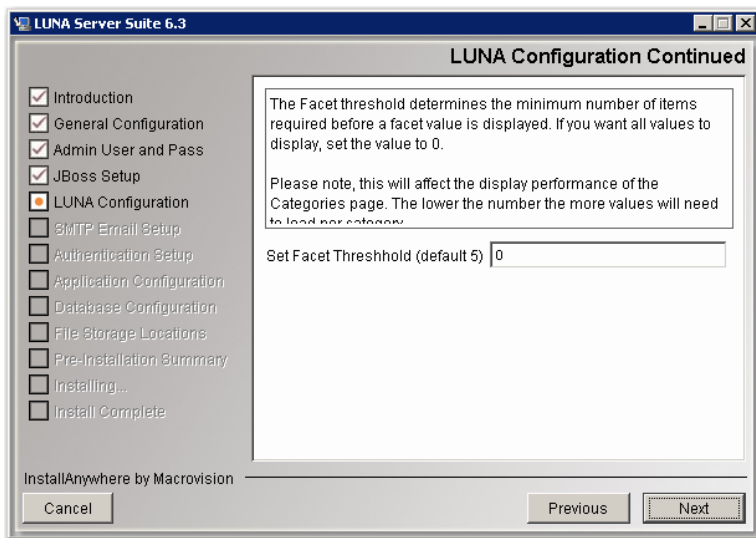
Access LUNA Commons Collections

See what is in the LUNA Commons, http://www.lunacommons.org/

LUNA Commons Server Address

To access the LUNA Commons, you may need to enter the appropriate Community Commons server address (the default will work unless told otherwise).

Enter your Institution's Short Name and your Serial Number

When you were issued your Serial Number, you were also issued a Short Name for your institution. This Short Name and your Serial Number are your keys to access the LUNA Commons collections.

Enter a string of letters and numbers with no spaces or special characters. This string will be used in the LUNA Publisher to trigger a download of the LUNA Commons content.
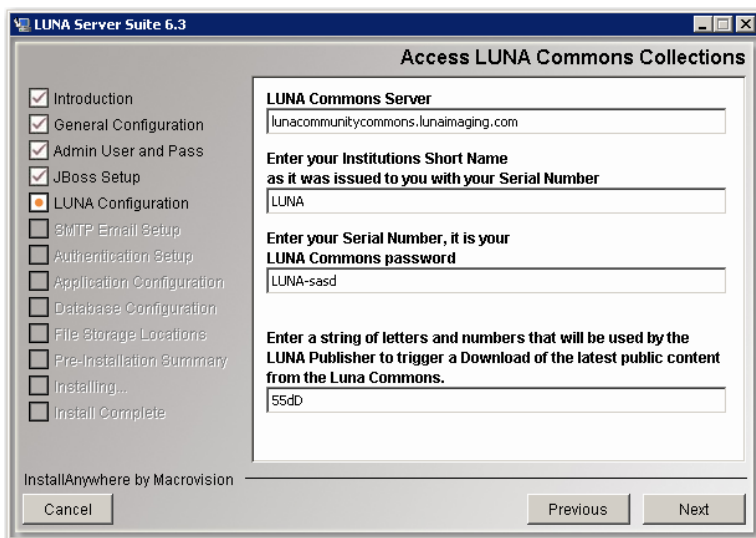
Share Select Collections with the LUNA Commons

With LUNA you can share some of your collections with the larger LUNA Community.

1. Enter Your LUNA Commons sharing URL.
   - This is the address to your LUNA server. The LUNA Commons Server will use this address to retrieve the collections you decide to share.
2. Enter Your Access ID and Access Password
   - This will be used by the LUNA Commons server to gain access to your selected LUNA collections.
   - By default this has been set to your institution's Short Name and Serial Number.
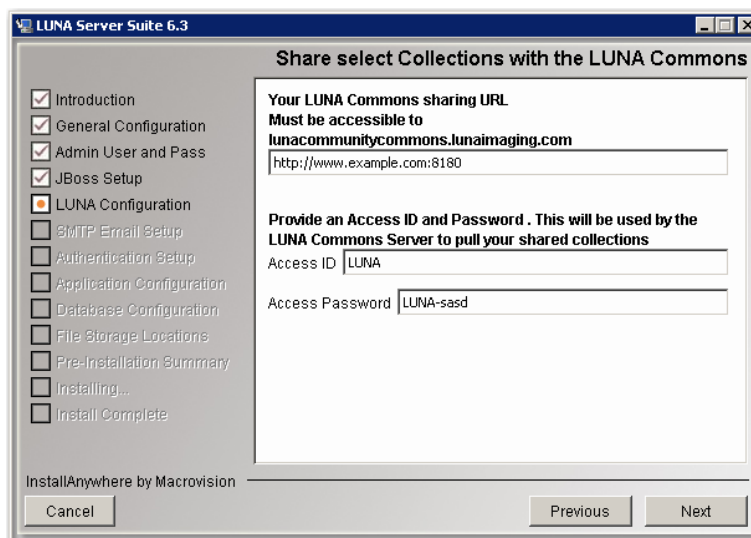
3. Create a new LUNA account
   - This account will be used to define what collections are being shared with the LUNA Community.
   - Once you have collections in LUNA, you can use the Admin Tools to assign collections to the Content Distribution Credential.

4. Enter a string of letters and numbers with no spaces or special characters. This string will be used in the LUNA Publisher to trigger the creation of your public content that you will share with the LUNA Commons.
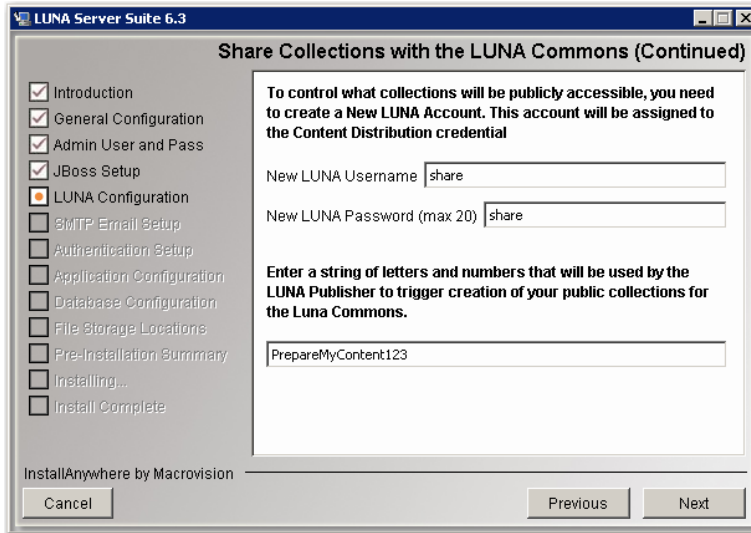
Google AdSense Configuration
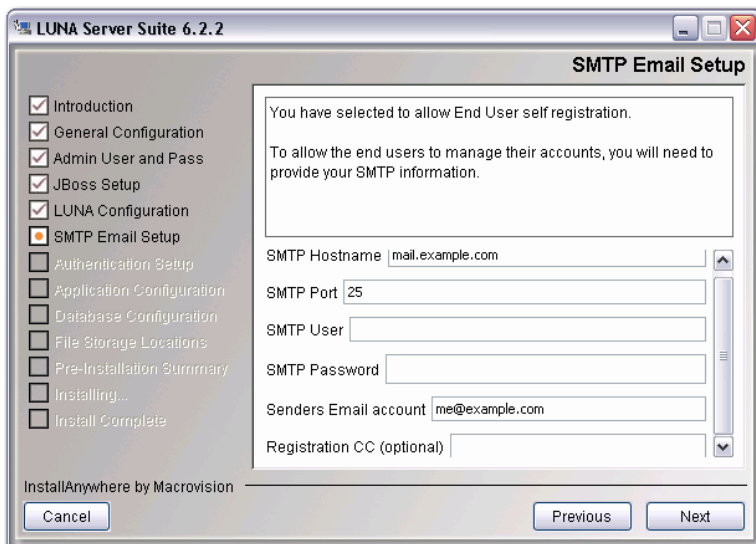
If you are seeing this screen, then you have selected to enable Google ads on your site. You will need to provide specific information to enable this feature properly. During your account setup in AdSense, you were provided information appropriate to this feature.
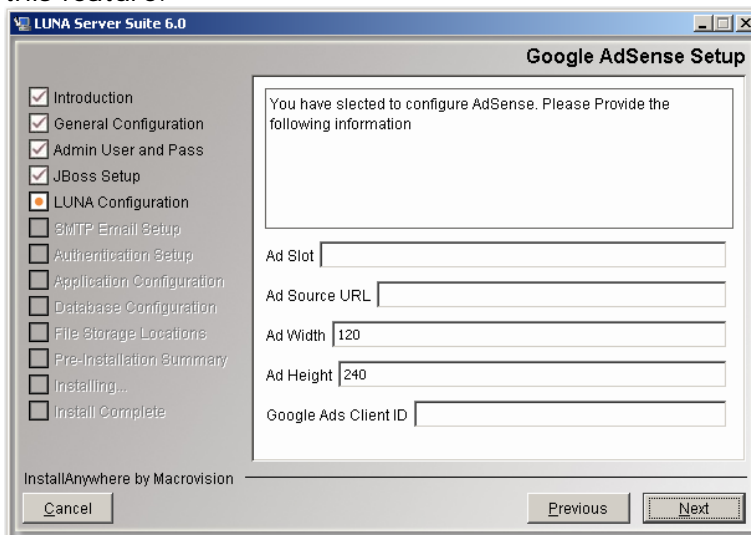
SMTP Mail Server Setup

If you selected end user registration, then fill in the following form.
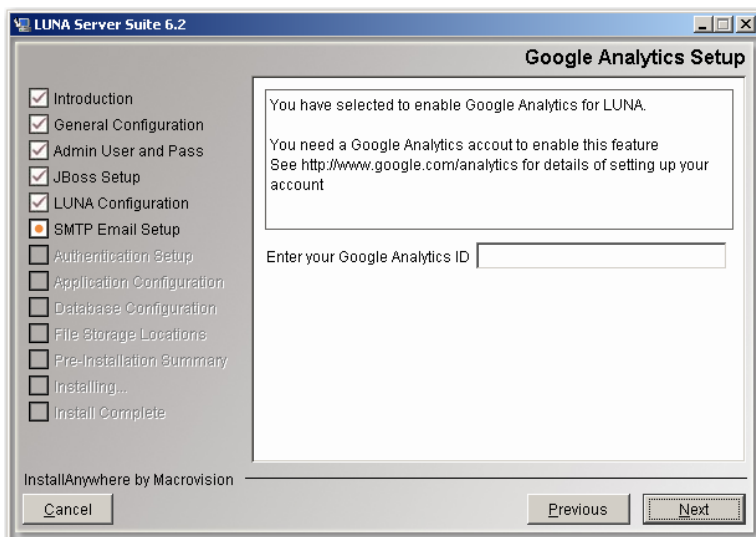
- Your email domain address
- SMTP Port Number
- SMTP User (optional)
- SMTP Password (optional)
- Senders email account (the account end users will respond to if necessary)
- Registration CC (optional) (will cc this email account on any self registration)

Google Analytics Setup

If you selected Google Analytics, you will need to enter your Analytics ID here.

LUNA Publisher Maintenance Setup

The information supplied in this panel is used when LUNA needs to be placed into a maintenance mode so that you can perform server adjustments or when the LUNA Publisher needs to replace the Lucene index with an updated version.

The maintenance mode is invoked via a URL with a security key. We suggest making the security key obscure by using only web friendly characters and letters.

<div style="background-color: yellow">
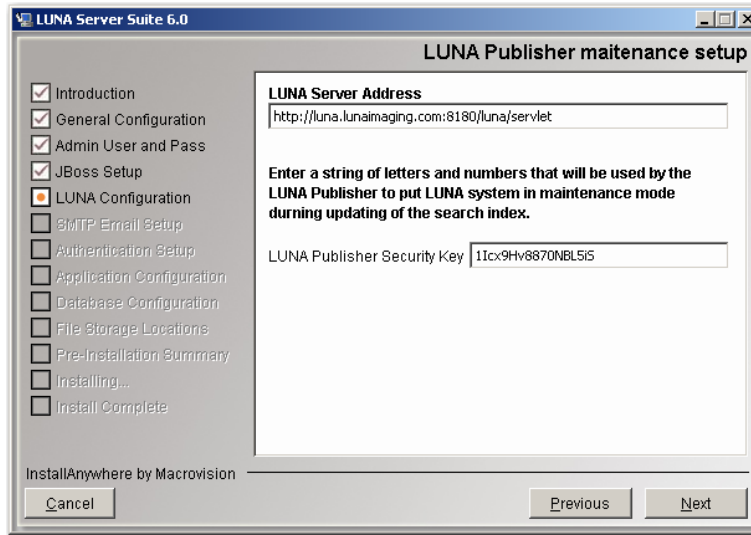
NOTE: If you are Upgrading or Reconfiguring, then skip to LUNA Graphics URL

</div>

Choosing a Database Type

The installer is designed to connect to your database server and to create database tables, fields and indexes for your LUNA Server and LUNA Publisher. Please choose the database type you wish to use. The information you identify here will be used to configure LUNA.
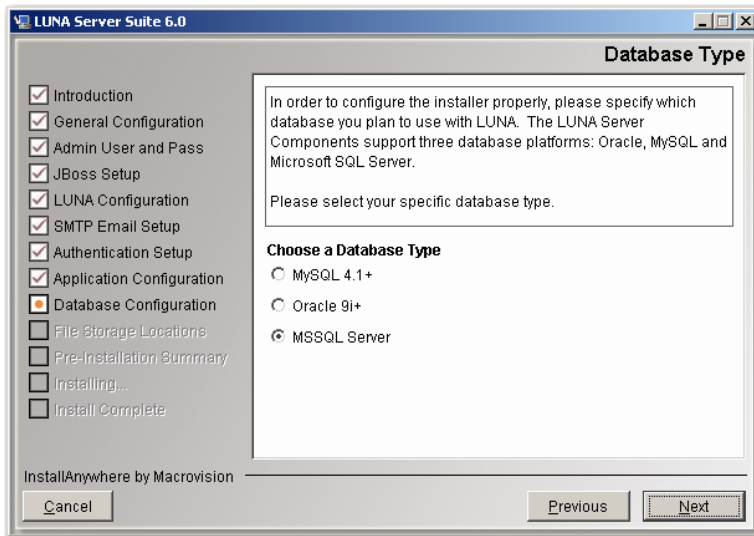
LUNA Database Information

Provide the information necessary to connect to your database, including the hostname, database name (SID Name if you're using Oracle), and database port. The installer will offer default values based on information provided earlier. Review the defaults (and change them as needed).
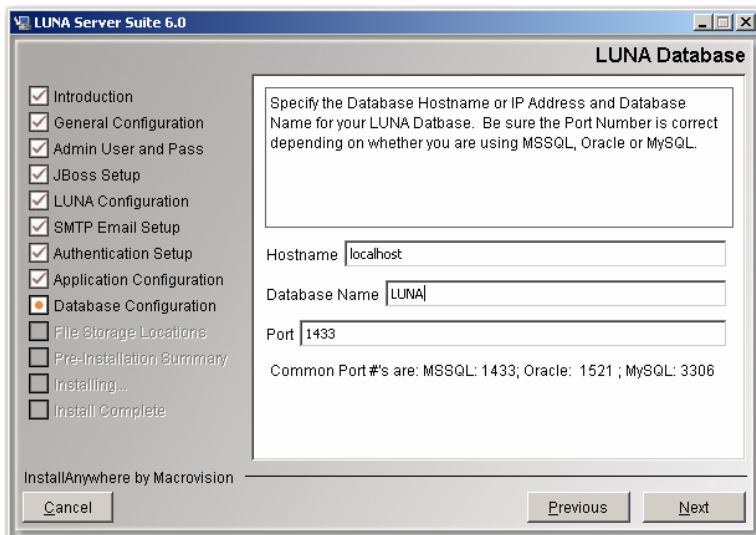
Database Username and Password

Please specify the username and password for your database. This is the username and password that LUNA should use to connect to the database.
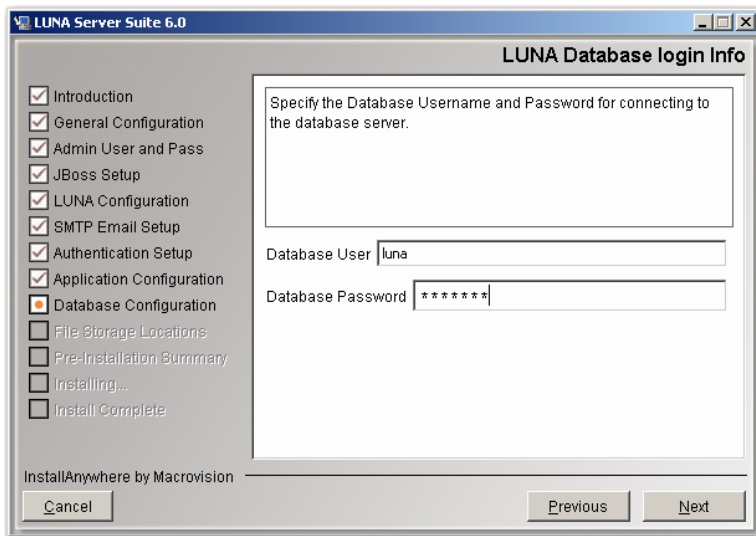
> ⚠ **WARNING:** the installer will **DROP ALL LUNA TABLES** once it has connected, so be sure that you are not installing over an existing version of LUNA. (The installer will warn you again before it actually drops any tables.)

Creating the LUNA Database

Once the installer has tested the connection, it will present you with the database creation script window. Click "Run Script" to create the LUNA tables and indexes.
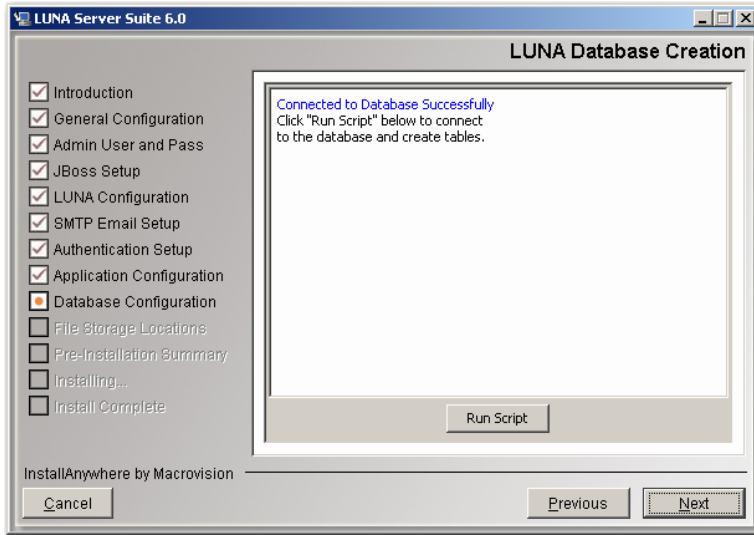
LUNA Graphics URL

The LUNA Graphics URL is used to access LUNA theme header graphics. Just make sure this URL is externally accessible from the installed machine. Do not use localhost or any other internal domain unless you know for sure the content will not be used outside of your institution.
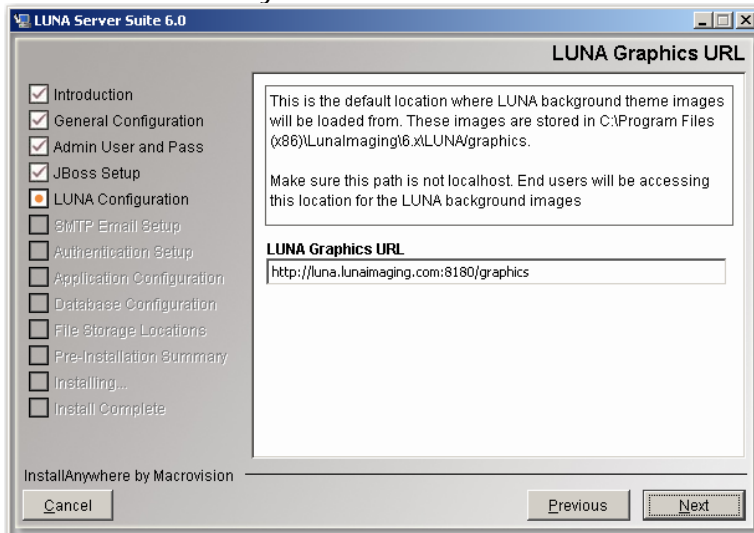
LUNA Publisher Database Information

Provide the information necessary to connect to your database, including the hostname, database name (SID Name if you're using Oracle), and database port. The installer will offer default values based on information provided earlier. Review the defaults (and change them as needed).
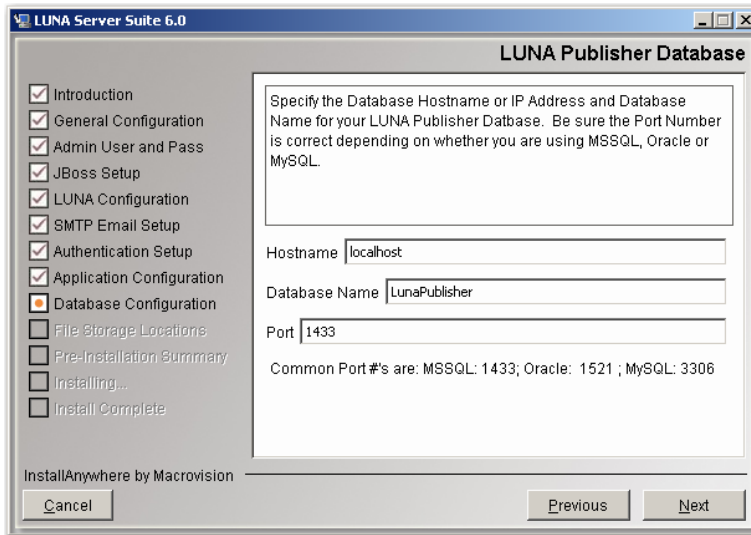
Database Username and Password

Please specify the username and password for your database. This is the username and password that LUNA Publisher should use to connect to the database.
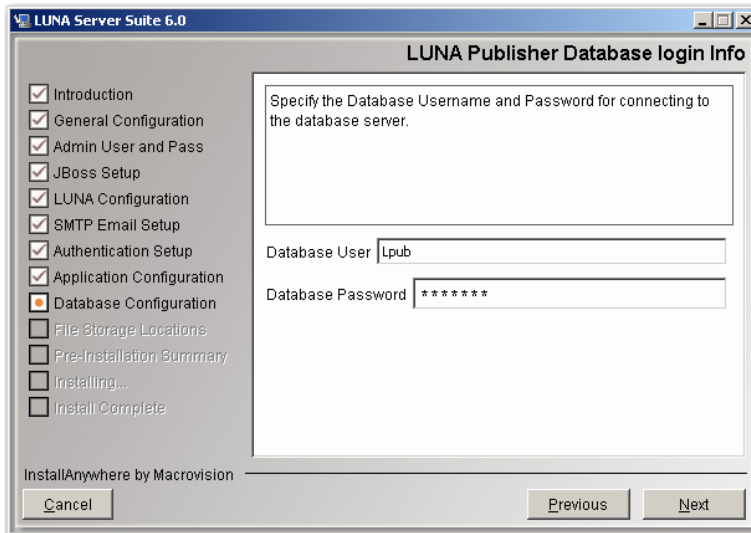
> **WARNING:** the installer will **DROP ALL LUNA Publisher TABLES** once it has connected, so be sure that you are not installing over an existing version of LUNA Publisher. (The installer will warn you again before it actually drops any tables.)

Creating the LUNA Publisher Database

Once the installer has tested the connection, it will present you with the database creation script window. Click "Run Script" to create the LUNA Publisher tables and indexes.
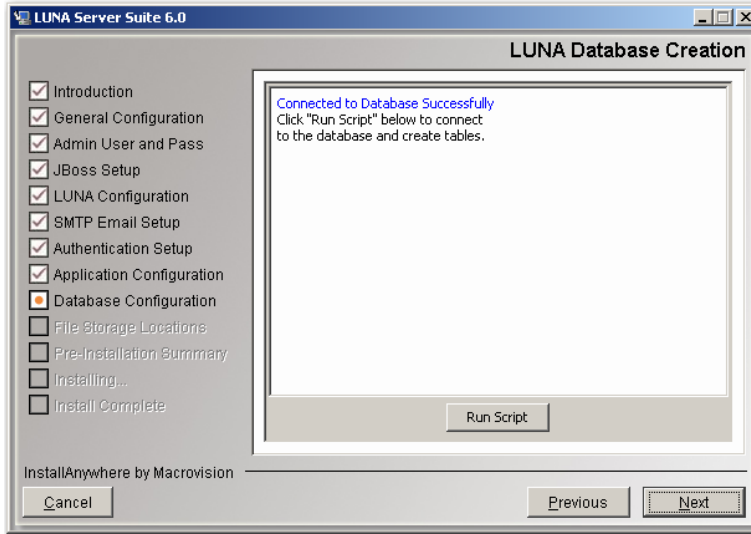
Lucene Index Folders

LUNA uses Lucene to search for content in your collections. These indexes can add up to hundreds of megabytes depending on the content you have in your collections. 160,000 objects takes about 400MB but this is entirely dependent on the size of your collections that you are accessing. So choose an appropriate location that can grow with your collections.
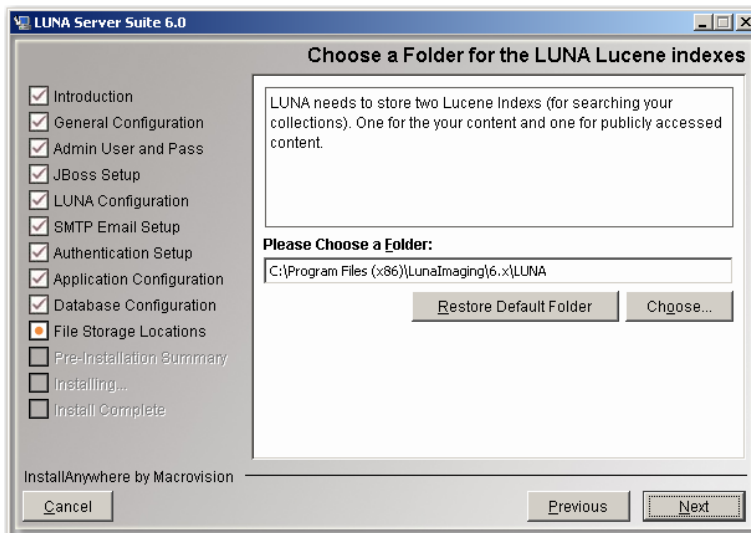
LUNA Temp Files Location

During the use of LUNA, content is exported and this location is used to store that information temporarily.
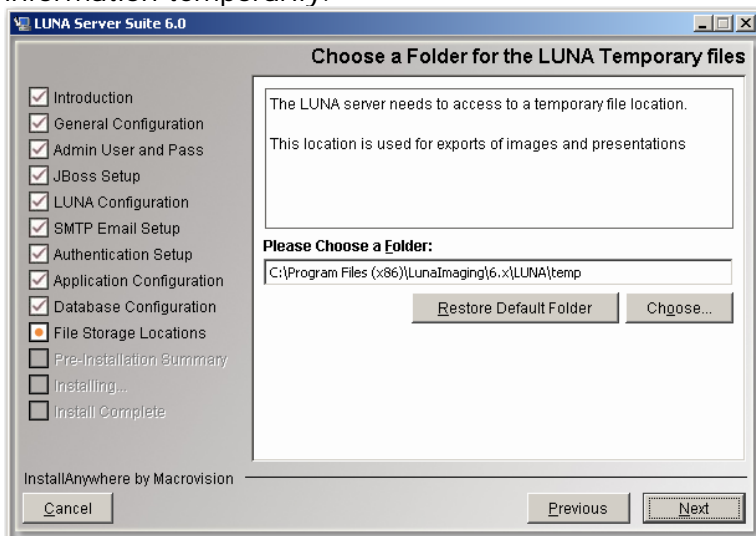
LUNA Storage

LUNA and the LUNA Publisher need space to store information extracted from Insight collections and a place to create the Lucene indexes during the publishing process. LUNA also uses this area for content distribution with the LUNA Commons Server. This area can easily grow to several gigabytes.
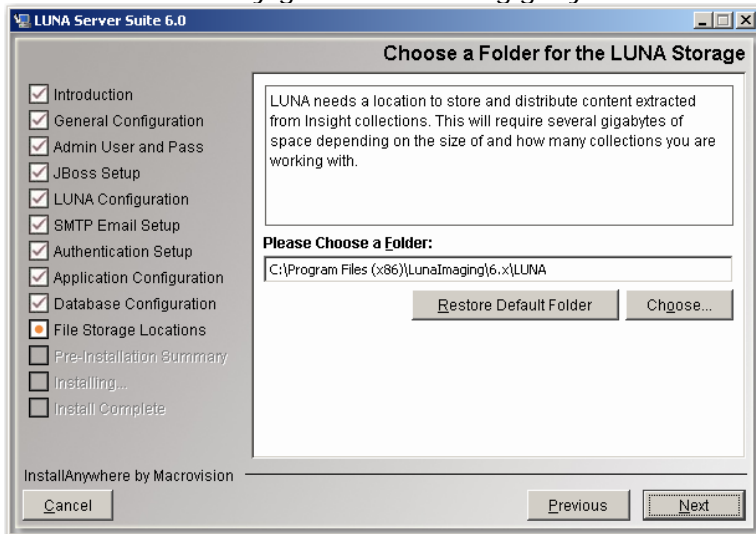
Media Manager for My Uploads Storage Location

The My Uploads server needs a location to store the content that is uploaded to it. Depending on the expected level of use, choose a storage location.
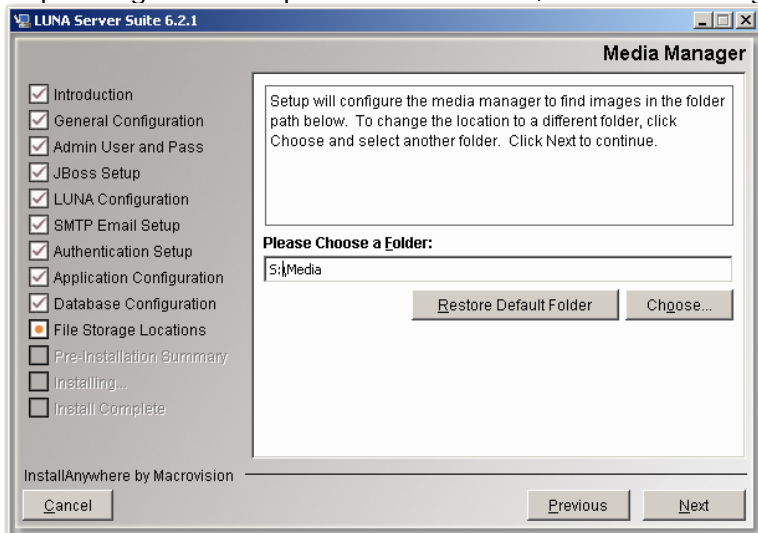
Start the Install Process

This may take several minutes depending on the server speed and how you are accessing the installer.
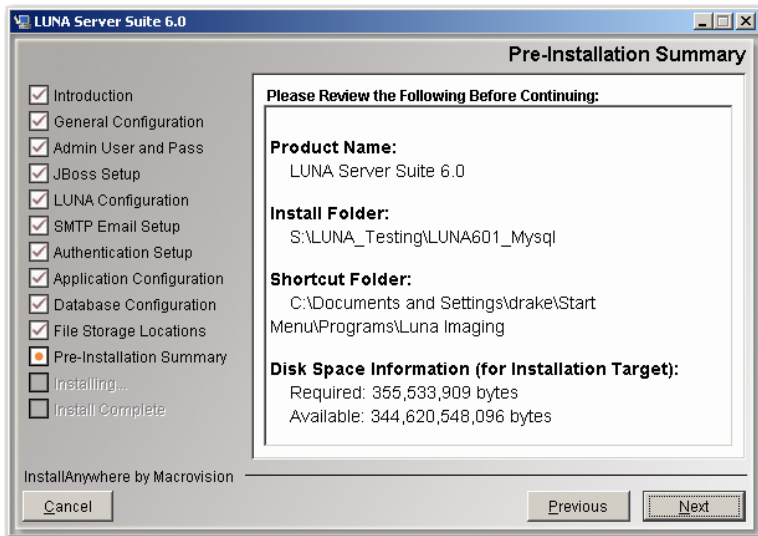
Before Installing LUNA and the LUNA Publisher you will see this **IMPORTANT** message.

IMPORTANT Information before you Install

IMPORTANT

The Installer will now backup any existing LUNA and LUNA Publisher configurations. This backup will be placed in S:\LUNA_Testing\63\MSSQL\luna_backups

With any upgrade, you should perform your own backups of the filesystem and databases before installing any new version.

IMPORTANT LDAP AUTHENTICATION INFORMATION

As of LUNA version 6.3 your authenticator settings are being preserved during the upgrade process. The settings are now storred in a file called luna-security.xml at the same location as the applicationContext.xml

[Back] [OK]

****IMPORTANT NOTE Updated in 6.3 ****

The Installer will now backup any existing LUNA and LUNA Publisher configurations.This backup will be placed in <USER_INSTALL_DIR>/luna_backups

With any upgrade, you should perform your own backups of the file system and databases before installing any new version.

IMPORTANT LDAP AUTHENTICATION INFORMATION

As of LUNA version 6.3 your authenticator settings are being preserved during the upgrade process. The settings are now stored in a file called luna-security.xml at the same location as the applicationContext.xml

Starting LUNA and the LUNA Publisher

You can start these two servers by starting the Tomcat or the JBoss server.

Go to:
<Install Directory>/tomcat/bin
or
<Install Directory>/jboss/bin

For Tomcat:

We have also supplied you with our standard java service wrapper version for starting and stopping the application:
start_jboss.bat on windows and start_tomcat.sh for Linux and Solaris will start tomcat in a console mode.

If you would like to start tomcat as a service on windows, we have supplied you with the install_as_service.bat file.

If you want to run jboss in the background using the java service wrapper on Linux or Solaris, you can start it with:
./tomcat_service.sh start

The script has the following options:
console | start | stop | restart | status

For Jboss:

You can use the standard jboss supplied run scripts run.bat or on Linux and Solaris you can start the servers by executing the run.sh script. If you want to run this in the background we suggest running:
nohup ./run.sh &

We have also supplied you with our standard java service wrapper version for starting and stopping the application:
start_jboss.bat on windows and start_jboss.sh for Linux and Solaris will start jboss in a console mode.

If you would like to start jboss as a service on windows, we have supplied you with the install_as_service.bat file.

If you want to run jboss in the background using the java service wrapper on Linux or Solaris, you can start it with:
./jboss_service.sh start

The script has the following options:
console | start | stop | restart | status

Once started go to http://www.example.edu:8180/

You should see something like one of the following:
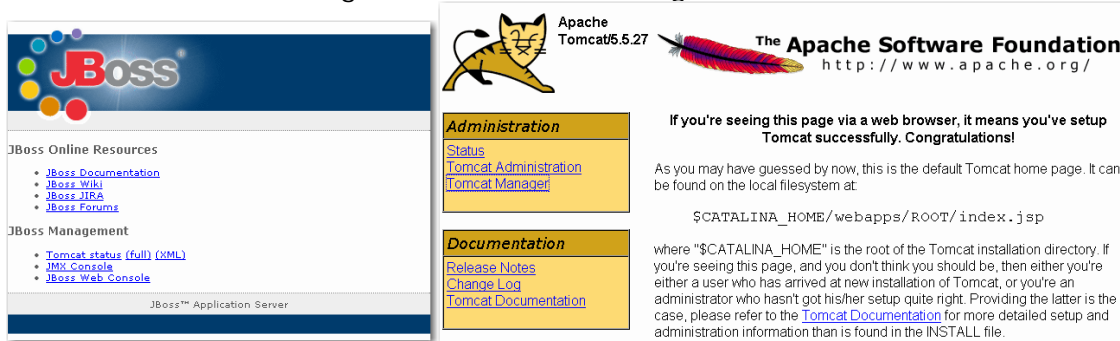
The LUNA application will now be available at http://www.example.edu:8180/luna/servlet and it will look similar to the following page:
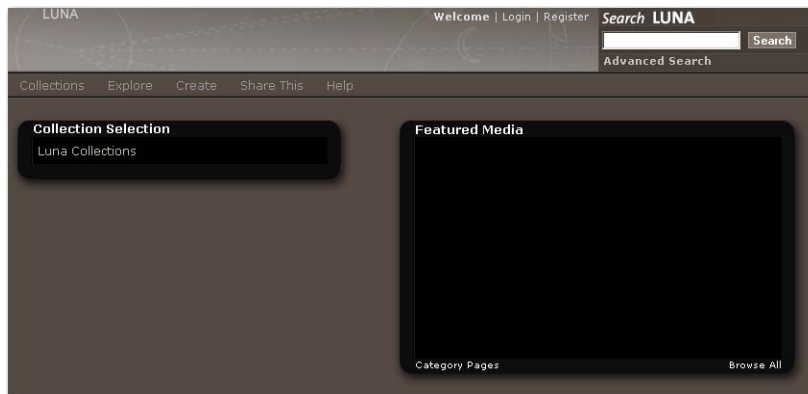
My Uploads Server testing

Testing the Media Manager

In your browser, go to http://localhost:8180/MediaManager/srvr

You should get a message like the following:

Testing the JPEG2000 Decoder

http://localhost:8180/MediaManager/jp2ktest

You should get a page like the following:

If you see any errors, see the **Testing the JPEG2000 Decoder & the Media Manager** in the Install and Configuration Guide.

Adding Insight Content to LUNA

Introduction

It's fairly easy to add Insight content to LUNA but first you should know what LUNA is and what it is not.

LUNA is a search interface and a place to work with media content. LUNA is not the repository of the content. LUNA allows the end user to select, organize and make use of various image and media content.

As of version 6.2.1, LUNA supports three kinds of source content. You can access and use Insight content and you can access and use content from Flickr and content from your own desktop using the My Uploads feature.

Insight Studio is used to prepare content for LUNA using the LUNA Publisher and the LUNA theme header graphic creator. These tools are available from the Insight Studio Task Menu.

> **Note:** The preferred method to upload a Header Graphic is now located in the LUNA Publisher NOT Insight Studio. See section on the LUNA Theme Header Graphic

> **Note:** You do not need to upgrade your Insight Collection Managers to work with LUNA. LUNA will work with all 5.x Insight Collection Managers.
>
> The only suggested adjustment you need to make is to update the language bundles on the Insight User Manager. This will ensure that you see the correct text labels while using the 6.2.2 Insight Studio tool.

The LUNA Publisher

So what does it mean to add content to LUNA? Well it's pretty simple; it means extracting all descriptive data from Insight and placing it into an index that LUNA uses to search. It also sets up and provides LUNA with information to connect to the Insight collection.

The LUNA Publisher is the tool you use to do the following:

- Schedule when and how often the LUNA collection index is updated from the Insight Collection.
- Setup LUNA specific characteristics

- o Choose Media Summary fields (provides additional roll-over information).
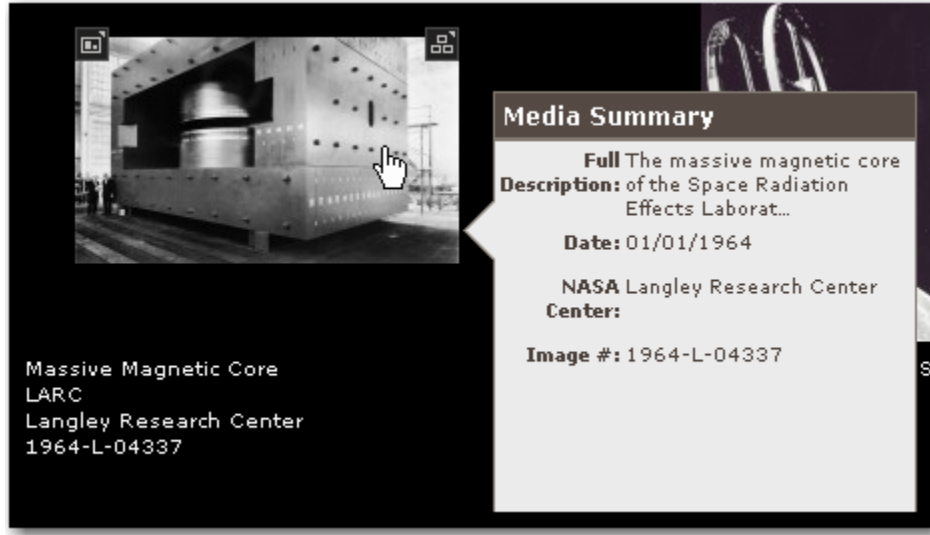
- o Choose the Who, What, When, Where fields used for filtering search results.
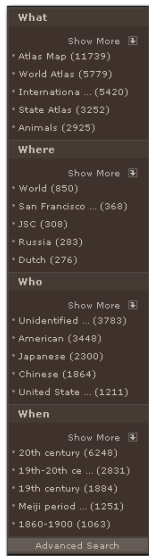
- o Identify the URL to the LUNA header graphic.

- Using the Merge and Load Task, all individual collection indexes are merged into a single index and then loaded into the live LUNA system.

LUNA Theme Header Graphic

The LUNA theme header graphic is the background that shows up at the top of the LUNA interface and can be different for each collection. This is used to provide collection identity.

The graphic needs to be 754 x 65 and should fit the theme being used by fading to a solid color on the right of the graphic (R=133, G=124, B=117 or the hex is #857C75).

To upload your Header Graphic, locate the Header Graphic section of your LUNA Publisher.
Click "Select header graphic".
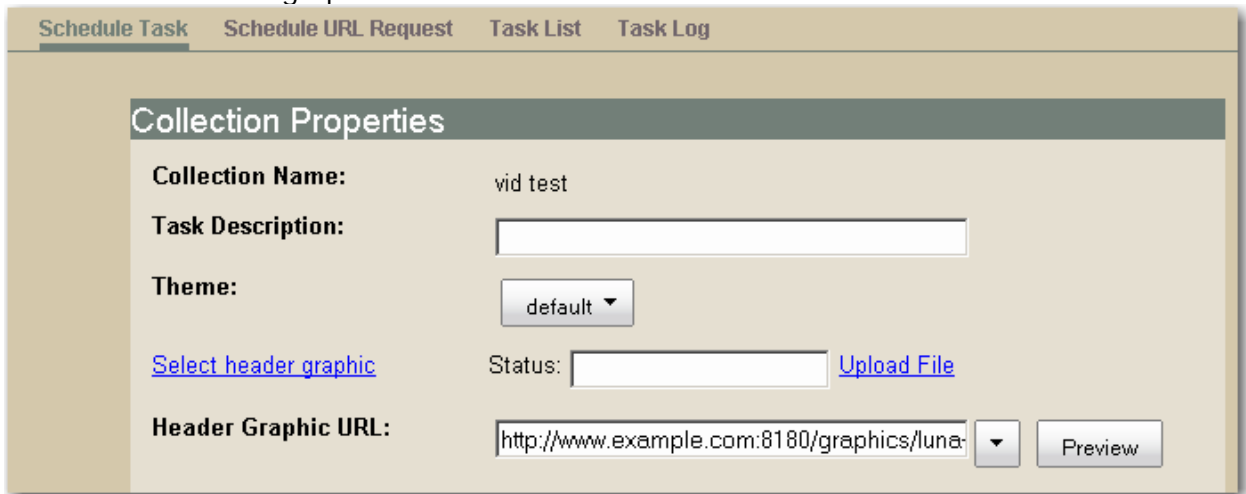
Next, click "Upload File". You will then be presented with a confirmation dialog box.
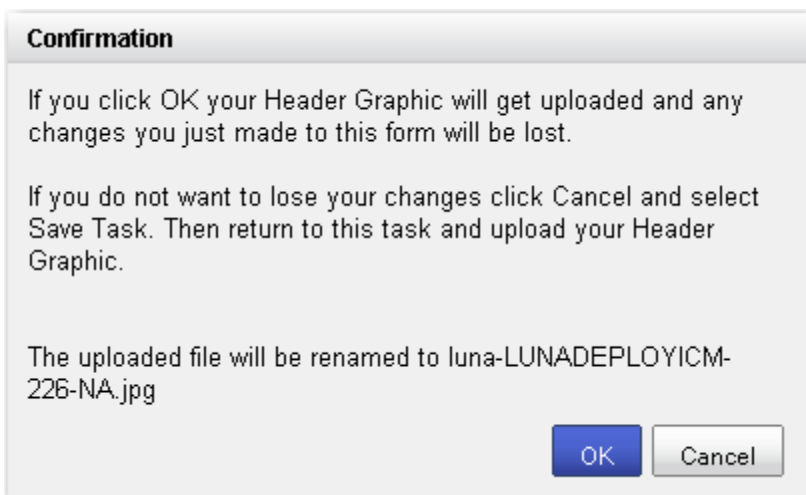
You can also Preview the graphic once it is uploaded.

Header Graphic Preview
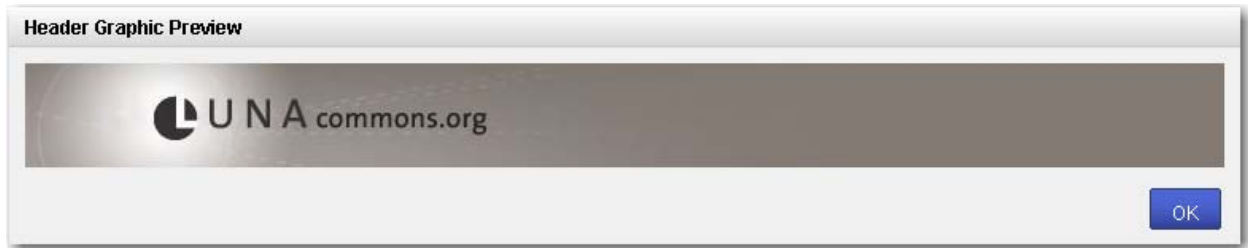
To setup a LUNA header graphic that will be used when more than one collection is being accessed, edit the Extended Collection Properties for the "-1" Collection ID.
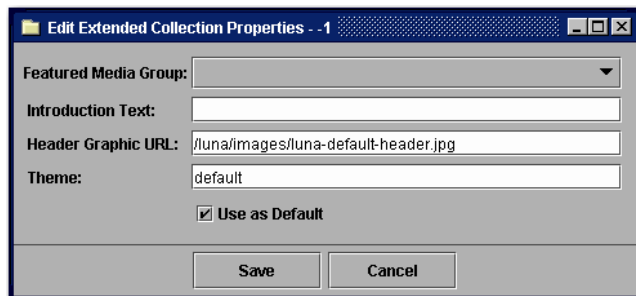
The default is set to /luna/images/luna-default-header.jpg

Note: This path refers to an image stored within the LUNA software. This is used as the default location.

Let's Get Started

Prerequisites

You need the following to proceed:

- LUNA and the LUNA Publisher need to be installed and running.
- 6.x version of Insight Studio configured with access to the LUNA Publisher.
- At a minimum, the language bundles on the Insight User Manager need to be updated.
- Insight Studio access to the collections you will be adding to LUNA.
- Inscribe access to the collection(s) you will be publishing.

> **Note**: The LUNA Publisher pulls the descriptive metadata and media information from a form of Inscribe. In certain collections that were created prior to 5.x, this content may not be properly accessible. If you do not see the correct images or data in the Inscribe tool, contact Luna's support department for assistance in preparing your collection for LUNA.

| | Collections that were created in Insight 5.x+ will not have this issue. |

Publishing a Collection

Start Insight Studio, select the collection you want to publish to LUNA and from the Main Task Menu select the LUNA Publisher.
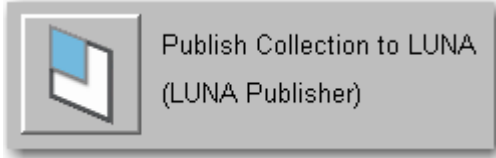
Next, select "Launch LUNA Publisher".
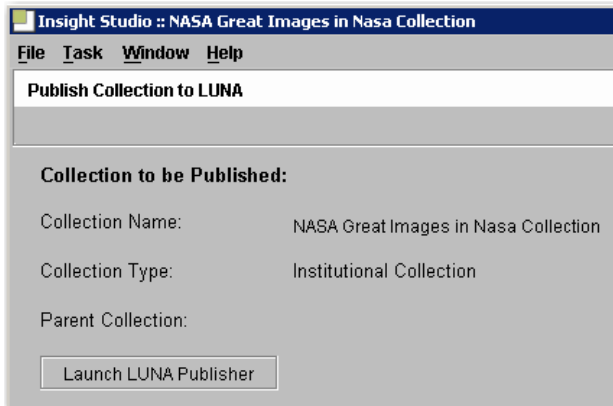
This will launch a web browser and connect to the LUNA Publisher.
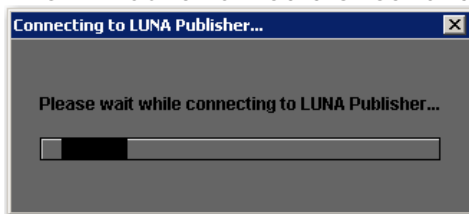
Once in the LUNA Publisher, you can make your selections in the following areas:

- Enter a Task Description (optional).
- Choose the Theme for your collection.
  - Only "default" is available in the initial release of LUNA. Additional themes will become available in the future. These new themes will change the color scheme of the entire application.
- Choose the LUNA Header Graphic URL for your collection. If you have not selected one, the default graphic will be used.
- Choose the Insight User Group that will be used to access the data from your Insight Collections.
- Select the Title Field from the drop down list. This Title will be used to identify individual media items on several pages within the LUNA application, such as the Detail view and as a label in a slideshow.

- Select up to 4 Summary Fields to display. The Summary Fields will display as the user moves their mouse over the thumbnail images.
- Drag and Drop up to 20 fields into the Who, What, Where and When categories.
- Choose a recurring schedule for the LUNA Publisher to perform updates of the LUNA search index.
- You have 4 options When completing this task
  o Save Task (will only save the task)
  o Save and Run Task (will save and run the task now)
  o Save and Schedule Task (will save then execute the task on a schedule)
  o Save, Schedule and Run Task

Once you schedule this task, the LUNA Publisher will do the following:
- Archive the data from Insight.
- Produce an Index for the Collection.
- When the Merge and Load task is activated, all collections that have been indexed will be merged and the new Master Index will be created and placed on the live LUNA server.

> **Note**: You need to activate the Merge and Load task before LUNA will make the collections live.

Activating the Merge and Load task

So what is Merge and Load?
During the Publishing process, a collection is turned into a searchable index for a specific collection. Each index is stored in the collection_indexes folder on your server.

Once you have published all collections that you currently want to make available in LUNA, these separate published indexes need to be merged into a single index. Then when the merge process is complete, the merged index needs to be loaded as the active current index. Once loaded you can search all collections that have been published to LUNA.

Now to activate the Merge and Load task
In the LUNA Publisher task list, locate the Merge and Load task. This will be the one without a delete button. Click the Modify button.

- Now set your preference on how often the Merge and Load task will take place. If you want it to run every night at 2am, select all the days of the week and change the hour to 02.
- You have 4 options When completing this task
  - Save Task (will only save the task)
  - Save and Run Task (will save and run the task now)
  - Save and Schedule Task (will save then execute the task on a schedule)
  - Save, Schedule and Run Task

Schedule URL Request

A URL Request is a special task and will most likely not be created by LUNA administrators. Two URL Request tasks are created by default during installation "Get LUNA Public Content" and "Prepare Public Content".

These tasks make request to the LUNA server to activate an operation on the server. The "URL" specified in the request will be called at the time of the request and Name and Value pairs will be passed to that server in a Post action.

This is similar to what happens when you fill a form out on a website and press send.

Testing your LUNA Collections

Once your collection(s) have been Published, Merged and Loaded, you will be able to view your Collections in LUNA. You may need to login or adjust your credential settings to get access to your collections.

The address to your LUNA collection will be similar to the following.
http://www.example.edu:8180/luna/servlet

If you would like to access your collection(s) without the port number (8180), you will need to configure the system to use the AJP connector. There are instructions on how to work with the AJP Connector for both Apache and IIS available on the web.

This document does not cover how to configure the AJP connector.

Migrating Insight Media Groups and Shares to LUNA

Introduction

You can perform a one time only migration of Media Groups and Share Folders from your Insight Collections to LUNA.

This process is a single direction process and you will NOT be able to synchronize Media Groups between LUNA and Insight.

You should plan your timing of this process carefully. This should be done with your end users knowledge of what and when this process will take place. Your end users may have a significant amount of work invested in creating and managing these Media Groups and Shares. They should also be very familiar with the new LUNA interface and how they can access their Media Groups once migrated.

Migrating the Content

Prerequisites

On the Install disk for LUNA you will find the utility for the migration in \utilities\media_group_migration_to_LUNA folder

- You will need access to each Insight Collection Manager on your server and database port access. Basically, if you can run the Admin Tools from the machine doing the migration, then you have sufficient database access to perform the migration.

- You will need the InsightServer.dat for each collection you plan to migrate the Collection level Groups from.

- You need the InsightUserServer.dat for the User Manager.

- You need the LunaServer.dat that was created at the Install time of LUNA. This file is contained in <LUNA Install directory>/resources/For_Media_Group_Migration

> These files have the database connection information in them and will be used for the migration.

- You will need access to the User Managers Image-Group-Files folder. This can be a copy or the original.

- The utility uses Java 1.4 and it will need to be available for the migration. All of the Insight servers use Java 1.4 so you can reference the Insight Server version.

- Make sure all Shares have an owner. This can be done using the Admin Tools and looking at the Owner Column of the User Shares. If they do not have an owner, please assign one or a random owner will be assigned at the time of migration.
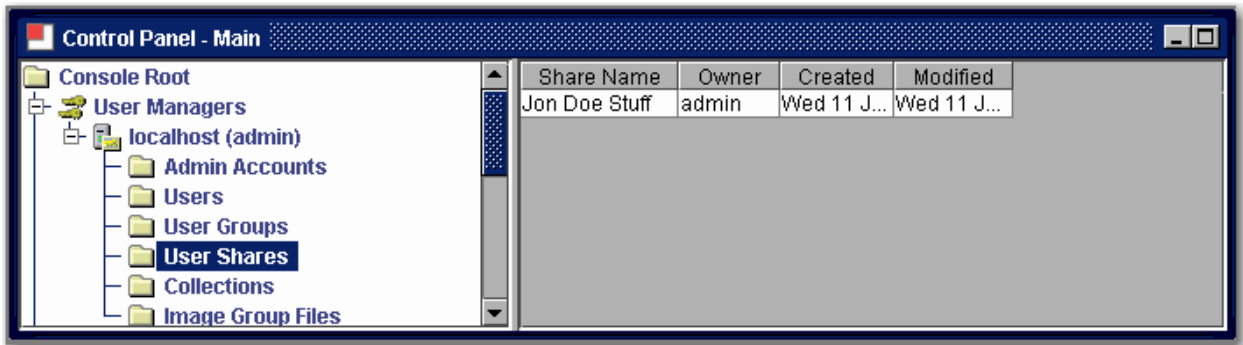
IMPORTANT NOTE
If you are migrating virtual collections, you will need to modify the **VCIDToLunaIID.txt** file.

On the left enter the Insight VCID for the collection
VC_Archivision_Digital_Research_Library_(Base-1)

Then enter a tab character

Next enter the Institution ID for the LUNA collection
ARCHIVISIONACM_Base-3

For example:

VC_Archivision_Digital_Research_Library_(Base-1)   ARCHIVISIONACM_Base-3

Do this for each virtual collection you are migrating from.

Steps for the Collection Level Group Migration

1. Copy the media_group_migration_to_LUNA folder to the location where you will perform the migration.

2. Copy the LunaServer.dat into your media_group_migration_to_LUNA folder.

3. Edit the LunaServer.dat.

      a. Modify the MediaGroupDefaultPassword= property to set the password used to Protect the Media Groups in LUNA.

      b. Set the ImageGroupFileDir= to point to the Image-Group-Files folder.

4. Copy the InsightServer.dat into your media_group_migration_to_LUNA folder.

5. Edit to the run_collectiongroupexport.bat (windows) or run_collectiongroupexport.sh (Linux or Solaris) to point to a local version of Java 1.4 if it is not in your PATH environment.

6. Execute the run_collectiongroupexport script (only once) if you run this twice, you will end up with duplicate Media Groups.

7. Verify that the Media Groups are in your LUNA system located in Explore/Media Groups.
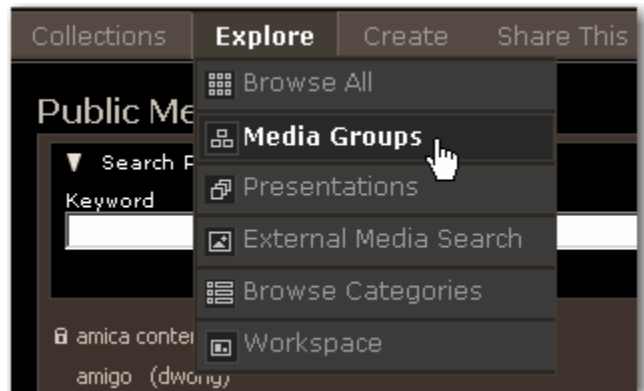
8. Repeat for each Collection Manager that you are migrating Collection Level Media Groups from by replacing the InsightServer.dat.

Steps for Migrating Insight Shares and Media Groups

1. Copy the media_group_migration_to_LUNA folder to the location where you will perform the migration.

2. Copy the LunaServer.dat into your media_group_migration_to_LUNA folder.

3. Edit the LunaServer.dat.

      a. Modify the MediaGroupDefaultPassword= property to set the password used to Protect the Media Groups in LUNA.

      b. Set the ImageGroupFileDir= to point to the Image-Group-Files folder.

4. Edit to the run_shareexport.bat (windows) or run_shareexport.sh (Linux or Solaris) to point to a local version of Java 1.4 if it is not in your PATH environment.

5. Execute the run_shareexport script (only once). If you run this twice, you will end up with duplicate Media Groups.

6. Verify that the Media Groups are in your LUNA system located in Explore/Media Groups.
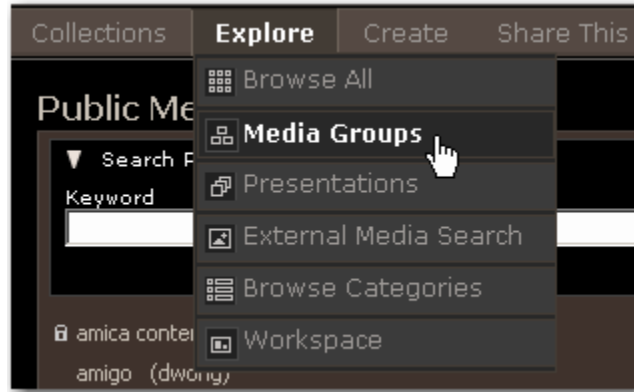
Managing LUNA with the Administrator Tools

Introduction

The Administrator tools have been enhanced to incorporate tasks for managing the LUNA application and configuration.

In the Administrator Tools you can:

- Manage user rights
- Manage Credentials
- Manage IP range access privileges
- See what collections LUNA has loaded
- Manage the LUNA Application Configuration
- Manage the Collection Properties
- Place the LUNA Application into maintenance mode

Managing User Rights and Access Privileges

Before defining how to manage users and their privileges, you need to understand what options exist and how they are integrated with current Insight User Management.

If you have been working with Insight, then you should be familiar with how Insight grants access to collections. LUNA can work with existing Insight authenticators to grant your users access to your collections.

During your installation, you were asked for your User Manager's address. If you are using the default Insight User Manager to grant access to your collections, then you do not need to do anymore work to allow your users access to collections in LUNA.

LUNA also has several other authenticators that can be used to grant access to your Collection resources.

- LUNA self registration and user management
- Integrate with Active Directory LDAP
- Authenticate via LDAP

LUNA Self Registration

During the install process you were given the option to let users self register in LUNA. If you selected this option you will see the Register option at the top of the LUNA application.
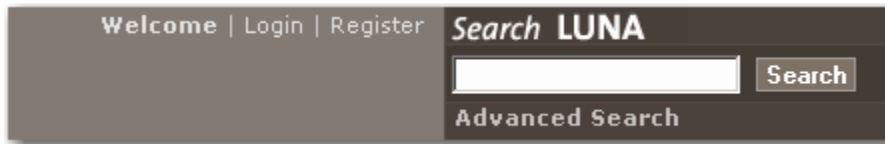
This allows the user to create and manage their own account in LUNA. Once registered, the user will be granted the default privileges defined in the default Credential.

Integrate with Active Directory Using Kerberos and LDAP

As with Insight, LUNA can be integrated with Active Directory to grant access to your Collections.

To configure LUNA with your Active Directory server, you will need to contact our support department for instructions on your specific configuration lunasupport@lunaimaging.com. This document does not go into the configuration details of Active Directory integration.

Integrate with LDAP

As with Insight, LUNA can be integrated with LDAP to authenticate your users and grant them access to your collections.

To configure LUNA with your LDAP server, you will need to contact our support department for instructions on your specific configuration lunasupport@lunaimaging.com. This document does not go into the configuration details of LDAP.

Advantages of LUNA Authentication Methods Not Available in Insight Java Client

LUNA authentication has been designed to be more flexible to allow for future authentication methods and to allow for mixed authentication methods to be used.

LUNA can be configured to use more than one authentication method in your environment. LUNA can be setup to step through any number of authenticators. For example:

- You can have LUNA access the Insight User Manager and also allow for LUNA self registration.
- You can have an LDAP server authenticate and use the Insight User Manager to grant access to individuals who are not in your LDAP server.

There are many ways LUNA can be configured. Please contact lunasupport@lunaimaging.com for any questions you might have.

LUNA's Escalating Collection Access

LUNA has also been designed to grant increasing access as a user passes certain conditions.

At your institution you may want to do the following:

- Level 1 anonymous user - off site but you still want to make some of your collections accessible.
- Level 2 (within a lager block of IP's) – on site privileged collections are accessible.
- Level 3 (within a restricted block of IP's) – on site but in a particular area where the user is granted access to restricted collections.
- Level 4 (logged in to LUNA) - granted access to even more collections with the ability to export.

This is a very flexible system and can meet many needs for granting varied collection access.

Credentials

Credentials are used to define a set of privileges to selected collections.
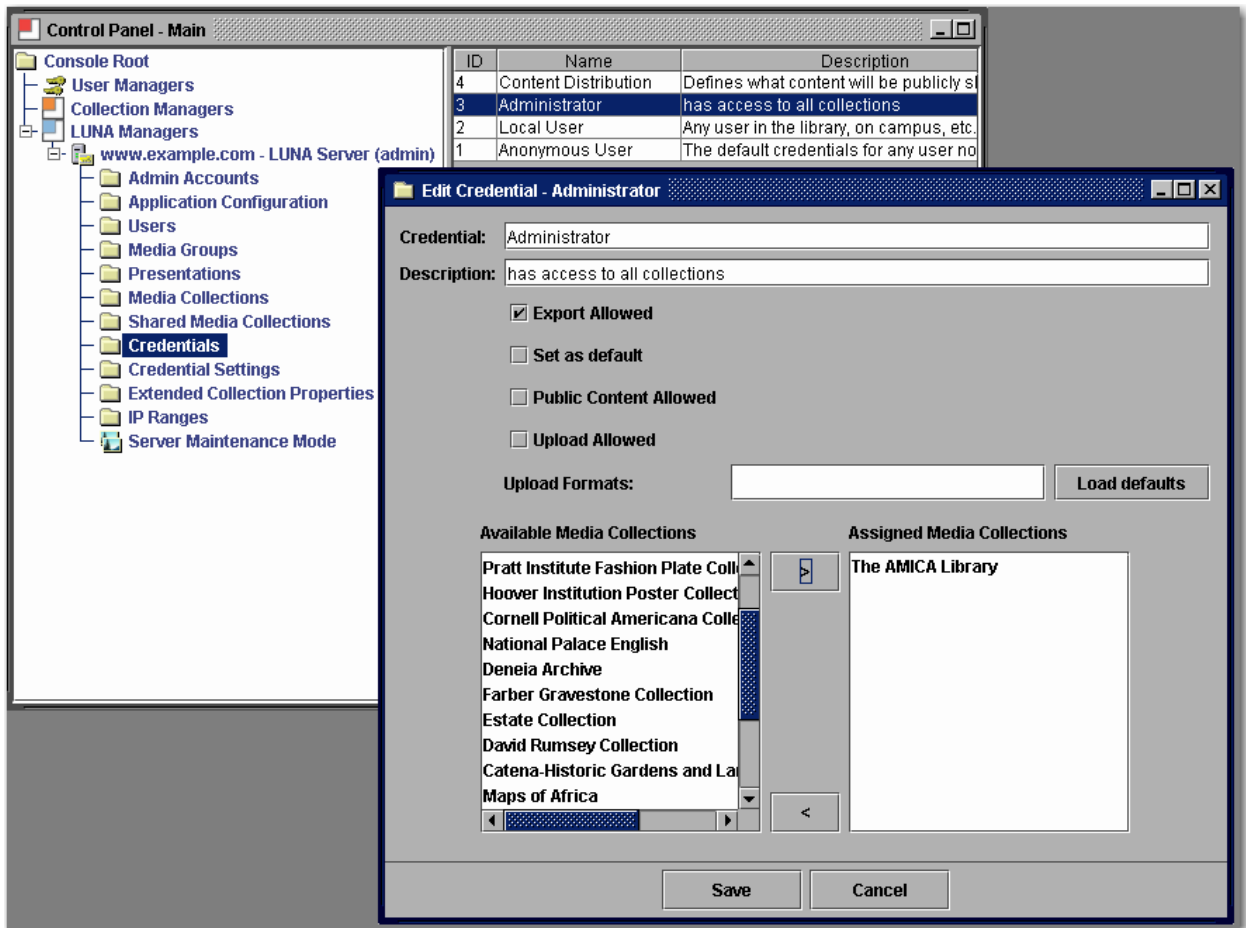
There are four Credentials by default in your LUNA application. You are responsible to define what each one of these will be used for. You can create as many Credentials as you want.

With a Credential you can:

- Define what collections are accessible
- Indicate if exporting will be allowed (this includes media and presentation exports)
- Define it as the default (only one allowed)
- Indicate if the LUNA Commons (publicly shared collections) will be accessible
- Grant Access to My Uploads
- Define the My Upload formats that a user can upload to LUNA

Only one credential can be assigned to:
- An IP Range
- A User
- Default (Anonymous User)

> Run Maintenance Mode twice to load your new Credential settings.

Credential Settings

Using Credential Settings, you have the following three options: 3, 4 and 5.
- 3 indicates the user has up to Size 3 access (768 pixels on the long side).
- 4 indicates the user has up to Size 4 access (1536 pixels on the long side).
- 5 indicates the user has full access privileges to the images.

Allow Collection Level Annotation. This grants the user the ability to save an annotation that will be accessible to all users for a specified collection.
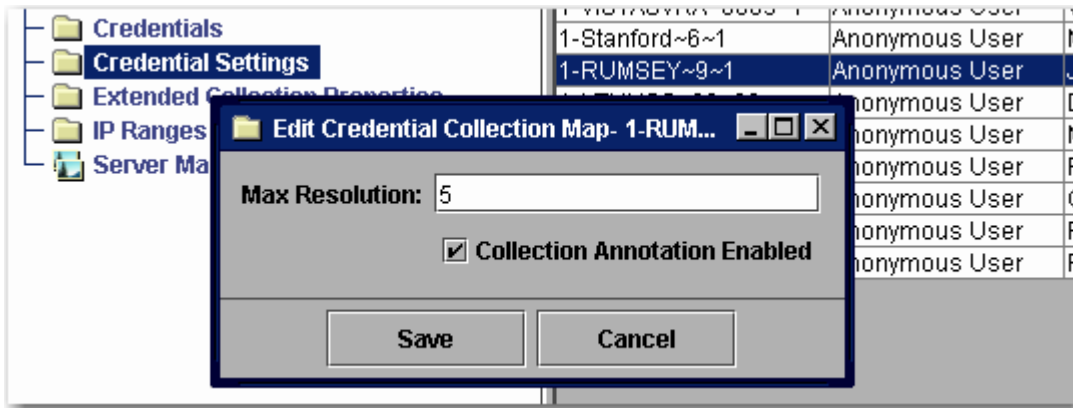
Access to LUNA Size 2 (384 pixels on the long side) is automatically assumed.

User Settings

Each user will be assigned a credential.
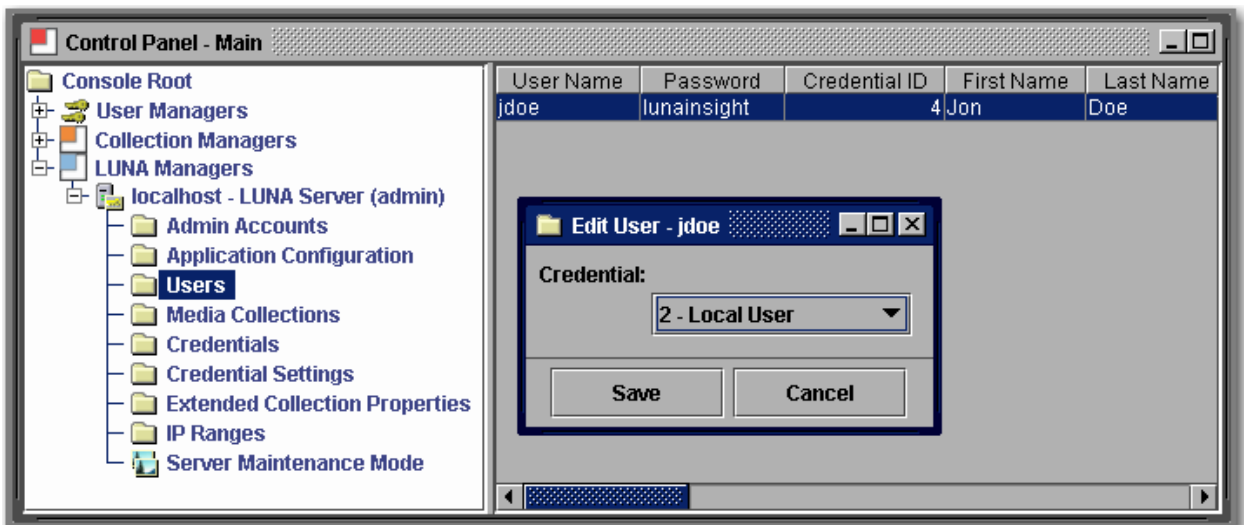
Users cannot be added from the Admin Tools. Instead, they will be created through the following:

- User Self Registration (passwords will display in Admin Tools)
- Automatically migrated from the Insight User Manager on first login (passwords never copied)
- From Active Directory (passwords never copied)
- From LDAP (passwords never copied)

Each authenticator will add its own user and each user is granted the default Credential. You can reassign a Credential to a user at any time.

If you are using the Insight User Manager to get access to your collections, you will receive access to all collections you had access to in Insight.

IP Ranges

IP Ranges are another way of assigning Credential level privileges. You can set up IP ranges to grant access to specific areas and access to specific content.
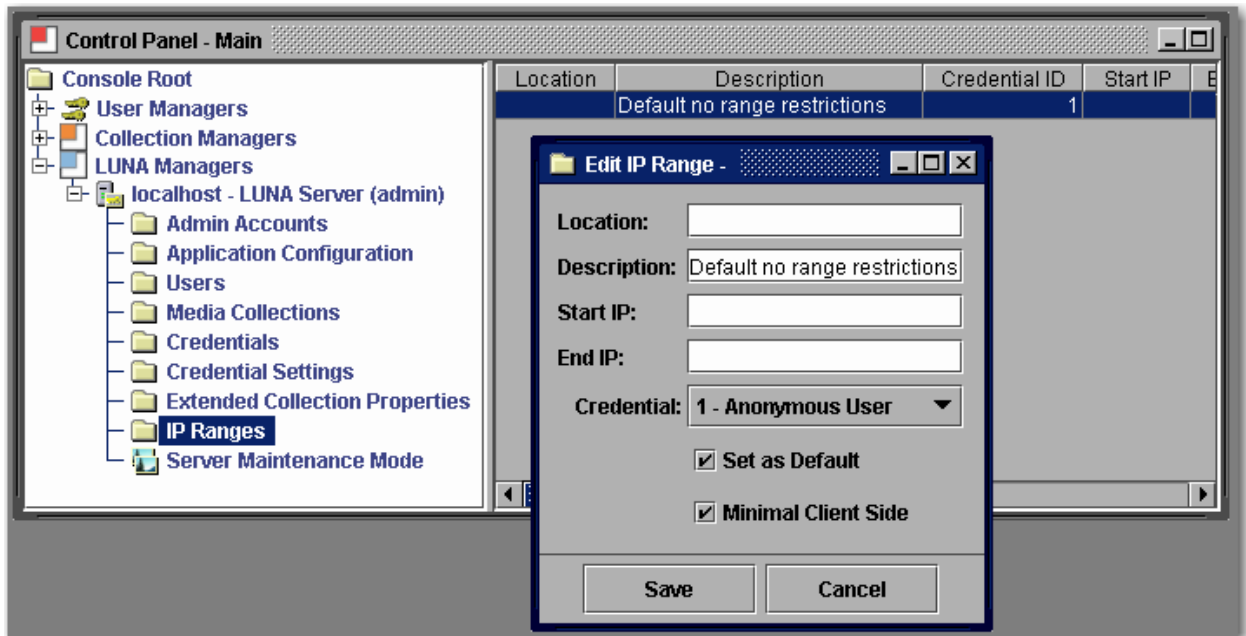
| ⓘ | Run Maintenance Mode twice to reload your new settings. Also to test make sure you quit all browsers on the tested system then test your access changes |

Media Collections

Media Collections shows you which collections have been added to LUNA.
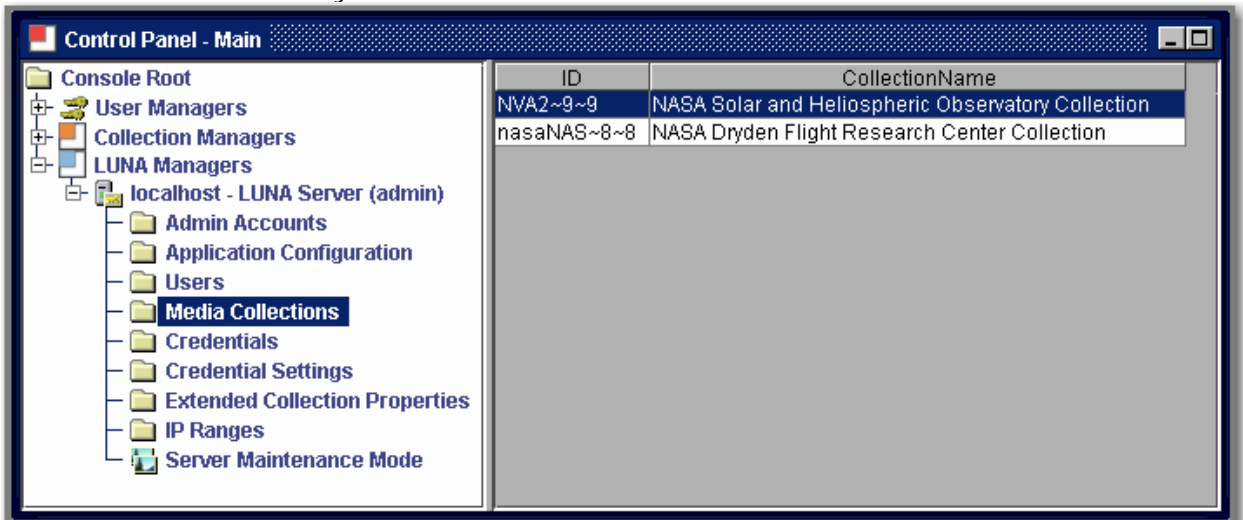
Extended Collection Properties

Extended Collection Properties are provided to allow you to make changes your collections.
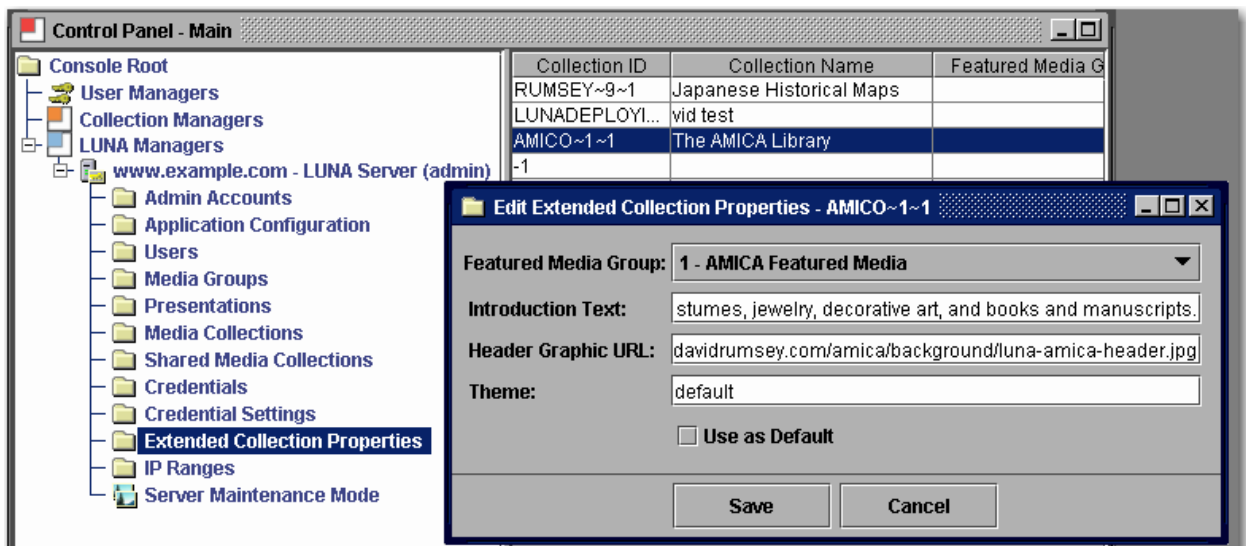
Extended Collection Properties will allow you to do the following:

- Set the Media Group that is used for your Featured Media on your Collections Page. This will allow the end user to see a selected set of media for the specified collection.
    - o To use this option, first make a Media Group in LUNA then select the group in the drop down menu (Must be public and not password protected).
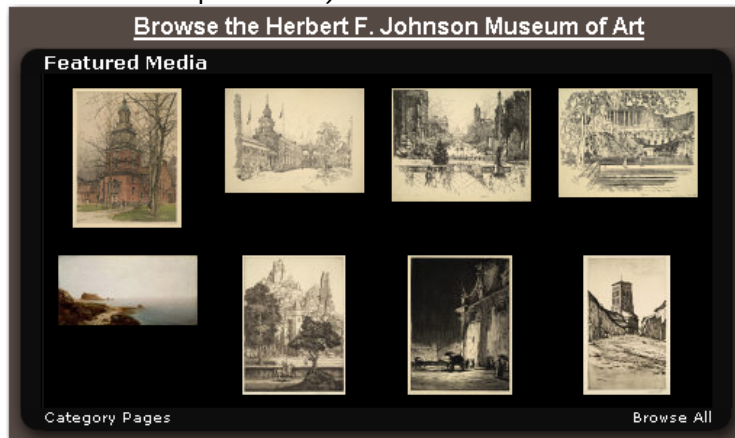
- Redefine the collection's Introduction Text (this text is automatically pulled from your Insight Collection and may not need to be updated).

- Change the Header Graphic URL. This Graphic must be exactly 754 x 65 pixels and be available from any browser accessing the collection.

- Indicate what theme will be used by your collection. At the time of this release, only "default" is available. In the future other themes that will define the entire color scheme of the application will be available to set. If you would like to participate in defining Themes, please contact Luna's support department lunasupport@lunaimaging.com.

Defaults for Multi Collection Access

Collection ID -1 is the default used for any user accessing more than one collection.
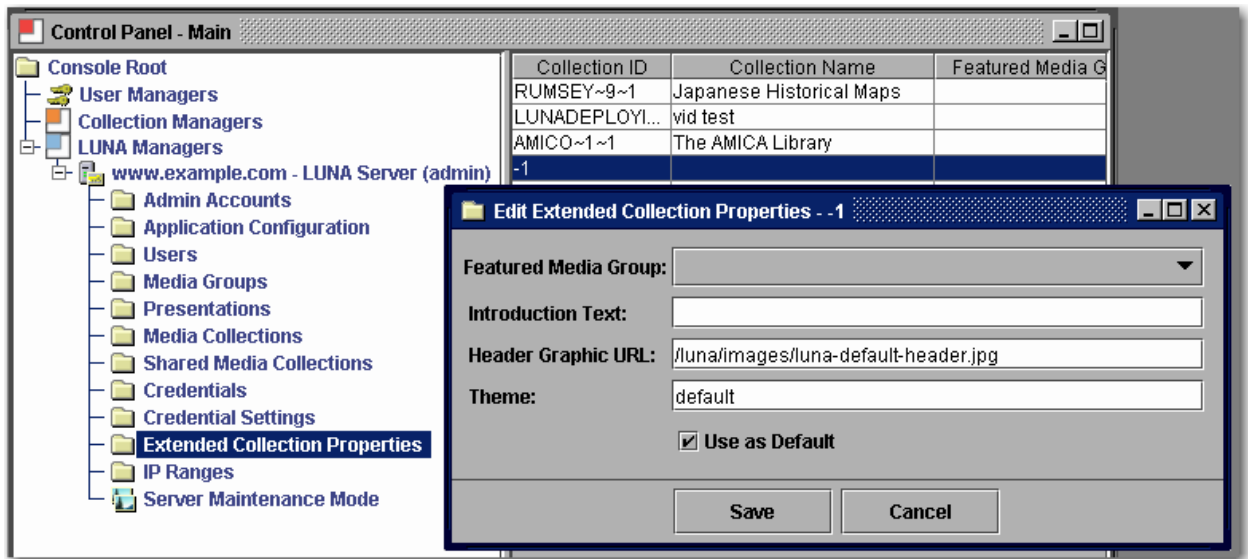
This is a very important graphic and will be used to give identity to your institution. Many times default access will be to more than one collection and you will want to have your institution's identity defined here.

Deleting a Collection from LUNA

Deleting a Collection from LUNA is done in a few steps.

1. Delete the collection from the Admin Tools.

2. Run the Merge and Load task
   a. This will remove the content from the search Index.
   b. Your LUNA system will not work properly unless you do this step.
3. Restart your Jboss or tomcat server

Deleting a User from LUNA

Deleting a User from LUNA is done the following way.

NOTE: Before you delete the user, Note the ID associated with that user.

Select the User in the Admin Tools and right click and select delete.
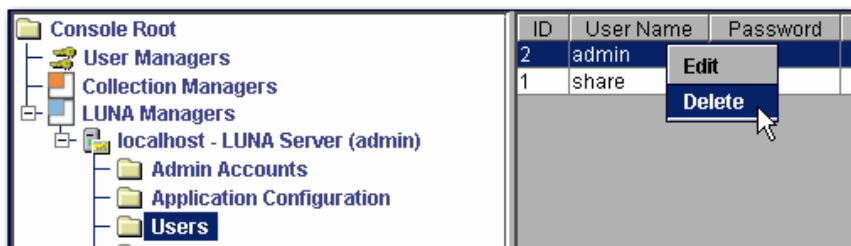
Once you delete the user, All Media Groups and Presentations that the user owned will be orphaned.

Open the Presentation or Media Group folder in the Admin Tools and locate any item that was owned by the User you just deleted and change the ID to another User's ID who you would like to pass ownership to. After you finish, run the Maintenance Mode twice.
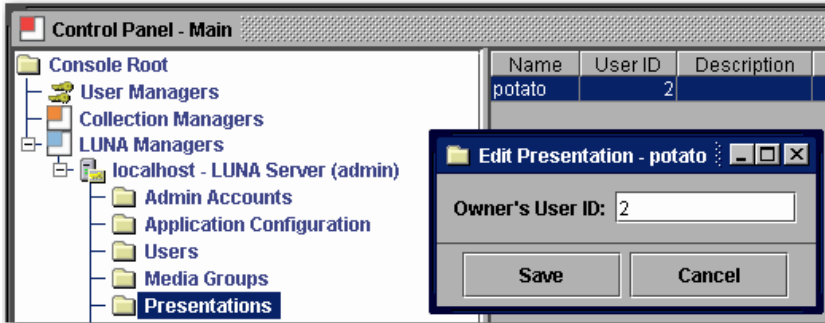
Application Configuration

Application Configuration allows you to set various characteristics of LUNA.
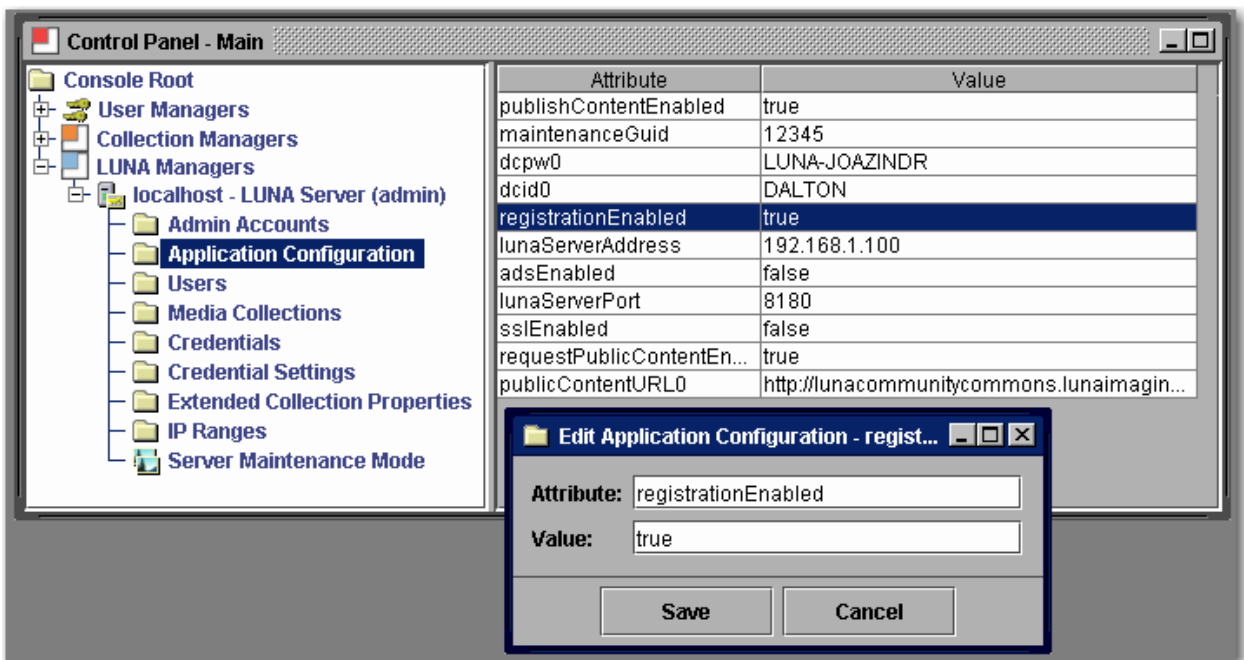
During the installation process these settings were defined. If you need to make modifications to any of these properties, be aware that it will affect how LUNA functions. If you are unsure of what a particular setting is for, do not change it without first contacting Luna support for an explanation of the setting.

Making any change most likely will require the application to be restarted.

Maintenance Mode

On occasion you will want to put the application into a maintenance mode.
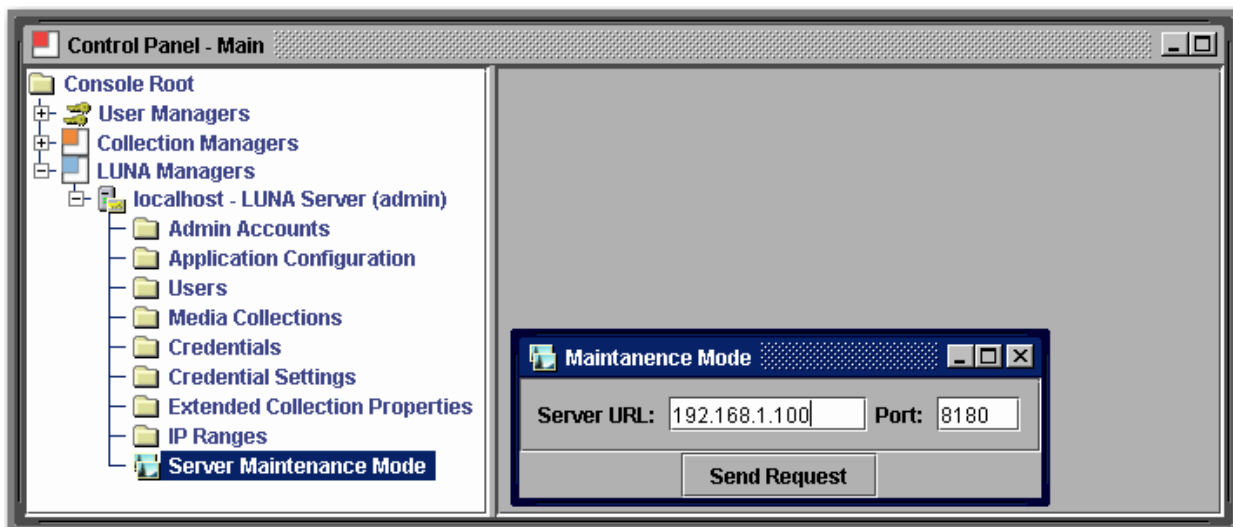
Maintenance Mode can also be used to reload User and Credential Settings. To trigger Maintenance Mode send one request, then send a second to take the system out of Maintenance Mode and reload your settings.

Admin Accounts

Used to control access to the Admin Tools console.
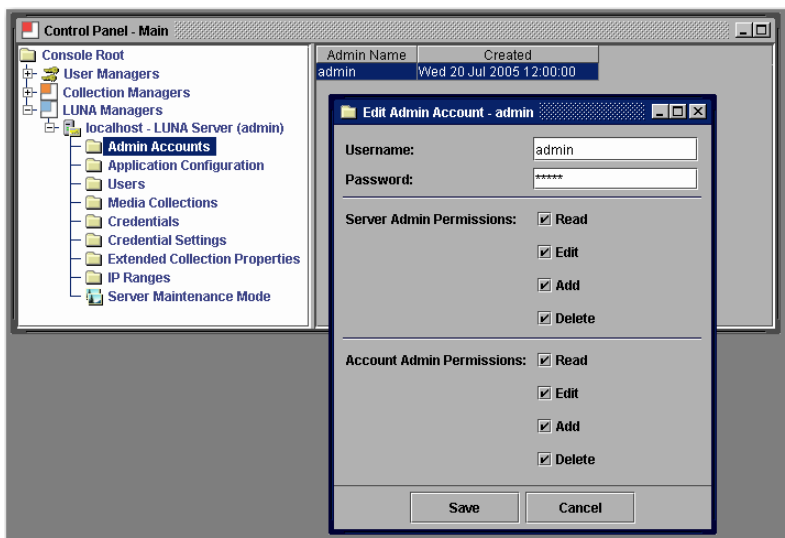
Like in User Manager and Collection Manager sections of the Administrator Tools, The LUNA Manager also has Admin Accounts. These accounts grant access to the Admin Tools.
Server Admin Permissions grants access to perform actions in the Admin Tools.
Account Admin Permissions grants access to create and manage Admin Accounts.

Virtual Collections in LUNA

Introduction

This section describes how to prepare your system to support Insight Virtual Collections in LUNA.

You will need to update your Insight Collection database by running a script that changes a Primary Key on the IRGROUPS table of your Insight Collection Manager database.

You will then need to use the Administrator Tools (6.0.1+) to prepare the virtual collection for LUNA as described in this section.

Once you have completed this preparation, you can publish your virtual collections the same way you publish other collections to LUNA.

Updating your Insight Database

Warning!!! Before making any database changes, always backup your current database.

The first step is to change the Primary key of the IRGROUPS table in the Insight database that contains your virtual collection.

There are two ways you can do this.

1. If you are familiar with how to change primary keys in your database, you can change the Primary Key on the table IRGROUPS from (GROUPID) to (UNIQUECOLLECTIONID,GROUPID,VCID)

2. Use one of following database scripts links to update your IRGROUPS table
   - For MySQL
   - For MSSQL
   - For Oracle

Preparing your Virtual Collection with the Administrator Tools

Using your Administrator Tools (6.0.1+) open your collection configuration panel for the Virtual Collection you would like to make available in LUNA. Scroll to the bottom

of the panel. You will see a button that says "**Prepare Collection Configuration for LUNA**".
Select this button. (This button will only show for virtual collections).
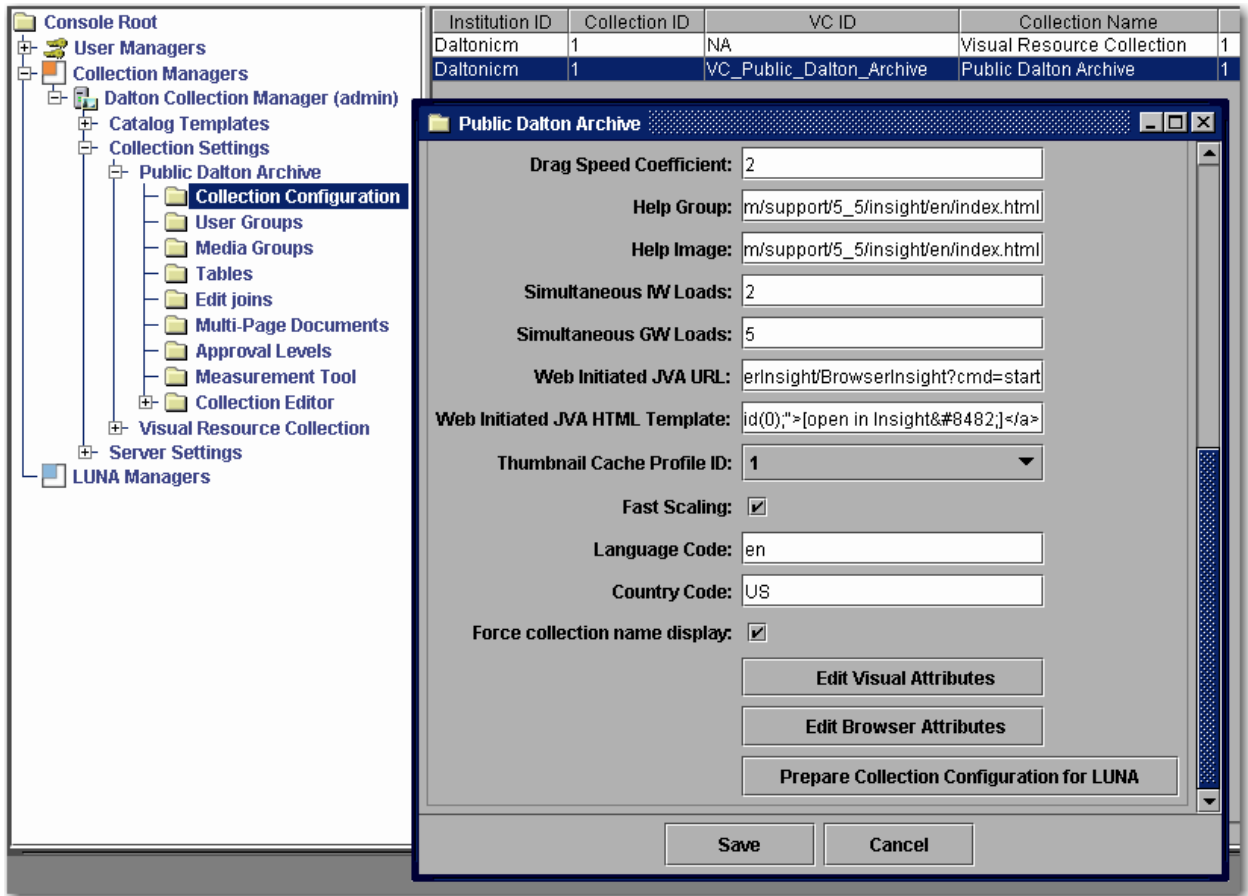
Once you have selected the **Prepare Collection Configuration for LUNA** button, you will need to set a New Institution ID for the collection. Make sure this is different than the Source Institution ID.
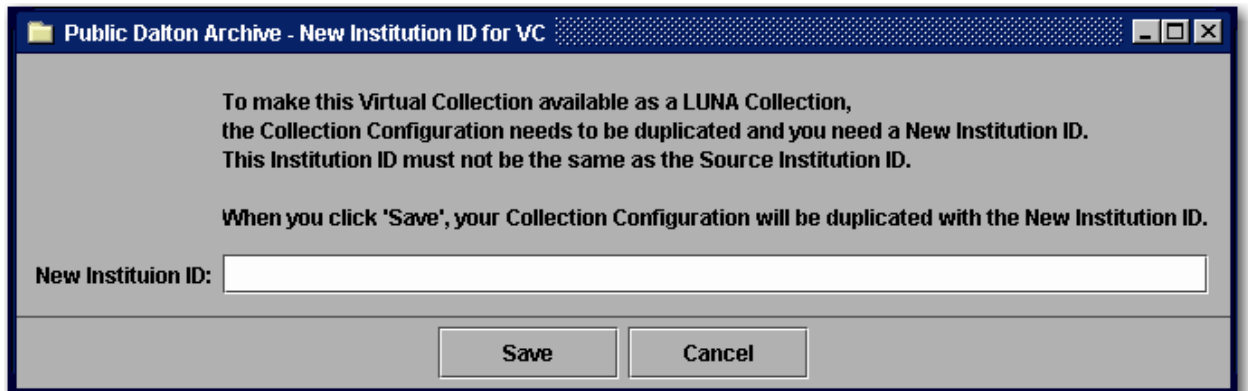
As described in the previous panel, your collection entry will be duplicated and you will now have two entries for your Virtual collection. The original and now the new one with the New Institution ID and the VC ID of NA.

Institution ID	Collection ID	VC ID	Collection Name
Daltonicm	1	NA	Visual Resource Collection
DALTONVC	1	NA	Public Dalton Archive
Daltonicm	1	VC_Public_Dalton_Archive	Public Dalton Archive

Next you will need to add an additional Collection entry to the User Manager to access the Virtual collection in LUNA.

Under the Collections section of the User Manager, create a new entry and fill in Collection Name, Collection ID, your new Institution ID Server Address and port number. Then save your Collection entry.
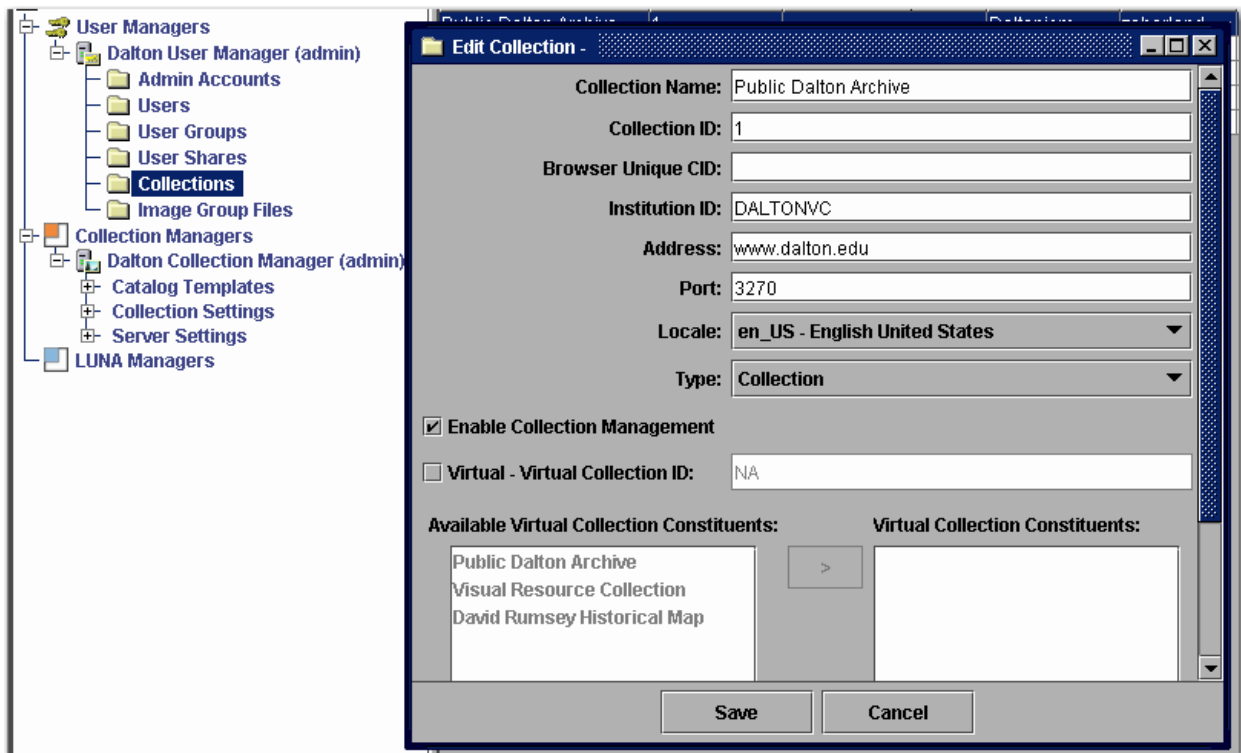
Next you will need to give a Studio privileged user access to this collection.
For instructions on this, follow the "Granting Access to Insight Studio" in the "User's Guide to Basic Collection Building".

Once a user has access to this virtual collection in Studio, they can Publish the collection into LUNA just like any non-virtual collection.

Upgrading LUNA and Insight to 6.3

Introduction

LUNA 6.3 requires an upgrade of both Insight and LUNA Suites.

Databases for Insight and LUNA will be upgraded by the installers.

For detailed instructions on upgrading LUNA, follow the instructions in *A Guide to LUNA.*

General Insight Upgrade Process:
1) Prepare your system.
   a. Check your system for Java.
   b. Back up your databases (recommended).
2) Shut down your Insight and LUNA Server components.
3) Run the Upgrade Installers.
4) Start your Insight and LUNA Server components.
5) Test.

Preparing your System for the Upgrade

Before you run the Upgrade Installer, there are a few tasks you should perform.

Check your system for Java

Run the following command from a command prompt:
"java -version" (use a space before the argument). If you get the message "not recognized as an internal or external command" (or something similar), you may only need to add Java to your system path or environment.

Note: On Linux systems in particular, the version of Java that is installed by default may not function properly with the upgrade. We suggest installing Sun's Java or pointing to one previously installed.

Java Setup: Since Java comes bundled with Insight, try pointing your system to your earlier version by adding the full pathname to the Insight 5.1 jre\bin (Windows) or jre/bin (Unix) directory to your system path or system environment, e.g., \Program Files\LunaImaging\5.x\jre\bin

You may reference another version instead, if available. If not, or if you have a version earlier than 1.4.2, please upgrade your system with a current version of Java.

Backing up your Databases

It is advisable to back up your databases. This will ensure that you can safely restore any changes.

Shutting Down your Insight and LUNA Server Components

Before running the upgrade, you will need to shut down your Insight and LUNA server components. These include: Collection Manager(s), Personal Collection Manager(s), User Manager and Tomcat/Jboss (Tomcat/Jboss control LUNA, Browser Insight, the Media Manager and the XMLGateway). This will ensure that no users log in or make any changes during the upgrade process. Once the upgrade is complete, you will need to restart all server components.

Running the Upgrade Installers

Insight Installer

To run the GUI Installer, double-click on the InsightUpgrade executable appropriate to your platform. It may take a few minutes to initially load. The installer is GUI-based and must be run in a graphical environment.

Note: As of version 6.3 the command line upgrade for Insight is no longer available.

Introduction
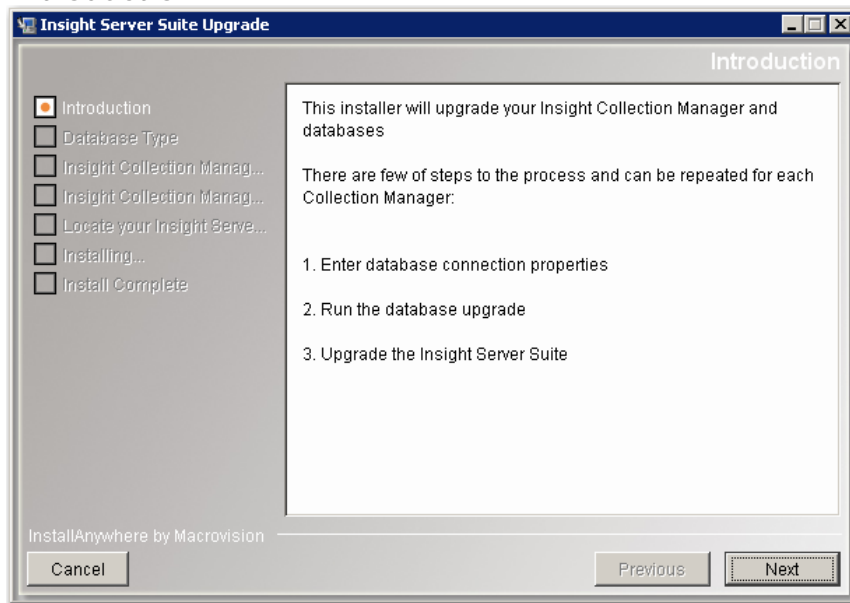
Connecting to the Insight Collection Manager Database

Since you are upgrading, you will now be asked how to connect to your Insight Collection Manager database. Once connected, the installer will evaluate your database to determine if it requires an upgrade.

If the installer determines that your Insight Collection Manager database requires an upgrade, you will be prompted to run a database upgrade script.
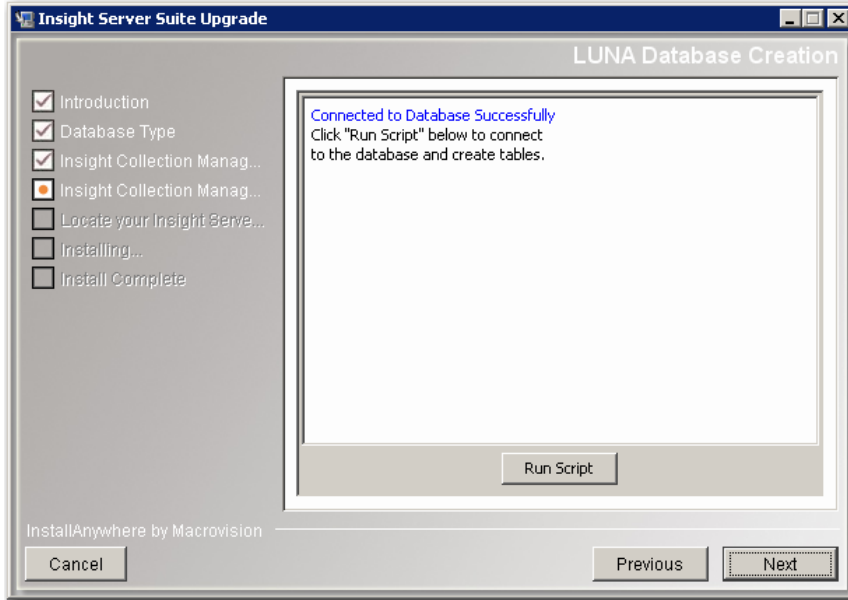
If the installer determines that your Insight Collection Manager database does not require an upgrade, you will be given a choice to continue or select another Insight Collection Manager database. If you have multiple Collection Managers, each database will need to be upgraded.
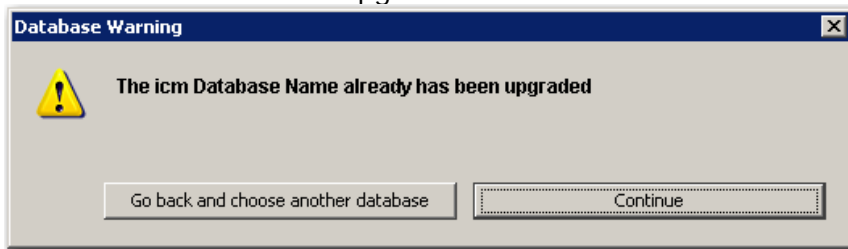
Once your database upgrade is complete or the installer determined that your database does not require an upgrade, you will be prompted with the choice to Continue with the Insight Server Suite Upgrade, select another Insight Collection Manager database or Finish and Exit the Upgrade installer.
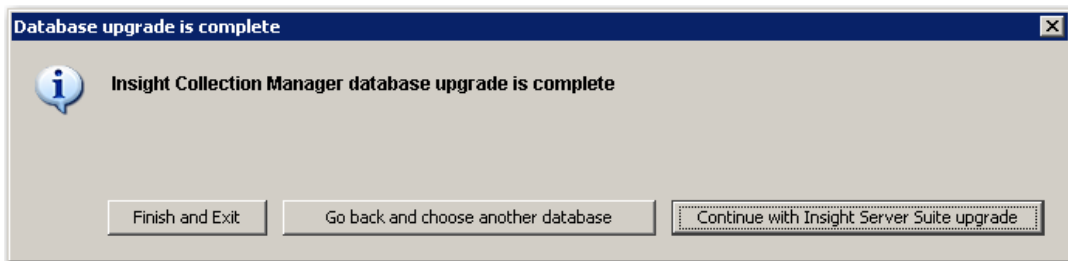
The last step is to choose the location of your Insight Suite. This is the directory where all your Insight Server components are located. You will see several directories in here; collection_manager, user_manager and others. Choose this directory and press Install.
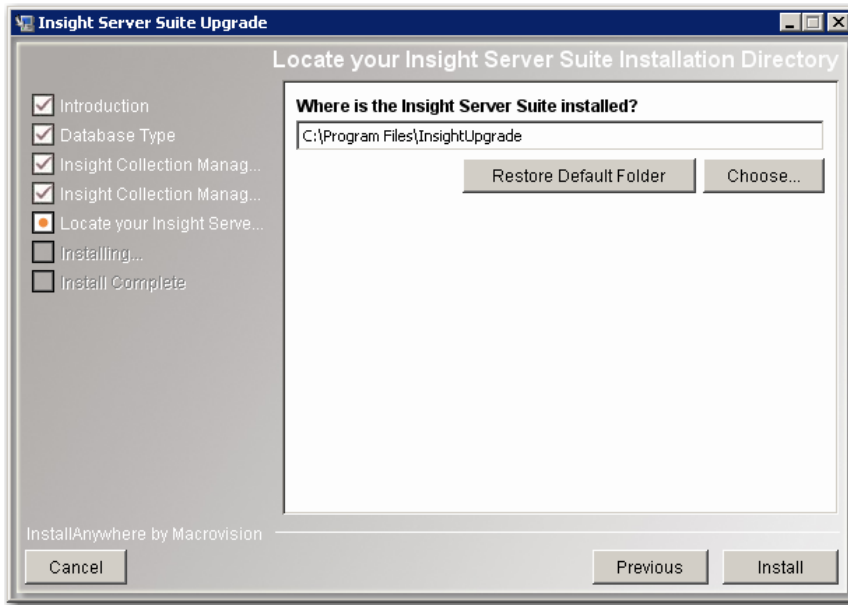
Installation Errors

If your Installer encounters any errors during the installation process, you will receive a message in the installer panel. Press the "**Done**" button to close the Installer, then go to the installation directory to review the installation log (**Insight_6.3_Server_Upgrade_InstallLog.log**). This log will indicate where a failure may have occurred. If you are unsure about any error reported, please forward the report to Luna Imaging's Support department.

Insight Client Installers

If you perform this upgrade on your Insight server, you must upgrade any Insight Studio clients as well. It is also recommended that you upgrade any Insight Administrator Tools installations. All other clients are forward-compatible and can be upgraded as needed.

Note: If you are upgrading and were using the ResampleDuringResizeMode property to eliminate a moiré pattern, you will need to reset the property in the InsightAdminStore.dat (Administrator Tools) and the InsightStudio.dat (Insight Studio) files after the upgrade has completed.

Insight Java client help

The URLs to the Insight Java help need to be updated. You will need to do this for all your collections.

1. Open the Insight Administrator Tools.
2. Login to your Collection Manager.
3. Go to Collection Settings.
4. Open the Collection you would like to update.
5. Select Collection Configuration.
6. Edit Collection Configuration.
7. Update the Help Group and Help Image properties to:
http://www.lunaimaging.com/support/5_6/insight/en/index.html
8. Save and close the Collection Configuration panel.

Upgrading LUNA

Upgrading LUNA is done by running the LUNA installer and choosing the Upgrade and Reconfigure LUNA option. Follow the instructions in the installer or see *A Guide to LUNA* for more detailed instructions.

Note: Stop Tomcat/Jboss before running the LUNA Installer.
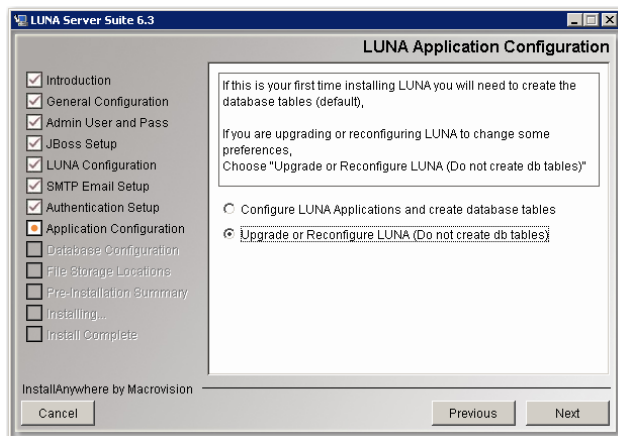
Starting the Insight Server Components for the First Time (in console mode)

Successful completion of the installation process is only possible when database, network, and local configuration settings have been correctly set. Components should continue to run properly after installation as long as the environment remains unchanged and all external elements that Insight relies on remain intact, unchanged, and running.

Testing the Installation of the User Manager

Though you will likely implement the User Manager as a service, it is strongly recommended that you test User Manager in console mode first to make sure that it has been properly installed.

1) Locate the "InsightUserManager" executable in the User Manager installation directory.

    If you installed with the default settings, you will find it in:

Table 6: Common Installation Locations for the Insight User Manager

Platform	Location
Windows	C:\program files\LunaImaging\5.x\user_manager\
Solaris / LINUX	/usr/home/insight/LunaImaging/5.x/user_manager/

2) Launch it.

3) A console window will open and begin a scroll of startup statistics. Toward the bottom of the scroll, look for the following line:

```
IUS: Accepting connection.
```

If you do not see this line, see the section labeled "Starting the User Manager in Console Mode" on page156.

NOTE: Closing the console window will close the User Manager. Do not close the console window unless you want to close the User Manager.

Testing the Collection and Personal Insight Managers

Though the Collection Manager and Personal Insight Manager are distinct products, they may both be tested in the same way. They will both be referred to as "Managers" below.

To begin testing them:

1) Locate the "InsightCollectionManager" executable in the Manager installation directory. If you installed with the default settings, you will find it in:

Table 7: Common Installation Locations for the Insight Collection Manager

Platform	Location
Windows	C:\program files\LunaImaging\5.x\collection_manager\xyz*
Solaris / LINUX	/usr/home/insight/LunaImaging/collection_manager/xyz*
	* where "xyz" is the short-name you defined for your collection

Table 8: Common Installation Locations for the Personal Insight Manager

Platform	Location
Windows	C:\program files\LunaImaging\5.x\personal_insight_manager\xyz*
Solaris / LINUX	/ usr/home/insight/LunaImaging/personal_insight_manager/xyz*
	* where "xyz" is the short-name you defined for Personal Insight

2) Launch your Collection manager or Personal Insight Manager.

3) A console window will open and begin a scroll of startup statistics. Toward the bottom of the scroll, look for the following line:

```
XYZ: Accepting connection.
```

(where "XYZ" is the short-name you defined for your collection)

If you do not see this line, see the section labeled "Starting the Collection Manager or Personal Insight Manager in Console Mode" on page 157.

NOTE: Closing the console window will close the Collection or Personal Insight Manager. Do not close the console window unless you want to close the Collection or Personal Insight Manager.

Starting Insight Studio

By starting Insight Studio on the server, you can test that your User Manager, Collection Manager, Personal Insight Manager, and Tomcat are working properly. Insight Studio is used to build collections and to configure Personal Insight.

NOTE: Your Collection Manager, Personal Insight Manager, User Manager must be running for Insight Studio to run properly.

NOTE: To test the media upload feature, you must also have Apache Tomcat running.

NOTE: Insight Studio is only available on Windows and Mac OSX You may need to install Insight Studio on a client machine to run these tests.

Testing the User Manager using Insight Studio:
1) Locate the Insight Studio Application and double-click on "Insight Studio 6.3".

2) If Insight Studio launches normally, you will see a login screen with a username / password.

3) Use the Insight Admin username / password you specified in the installer.

4) Click "login" when you've entered your password.

5) If you can login, the User Manager is running properly. If not, please confirm your administrative username and password.

Testing the Collection Manager using Insight Studio:
1) You should be presented with the Collection Manager you just installed. If you installed a Personal Insight Manager it should be listed as well.

2) Double-click on the Collection Manager, and the folder should open with two options: "Create Catalog Template" and "Create a Collection", choose the latter.

3) If you see the Insight Studio "Getting Started" panel (shown below), then you know that your Collection Manager is running properly.

4) Repeat the steps above for the Personal Insight Manager.

NOTE: "Create a Collection" is not a Personal Insight option in Insight Studio. Insight Studio can create templates for Personal Insight, but cannot create Personal Collections.

Testing Apache Tomcat 5.0.19

Apache's Tomcat Application Server provides a platform for JSP and Servlet Applications for Insight. Tomcat commonly runs on port 8080 or 8081, and optionally also supports SSL connections by default on 8443.

To Test Tomcat:
1) Locate Tomcat.

    Locate the Tomcat installation directory. If you installed with the default settings, you will find it in: <see installation location>.

    Table 9: Common Installation Locations for Tomcat

Platform	Location

Windows	C:\program files\LunaImaging\5.x\tomcat\bin
Solaris / LINUX	/ usr/home/insight/LunaImaging/tomcat/bin

2) Start Tomcat.

Run "start_tomcat.bat" (Windows) or "start_tomcat.sh" (Solaris/Linux) from the Command Line (make sure it is not already running as a service!).

3) Test that Tomcat is running.
Open a web browser. Go to http://localhost:8081/
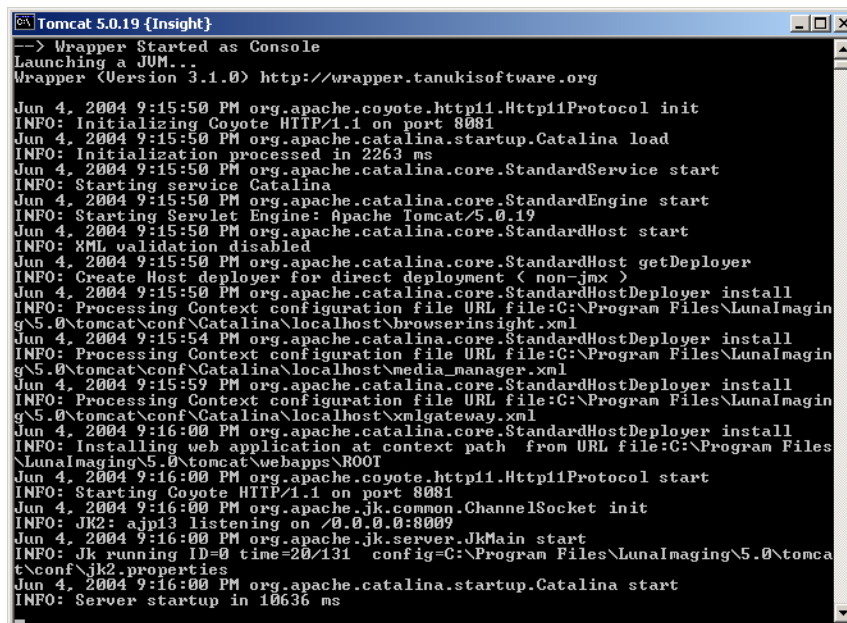
NOTE: If you specified a different port for tomcat in the installer, replace 8081 with the appropriate port.

You should see the following page:

If you see anything other than the page above, check the Tomcat console for errors. Below is an example of the console output of a valid Tomcat startup:

```
Tomcat 5.0.19 {Insight}                                      _□×
--> Wrapper Started as Console
Launching a JVM...
Wrapper (Version 3.1.0) http://wrapper.tanukisoftware.org

Jun 4, 2004 9:15:50 PM org.apache.coyote.http11.Http11Protocol init
INFO: Initializing Coyote HTTP/1.1 on port 8081
Jun 4, 2004 9:15:50 PM org.apache.catalina.startup.Catalina load
INFO: Initialization processed in 2263 ms
Jun 4, 2004 9:15:50 PM org.apache.catalina.core.StandardService start
INFO: Starting service Catalina
Jun 4, 2004 9:15:50 PM org.apache.catalina.core.StandardEngine start
INFO: Starting Servlet Engine: Apache Tomcat/5.0.19
Jun 4, 2004 9:15:50 PM org.apache.catalina.core.StandardHost start
INFO: XML validation disabled
Jun 4, 2004 9:15:50 PM org.apache.catalina.core.StandardHost getDeployer
INFO: Create Host deployer for direct deployment ( non-jmx )
Jun 4, 2004 9:15:50 PM org.apache.catalina.core.StandardHostDeployer install
INFO: Processing Context configuration file URL file:C:\Program Files\LunaImagin
g\5.0\tomcat\conf\Catalina\localhost\browserinsight.xml
Jun 4, 2004 9:15:54 PM org.apache.catalina.core.StandardHostDeployer install
INFO: Processing Context configuration file URL file:C:\Program Files\LunaImagin
g\5.0\tomcat\conf\Catalina\localhost\media_manager.xml
Jun 4, 2004 9:15:59 PM org.apache.catalina.core.StandardHostDeployer install
INFO: Processing Context configuration file URL file:C:\Program Files\LunaImagin
g\5.0\tomcat\conf\Catalina\localhost\xmlgateway.xml
Jun 4, 2004 9:16:00 PM org.apache.catalina.core.StandardHostDeployer install
INFO: Installing web application at context path  from URL file:C:\Program Files
\LunaImaging\5.0\tomcat\webapps\ROOT
Jun 4, 2004 9:16:00 PM org.apache.coyote.http11.Http11Protocol start
INFO: Starting Coyote HTTP/1.1 on port 8081
Jun 4, 2004 9:16:00 PM org.apache.jk.common.ChannelSocket init
INFO: JK2: ajp13 listening on /0.0.0.0:8009
Jun 4, 2004 9:16:00 PM org.apache.jk.server.JkMain start
INFO: Jk running ID=0 time=20/131  config=C:\Program Files\LunaImaging\5.0\tomca
t\conf\jk2.properties
Jun 4, 2004 9:16:00 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in 10636 ms
```

Identifying Exceptions while watching the Tomcat Console

The most common error with Tomcat is that there is already a service running on Tomcat's port. On the console, you will see an error similar to this:

```
java.net.BindException: Address already in use: JVM_Bind:8081
```

If you already have something running on this port, you can change the port that Tomcat uses in Tomcat's server.xml configuration file.

> **NOTE:** If you are running another version of Tomcat on the same machine, other ports supporting SSL, AJP, or J2K may also overlap and cause errors, please consult your server.xml for more information on changing these.

> **NOTE:** The server install has configured many of Insight's components to use the port and hostname that you supplied in the installer, changing these after the fact will result in the manual re-configuration of the Collection Manager, Personal Insight Manager, Media Manager, BrowserInsight, and XML Gateway.

Testing the JPEG2000 Decoder & the Media Manager

To test the Media Manager, start Tomcat and open a web browser on the same machine.

> **NOTE:** This testing document assumes that tests are run from the computer where Media Manager was installed, and is running Luna's distribution of Tomcat. If you are using your own version of Tomcat or using Resin, or are testing from another machine, you will have to adjust the tests.

Testing that the Media Manager is installed.

1) In your browser, go to http://localhost:8081/MediaManager/. You should see a screen similar to Figure 5: Finding Media Manager Context in Tomcat below.
   a. If you do not see the page as displayed in Figure 5: Finding Media Manager Context in Tomcat below, the Media Manager servlet was not loaded.
      i. Check that the Media Manager was installed. It should be located in the media_manager directory of your Installation Directory.
      ii. Check that the Media Manager Servlet Context file was installed. The "media_manager.xml" should be in conf/Catalina/localhost directory under the Tomcat installation directory.
      iii. Open the "media_manager.xml" and confirm that the **docBase** parameter points to the media_manager/servlet directory above.

Figure 5: Finding Media Manager Context in Tomcat
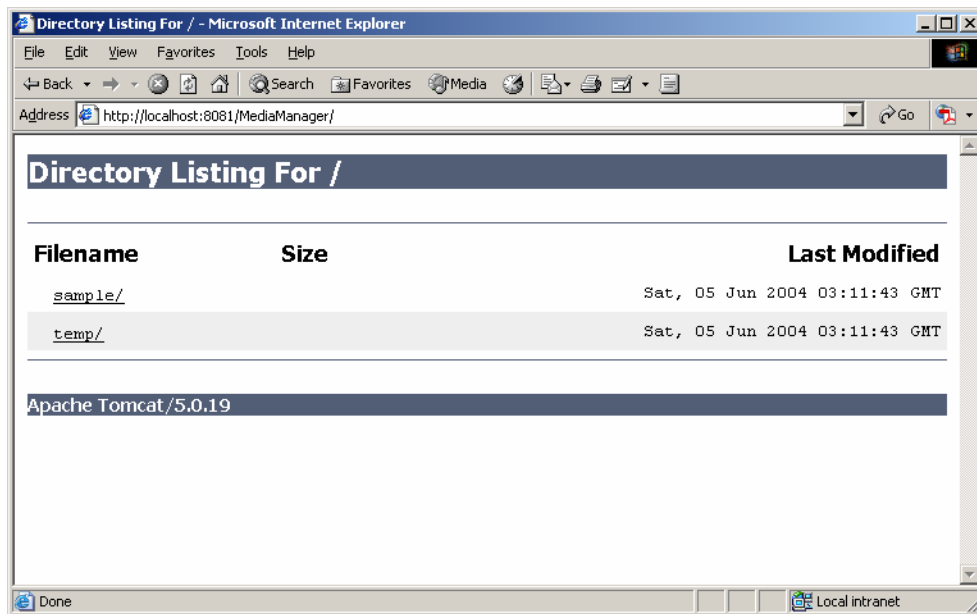
An example of a failure to load properly:

Figure 6: Failure to find Media Manager Context in Tomcat
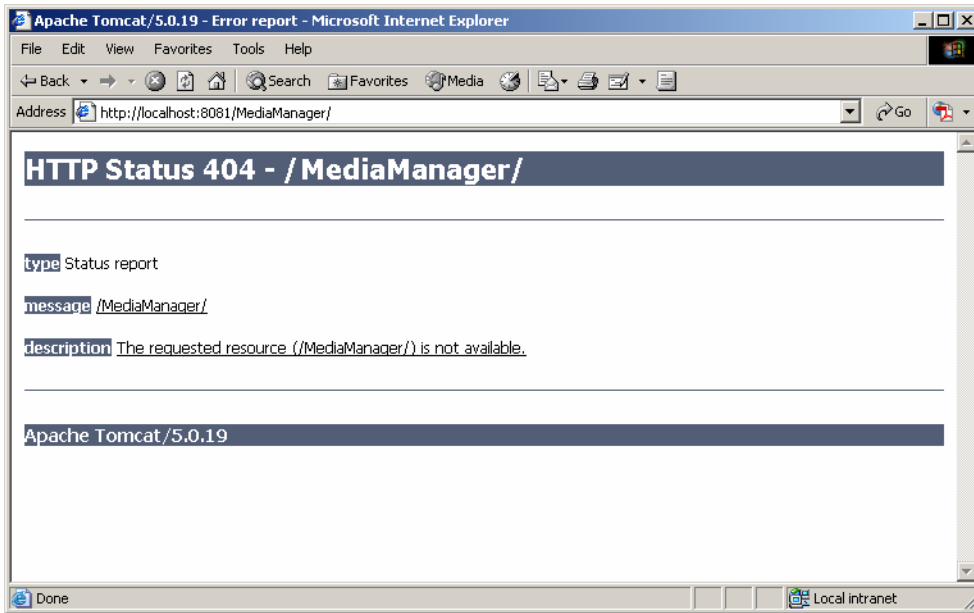
Testing the JPEG2000 Decoder:

1) If the Media Manager page loaded successfully, go to
   http://localhost:8081/MediaManager/jp2ktest. You should see:

Figure 7: Successful Test of the JPEG2000 decoder
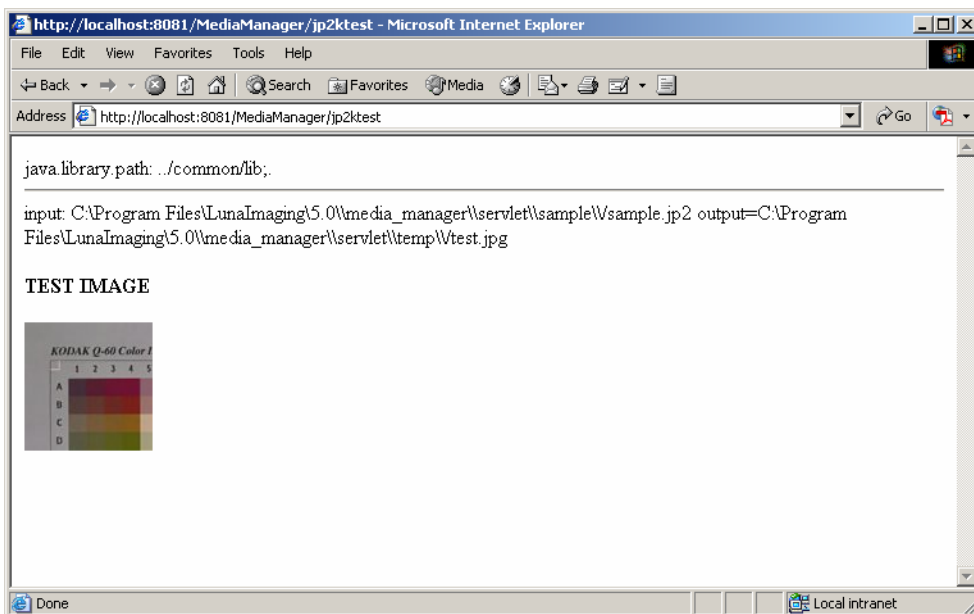
2) If you see the error shown in Figure 8: Missing JPEG2000 Library Error below:

a. Then it means that the JPEG2000 libraries are not accessible by Java. Check that the libraries are in the library path (specified above).
   i. Open the Insight installation directory.
   ii. Navigate to the following directory:

<installation_directory>/tomcat/common/lib

NOTE: This is the same location as ../common/lib in the example above.

b. Check if the following libraries are in the common/lib directory, then add them (there are versions of the libraries in the **<installation_directory>/media_manager/support** directory separated by OS). If the libraries are there, check the rights to ensure that Tomcat has the ability to see them.

Figure 8: Missing JPEG2000 Library Error
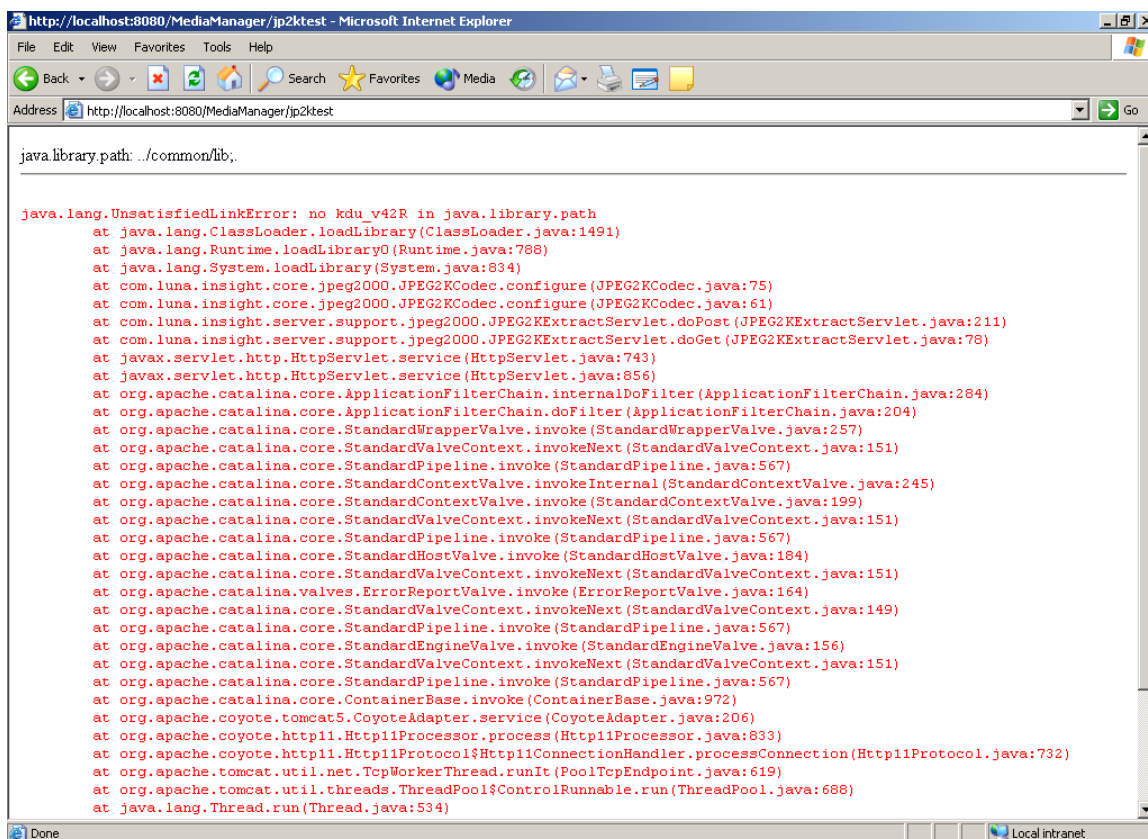
3) Go to http://localhost:8081/MediaManager/srvr. You should see the message below:

Figure 9: Media Manager Message with Ticketed Security Disabled
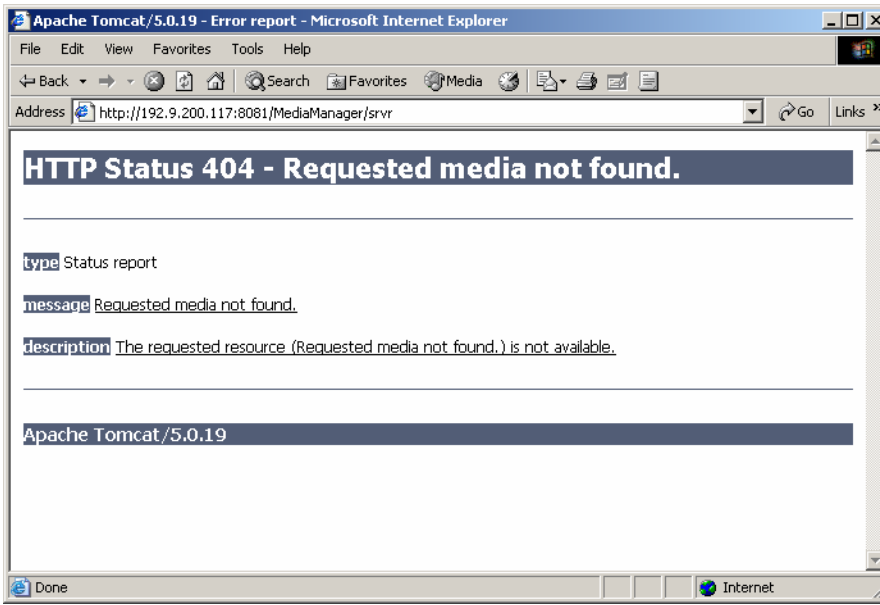
If you see the above message, then it means that the Media Manager is properly installed and is running.

If you have Media Security enabled you will see the message below:

Figure 10: Media Manager Message with Ticketed Security Enabled
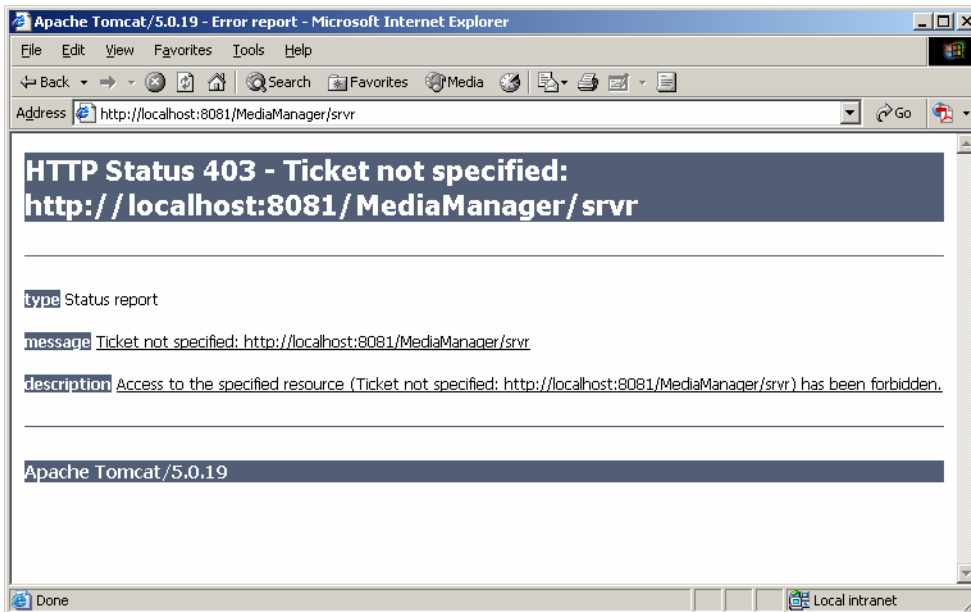
4) If media is not showing up in Insight, but the above tests show that the Media Manager is operational, the problem is likely in the Collection Manager's configuration. A few items to check:
   a. In Insight Administrator Tools or Insight Studio, check that the SPS values point to the Media Manager URL. See **Error! Reference**

> **source not found.** on page **Error! Bookmark not defined.** for more information.
>
> b. Do the private keys setup in the Media Manager and the Collection Manager match? See **Error! Reference source not found.** on page **Error! Bookmark not defined.** for more information.

Troubleshooting an Unsatisfied Link Error on Solaris

On Solaris, the JPEG2000 decoder requires common shared libraries to be installed in order to function properly. If these libraries are not installed, they may result in a **java.lang.UnsatisfiedLinkError**. For example:

```
java.lang.UnsatisfiedLinkError:/home/insight/Insight5.x/tomcat/common
/lib/libkdu_v42R.so: ld.so.1:
/home/insight/Insight5.x/jre/jre/bin/java: fatal: libstdc++.so.5:
open failed: No such file or directory
```

This error is a result of missing libraries in /usr/local/lib. The tomcat sh script assumes the **libgcc_s.so.1** and **libstdc++.so.5** libraries exist in /usr/local/lib.

If you do not have copies of these libraries installed, you can find copies at:

```
<install_dir>/media_manager/support/Solaris-gcc/
```

To Install **libgcc_s.so.1** and **libstdc++.so.5:**
1) Copy libgcc_s.so.1 and libstdc++.so.5 to a common directory.

2) Open the /tomcat/bin/tomcat_service.sh in a text editor.

3) Locate the following Line:

```
LD_LIBRARY_PATH=/usr/local/lib
```

4) Append the full path to the libraries to the end of the LD_LIBRARY_PATH with a colon separating the current and new path.

```
LD_LIBRARY_PATH=/usr/local/lib;/new/path
```

5) Save the file and close it.

6) Restart the tomcat service and go to http://localhost:8081/MediaManager/jp2ktest to verify that the error does not persist.

> **NOTE:** Alternately, you can download the libgcc-3.3-sol8-sparc-local.gz package and install the libraries from http://www.sunfreeware.com/

Troubleshooting a Media File Compromised Error

One error with the Media Manager is that the base file path for media may be slightly different from the actual path. This most commonly occurs on Windows where file-paths are not case sensitive (while the Media Manager's checks are). If you see an error similar to the following, then check the **MediaFileRootDir** parameter.

Figure 11: Media File Compromised Error
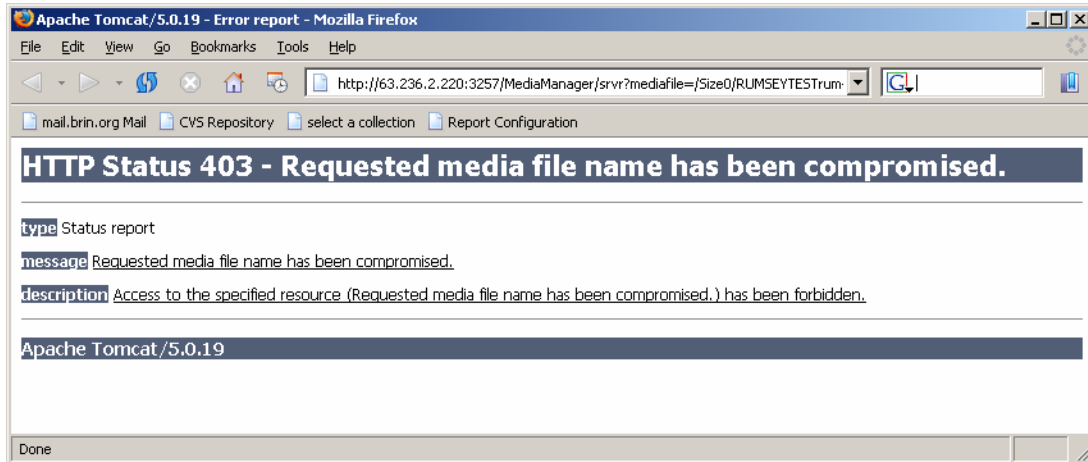
To change the MediaFileRootDir property:

1) Open your MediaManager.dat file (located in the media_manager directory) in a text editor.

2) Find the **MediaFileRootDir** parameter.

3) Check that the value matches the path to your media exactly (check the case of all pieces as well).

4) Save the file.

5) Restart Tomcat.

Testing your BrowserInsight Installation

BROWSER INSIGHT IS NO LONGER SUPPORTED BEYOND 6.2

Once you have modified the configuration files for Tomcat or Resin by adding the context for BrowserInsight, start Tomcat or Resin. By default, Tomcat and Resin are configured to run on Port 8081, to test that Resin or Tomcat is running properly:

Open a web Browser on the server running tomcat or resin and load the following page:

```
http://localhost:8081
```

1) Both Resin and Tomcat will display a default page stating that they are configured properly. If you do not see a page like this, check your configuration files for errors. There may be a missing "<" or ">". For other common configuration problems, review the Resin or Tomcat Manual.

2) If the default page loaded properly, load the following page:

```
http://localhost:8081/BrowserInsight/BrowserInsight
```

3) If Insight is configured properly, you should see a login page (below):
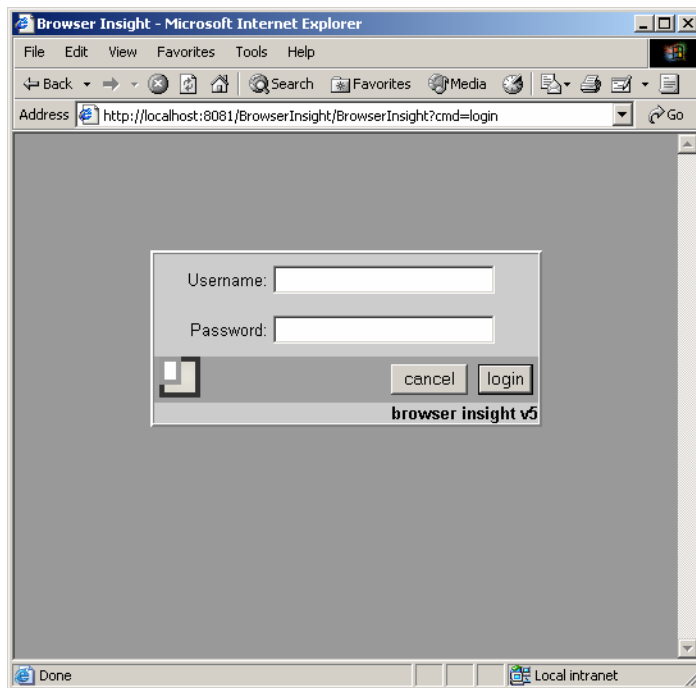
4) Enter your administrative username and password.

If you have already built collections, then you can press login and select one.

If you are expecting to see collections, but cannot, then the next step is to enable BrowserInsight's debugging information.

Troubleshooting Collections not displaying in BrowserInsight

BrowserInsight will attempt to dynamically add new 5.x collections once they're created. To this end, there is one requirement for any collection, specifically, that there is already a collection in that database. If there is an existing collection in that database, BrowserInsight will dynamically add the collection once it's created. If you just added a new Collection Manager or Personal Insight Manager to your version of BrowserInsight, try restarting BrowserInsight once the collection has been created.

If your collection still is not showing in the select list, try increasing the debug level and watching the console text. For more information on increasing the debug level for BrowserInsight, please see Enabling Debug Information for BrowserInsight on page 162.

Testing the XML Gateway

Testing for proper installation and configuration of the Insight XML Gateway is a two-step process. Before testing the XML Gateway installation, please ensure that Tomcat or Resin is properly installed and is able to serve its standard web pages and servlets. The default URL for the XML Gateway is:

```
http://<ipaddress>:<port>/insight/servlet/XMLGateway
```

These instructions assume that a default installation of Tomcat/Resin is being used as the servlet container, though Tomcat is shown. The testing process using Resin is similar, but exact steps and screenshots will differ.

Out of the box, the 6.3 version of Insight was shipped with a "Gateway Tester" application which sends a "collection list" request to the XML Gateway and returns the result. (For more information on the different types of requests that Insight XML Gateway responds to, please see the XML Gateway Documentation.)

1) Since the XML Gateway is middleware, it has no front-end. It can be tested by running a program that accesses it. A tester has been written for that purpose. Run the tester by going to the following location with your browser:

```
http://<ipaddress>:<port>/insight/servlet/tester
```

where <ipaddress> and <port> are those of the running Tomcat/Resin server. When Tomcat/Resin and the XML Gateway are properly configured, you should receive the following response:

```
Cannot find server - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back          Search     Favorites    Media

Address  http://localhost:8080/insight/servlet/tester          Go


Connecting to gateway...

sending xml...

waiting for response...

reading xslt...

Transformer Factory is a :org.apache.xalan.processor.TransformerFactoryImpl

Transformer is a :org.apache.xalan.transformer.TransformerImpl

beginging xslt transform...

completed xslt...

status code 0 == available


response status: 0
request status: 0
David Rumsey Collection - v4.1 - status: 0
Johnson Museum - v4.1 - status: 0


Done                                              Local intranet
```

Analyzing the messages above step by step:

1) Connecting to gateway … (the tester is connecting to the XML Gateway).

2) sending xml … (if you got this far, then the tester connected properly to the XML Gateway).

3) waiting for response … (xml was sent to the Gateway).

4) reading xslt… (received xml response, now processing).

5) Transformer factory … (ignore).

6) Transformer is (ignore).

7) beginning xslt transform… (ignore).

8) completed xslt … (check for errors below this line).

NOTE: The response status is 0 – meaning that the xml gateway is configured properly and was able to connect / communicate with the User Manager.

NOTE: Your list of collections will differ, based on collections made available to the XML Gateway.

NOTE: Each collection will also display a status message after it.

A successful test will return a response of 0 – similar to above.
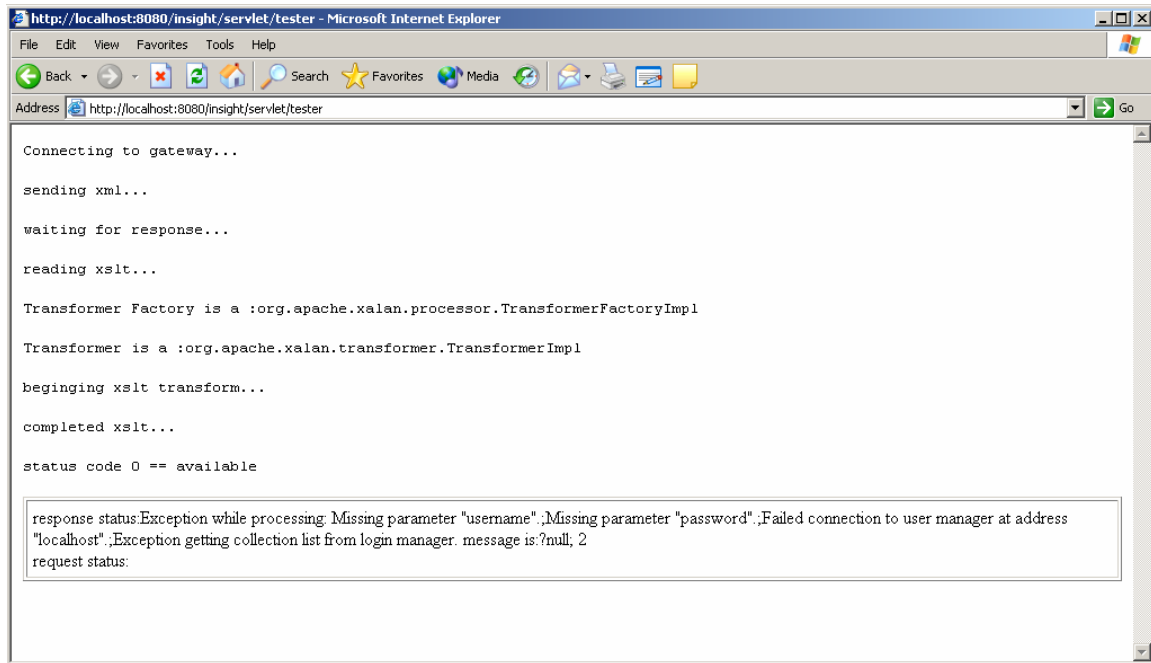
Error codes will be accompanied by a message in the status box. It will display any configuration errors in the xml gateway's web.xml configuration file.

http://<ipaddress>:<port>/insight/servlet/XMLGateway

Packaging and Distributing the Java Client

> ⚠ DEPLOY DIRECTOR IS NO LONGER SUPPORTED BEYOND 5.6

Deploy Director is no longer an available as an add-on to Insight, however, depending on whether you purchased Deploy Director when it was available you may have one or two options for distributing the Insight Java Client. If you did not purchase Deploy Director when it was still available, you can repackage the Java Client with a custom configuration. If you did purchase Deploy Director, you can use Deploy Director to manage, install and upgrade the Java Client.

Repackaging the Java Client with your User Manager Address

To package and distribute the Insight Java Client with your own configuration, simply zip up the Java Client's installer with a custom Insight.dat file. The installer will use that configuration file instead of the one that is packaged with the client. For detailed instructions on packaging the client, as well as instructions on customizing all of Java Client's configuration options, please see Repackaging & Advanced Configuration of the Insight Client Applications on page 166 for more information.

Distributing the Java Client using Deploy Director

> ⚠ DEPLOY DIRECTOR IS NO LONGER SUPPORTED BEYOND 5.6

Deploy Director was a powerful tool for managing and distributing the Java Client, unfortunately it is no longer available for new Insight clients. For more information on installing and configuring previously purchased Deploy Director, please see **Error! Reference source not found.** on page **Error! Bookmark not defined.** for more information.

Updating Deploy Director with the 6.2 Version of the Insight Java Client

DEPLOY DIRECTOR IS NO LONGER SUPPORTED BEYOND 5.6

For information on packaging and distributing the Java Client and updating an existing version of Deploy Director, please see **Error! Reference source not found.**on page **Error! Bookmark not defined.** for more information.

Configuring the Collection and User Managers to Run as Services

Insight is fully integrated with the Java Services Wrapper, an LGPL product from Tanuki Software (http://wrapper.tanukisoftware.org/doc/english/introduction.html). The service wrapper software allows Insight to integrate with the services interface for Windows, Solaris, or Linux.

Installing the Insight Server Components as a Service on Windows

The User Manger, Collection Manger, Personal Insight Manager, and Tomcat are pre-configured to run with the services wrapper. In each case, a series of batch files are installed to enable you to easily add and remove the service.

Install_as_service.bat:
Registers the Insight application with the windows service registry.

Uninstall_as_service.bat:
Removes the Insight application from the windows service registry.

To Install an Insight Application Component as a Service
1) Test that the server component starts correctly in console mode.

2) Run install_as_service.bat.

```
wrapper  | Insight User Server 5.x installed.
Press any key to continue . . .
```

3) Confirm that the service was installed properly.
   a. Open the Window service console (located in the Server Administrator Tools Folder of the Start Menu).
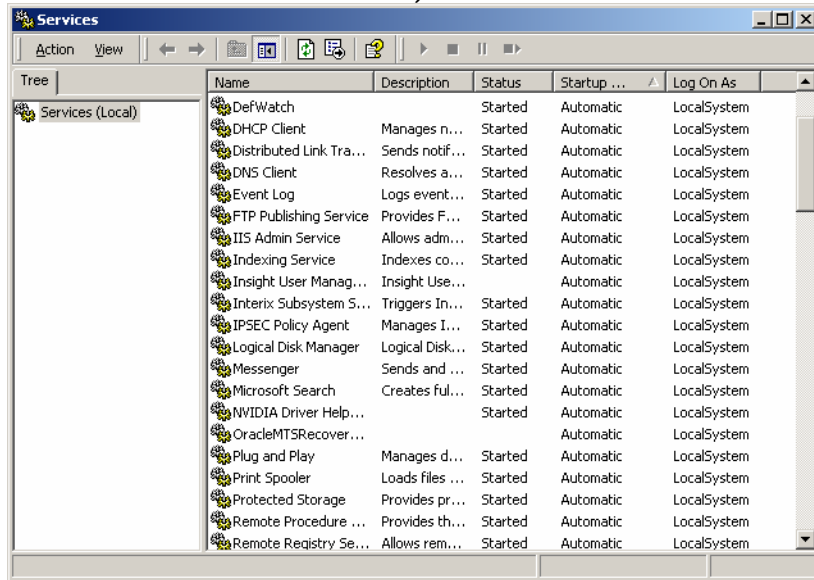
   b. Locate the Service you installed.

   c. If you are Installing the Collection Manager, User Manager, or Personal Insight Manager, then you should also check the database dependencies.
      i. Right-click on the service and choose "properties."
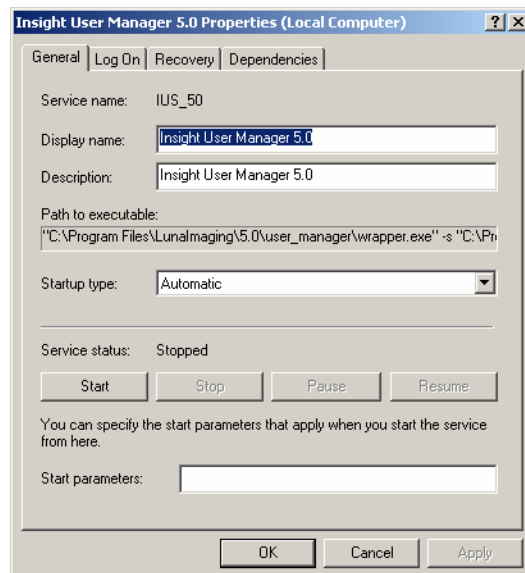
      ii. Choose the "Dependencies" tab.
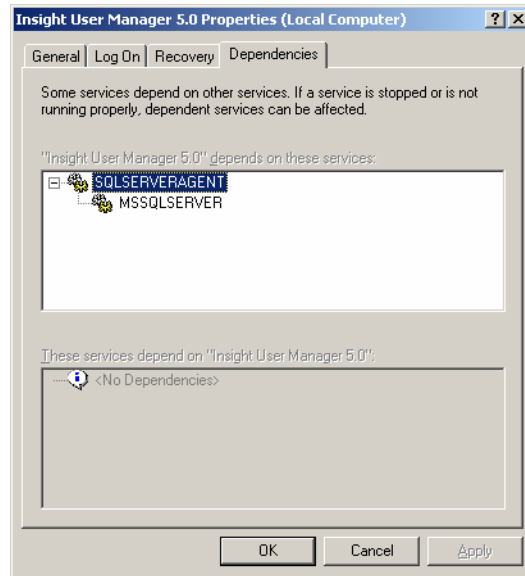
iii. If the service has been configured properly, you should see the name of the service for your database in the list of dependencies. If you don't see your database's service listed as a dependency, then delete the service by running Uninstall_as_service.bat, and follow the instructions below for configuring the service dependencies by hand.

NOTE: Dependencies can only work when the Database and Insight server components are on the same machine.

Configuring Insight's service dependencies by Hand

If the Collection, User, or Personal Insight Manager is running properly, then we need to identify dependencies for Insight to start before we can install it as a service. The User Manager, Collection Manager, and Personal Insight Managers are dependent on the database.

1) Locate the service name for the database. To do this, open the Windows Service Manager (located in the Server Administrator Tools Folder of the Start Menu).

Find the service for your database. Many databases have multiple services associated with them.

Database Name	Service Name
Microsoft SQL Server	SQLSERVERAGENT: SQL Server Agent is actually the listener for Microsoft SQL Server. If it's not running, applications will not be able to connect to the SQL Server Database.
Oracle	OracleService<SID NAME>: For Oracle, there is a service for each SID listener. The name of the service is the combination of OracleService and the SID Name, for example OracleServiceMySID (where MySID is the name of your SID).
MySQL	MYSQL

2) Choose properties.

3) The first entry should bethe actual name of the service (used for dependencies).

4) Once you have the name of the database service, we'll configure the Insight server component to depend on it.
   a. Open the configuration file for the component:
      - InsightServer.dat
      or
      - InsightUserServer.dat
   b. Locate the following line:

```
wrapper.ntservice.dependency.1=
```

   c. Add the name of the database service immediately after the =
   d. Now install the service by running the install_as_service.bat file. You should see this for the user server:

```
wrapper  | Insight User Server 5.x installed.
Press any key to continue . . .
```

   e. If you see something like this:

```
wrapper  | CreateService failed - The specified service already
exists. (0x431)
Press any key to continue . . .
```

   Then there's already a service installed with this name. Check that the service hasn't already been installed or, if it has, then change the name of the service by changing this entry in the config file:

```
wrapper.ntservice.name=
```

   Try installing the service again.

Figure 12: Windows Service Manager
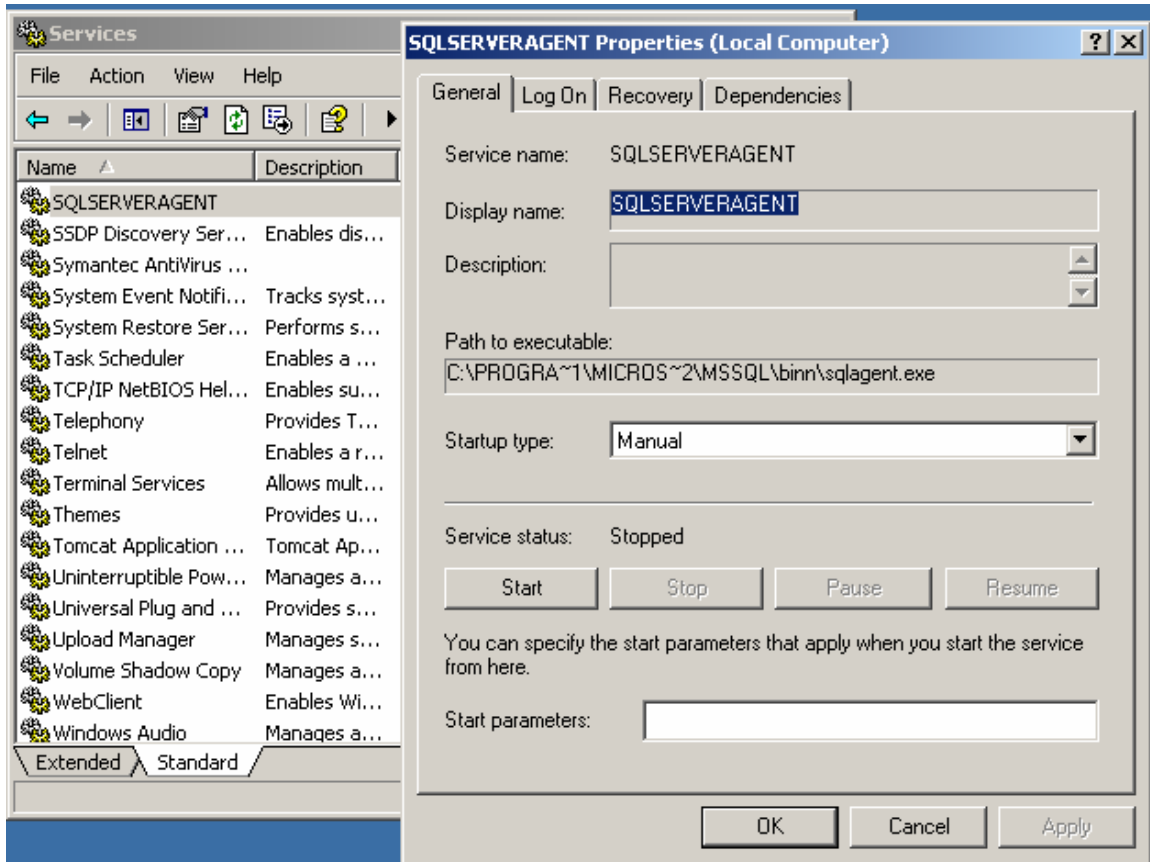
5) Open the Windows Services interface (or if it's already open, refresh it). You should now see each of the services you installed. If you look at the dependencies, you should also see a list of the dependent services.

6) Now start the service and try logging in.

Installing the Insight Server components as a Service on Linux or Solaris

NOTE: Each Linux / Solaris / UNIX System is different. Check with your Sysadmin before going any further.

Prerequisites:
Before you can set up Insight as a service, you must first:
1) Have root access to your machine.

2) Understand the basics of the rc.d and inet.d settings.

3) Know where your database and network are setup in the system boot sequence.

Installing Insight or Tomcat as a Service:
Insight and Tomcat have been set up to run as services. However, the services need to be registered with the Operating System before they can be used. Each component will include one shell script which can control Insight as a service. **These shell scripts (named insight_Collection_service.sh, insight_User_service.sh, or tomcat_service.sh) should not be moved from their current locations**.

Service shell script installation locations:

```
/LunaImaging/Tomcat/bin/ -- tomcat
/LunaImaging/user manager/ -- User Manager
/LunaImaging/collection manager/***/ -- collection mgr.
/LunaImaging/personal_insight /***/ -- personal insight
```

(where *** is the installation directory)

Each shell script responds to the standard start / stop service commands for a Unix / Linux System. Based on where your database is placed in the RC / Inet Hierarchy, set the Insight server components as follows:

ON STARTUP:
If your database is set as 20 in the startup script, you'll want to set the Insight server components as 21 (so that they startup after the database). To actually install the script, create a symlink to the shell script.

For more detailed instructions on how to configure the service on Solaris or Linux, please see:

Solaris:
http://wrapper.tanukisoftware.org/doc/english/launch-nix-boot-solaris.html

Linux:
http://wrapper.tanukisoftware.org/doc/english/launch-nix-boot-debian.html

Apache Tomcat 5.0

Bundling Insight with Tomcat 5 simplifies installation and configuration as well as management.

Tomcat Manager

The Tomcat Manager application is designed to simplify the management and deployment of servlet applications. Luna has configured the Tomcat Manager to restrict access to only requests from that machine. Furthermore, it has been pre-configured with your Insight admin username and password.

The Tomcat Manager can be reached by going to:

```
http://localhost:8081/manager
```

For more information on the Tomcat Manager and how to use it, please see Tomcat's user document.

Tomcat Configuration Files

Tomcat 5.0 has three main locations for configuration information:

The Tomcat server.xml

The Tomcat 5.0 server.xml specifies the port and other general information about Tomcat. If you need to change the port Tomcat is running on after you've installed, you would adjust it here.

The Tomcat Context Area

The Tomcat Context area, located in the **Catalina/localhost** directory of Tomcat's conf directory contains a series of XML files, one for each of Tomcat's Servlet Contexts.

Each of these XML files contains basic configuration information for its servlet, including debug levels, IP Restrictions, the location of the servlet's files, and other general information.

web.xml Files

Each Java servlet has a web.xml configuration file in its WEB-INF directory to specify initialization parameters and other startup information.

Tomcat Help Files

All of Tomcat's documentation has been installed with Insight and can be located in the **webapps-disabled\tomcat-docs** directory of the Tomcat directory.

Managing Tomcat Administrative Users

Apache Tomcat manages administrative users using a tomcat-users.xml file located in the conf directory. You may edit this file to add administrative users, or change passwords.

Configuring BrowserInsight

⚠ BROWSER INSIGHT IS NO LONGER SUPPORTED BEYOND 6.2

BrowserInsight is one of the Insight Servlet Components, providing browser-based access to Insight collections. It is installed and configured by default with each new Collection Manager or Personal Insight Manager you add or upgrade.

Common Administrative Tasks to Perform with BrowserInsight:
- Enabling Auto-login
- Changing the User Manager
- Adding a collection or Collection Server
- Enabling Media Security
- Changing the behavior of the "Collection Selection Panel" on login
- Changing the maximum number of speed-search values

Differences in BrowserInsight between 4.1 and 5.x

In 5.x, the BrowserInsight configuration file has changed a bit. Besides Collection entries, which represent database connections for specific collections, the BrowserInsight.conf contains entries for Server entries (which represent a Collection Manager or Personal Insight Manager). 5.x no longer requires a **BrowserUniqueCID** entry in the User Manager's collection table.

For existing collections, leave your collection and BrowserUniqueCID entries as they were in 4.1 (as any change will break all existing Remote Launch Strings to that collection). For new collections, use the "Server" method without the BrowserUniqueCID.

Configuring BrowserInsight by Editing the BrowserInsight.conf Configuration File

After installation, the Insight Suite Installer will configure BrowserInsight with information about your User Manager, Collection and Personal Insight Managers. You should not have to configure anything for BrowserInsight.

> **NOTE:** Though you will not need to add new collection entries to the Browser each time you create a collection, you will need to restart the BrowserInsight Servlet before it sees any new collections.

Locating the BrowserInsight.conf Configuration File

The BrowserInsight configuration maintains information on BrowserInsight's database connections, collections, and other basic information.

To Locate the BrowserInsight.conf:
1) Locate your Insight Installation Directory.

2) Open the **browserInsight** directory.

3) Your **BrowserInsight.conf** file is located here.

Configuring BrowserInsight to Bypass the Login Page

BrowserInsight is initially configured to require users to enter a username and password to view collections. If you would like to allow users direct access to collections without being asked to enter a username and password, you can provide default values in the configuration file.

To configure "auto-login":

1) Locate the following lines in the BrowserInsight.conf configuration file:

```
#DefaultBrowserInsightUsername =

#DefaultBrowserInsightPassword =
```

2) Remove the comment character (#) from the beginning of both lines.

3) Add the default username and password of your choice after each equals sign.

```
DefaultBrowserInsightUsername = myusername

DefaultBrowserInsightPassword = mypassword
```

4) Save the BrowserInsight.conf configuration file and restart BrowserInsight.

Configuring BrowserInsight to Close the Collection Selection Window After Opening a Collection in the Group Workspace or Image Workspace

After a user enters their username and password, they are presented with a collection selection window. When users click on a Remote Launch String, if more than one collection is available to that user, BrowserInsight by default will also display that collection selection window in the background. As an administrator, you may choose what happens to that collection selection window if they click on a Remote Launch String, either to leave the window open, or close it.

To configure the collection selection window to close when users click on a Remote Launch String:

1) Locate the following lines in the BrowserInsight.conf configuration file:

```
# if set to 1, when a remote launch string is invoked the collection
selection
# window will close after login, and BrowserInsight will launch the
selected
# collection
# if set to 0, the default, BrowserInsight will keep the collection
selection
# window open in the background
#
# CollectionSelectionWindowMode=0
```

2) Remove the comment character (#) from the beginning of the **CollectionSelectionWindowMode** line.

3) Set the **CollectionSelectionWindowMode** parameter to 1.

```
CollectionSelectionWindowMode=1
```

4) Save the BrowserInsight.conf configuration file and restart BrowserInsight.

Configure Collection Manager Server Database Settings

BrowserInsight can connect to multiple collection databases. For each database, you must specify a server entry with the following parameters: Database Driver, Connect String, Username, Password, Media Manager Address, and Media Manager status.

For collections that were created pre-5.0 environment, BrowserInsight still supports "Collection" entries which enable access to specific collections and tie Remote Launch Strings to collection entries via the **BrowserUniqueCID**.

```
Collection.1.InsightDBDriver = sprinta

Collection.1.connectString =
www.dalton.org:1433?database=insightVRA&sql7=true&user=insight&passw
ord=admin

Collection.1.username =
```

```
Colelction.1.password =


Collection.1.mediaSecurityEnabled    = yes

Collection.1.mediaSecurityServletUrl =
http://localhost:8081/Media_Manager/srvr




Server.2.InsightDBDriver = oracle

Server.2.connectString = @www.dalton.org:1521:insight

Server.2.username = a_user_name

Server.2.password = a user password

Server.2.mediaSecurityEnabled  = yes

Server.2.mediaSecurityServletUrl =
http://localhost:8081/Media_Manager/srvr
```

The example above shows two entries: one for a specific collection using the Sprinta Driver and VRA Database, the other a server entry for a 5.x Collection Manager which may have multiple collections in its Oracle Database.

Table 10: Required Entries for a Collection or Server Entry in BrowserInsight

Collection or Server Parameter	Description
InsightDBDriver	The Database Driver Insight should use to connect to the Collection Manager database. Valid entries include (sprinta, oracle, JTurbo and jtds).
connectString	The Database Connection String Insight should use to connect to the Collection Manager database.
username	The Database Username Insight should use to connect to the Collection Manager database.
password	The Database Password Insight should use to connect to the Collection Manager database.
mediaSecurityEnabled	Specify whether BrowserInsight should use the Media Manager when requesting media. The default is "no", should be set to "yes" in general.
mediaSecurityServletUrl	The URL for the Media Manager, this should be http://your.media.manager:8081/Media_Manager/srvr

Table 11: Optional Entries for a Collection or Server Entry

Collection or Server Parameter	Description
mediaTicketDuration	The length of time a media request ticket is valid. The default value is 30 minutes.
mediaSecuritySecretKey	The private key BrowserInsight should use to request a ticket for accessing media. This must match the value in the Media Manager's configuration file.

| mediaTicketless | Set this setting to yes if you would like to use the Media Manager, but don't require the media security settings. |

Enabling Media File Deletion

By default the Insight Media Manager does not delete Media off of the server. To enable media deletion, follow the directions below.

1. Edit the MediaManager.dat located in the "media_manager" directory of the installation directory.

2. Locate the following section.

```
##
# MediaSecurityKey - The security key used by the Media Manager.
# This security key must be the same in both the
# collection server and media security servlet environments.

MediaSecurityKey =

##
# MediaDeleteEnabled - If set to 1, the media security servlet will
delete media
# from server when users delete media from client applications.
# The default value is 0 (does not delete media from server)

MediaDeleteEnabled = 0
```

3. Enter a value for the MediaSecurityKey property

4. Change MediaDeleteEnabled to 1.

5. Save the file.

6. Edit the InsightServer.dat located in your the Collection_Manager directory.

7. Locate the following section.

```
##
# MediaSecurityKey - The security key used by the Media Manager.
# This security key must be the same in both the
# collection server and media security servlet environments.

MediaSecurityKey =
```

8. Enter a matching value for the MediaSecurityKey property.

9. Save, then restart your Collection Manager and Tomcat.

Configuring the XML Gateway

The Insight XML Gateway is installed by default. Once the XML Gateway has been installed, it needs to be configured.

Configuring the XML Gateway with a Username and a Connection to a User Manager

The Insight XML Gateway acts like the Insight Java Client. It is configured with a **User Manager Address**, a **Username**, a **Password**, and **License-File** Directory. By default, these are the only required configuration properties.

1) Locate the XML Gateway configuration file (**web.xml**). The web.xml file is located in the WEB-INF directory of the XML Gateway installation directory.

2) Open the web.xml file in your preferred text editor.

3) Change the User Manager Address.
   a. Locate the following lines in the web.xml file:

```
<param-name>UserServerAddress</param-name>
<param-value>localhost</param-value>
```

   b. Change "localhost" to match the address of your Insight User Manager.

4) Change the username and password.
   a. Locate the following lines in the web.xml file.

```
<init-param>
    <param-name>username</param-name>
    <param-value>test</param-value>
```

```
   <description>Username for User Manager
   authentication.</description>
</init-param>
<init-param>
   <param-name>password</param-name>
   <param-value>test</param-value>
   <description>Password for User Manager
   authentication.</description>
</init-param>
```

        b. Set the **username** parameter to match a valid **username** on your User Manager.

        c. Set the **password** parameter to match the valid **password** for the username used above.

5) If you have upgraded from a previous version of the XML Gateway, change the ResponseSystemID parameter to http://www.lunaimaging.com/support/dtd/insightXMLGateway/v6.3/insightresponse.dtd.

6) Restart Tomcat.

7) Run the XML Gateway Tester (for more information on the XML Gateway Tester, please see (Testing the XML Gateway on page 121).

Configuring the Simple Search Example Servlet

Insight ships with an example servlet on the Installation CD to help you get started with the XML Gateway. For more information on the simple search example servlet, please see the "**utilities**" directory on the Installation CD.

Configuring BrowserInsight to Use SSL

⚠ BROWSER INSIGHT IS NO LONGER SUPPORTED BEYOND 6.2

HTTP over SSL (or Secure Socket Layer) provides enhanced security around Insight's login functionality. When enabled, users who load the login page for BrowserInsight are redirected to a Secure HTTP Connection (over SSL), where they login, and are then passed back to the BrowserInsight Application. This situation is ideal for Single-Sign-On Situations where usernames and passwords provide greater access to Institutional Resources than Insight.

> **NOTE:** The Insight 5.x Suite Installer will pre-configure many of these settings for you according to your installation choices. In many cases you may simply have to uncomment the existing values.

To enable SSL with the bundled version of Tomcat 5.0:
1) Open Tomcat's server.xml (located in the tomcat/conf directory).

2) Locate the section on the SSL Connector (as follows).

```
  <!-- Connector port="8443"
             maxThreads="150" minSpareThreads="25"
maxSpareThreads="75"
             enableLookups="false" disableUploadTimeout="true"
             acceptCount="100" debug="0" scheme="https"
secure="true"
              keystoreFile="path/to/your/keystore"
```

```
                 keystorePass="keystore password"
                 clientAuth="false" sslProtocol="TLS" / -->
```

3) Uncomment the connector for SSL so the line looks like this:

```
  <Connector port="8443"
               maxThreads="150" minSpareThreads="25"
maxSpareThreads="75"
               enableLookups="false" disableUploadTimeout="true"
               acceptCount="100" debug="0" scheme="https"
secure="true"
                keystoreFile="path/to/your/keystore"
                keystorePass="keystore password"
               clientAuth="false" sslProtocol="TLS" />
```

4) Follow the instructions on http://jakarta.apache.org/tomcat/tomcat-5.0-doc/ssl-howto.html for information on how to create a keystore.

5) Change the **keystoreFile** parameter to match the path to your keystore file.

6) Change the **keystorePass** parameter to match the password you created for your keystore.

7) Save the **server.xml** configuration file.

8) **Restart** Tomcat.

To enable SSL during login:
1) Configure your servlet container (Resin or Tomcat) to use SSL. See your Resin or Tomcat documentation for directions on configuring and testing SSL. Note the port number on which SSL is configured.

2) Once the servlet container is properly listening for SSL connections on the specified port, open the BrowserInsight.conf, located in the root of the BrowserInsight installation directory.

3) Locate the following lines:

```
#--------------------------------------------------------
# SSL Security Settings
#--------------------------------------------------------

# to enable secure login uncomment and update the
# following lines

#LoginSSL  = yes
#SecureDomain = https://browserinsight.lunaimaging.com:8085
#StandardDomain = http://browserinsight.lunaimaging.com:8080
```

4) Uncomment the **LoginSSL** property and set it to 'yes' in your BrowserInsight.conf.

5) Uncomment the **SecureDomain** property and set it to match the domain on which the Secure version of BrowserInsight is running. Commonly, the secure domain is composed of the protocol (https) + the host running

BrowserInsight + the servlet container's SSL port number. For example, if your domain name is host.mydomain.com and your servlet container's SSL port is 8085, specify SecureDomain as: https://host.mydomain.com:8085/

> **NOTE:** If you are using the standard HTTPS port, 443, you may omit the port definition for the SecureDomain property, as seen in the example above.

6) Uncomment the **StandardDomain** property and set it to match the domain on which the unsecured version of BrowserInsight is Running, commonly this is preset for you.

7) Save the BrowserInsight.conf file and continue with the steps below, specific to your servlet container.

Additional Installation Instructions for Resin

1) Open the resin.conf file located in the <resin_install>/conf directory.

2) Search for the line beginning with "<session-config" in the resin.conf file, it should look something like the following:

```
<session-config enable-cookies='true' enable-url-rewriting='false'
session-timeout='30'/>
```

3) If **LoginSSL** is set to "yes" in BrowserInsight.conf, then the above line must be changed to the following:

```
<session-config enable-cookies='true' enable-url-rewriting='true'
session-timeout='30' cookie-domain='.mydomain.com'/>
```

4) The dot (.) character preceding 'mydomain' is required. Be sure to change 'mydomain' to the domain under which BrowserInsight is running.

> **NOTE:** Setting 'enable-url-rewriting' to true, as shown above, has the effect that users who have disabled cookies in their web browser will still be able to use BrowserInsight.

5) Restart Resin after modifying resin.conf.

Additional Installation Instructions for Apache's Tomcat 4.x

1) Open the server.xml file located in the <tomcat_install>/conf directory.

2) Search for "BrowserInsight" in the server.xml file, it should look like the following:

```
<Context className="org.apache.catalina.core.StandardContext"
crossContext="false" path="/BrowserInsight"  debug="3"
reloadable="true" docBase="<browser install dir>"
defaultSessionTimeOut="30">
```

3) When using Tomcat with SSL, cookies may not be used to track user sessions. Disable cookies by changing the above line to the following:

```
<Context className="org.apache.catalina.core.StandardContext"
crossContext="false" path="/BrowserInsight"  debug="3"
reloadable="true"  docBase="<browser install dir>"
defaultSessionTimeOut="30" cookies="false">
```

4) Restart Tomcat after modifying server.xml.

Using your own version of Apache's Tomcat or using Caucho's Resin

Insight 6.3 ships with a customized version of Apache's Tomcat 5.0 running on the Sun JDK 1.4.2. If you'd like to use your own version of Tomcat, or Caucho's Resin Application Server, manual configuration will be required.

Prerequisites

The Insight Servlet Components maintain a few prerequisites for running. These include a specific version of Sun's JDK (1.4.2) and specific versions of Tomcat or Resin.

Supported versions of Sun's JDK

Luna currently supports Sun's JDK version 1.4.2.

> **WARNING:** The Insight Servlet Components will not run on versions of the JDK earlier than 1.4.2.

Supported versions of Tomcat

Luna currently supports Insight running on Tomcat versions 4.x and 5.0.x.

Supported versions of Resin

Luna currently supports Insight running on Resin 3.x.

Insight Servlet Components

Insight includes three separate Servlet Components that run inside basic servlet contexts:

BrowserInsight – *a Browser based thin client.*

Media Manager – *The Insight Media Manager provides integrated support for uploading serving Insight Media content (including JPEG2000 Files).*

XML Gateway (optional) – *a REST Based XML Gateway that facilitates searching of Insight collections from XML aware applications.*

Locating the Servlet Components Context Files

Each Insight Servlet context is installed into its own directory with the server installation. The components are located in the following Directories:

```
Media Manager Location – LunaImaging/5.x/media manager/Support/

BrowserInsight Location – LunaImaging/5.x/browserInsight/Support/

XML Gateway Location – LunaImaging/5.x/xmlgateway/Support/
```

In each directory is a support directory with the following two files:

```
/Support/Tomcat conf additions.txt
/Support/Resin_conf_additions.txt
```

Each file represents the required additions to **Tomcat** or **Resin** to enable the Insight servlet components.

Configuring the Insight Servlet Components to Run in a Custom Version of Tomcat

Adding the Insight Servlet Contexts to the Tomcat 4.x server.xml

The following instructions assume a new installation of Tomcat. If you have modified the default Tomcat configuration, the steps required to configure Tomcat to run the Insight Servlet Components may be different.

1) Locate your Tomcat Installation Directory.
2) Locate the server.xml file located in the conf/ directory inside the Tomcat Installation Directory.
3) Open the server.xml file in your preferred text editor locate the following:

```
'<Context path="" docBase="ROOT" debug="0"/>'.
```

4) Copy the contents of each of the "Tomcat_conf_addition.txt" files (located in the support directories of the servlet's (see above for more information)

and paste them under the above location. The result should look like this:

```
<Context path="" docBase="ROOT" debug="0"/>
<Context className="org.apache.catalina.core.StandardContext"
crossContext="false" path="/BrowserInsight" debug="0"
reloadable="true" defaultSessionTimeOut="30"
docBase="C:\Program Files\LunaImaging\5.x\browserInsight\servlet\">

<Logger className="org.apache.catalina.logger.FileLogger" debug="0"
verbosity="1" prefix="localhost BrowserInsight log." directory="logs"
timestamp="true" suffix=".txt"/>
</Context>
```

> **NOTE:** If you are adding more than one of the Insight Servlet components, you'll have to repeat the above steps for each component.

5) Restart Tomcat.

Adding the required Libraries to Tomcat's Library Path

The Insight Media Server requires some external shared libraries that must be loaded by the JDK (Java SDK). These libraries need to be placed in the Java Library Path (specified by the java.library.path or **LD_LIBRARY_PATH** environment variable).

Configuring Java Imaging Properties for Solaris and Linux

Note you will need to add the following extra launch parameter to the instance of Java running tomcat (-Djava.awt.headless=true).

Adding the Insight Servlet Contexts to an Instance of Tomcat 5

Rename each of the tomcat_conf_additions.txt to something a bit more identifiable and copy each one into Catalina/localhost/.

Adding the Required Libraries to Tomcat's Library Path

The Insight Media Server requires some external shared libraries that must be loaded by the JDK (Java SDK). These libraries need to be placed in the Java Library Path (specified by the java.library.path or LD_LIBRARY_PATH environment variable).

On Windows:
Edit the Catalina.bat file used to startup Tomcat. Add the following line to the beginning:

```
SET JAVA_OPTS=-Djava.library.path="<insight-install-
dir>\media_manager\support\win32"
```

> **NOTE:** If you have spaces in your filepath, you should keep the quotes.

On Linux:
Edit the Catalina.sh file used to startup tomcat, add the following line to the beginning:

```
JAVA OPTS=-Djava.library.path=<insight-install-
dir>\media_manager\support\Linux-gcc
```

On Solaris:
Edit the Catalina.sh file used to startup Tomcat. Add the following line to the beginning:

```
JAVA OPTS=-Djava.library.path=<insight-install-
dir>\media_manager\support\Solaris-gcc
```

Configuring Java Imaging Properties for Solaris and Linux
Note you will also need to add the following extra launch parameter to the JAVA_OPTS as well:

```
(-Djava.awt.headless=true)
```

Configuring the Insight Servlet Components to run Caucho's Resin Application Server

Adding the Insight Servlet Contexts to the resin.conf

The following instructions assume a new installation of Resin. If you have modified the default Resin configuration, the steps required to configure Resin to run the Insight Servlet Components may be different.
1) Locate your Resin Installation Directory.

2) Locate the resin.conf file located in the conf/ directory inside the Resin Installation Directory.

3) Open the resin.conf file in your preferred text editor locate the following:

```
<host id=''>
```

4) Copy the contents of the file "Resin_conf_addition.txt" (located in the support directories of the servlet's (see above for more information) and paste them under the above location. The result should look like this:

```
<host id=''>
<web-app id='/BrowserInsight' class-update-interval='2'
app-dir='C:\Program Files\LunaImaging\5.x\browserInsight\servlet\' >
</web-app>
```

NOTE: If you are adding more than one of the Insight Servlet components, you'll have to repeat the above steps for each component.

5) Restart Resin.

Adding the Required Libraries to Resin's Library Path

The Insight Media Server requires some external shared libraries that must be loaded by the JDK (Java SDK). These libraries need to be placed in the Java Library Path.

On Windows:
Copy the JPEG2000 libraries from the media_manage/support/win32 directory into the bin directory of Resin.

On Solaris / Linux:
Copy the JPEG2000 libraries from the appropriate subdirectory of the media_manager/support directory either (linux-gcc or solaris-gcc) into the libexec folder in resin's application directory.

> **NOTE:** The libexec directory is added by resin to the LIBRARY_PATH).

Configuring Java Imaging Properties for Solaris and Linux

Note you will need to add the following extra launch parameter to the instance of Java running tomcat

```
   (-Djava.awt.headless=true)
```

Testing your Custom Configuration

After restarting, test all of your existing Web Applications to ensure they run properly. If they are working, please refer to the respective sections of the Install and configuration guide for the servlet components you installed.

Troubleshooting Errors with the XML Gateway

If you are having problems running the Insight XML Gateway, check the Tomcat log files.

If you see this error in the log file:

```
InsightXMLGateway: Failed to get Class object for parser named
"org.apache.xerces.parsers.SAXParser"
```

Then you need to add the XML Parser to you classpath. To do this:
      a. Locate the lib directory inside the support directory of your XML Gateway installation.
      b. Copy the three jar files (xml-apis.jar, xalan.jar, xercesImpl.jar) into the lib directory, located in the servlet/WEB-INF directory

```
<installation dir>/support/lib/xercesImpl.jar
                             /xalan.jar
                             /xml-apis.jar
```

into:

```
<installation_dir>/servlet/lib/
```

      c. Restart tomcat/resin.

If any configurable value in web.xml is incorrect, the XML Gateway servlet will return an empty InsightResponse with a status message. The Tester may return a message similar to:

```
InsightXMLGateway: Failed connection to User Manager at address
"localhost".
```

Check your web.xml and confirm that the username, password, and User Manager Address are correct.

Fix any error conditions identified, restart Tomcat/Resin, and navigate to the XML Gateway's Tester URL again.

Troubleshooting Errors with Resin and the Media Manager

Resin does not always properly load the security library properly, to ensure it is loaded:

1) Locate the lib directory inside the installation directory of resin.

2) Copy the bcprov-jdk14-115.jar from the servlet\WEB-INF \lib directory inside the installation directory for the Insight Media Manager into the lib directory for resin.

```
<secure media server install dir>\servlet\WEB-INF\lib\bcprov-jdk14-
115.jar
```

copy to

```
<resin_installation_directory>\lib\ bcprov-jdk14-115.jar
```

Debugging the Insight Server Components

If any of the Insight server components fail to start properly (either they're not allowing connections from Insight, Inscribe, or Insight Studio, or they aren't printing "Accepting Connections" in the console), it may be useful to increase Insight's debug level to help diagnose the problem.

> **NOTE:** Regardless of the debug level, Insight will always print "Accepting Connections" on proper startup.

It is important to recall that when the installer completes, it has installed the components, it has not started them as running processes. They need to either be manually started (in console mode) or installed as services. We recommend testing the components as console mode processes until they have been verified as working properly, THEN running them as services.

Problems, when they occur, generally fall into one of four categories:

- Network Issues
    - Is the network running?
    - Is the device in question running?
    - Is the device accessible?
    - Is the port operational?
    - Are firewall restrictions getting in the way?
    - Have necessary network privileges been set up?
- Database Issues
    - Is the database service running?
    - Is the database service accessible?
        - Has a database username / password been established?
        - Does that username have the necessary permissions?

- o Does the database exist?
- o Are we pointing at the right database?
- o Are there space issues?
- Configuration Issues
  - o Are all parameters pointing where they should be?
  - o Are all of the usernames, passwords, databases, hostnames, ports correct?
- File System Issues
  - o Is there space on the target device?
  - o Does the user have rights to write to the target device/directory?

Since most components are dependent on the User Manager, test it first. Then test the Collection Manager and Personal Insight Manager, then the Media Manager, BrowserInsight, and finally the XML Gateway.

Checking the Version of All Installed Components

Insight 6.3 ships with a new tool to display the versions of each of the Insight Components. This tool is designed to assist with patch updates and help ensure that patches are installed and configured properly.   One of the most common support problems is that different Insight server components are running using different versions.

To check the versions of all installed components:

1) Locate the Insight Installation Directory.

2) Open the "**utilities/check_server_version**" Directory.

3) Run "**checkInsightVersion.cmd**" or "**checkInsightVersion.sh**" (depending on which platform you're on).

4) This tool will run a script and print out the version of each of the components installed.

5) In the script, it will print out the name and location of each of the critical JAR files, as well as the build number and date.

6) Please confirm that each of the dates and versions match.

```
C:\WINNT\system32\cmd.exe                                          _ □ ×

     [echo] checking the version of your Insight components.

     [echo] ***********************************************
     [echo] *                                             *
     [echo] *  THIS WILL CHECK THE VERSION OF ANY         *
     [echo] *  INSIGHT SERVER COMPOENT THAT'S             *
     [echo] *  INSTALLED IN A DEFAULT LOCATION.  IF       *
     [echo] *  YOU HAVE INSTALLED CERTAIN INSIGHT         *
     [echo] *  SERVER COMPONENTS IN ANOTHER LOCATION,     *
     [echo] *  YOU WILL NEED TO CHECK THOSE SEPARATELY.*  *
     [echo] *                                             *
     [echo] *  TO ENSURE INSIGHT RUNS PROPERLY:           *
     [echo] *  PLEASE CONFIRM THAT ALL OF THE VERSION     *
     [echo] *  NUMBERS AND BUILD DATES ON EACH JAR        *
     [echo] *  FILE MATCH.                                *
     [echo] *                                             *
     [echo] ***********************************************

     [echo] C:\Program Files\LunaImaging\5.1\browserInsight\servlet\WEB-INF\lib\
insightserver.jar
     [echo] v5.10(02) 23November2004

     [echo] C:\Program Files\LunaImaging\5.1\collection_manager\mci\lib\insights
erver.jar
     [echo] Insight Smart Server - Build of v5.10(02) 23November2004

     [echo] C:\Program Files\LunaImaging\5.1\media_manager\servlet\WEB-INF\lib\i
nsightserver.jar
     [echo] v5.10(02) 23November2004

     [echo] C:\Program Files\LunaImaging\5.1\personal_insight_manager\pmi\lib\in
sightserver.jar
     [echo] Insight Smart Server - Build of v5.10(02) 23November2004

     [echo] C:\Program Files\LunaImaging\5.1\user_manager\lib\insightserver.jar
     [echo] Insight User Server - Build of v5.10(02) 23November2004

     [echo] C:\Program Files\LunaImaging\5.1\xmlgateway\servlet\WEB-INF\lib\insi
ghtserver.jar
     [echo] v5.10(02) 23November2004


BUILD SUCCESSFUL
Total time: 25 seconds
```

Enabling Debug Information

There are two distinct types of "Debug Mode" for the Insight server components:

Console Debug Mode:
Adjusting the Console Debug Mode will increase / decrease the amount of information printed to the application's console. In the case of applications running as services, the debug content will not be logged.

To change the debug level

1) Open the appropriate configuration file for any Insight server component in a text editor (for more information see the tables starting on page 109).

2) Locate the "DebugLevel" parameter.

3) Change the "DebugLevel" parameter to either increase or decrease the debug messages:

Table 12: Debug Levels for the Insight Server Components

Off	0
Low	1
Medium	2

High	3

4) Close the configuration file.

5) Restart the Insight server component.

Database Debug Mode

Database Debug Mode determines whether database queries are logged to a file.

To enable or disable the database debug information:

1) Open the appropriate configuration file for any Insight server component in a text editor (for more information see the tables starting on page 109).

2) Locate the "DatabaseDebugMode" parameter.

3) Change the "DatabaseDebugMode" parameter to either on or off, to display or suppress debug messages:

Table 13: Database Debug Mode settings

Off	0
On	1

4) Close the configuration file.

5) Restart the Insight server component.

6) All database queries should be logged to the JDBCConnector.txt file in the **logs** directory of the server component.

> **NOTE:** Changing the debug level can drastically decrease Insight's run speed. Be sure to reset all debug levels to 0 once you have fixed the problem.

Starting the User Manager in Console Mode

1) Locate the User Manager's installation directory.

2) Run the "InsightUserManager."

   If you are on Windows: Run InsightUserManager.cmd (a new DOS Console should appear and display debug information as the User Manager starts).

   > **NOTE:** In GUI environments, do not close the console window unless you want to close the Collection or Personal Insight Manager.

   If you are on Solaris or Linux: Run InsightUserManager.sh (a new Console should appear and display debug information as the User Manager starts).

3) Look for successful startup. If the User Manager started up successfully, you should see the following message print on the console:

```
IUS: Accepting connection.
```

4) Troubleshooting unsuccessful startup.

   If you do not see "Accepting connection," you may see one of the following:

```
IUS: IOException on listener open.
IUS: Server port cannot be opened.  Terminating.
```

   This often means that an application is already running on port 2840 (User Manager's default port). This is most likely because the User Manager itself is already running.

   Check to see if User Manager is running as a service. If it is, stop the service, and resume testing in console mode. At the conclusion of the test, after everything is repaired, remember to restart the User Manager service.

```
IUS: Database is not configured correctly
```

   This means that the User Manager could not connect to the database. For more information, see "Debugging a Database Connection for the User, Collection, or Personal Insight Managers" on page 158.

Starting the Collection Manager or Personal Insight Manager in Console Mode

1) Locate the Collection or Personal Insight Manager's installation directory.

2) Run the "InsightCollectionManager" executable.

   If you are on Windows: Run InsightCollectionManager.cmd (a new DOS Console should appear and display debug information as the Collection or Personal Insight Manager starts).

   NOTE: In GUI environments, do not close the console window unless you want to close the Collection or Personal Insight Manager.

   If you are on Solaris or Linux: Run InsightCollectionManager.sh (a new Console should appear and display debug information as the Collection or Personal Insight Manager starts).

3) Look for successful startup. If the Collection or Personal Insight Manager starts up successfully, you should see the following message print on the console:

```
XYZ: Accepting connection.
```

4) Troubleshooting unsuccessful startup.

If you do not see "Accepting connection," you may see one of the following:

```
XYZ: IOException on listener open.
XYZ: Server port cannot be opened.  Terminating.
```

This often means that an application is already running on port 3070 (Collection or Personal Insight Manager's default port). This is most likely because the Collection or Personal Insight Manager itself is already running.

Check to see if Collection or Personal Insight Manager is running as a service. If it is, stop the service, and resume testing in console mode. At the conclusion of the test, after everything is repaired, remember to restart the Collection or Personal Insight Manager service.

```
XYZ: Database is not configured correctly
```

This means that the Collection or Personal Insight Manager could not connect to the database. For more information, see "Debugging a Database Connection for the User, Collection, or Personal Insight Managers" on page 158.

Debugging a Database Connection for the User, Collection, or Personal Insight Managers

Insight relies on a backend database to store user and collection information. Without a connection to the database, the components will not run properly. All of the Insight server components (User, Collection and Personal Insight Manager) may be tested the same way.

When running one of the Insight server components in console mode, toward the bottom of the scroll, we want to see:

```
XYZ: Accepting connection.
```

(where "XYZ" is the short-name you defined for your collection, or "IUS" for the User Manager)

If you instead encounter:

```
IUS: Database is not configured correctly
```

there may be problems with the database itself or with the Insight connection to it. Starting with the database, check the following:

Common Things to Check when testing a Database Configuration Error:
- Is the database server running?
- Are other applications that are dependent on the database running properly?
- Can you connect to the database using the database's Administrator Tools:
  - For Microsoft SQL Server – Enterprise Manager
  - For Oracle – Enterprise Console

If the Database Server is Running:
If you can connect to the database using other applications, then the next step is to confirm the database configuration settings for the server components you are testing.

> **NOTE:** It is best to test the Insight server components in console mode, as it's easier to see debug messages in the console.

1) Locate the configuration file for the Insight server component you are testing.

   In the Insight server component installation directory, look for the appropriate configuration file. It will be one of the following:

   a) InsightUserServer.dat – for User Manager
   b) InsightServer.dat – for Collection Manager or Personal Insight Manager

2) Open the Configuration File in a text editor.

3) There are three common configuration settings that are most likely to produce errors: the Database Connection String, Database Username, and Password.

4) Check the Database Connection String:

   a) For the User Manager:

```
UserDatabaseConnect =
```

   b) For the Collection Manager or Personal Insight Manager:

```
DatabaseConnect =
```

   Check the Database Hostname, Port, and database name to ensure they are correct.

   MS SQL Manager Example:

Depending on the version of Insight you installed with, you may have a different driver for Microsoft SQL Server.

Which Driver am I using?
To determine the SQL Driver you are using:
  a. find the line "**JDBCDriverName**" in the configuration file.
  b. Match it with the column in the Table on page 195.

5) Check the Database username and password:

   Common errors are to use the Insight administrator username / password or an Insight end user username / password. The database username / password are needed here.

   For MS SQL Server:
   Database Username and Password are part of the DatabaseConnect string (see #4 above).

   For Oracle, MySQL,:
   Locate the following lines and check the values.

   ```
   DefaultUsername = yourusername
   DefaultPassword = yourpassword
   ```

6) Turn on database debugging.

   Find the following line:

   ```
   DatabaseDebugMode =
   ```

   If it is not already "on" (1), change the value:

   ```
   DatabaseDebugMode = 1
   ```

7) Save your changes.

   Save any changes you made to the "InsightUserServer.dat" or "InsightServer.dat".

8) Restart the Insight server component to begin logging.

> **NOTE:** The configuration files are only read by the Insight server components at startup. Changes in the dat file will not be reflected until the next time the Manager is started.

9) Open the "JDBCConnector.txt" log file located in the logs directory of the component's installation directory.

10) Look for successful startup:

Logs will vary, depending on the database engine in use, but will generally follow a pattern as follows:

```
HH:MM:SS driver: [message level] message text.
```

An example of a successful return may be:

```
JC 13:59:14 jdbc: [L] Statement created.
JC 13:59:14 jdbc: [L] Results generated.
JC 13:59:14 jdbc: [L] Returning from runQuery.
```

11) Troubleshooting unsuccessful startup:

Look for words like "Exception" / "Error" (etc.) in the log.

In the following MS SQL Server example, JoeUser is NOT a valid database username:

```
JC 16:36:39 jdbc: [H] SQL Exception while connecting:
      java.sql.SQLException: []Login failed for user 'JoeUser'.
JC 16:36:39 jdbc: [H] No valid connection available, aborting
      query.
JC 16:36:39 jdbc: [L] Returning from runQuery.
```

Testing the Network Connection

If you are having trouble connecting to any Insight server component, you may have a network problem.

Setting up a testing environment

It is best to run this test while the server component is running in console mode, as it is possible to see when a client application connects to the server component. Check that when the server component starts up, it prints "**Accepting Connection**" on the console. If it doesn't, the problem is likely not in the network (try the database).

Testing a local connection from the server

If you can see "**Accepting Connection**," then see if you can log in with Insight Studio. If you can not login, check for a working network connection (try a web browser). If the browser works, and you can browse the web, then you definitely have a network connection.

Insight commonly runs on a series of ports:

Table 14: Default Ports for Insight Server Components

Insight Server Component	Port
User Manager	2840
Collection Manager	3070 – 4040
Default Collection Manager Port	3070
Default Personal Insight Manager Port	3080

> If you run a firewall, be sure that ports assigned to Managers are open to bi-directional traffic. Failure to do so will interfere with communication to the Managers.

Testing the Network Connection

If you have a good network connection and the ports are available, then check the Hostname / IP address for the User Manager, and the collection list to ensure that the hostnames are valid. If you're still having problems and you can log in from the server then contact your network administrator.

Enabling Debug Information for BrowserInsight

> BROWSER INSIGHT IS NO LONGER SUPPORTED BEYOND 6.2

To enable BrowserInsight's Debug Information:

1) Open up the browserInsight.conf configuration file.

2) Locate the Logging section, change the following line:
   Log.Console.On=no to **Log.Console.On=yes**.

3) Also, confirm that the **Log.console.loglevel** is set to 10.

4) Save the BrowserInsight.conf configuration file.

5) To simplify debugging, restart Tomcat in console mode (if you are running Tomcat as a service, stop the service and run "start_tomcat.bat" or "start_tomcat.sh").

As Tomcat starts, it will process each of Insight's servlet component's configuration files. When it reaches BrowserInsight, it will connect to each of your Collection Managers and Personal Insight Managers and print out a list of collections that it can connect to. An example follows:

```
BI 12:34:04 Hlpr: getTrinityList: dbProfile:
BrowserInsightDBProfile:  Name = oracle, JDBCDriver =
oracle.jdbc.driver.OracleD
river, JDBCUrlPrefix = jdbc:oracle:thin:, useLowerCaseCommand = true,
useDistinc
tKeyword = false.
BI 12:34:06 infr: adding 11: 3::LUNA::NA
```

```
BI 12:34:06 infr: adding 12: 9::LUNA::NA
BI 12:34:06 infr: adding 13: 8::LUNA::NA
BI 12:34:06 infr: adding 14: 2::LUNA::NA
BI 12:34:06 infr: adding 15: 6::LUNA::NA
BI 12:34:06 infr: adding 16: 7::LUNA::NA
BI 12:34:06 infr: adding 17: 1::LUNA::NA
BI 12:34:06 infr: adding 18: 4::LUNA::NA
BI 12:34:06 infr: adding 19: 5::LUNA::NA
```

Once it has completed, log in to BrowserInsight. As you log in, BrowserInsight will connect to each collection and verify that the browser's settings are configured properly. If there is an error, a message will be sent to the console.

```
BI 12:38:59 Hlpr: constructTrinityProxy: dbProfile:
BrowserInsightDBProfile:  Name = oracle, JDBCDriver =
oracle.jdbc.driver.OracleDriver, JDBCUrlPrefix = jdbc:oracle:thin:,
useLowerCaseCommand = true, useDistinctKeyword = false.
BI 12:38:59 Hlpr: no media security on collection 15
BI 12:38:59 hPLg: No left background is specified for the collection.
This is potentially a misconfiguration.
BI 12:38:59 hPLg: Trimming Admin Media Processing Collection
```

In the example above, the collection is missing a piece of the Background Image. Other common issues might be an undefined **BrowserInsightDBProfile**, or a mismatched collection name.

If you need to see the SQL queries, turn database debug on:

1) Open the BrowserInsight.conf Configuration File.

2) Locate the **DatabaseDebugMode** Parameter.

3) Change **DatabaseDebugMode** from **0** to **1.**

```
DatabaseDebugMode=1
```

4) Save the BrowserInsight.conf configuration File.

5) Restart BrowserInsight.

6) Database queries will be logged to databaseconnector.txt in the logs directory of BrowserInsight's Installation Directory.

Performance Tuning for the Insight/Inscribe Server Components

The largest performance gain that can be made for Insight server components is to turn all debug settings to 0. Review "Enabling Debug for the Insight Server Components," but instead of increasing logging values, turn them off.

> **NOTE:** Disabling debug logs does not disable the search query, access, and export logs (used for reporting on system usage). These logs are configured with their own parameters.

Inscribe Performance Enhancements

Inscribes performance is tied to several conditions. They are as follows
- Complexity of the Catalog Template
- Database Performance
- When Keyword indexing occurs

To configure your system to optimize performance for your workflow, you need to be aware of how the Insight system works.

The fastest systems have a simple Catalog Template. This is similar to a single Spread sheet in Excel. There are no repeating fields and no authorities to maintain. As the structure becomes complex more work is required to save a record.

Most searches are preformed using Keywords. Keyword searching requires the system to parse all values in the records. So if you add or remove a word, the relationship to that word needs to be modified.

So, why tell you this? During our investigations into performance enhancement in Inscribe, we addressed a number of areas where performance improvements could be made. One of the most significant areas we identified was through Keyword (Term) Indexing.

In all previous versions of the software, when you made a save in Inscribe, you had to wait until the process of adding the record to the database was complete. Once complete you were allowed to proceed. Save times included adding values, creating relationships between records and authorities and Keyword Indexing.

In order to enhance this, we separated the process of Keyword indexing from the process of entering the values into the database. This separation has allowed us to give you several options to improve save performance depending on your workflow.

Several advanced configuration options are available that may significantly influence the performance of Inscribe save times for the cataloger. Regardless of your choice, all keyword indexing must take place at some point.

Making a few adjustments in your InsightServer.dat file will determine when the Keyword indexing is preformed.

Here are your options:

- Automatic keyword indexing (as before). When cataloging in Inscribe, commit all changes before control is returned to the client.
    o MedeAutoTermIndexingMode =1

- Turn off automatic keyword indexing. This requires manually Keyword (Term) Indexing from the Insight Administrator Tools or command line Indexer.
    o MedeAutoTermIndexingMode =0

- Run automatic Keyword (Term) Indexing in the Background on a schedule.
    o MedeAutoTermIndexingMode = 2
    o MedeBackgroundTermIndexingMinutes = 1440
        ▪ 1440 minutes is every 24 hours
    o MedeBackgroundTermIndexingFirstTime =0230
        ▪ 0230 is 2:30AM

- Run automatic Keyword(Term) Indexing immediately after Inscribe save completion.
    o MedeAutoTermIndexingMode = 2
            Note: MedeBackgroundTermIndexingFirstTime and
            MedeBackgroundTermIndexingMinutes are commented out.

Repackaging & Advanced Configuration of the Insight Client Applications

The Insight client applications (Insight Client, Inscribe, and Insight Studio) can be configured to enable support for special environments and settings. Configuration options include automatic login definition, support for lab or restricted environments, how multimedia is played, support for proxy servers, and changing the default User Manager.

Packaging and Distributing the Insight Client Applications

Luna provides a simple and easy way to repackage the Insight Client Applications, allowing system administrators to distribute Insight with the settings most appropriate to their environment. The Insight Client Applications (Insight, Inscribe, and Insight Studio) can be customized to work with your User Manager and your environment. Platform-specific installers for the clients can be found on the "Clients" CD as follows:

Table 15: Locations of the Client Installers

Directory (based on client product name)	Subdirectory (based on platform)	Installer (or component)
insight_client		
	MacOSX	installInsight.zip
	Windows	installInsight.exe

Inscribe	MacOSX	installInscribe.zip
	Windows	installInscribe.exe
insightStudio	MacOSX	installStudio.zip
	Windows	installStudio.exe

Packaging the Insight Client Applications

For more information on customizing the Insight Application Clients configuration file, please see the other chapters within this document. Once you have the configuration you want to distribute, it's time to repackage the clients.

> **NOTE:** The following example describes how to package the Insight Java Client, but will work with any of the other Insight application clients. Simply replace the name of the installer and configuration file with the name of the Insight Client Application and configuration file you would like to distribute.

For Windows systems

To distribute a preconfigured Insight Java client to your end users, you need to repackage *installInsight.exe* with your customized configuration file *insight.dat* (for information on customizing Insight, see **Insight Client Application Configuration Files** on page 169).   The installation files for the Windows version of the Insight Java Client are located on the Insight 6.3 Clients CD under the directory: *insight_client\Windows*. To build an installation package for Windows end-users:

1) If you do not already have the WinZip archive utility and WinZip Self-Extractor, download and install them. (It is recommended that you order the software instead of merely downloading trial copies. Though trial copies generate the package correctly, they produce a message indicating that unlicensed copies were used when end users unzip and install the package.)

   - For the trial copy of WinZip Archive Utility: http://www.winzip.com/downau81.cgi?winzip81.exe

   - For the trial copy of WinZip Self-Extractor: http://www.winzip.com/downauto.cgi?wzipse22.exe

2) Start WinZip Self Extractor, select "**Self-extracting zip file for Software Installation,**" and press **Next**.

3) At the next panel, leave **"Span multiple removable disks"** unchecked, and press **Next**.

4) Press "**Run WinZip**".

5) After passing the first two panels of WinZip by pressing **Next**, select "**Create a new Zip file**".

6) Follow the instructions and create a Zip file (for example, *insight50_and_dat.zip*) containing **installInsight.exe** from the **insight_client\Windows** directory on the Insight 6.3 Clients CD, and your customized **insight.dat** configuration file**.**

NOTE: Don't try and open the InstallInsight executable as a zip file and add the DAT file to it, this will corrupt the installer.

7) After the Zip file is created, close the WinZip panel.

8) Return to WinZip Self Extractor (or you can restart it, and select "**Self-extracting file for software installation**"), select the Zip file you just created (for example, *insight_and_dat.zip*), and press **Next**.

9) In the next panel, enter the message you would like your end user to see when the files are self-extracted, and press **Next**.

10) Leave "**Unzip automatically**" unchecked, select English as the preferred language, and press **Next**.

   Important: Enter **.\installInsight.exe** under "**Command to issue when unzip operation completes**." Leave "**Wait for**" blank, and press **Next**.

11) Enter your message (which will be displayed when the package is unzipped and installed), and press **Next**.

12) Enter the information to be displayed in the "**About**" box (if desired), and press **Next**.

13) In the next panel, select your own icon (if desired), and press **Next**.

14) In the last panel, review all of your selections and all messages you have prepared. After verifying them, press **Finish**, to create the self-extracting executable file.

15) Test the self-extracting package to verify that it works correctly.

16) Place the self-extracting package in a location accessible to your end-users.

End-users will download the self extracting package, launch it, and follow the instructions to install the Insight Java Client.   For users who have previous releases of the Insight Java Client installed, installing the new release of the Insight Java Client in the same location will cause their old **Insight.dat** file to be overwritten by the new one packaged with *installInsight.exe*.

For MacOSX systems (10.2+)

NOTE: The procedure described below must be performed on a Mac OSX machine. Other Mac OS versions will produce corrupted installers.

To repackage the MacOSX Insight Client installer for with a customized configuration file:

1. Locate **installInsight.zip** in the **\insight_client\macOSX** directory on the Insight 6.3 Clients CD. Unzip it to a temporary working directory on the Mac OSX machine.

2. Copy the customized **insight.dat** configuration file to the same working directory.

3. Make a new zip file (or other compressed package that can be processed and accepted under Mac OSX) containing both InstallInsight installer and **insight.dat**

Insight Client Application Configuration Files

Each of the Insight Client Applications uses a unique configuration file to store basic information. This configuration file includes information on the User Manager the client should use for authentication as well as other client based configurations.

Table 16: Client Configuration Files

Client Name	Configuration File
Insight	insight.dat
Inscribe	inscribe.dat
Insight Studio	insightStudio.dat

Each of these configuration files can be opened using a text editor of your choice.

> **NOTE**: Double-clicking on these files in some Macintosh systems will not open these files with TextEdit or another text editor, if you have problems opening this file, (1) open TextEdit and then (2) open the file using TextEdit's Open option from the file menu.

Table 17: Default Client Installation Locations

Client Name	Platform	Installation Location
Insight	Windows	C:\program files\LunaImaging\Insight 5.x
	OS X	/Applications/LunaImaging/Insight 5.x
Insight	Windows	C:\program files\LunaImaging\Insight
	OS X	/Applications/.LunaImaging/Insight /Applications/LunaImaging/Insight *
Inscribe	Windows	C:\program files\LunaImaging\Inscribe 5.x
	OS X	/Applications/LunaImaging/Inscribe 5.x
Insight Studio	Windows	C:\program files\LunaImaging\5.x\Studio
	OS X	/Applications/LunaImaging/5.x/Studio

Use-based configurations

Below are a set of use cases and adjustments to the Insight Configuration Files.

Changing the Default User Manager Address or adding additional User Managers

As each Institution will want to configure the Insight Client Applications to use their own User Manager (and potentially a list of others as well), Luna has provided a method to configure the clients so the user can choose from one or a set of User Managers.

Each of the Insight Client Applications can be configured to provide the user with a list of one or a set of User Manager Addresses on login.

> **NOTE**: When you run the installer for the Insight server components, a set of configuration files is automatically created and pre-configured with your connection information for your User Manager.

To customize your User Manager address in any of the Insight Client Application configuration files, follow these steps:

1) Locate a copy of the configuration file: copies of the Insight Client Application configuration files are located in the client_config_files directory located in the Installation directory of the Insight server components.

2) Open the configuration file you would like to customize in a text editor. A sample Insight.dat configuration file is displayed below:

```
# Insight.dat
# Insight configuration file
#
# Lines starting with # signs are comments.
#
# UserServerAddress1 – the address of the user server.

# This address provides access to all collections

UserServerAddress1 = InsightUser.lunaimaging.com

#DefaultUserName = user
#DefaultUserPassword = user
```

3) To change the User Manager Address, locate the following line:

```
UserServerAddress1 =
```

4) Set the value of UserServerAddress1 to the hostname of your User Manager. If you would like to specify more than one User Manager, then increment the number after UserServerAddress by one for each User Manager you would like to add. For example:

```
UserServerAddress1 = http://www.myusermanager.mycollege.edu/
UserServerAddress2 = insightuser.lunaimaging.com
```

> **NOTE:** Any line beginning with # is a comment, and is ignored by the system. Comments exist only to assist you in preparing the file. They provide

explanations and present alternatives. Be sure that the *UserServerAddress1* line is turned on (does not have a leading #).

5) Save the file.

6) Test your changes:
    a) Copy your new configuration file into the installation directory for a version of the client.
    b) Launch the client application and try to log in.

Configuring the Insight Client to Automatically Login

The purpose of automatically logging on to Insight is to allow users access to an Insight collection without needing to know a username or password. Automatic log-on enables the user(s) to select a collection by bypassing the log-on screen.

> **NOTE:** This means that anyone who has access to a system that has automatic log-on initiated is granted access to a collection, regardless if they know the appropriate username/password or not.

> **NOTE:** Due to the security risks, this feature is only available to the Java Client, and is not available to Insight Studio or Inscribe.

You must install a functioning version of Insight Java Client in order to set the automatic log-on. To set automatic log-on for your Insight collection, follow these instructions:

1) Locate the file named Insight.dat. This file is located where you installed Insight.

2) Open the Insight.dat file using Notepad or any other text editor of your choice.

3) Before you make any changes, you may want to create a copy or backup of your Insight.dat file for future reference.

4) Locate the following lines:
```
#DefaultUserName =
#DefaultPassword =
```

5) Remove the # signs from the front of the DefaultUserName and DefaultUserPassword. Be sure you do not remove any other # signs other than the ones instructed.

6) Once you have removed the # signs from the DefaultUserName and DefaultUserPassword, set the values to match the username and password you would like to use for automatically login.
```
DefaultUserName = my_username
DefaultPassword = my_password
```

7) Save the changes you made to the Insight.dat file.

Now, you should be able to automatically log on to your Insight collection when it is launched. If you would like to disable automatic log-on, simply restore the # signs in front of DefaultUserName and DefaultUserPassword.

> **NOTE**: If for some reason Insight cannot login using the default username and password, the login screen will be presented to the user.

Support for a Lab Environment (Locked-Down Machines)

Besides the client applications themselves, the clients use a set of files at runtime. These include temporary caches, user preferences, and re-useable information such as localization files.

Temporary Files

The Insight clients maintain a cache of the images requested by the clients to optimize requests for the same image more than once – quite similar to the image and field caches for web-browsers. These caches are encrypted and are maintained at run-time and then discarded when the application is shut down. Insight Studio and Inscribe also use temporary space for creating the derivatives and wavelet files before they are uploaded to the server.

By default, the Clients use the OS's temporary directory for storing these files. Though these locations can be customized, common locations are as follows:

Table 18: Common Temporary Locations Per Platform

Platform	Location
Windows 2000 / XP	C:\documents and settings\username\Local Settings\Temp
OS X	/tmp/
NOTE: These locations can be easily overridden. Please check with your system administrator for the default location on your system.	

Forcing Insight to use a Specific Location for Temporary Files

If you would like to force the Insight Client Applications to use a specific location for temporary files, you can set a property in any of the configuration files:

Property	Value
TmpDir	The location where temporary files should be placed on your machine

Once you have made this change, restart the client application to test the configuration (for more detailed steps on editing the configuration file, follow the steps above for changing the UserManagerAddress).

User Preferences & Reusable Information

User Preferences and other Reusable Information such as locale "language" files and collection backgrounds are stored by default in the User's home directory (within a LunaImaging Directory).

Table 19: Operation System User Preference Directory

Platform	Location
Windows 2000 / XP	C:\documents and settings\username
OS X	/Users/username
NOTE: These locations can be easily overridden, please check with your system administrator for the default location on your system	

Forcing Insight to use a Specific Location for Reusable Files

If you would like to force the Insight Client Applications to use a specific location for reusable files, you can set a property in any of the configuration files:

Property	Value
HomeDir	The location where reusable files should be placed on your machine

Once you have made this change, restart the client to test the configuration (for more detailed steps on editing the configuration file, follow the steps above for changing the UserManagerAddress).

Playing Multimedia within the Image Workspace Instead of an External Player

If you would like to play Audio, Video, and QTVR media in the image workspace instead of in an external player, you can set a property within the Insight Java Client and Inscribe's configuration files.

> **NOTE:** Playing multimedia within the Image Workspace REQUIRES Apple's QuickTime and QuickTime for Java to be installed.

> **NOTE:** For more information on configuring QuickTime or QuickTime for Java, please see http://www.lunaimaging.com/support/getquicktimeforjava.html.

Property	Value
UseExternalMultiMediaViewer	0 – play media in the Image Workspace
	1 – play media in an external QuickTime Player
NOTE: The default is to play media in the External Player.	

Support Firewalls and Advanced Networking Environments

The Insight Client Applications utilize a series of ports for communicating with the User, Collection, Personal Insight, and Media Managers. Depending on your networking environment, you may have to configure your firewall or proxy server to allow bi-directional connections for all of the ports that your Insight server components run on.

Insight Component	Port
User Manager	2840
Collection Manager or Personal Insight	3070-4080
Media Manager / BrowserInsight	80, 8080, 8081
NOTE: *Depending on your configuration, not all of these ports may be in use. Please check with your Insight administrator (or check the server component configuration files for a more specific list of ports).*	

Using Insight with a Proxy Server

Because the Insight Applications use a series of ports for accessing the server components and media files, a proxy server configuration will most likely have two components: an HTTP based proxy for media and a SOCKS based proxy for the Insight server components.

HTTP based Proxy for Media Content

The Insight Client applications support the use of an HTTP based proxy to connect to the Media Manager or a web server serving Insight's content.

To configure the Insight Client applications to use your HTTP Proxy Server, open the Insight Configuration file and add the following properties:

Property Name	Value
http.proxyHost	The hostname of the HTTP Proxy Server
http.proxyPort	The port address of the HTTP Proxy Server (note both the port and hostname need to be set for this to work)
http.nonProxyHosts	A list of hosts separated by "|" (vertical bar) that should not be used for HTTP Proxy connections for example (myserver1.com|myserver2.org)
NOTE: You only have to configure those clients outside the proxy server that access Insight Servers inside the proxy server .	

Once you have made this change, restart the client to test the configuration (for more detailed steps on editing the configuration file, follow the steps above for changing the UserManagerAddress).

SOCKS based Proxy for Non-HTTP Based Ports (User & Collection Managers)

For non-HTTP based communications such as the client's communication with the collection or User Managers, you will either need to open the ports on your firewall or set up a SOCKS based proxy server.

To configure the Insight Client applications to use your SOCKS Proxy Server, open the Insight Configuration file and add the following properties:

Property Name	Value
socksProxyHost	The hostname of the SOCKS Proxy Server
socksProxyPort	The port address of the SOCKS Proxy Server (note both the port and hostname need to be set for this to work)
NOTE: You only have to configure those clients outside the proxy server that access Insight Servers inside the proxy server.	

Once you have made this change, restart the client to test the configuration. (for more detailed steps on editing the configuration file, follow the steps above for changing the UserManagerAddress)

> **NOTE:** If you are configuring both a SOCKS Proxy and HTTP Proxy, it's important to understand the tunneling order. The clients are configured to use the SOCKS proxy server as the default connection method and connect to the HTTP proxy through the SOCKS proxy, i.e.:

CLIENT -> SOCKS PROXY -> HTTP PROXY -> Insight Media Manager

Wireless Compatibility Mode

Luna has documented specific issues where the Insight Client Applications' experience may degrade when run under explicit wireless conditions. This is currently known to occur using **Intel's CENTRINO** wireless chipset, though check with Luna for an up-to-date list of affected chips. For computers using this wireless chipset to use Insight, it may be necessary to configure the client to run in "**Wireless Compatibility Mode**". To do this, simply enable this parameter with a value of 1.

Property Name	Value
WirelessCompatabilityMode	0 – OFF 1 – ON

Specifying a Collection Data Directory

The Collection Data Directory is used by Insight and Personal Insight for processing derivative files, storing thumbnail images (for display in the linking tool), and other collection data.

> **NOTE:** The collection data directory can grow quite large as you build more collections.

Property Name	Value
CollectionDataDirectory	The physical path to the directory where media processing should be performed and files should be stored.

Common Properties for the Insight Client Applications

Table 20: Consolidated Properties by Client Application

Property	Insight	Inscribe	Insight Studio
Filename	insight.dat	inscribe.dat	insightStudio.dat
UserManagerAddress1 UserManagerAddress2 ...	YES	YES	YES
DefaultUserName	YES	NO	NO
DefaultPassword	YES	NO	NO
TmpDir	YES	YES	YES
HomeDir	YES	YES	YES
http.proxyHost	YES	YES	YES
http.proxyPort	YES	YES	YES
http.nonProxyHosts	YES	YES	YES
socksProxyHost	YES	YES	YES
socksProxyPort	YES	YES	YES
UseExternalMultiMediaViewer	YES	YES	NO
CollectionDataDirectory	YES	NO	YES
WirelessCompatabilityMode	YES	YES	YES

Configuring Insight's Advanced Authentication and Authorization Features

The Insight User Manager currently supports three Security Models. By default, Insight is configured with the standard security model which simply uses the usernames and passwords in the User Manager. Since Insight 4.1, Luna has modularized the methods that Insight uses to manage Authentication and Authorization. Luna has also released two new security modules for those institutions that are interested in configuring Insight to work with an existing security provider.

Pure LDAP

The first security module out-sources the process of Authentication to an LDAP Server. To use this module, you must first have an LDAP Directory Server that supports LDAP v3. The following are LDAP Servers that Luna has tested against:

- o Windows 2000's Active Directory server
- o OpenLDAP
- o SunONE Directory Server v5.2

NOTE: Insight optionally supports SSL connections for LDAP Queries.

Kerberos & LDAP or (Windows® Active Directory)

The second security module out-sources Authentication to a Kerberos 5 Server and Authorization to an LDAP Server. To use this module, you must have a working

Kerberos 5 implementation and an LDAP Server that supports GSS-API SASL. The following implementations have been tested:

- o Windows 2000's Active Directory Server (provides both Kerberos & LDAP)
- o MIT Kerberos 5 KDC with one of the following:
  - OpenLDAP
  - SunONE Directory Server v5.2

NOTE: Insight optionally supports SSL connections for LDAP Queries.

Enabling Simple LDAP Authentication for the Insight User Manager

NOTE: Changing Insight's Security model can have major repercussions. Please consult with your network and security administrators before implementing **any** changes regarding your local security environment.

NOTE: Please read and complete the Insight Security Worksheet at the end of this chapter before going any further.

NOTE: Finally, please test all configurations on a **test server** before implementing in a production environment.

1) In a text editor, open the InsightUserServer.dat file located in the "<insight_install>\user_manager" directory.

2) Change the Insight Authentication Handler to use LDAP:

   a. Locate the following lines:

```
##
# AuthenticationHandler - the full class name of the
# authentication handler to use for authentication.

AuthenticationHandler =
com.luna.insight.client.security.DefaultAuthenticationHandler
```

   b. Change the `AuthenticationHandler` property to: `com.luna.insight.client.security.SimpleLDAPAuthenticationHandler`. This will tell the User Manager to use LDAP when authenticating users.

3) Change the Authorization Handler to use LDAP:

   a. Locate the following lines:

```
##
# AuthorizationHandler - the full class name of the
# authorization handler to use for authorization.
AuthorizationHandler =
com.luna.insight.client.security.DefaultAuthorizationHandler
```

b. Change the AuthorizationHandler property to:
`com.luna.insight.client.security.SimpleLDAPAuthorizationHan dler`. This will tell the User Manager to use LDAP when authorizing users.

4) Define the URL for the LDAP v3 Server:

a. Locate the following lines:

```
##
# LdapURL - The URL of the LDAP server.
# (note: under Windows 2000/Active Directory, this is the
# address # of the Active Directory machine pre-pended with
# ldap:// )

#LdapURL = ldap://ldap.lunaimaging.com
```

b. Uncomment the `LdapURL` property and change it to match the URL for your LDAP Server. When done, it should look like this:

```
##
# LdapURL - The URL of the LDAP server.
# (note: under Windows 2000/Active Directory, this is the
# address # of the Active Directory machine pre-pended with
# ldap:// )

LdapURL = ldap://your.ldap.server.edu
```

5) Define whether insight should use SSL to communicate with the LDAP Server:

a. Locate the following lines:

```
# LoginSSL - A value of 1, yes, or true, will cause LDAP
# communication to use SSL.  The LDAP server must be
# configured to use SSL.  Any other value (with 0 being the
# correct one), or not specified, and LDAP communication
# will not be secured.

# LoginSSL = 0
```

b. Uncomment and change the LoginSSL property to 1. When done, it should look like this:

```
# LoginSSL - A value of 1, yes, or true, will cause LDAP
# communication to use SSL.  The LDAP server must be
# configured to use SSL.  Any other value (with 0 being the
# correct one), or not specified, and LDAP communication
# will not be secured.

LoginSSL = 1
```

6) Define the LDAP User Path – this is the directory path in the LDAP Server identifying where to find valid users.

a. Locate the following lines:

```
##
# LdapUserPath: Directory path in the LDAP server
# identifying object containing authenticatable users.

LdapUserPath = ou=people,dc=lunaimaging,dc=com
```

b. Uncomment the `LdapUserPath` property and set it to the path in the
    LDAP database that Insight should use to find valid users. When
    complete, it should look like this:

```
##
# LdapUserPath: Directory path in the LDAP server
# identifying object containing authenticatable users.

LdapUserPath = ou=people,dc=lunaimaging,dc=com
```

NOTE: Search more the one "ou" in LDAP (new in 6.2).

```
OPTIONAL SIMPLE LDAP CONFIGURATION:   SEARCHING MULTIPLE BRANCHES IN
THE DIRECTORY

LdapUserPathN and LdapUserAttributeN:  To grant Insight access to
users distributed through

more than one branch in a directory server, define additional
LdapUserPath properties.

Each additional LdapUserPath property must end with a unique integer
greater than or equal to 2.

In most configurations, the attribute used to identify user login
names will be the same

in all branches of the directory server.  If this is not the case,
you may define additional

LdapUserAttribute properties, using the same numeric suffix
technique.

When a user logs in, Insight will search the directory server using
search paths in numeric order.

Example 1 -- Search two paths, using the same user attribute:

LdapUserPath        = ou=professors,dc=myschool,dc=edu

LdapUserPath2       = ou=catalogers,dc=myschool,dc=edu

LdapUserAttribute = uid



Example 2 -- Search two paths, using a different user attribute for
each:

LdapUserPath          = ou=professors,dc=myschool,dc=edu
```

```
LdapUserAttribute   = uid

LdapUserPath2        = ou=catalogers,dc=myschool,dc=edu

LdapUserAttribute2 = login
```

7) Define the LDAP User Attribute – this is the field that usernames are authenticated against.

    a. Locate the following Lines:

```
##
# LdapUserAttribute - LDAP Attribute to match usernames
# against.

# Examples:
# LdapUserAttribute = cn   // Active Directory
# LdapUserAttribute = uid  // LDAP using EduPerson schema

#LdapUserAttribute = uid
```

    b. Uncomment the LdapUserAttribute and set it to the field in your LDAP Database that contains usernames. When complete, it should look like this:

```
##
# LdapUserAttribute - LDAP Attribute to match usernames
# against.

# Examples:
# LdapUserAttribute = cn   // Active Directory
# LdapUserAttribute = uid  // LDAP using EduPerson schema

LdapUserAttribute = uid
```

Associating LDAP Users with Insight Users

Each User in the Insight User Manager will be matched with an LDAP user by comparing the username properties. Usernames must be unique for this authentication model to work properly. Please also ensure that passwords are populated although these passwords are not used for authentication. The passwords will be validated through the LDAP Query.

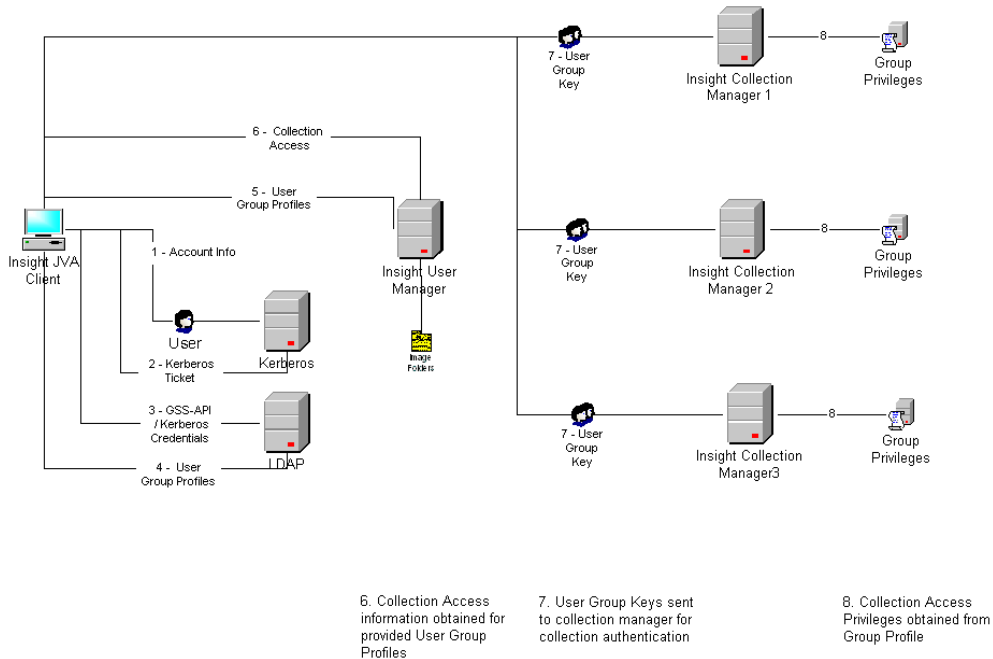## Using LDAP SSL Certificates with Insight

Secure Socket Layer (SSL) Communications require a certificate to encrypt data during transit, as well as to prove the identity of each party involved. For public use, trusted certificate authorities (i.e. Verisign, Thawte) provide trusted SSL certificates. Insight's LDAP Authentication method will automatically recognize and support Verisign & Thawte SSL Certificates.

Kerberos & LDAP Authentication and Authorization

NOTE: Changing Insight's Security model can have major repercussions. Please consult with your network and security administrators before implementing **any** changes regarding your local security environment.

NOTE: Please read and complete the Insight Security Worksheet at the end of this chapter before going any further.

NOTE: Finally, please test all configurations on a **test server** before implementing in a production environment.

6. Collection Access information obtained for provided User Group Profiles

7. User Group Keys sent to collection manager for collection authentication

8. Collection Access Privileges obtained from Group Profile

Kerberos Authentication - Overview

Kerberos Version 5 is used for both the authentication and secure communication aspects of the Luna client and server applications. In order to use the Kerberos authentication method, you will need access to a Kerberos installation. To configure the Insight User Manager, you will need the default realm and the default KDC of your Kerberos installation. Contact your network administrator responsible for the Kerberos server for these configurations.

As with all Kerberos installations, a Kerberos Key Distribution Center (KDC) is required. It needs to contain the user name and password you will use to be authenticated to Kerberos. Note: A KDC implementation is part of a Kerberos installation, not a part of the Insight installation.

The essential Kerberos configuration information is the default realm and the default KDC. Typically, the default realm and the KDC for that realm are indicated in the Kerberos krb5.conf/krb5.ini configuration file. On Windows, the krb5.ini file can be located in c:\winnt\. On Unix, the file is located in the \etc\ directory. If this file does not exist or you are unsure of the configurations, contact your network administrator responsible for the Kerberos server for these settings.

To minimize client configuration requirements, Insight provides a version of the Kerberos configuration file to each Insight client when Kerberos authentication is used. This file is written to the application's installation directory and has no impact upon the krb5.conf/krb5.conf file that may or may not reside on your system. Insight uses this file for the default realm and default KDC information. These values are defined in the InsightUserManager.dat file located in the Insight User Manager sub-directory.

Specifying the Kerberos Settings

1) In a text editor, open the InsightUserServer.dat file located in the "<insight_install>\user_manager" directory.

2) Define the **KerberosRealm** property. This is the default Kerberos realm to which the user will be authenticated. This Kerberos Realm will be attached to the user ID's for authentication. The Kerberos Realm must be defined in ALL CAPS. (e.g. KerberosRealm = LUNAIMAGING.COM).

3) Define the **KerberosServer** property. This is the default Kerberos Key Distribution Center (e.g. KerberosServer = kerberos1.lunaimaging.com).

If you are unsure of these values, you may wish to submit the Implementation Worksheet to your system administrator responsible for Kerberos and Directory Services.

For example, say I was unsure of the default realm and default KDC used at my institution. After contacting my network administrator, he/she provides the following information:

```
Default Realm = LUNAIMAGING.COM
Default KDC  = kerberos1.lunaimaging.com
```

With this information, I open the InsightUserServer.dat file located in the Insight User Manager installation directory. In this example, I define the KerberosRealm as LUNAIMAGING.COM. I also define the KerberosServer as kerberos1.lunaimaging.com. It is important to note that the Kerberos Realm is defined in ALL CAPS. Under Windows 2000/Active Directory, the Kerberos Realm is usually the same as the Active Directory domain name. On Solaris, the Kerberos Realm may or may not be the same as your domain, but conventions encourage using the domain name, in upper-case letters. In this example, members of lunaimaging.com are in the Kerberos realm LUNAIMAGING.COM.

```
KerberosRealm  = LUNAIMAGING.COM
KerberosServer = kerberos1.lunaimaging.com
```

Based on the example above, the krb_config.conf file created on the client's application installation directory would contain the following information:

```
### insight krb_config.conf file ###
```

```
 [realms]
LUNAIMAGING.COM = {
 kdc = kerberos1.lunaimaging.com
}

[domain realm]
.lunaimaging.com = LUNAIMAGING.COM

### end insight krb_config.conf file ###
```

Enabling Kerberos Authentication for the Insight User Manager

In order to enable the Kerberos Authentication Handler, in the InsightUserServer.dat file, modify the AuthenticationHandler property to reference the KerberosAuthenticationHandler instead of the standard Insight DefaultAuthenticationHandler. Save changes and restart the Insight User Manager.

For example, the AuthenticationHandler property should appear as below:

```
AuthenticationHandler =
com.luna.insight.client.security.KerberosAuthenticationHandler
```

If you wish to later re-enable the standard Insight User Database authentication method, simply replace the line above with "AuthenticationHandler = com.luna.insight.client.security.DefaultAuthenticationHandler". Save changes and restart the Insight User Manager.

LDAP Authorization - Overview

LDAP (Lightweight Directory Access Protocol) is a software protocol for enabling individuals and applications to locate information about organizations, individuals, and other resources. In the case of Insight, the LDAP Directory is used to store Insight authorization information. Insight uses the Kerberos credentials obtained during the Kerberos authentication process to gain access to the LDAP Directory Service. The use of Kerberos authentication by the LDAP Server unites the LDAP services with the Kerberos credentials and Kerberos based services. This also removes the need for Insight to ever store administrative passwords to the LDAP Directory service.

The use of Kerberos credentials for LDAP Directory access requires an LDAP Server supporting the GSS-API SASL mechanism. The Generic Security Service API (GSS-API) provides a common interface for accessing different security services, such as Kerberos V5. Simple Authentication and Security Layer (SASL) is the mechanism used to authenticate against another service using existing Kerberos credentials. The GSS-API SASL mechanism is only supported by LDAP v3 Servers. The LDAP Servers that support the GSS-API SASL mechanism include Windows 2000's Active Directory Server, OpenLDAP, and the SunONE Directory Server v5.2.

The use of an LDAP Server for Insight authorization requires the ability to assume the identity of the authenticated Kerberos principal. In other words, the Kerberos Principal Name provided during authentication must also be present in the LDAP Directory. For example, if your Kerberos principal name is jsmith@foobar.com, an attribute containing the value "jsmith@foobar.com" must exist in the directory.

Specifying the LDAP Settings

1) In a text editor, open the InsightUserServer.dat file located in the "<insight_install>\user_manager" directory.

2) Define the URL for the LDAP v3 Server:

   a. Locate the following lines:

   ```
   ##
   # LdapURL - The URL of the LDAP server.
   # (note: under Windows 2000/Active Directory, this is the
   # address # of the Active Directory machine pre-pended with
   # ldap:// )

   #LdapURL = ldap://ldap.lunaimaging.com
   ```

   b. Uncomment the LdapURL property and change it to match the URL for your LDAP Server. When done, it should look like this:

   ```
   ##
   # LdapURL - The URL of the LDAP server.
   # (note: under Windows 2000/Active Directory, this is the
   # address # of the Active Directory machine pre-pended with
   # ldap:// )

   LdapURL = ldap://your.ldap.server.edu
   ```

3) Define the LDAP User Path, this is the directory path in the LDAP Server identifying where to find valid users.

   a. Locate the following lines:

   ```
   ##
   # LdapUserPath: Directory path in the LDAP server
   # identifying object containing authenticatable users.

   LdapUserPath = ou=people,dc=lunaimaging,dc=com
   ```

   b. Uncomment the LdapUserPath property and set it to the path in the LDAP database that Insight should use to find valid users. When complete, it should look like this:

   ```
   ##
   # LdapUserPath: Directory path in the LDAP server
   # identifying object containing authenticatable users.

   LdapUserPath = ou=people,dc=lunaimaging,dc=com
   ```

4) Define the field in the LDAP database that contains the Insight User Profile:

   a. Locate the following lines:

   ```
   ##
   #TargetAttributeName - The LDAP attribute name which stores
   ```

```
# the collection data/profile ID's needed by the
# application.

#(note: in the case of Active Directory,  "info" is the "notes"
field under the "telephones" tab in a user's properties.)

#TargetAttributeName = info
```

> b. Uncomment and define the **TargetAttributeName** property. This is
> the LDAP attribute in which the Insight Access Profile may be found.
> This is the LDAP attribute name containing the Insight Access Profile
> needed for authorization. Insight requires the use of an LDAP attribute
> name, which stores the collection access information. For Windows
> 2000 Active Directory, by default, the "info" attribute is used.   See the
> Windows® Active Directory & Insight User Account Information section
> of the documentation for additional details. For other LDAP Servers,
> you will need to determine which attribute is currently unused, or
> create a new attribute to store the Insight Access Profile.

5) Define User metadata fields in the LDAP Directory.

> c. Locate the following lines:

```
##
#UserAttributeName - The LDAP directory attribute name under which
the user's unique login name can be found.

#UserAttributeName = userprincipalname

# User Info Attributes - Added 2003-07-24

#OrganizationAttributeName      = company

#EmailAttributeName             = mail

#PhoneAttributeName             = homePhone
```

> d. Uncomment and define the **UserAttributeName,
> OrganizationAttributeName, EmailAttributeName, and
> PhoneAttributeName** properties. The User Attribute name is the
> LDAP attribute in which the full Kerberos name may be found. This
> attribute is used to uniquely identify the user when searching the LDAP
> directory. The values stored in this field MUST be of the form: <YOUR
> USERNAME>@<YOUR KERBEROS REALM>. For Windows 2000 Active
> Directory, this attribute will always be "userprincipalname".   For
> OpenLDAP using the kb5-kdc.schema, this attribute will be the
> "krb5PrincipalName" (e.g. UserAttributeName = userprincipalname).
>
> The **OrganizationAttributeName** property is the LDAP attribute in
> which the user's organizational membership information is stored.
> Obtained values are used for administrative purposes within Inscribe.
> For Windows 2000 Active Directory, the "company" attribute is used to
> store this information. For OpenLDAP using the EduPerson schema,
> the "organizationName" attribute will typically be used.

The **EmailAttributeName** property is the LDAP attribute in which the user's e-mail address information is stored. Obtained values are used for administrative purposes within Inscribe. For Windows 2000 Active Directory, the "mail" attribute is used to store this information. For OpenLDAP using the EduPerson schema, the "mail" attribute will typically be used.

The **PhoneAttributeName** property is the LDAP attribute in which the user's telephone contact information is stored. Obtained values are used for administrative purposes within Inscribe. For Windows 2000 Active Directory, the "homePhone" attribute is used to store this information. For OpenLDAP using the EduPerson schema, the "telephonePhone" attribute will typically be used.

Enabling LDAP Authorization for the Insight User Manager

In order to enable the LDAP Authorization Handler, in the InsightUserServer.dat file, modify the AuthorizationHandler property to reference the LDAPAuthorizationHandler instead of the standard Insight DefaultAuthorizationHandler. Save changes and restart the Insight User Manager.

For example, the AuthorizationHandler property should appear as below:

```
AuthorizationHandler =
com.luna.insight.client.security.LDAPAuthorizationHandler
```

## Interaction of Kerberos & LDAP Users and Users in the Insight User Table

NOTE: Before enabling Kerberos & LDAP, please ensure that you delete all users from the Users tab in the Insight Administrator Tools. Maintaining existing users in the Insight User Manager introduces a potential security hole as clients that are not enabled for Kerberos & LDAP security will continue to try and authenticate using the Standard Authentication method.

Using the Insight Administrator Tool to identify Insight Access Profiles

1) Launch the Insight Administrator Tools.

2) Expand the User Manager node and connect to your default Insight User Manager.

3) Click on the User Groups node. User Groups determine how users access collections.
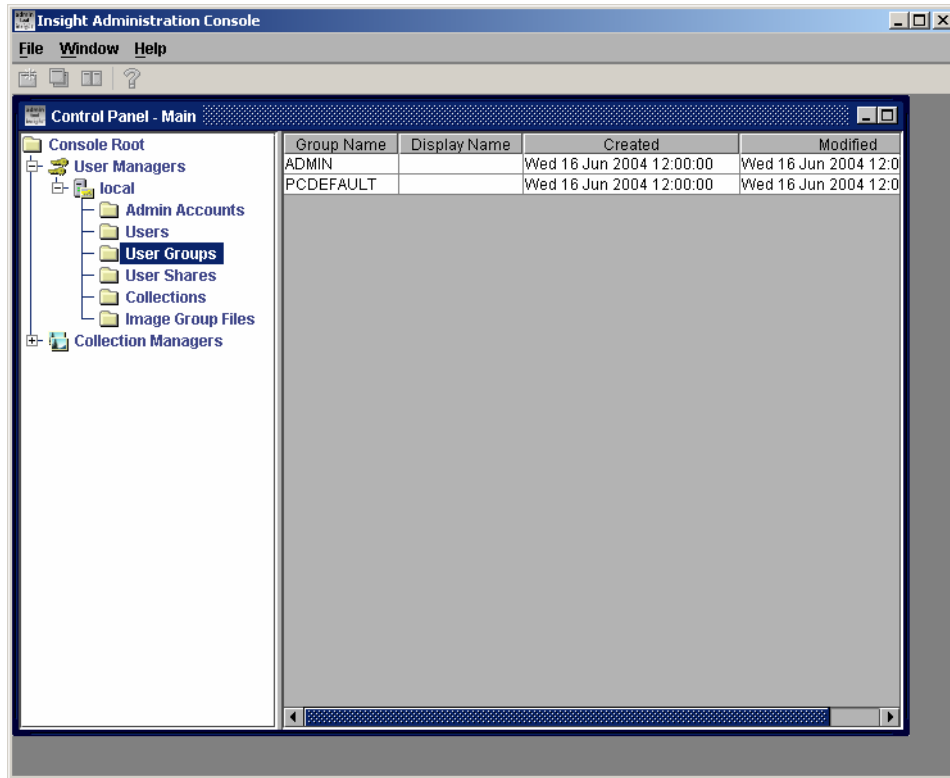
4) Identify the User Groups you want to be associated with an LDAP user account. For example, from the illustration above, **ADMIN** and **PCDEFAULT** will be used to associate with the user's LDAP directory entry. Multiple User Groups can be separated by commas.

5) Click on the User Shares node. User Shares are places where end-users can save groups, presentations, or annotations.
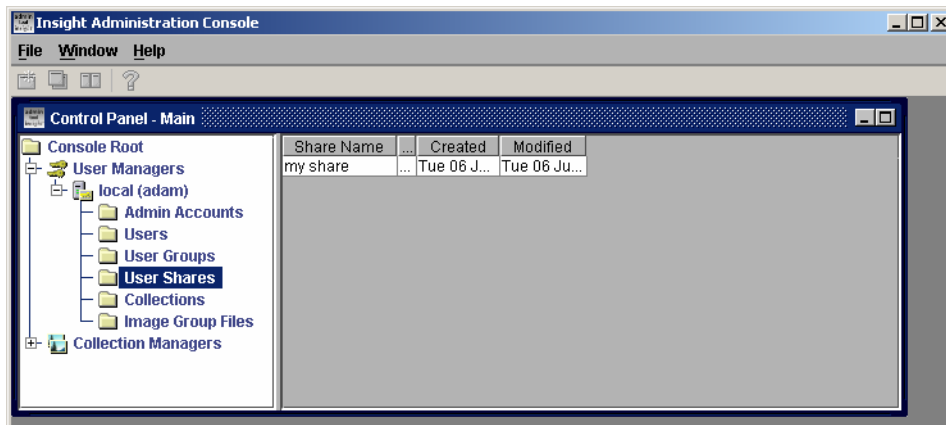
6) Identify the User Shares you want to be associated with the LDAP user account. In the example above "**my share**" will be used to associate with the user's LDAP directory entry. Multiple Shares can be separated with commas.

7) Creating the LDAP string:

a. Combine each of the User Group names, separating them with commas.
b. For each User Share, define whether the user should have read, write, delete privileges.
c. Combine each of the User Share Names with /w for read/write privileges. /wd for read / write / delete, or just the share name for read-only.
d. Combine the Shares and privileges together, separating them with commas.
e. Combine the list of all User Groups and all User Shares separating the groups with a colon. See example below:

```
UserGroup1,UserGroup2:UserShare1,UserShare2/wd
```

In this example above, the user has been given rights to access collections within UserGroup1, UserGroup2. The user also has read-only privileges to UserShare1, and read-write-delete for UserShare2.

8) Populate the LDAP Insight Profile Attribute with the Insight Access Profile. For Active Directory follow the Windows Active Directory & Insight User Account Information section of this document. If you are using OpenLDAP, you will need to update the directory records through the OpenLDAP command-line interface. Consult your user documentation for details.

Windows® Active Directory & Insight User Account Information

The Windows 2000 operating system implements the Kerberos network authentication protocol as its default authentication method. On a Windows 2000 Domain Controller, both Kerberos and LDAP account information are managed using the Active Directory management consoles. Each Windows 2000 Domain Controller also represents a Kerberos Key Distribution Center.

Users belonging to a Windows 2000 domain are managed through the Active Directory Users and Computers management console. To access the Active Directory Users and Computers console you will need administrative privileges on the domain controller you are using as your primary KDC for Insight. You may need to provide the following information to your network administrator responsible for Active Directory Administration.

Prior to managing user accounts using Active Directory, ensure that you have defined the User Group Profiles within the Insight Administrator Tool. Refer to the Insight Administrator Tool documentation for details.

To Manage Insight User Account Information using Active Directory

1) Log-on to the Windows 2000 Domain Controller with administrative privileges.

2) Click Start -> Program Files -> Administrator Tools -> Active Directory Users and Computers.

3) In the Active Directory Users and Computers, click the Users directory under the appropriate domain.
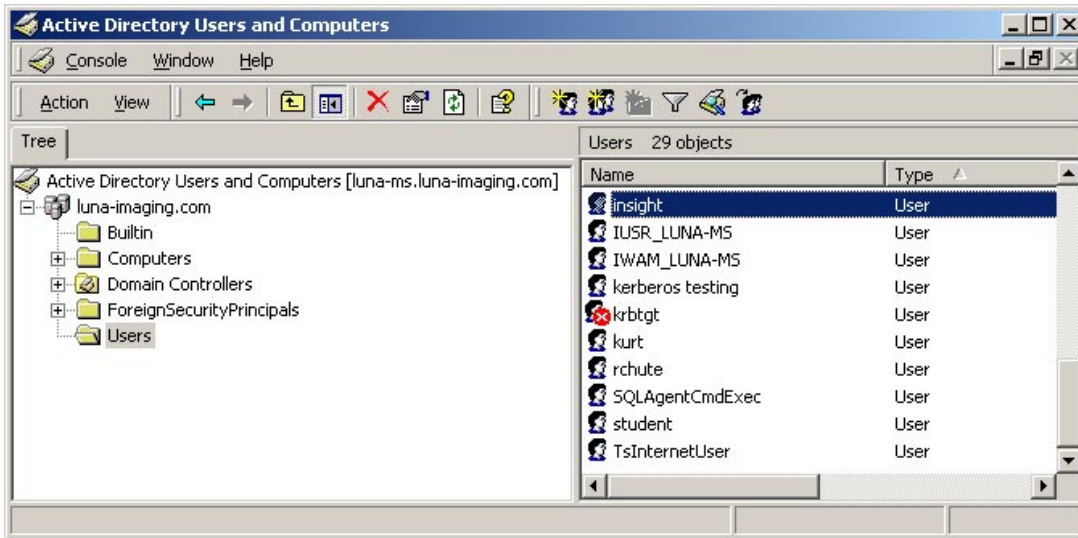
4) Double-click on a user account you wish to grant Insight Access to.

5) Once the Properties window appears, a series of tabs will appear along the top. The General Properties tab contains the basic information about the user.
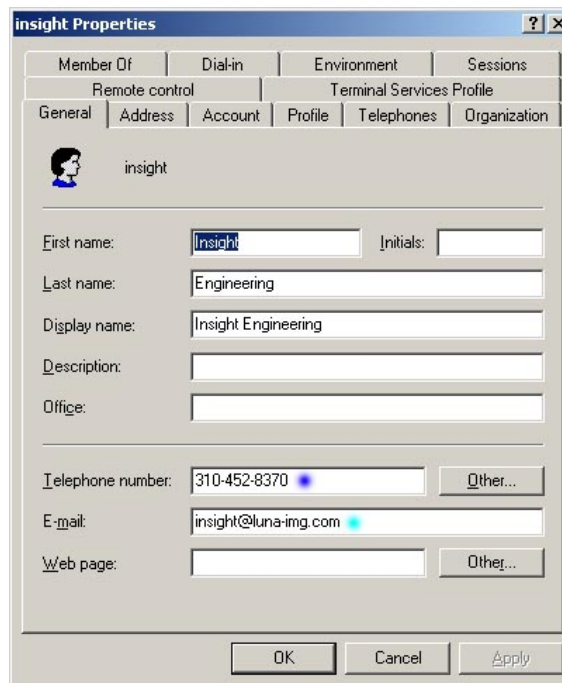
The Telephone Number and E-mail address entries are used by Inscribe during authorization to update editorial contact information. No modifications are necessary in the General Properties tab.

6) Click the Telephones tab to the right of General Properties. Insight requires the use of an LDAP attribute name, which stores the collection access information (e.g. Notes).
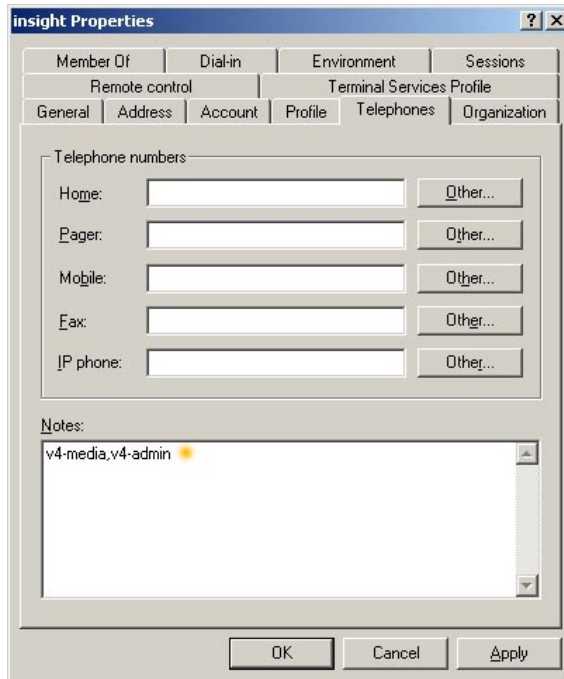
In this example, the Notes text box is used to store the Insight Access Profile information, but any unused attribute name may be configured to store this property. User accounts may be associated with a single profile, or multiple profiles by separating each profile name with a comma. See the illustration above for an example.

7) Apply Changes to save the defined Insight Access Profile.

Restoring the Default Security Configuration for Insight

1) In a text editor, open the InsightUserServer.dat file located in the "<insight_install>\user_manager" directory.

2) Change the Insight Authentication Handler to the default Handler:

    a. Locate the following lines:

```
##
# AuthenticationHandler - the full class name of the
# authentication handler to use for authentication.

AuthenticationHandler =
com.luna.insight.client.security.DefaultAuthenticationHandler
```

    b. Change the `AuthenticationHandler` property to: `com.luna.insight.client.` `security.DefaultAuthenticationHandler`.   This will tell the User Manager not to use Kerberos or LDAP when authenticating users.

3) Change the Authorization Handler to the Default Handler:

    a. Locate the following lines:

```
##
# AuthorizationHandler - the full class name of the
# authorization handler to use for authorization.
AuthorizationHandler =
com.luna.insight.client.security.DefaultAuthorizationHandler
```

Change the AuthorizationHandler property to:
com.luna.insight.client.security.DefaultAuthorizationHandler. This will tell
the User Manager not to use Kerberos or LDAP when authorizing users.

Resources

Windows 2000 Kerberos Interoperability, Microsoft Whitepaper
http://www.microsoft.com/technet/prodtechnol/windows2000serv/deploy/confeat/kerberos.mspx

Kerberos interoperability issues - Paul B. Hill - MIT
http://www.usenix.org/events/lisa-nt2000/hill/hill_html/

Kerberos Infrastructure HOWTO
http://cryptnet.net/fdp/admin/kerby-infra/en/kerby-infra.html

GSS-API/Kerberos v5 Authentication
http://java.sun.com/products/jndi/tutorial/ldap/security/gssapi.html

Generic Security Service API Version 2: Java Bindings
http://www.faqs.org/rfcs/rfc2853.html

Using LDIFDE to Import and Export Directory Objects to Active Directory
http://support.microsoft.com/default.aspx?scid=http://support.microsoft.com:80/support/kb/articles/Q237/6/77.ASP&NoWebContent=1

Insight Security Release – Implementation Worksheet

Kerberos Settings (Kerberos & LDAP Only)
The Kerberos implementation is (select one):   MIT Kerberos V5 KDC (Unix)
                                                 Windows 2000 Domain Controller

Realm/Domain Name   _____
KDC Instance   _____
Kerberos Principal Name for testing   _____

LDAP Settings (Pure LDAP / Kerberos & LDAP)
The LDAP implementation is (select one):   OpenLDAP 2.1+
                                                Windows 2000 Domain Controller
                                                Sun ONE Directory Server 5.2

LDAP Server URL   _____
BaseDN   _____
Krb5PrincipleName Attribute Name   _____
Insight Profile Attribute Name   _____
Organization Attribute Name   _____
E-mail Attribute Name   _____
Phone Attribute Name   _____

User Authorization - Account Information
Account Login Name   _____
Insight Profile Value   _____

JDBC Database Configuration Properties

Database	MySQL	Oracle 8i / 9i	MSSQL	MSSQL
Driver	MySQL	Oracle 8i / 9i	iSprinta	jTDS
Filename	mysql-connector.jar	classes12.jar and nls_charset12.jar	Sprinta2000.jar	jtds.jar
Database Connect String	See below	See below	See below	See below
Java Class	com.mysql.jdbc.Driver	oracle.jdbc.driver.OracleDriver	com.inet.tds.TdsDriver	net.sourceforge.jtds.jdbc.Driver
JDBC URL	jdbc:mysql://	jdbc:oracle:thin:	jdbc:inetdae7:	jdbc:jtds:sqlserver://
Uses Username & Password Properties	NO, in connect string	Yes	NO, in connect string	NO, in connect string
Database Query Mode	1 (intermediate)	8i: 0 (Entry level) 9i 1 (intermediate)	1 (intermediate)	1 (intermediate)
Use Distinct Keyword	1 (yes)	1 (yes)	1 (yes)	1 (yes)
Left Escape Delimiter	\\ *		[	[
Right Escape Delimiter			]	]
Character Wildcard	_	_	_	_
String Wildcard	%	%	%	%
Global Escape Delimiter	\\ *			
Unicode Field Prefix			N	N
* NOTE: the "\\" is translated to "\" when the property file is read				

Example with the Sprinta Driver:

```
DatabaseConnect =
dalton.org:1433?database=DaltonColl&sql7=true&user=YourDBusername&
password=YourDBpassword
```

Where:

Hostname	*dalton.org/*	*use your hostname*
Port	:1433	*default, only change if needed*
Database name	database=DaltonColl	*use your database name*
SQL version	sql7=true	*default, should not change*
DB Username	user=YourDBuser	*use your DB Username*
SQL version	password=YourDBPassword	*use your DB Password*

Example with the jTDS Driver:

```
DatabaseConnect = dalton.org:1433/
DaltonColl;user=YourDBusername;password=YourDBpassword
```

Where:

Hostname	dalton.org/	*use your hostname*
Port	:1433	*default, only change if needed*
Database name	DaltonColl	*use your database name*
DB Username	user=YourDBuser	*use your DB Username*
DB Password	password=YourDBPassword	*use your DB Password*

Oracle Example:

```
DatabaseConnect = @dalton.org:1521:YourSID
```

Where:

Hostname	@dalton.org/	*use your hostname*
Port	:1521	*default, only change if needed*
SID	YourSID	*use your SID*

MySQL Example:

```
DatabaseConnect =
mysql.dalton.org:3306/YourDB?user=insight&password=insight&useUnic
ode=true&characterEncoding=utf8
```

Where:

Hostname	mysql.*dalton.org/*	*use your hostname*
Port	:3306	*default, only change if needed*
DatabaseName	YourDB	*use your database name*
DB Username	user=YourDBuser	*use your DB Username*
DB Password	password=YourDBPassword	*use your DB Password*

Introduction to the Insight Configuration Files

Each of the Insight Components (server and client) use configuration files which enable them to run properly. Below is a list of Insight configuration files and configuration options:

Collection Manager and Personal Insight Manager

The Collection Manager is controlled by InsightServer.dat, which is used to set up database connections and manage the server. diacriticmappings.dat is used in indexing and to help with handling special characters.

Configuration files for the Collection Manager and Personal Insight Manager can be found inside the "Collection Manager" or "Personal Insight" directory inside the installation directory.

Task	InsightServer.dat	DiacriticMappings.dat
Changing the server's database connection - username & password - database name - hostname of the database server - database port	X	
Changing database SQL properties - escape characters & other information	X	
Changing the debug mode	X	
Changing the database debug mode	X	
Changing the Collection Manager's port	X	
Changing where server-managed files are created: - Presentation files - Group files - Annotations	X	
Changing the server timeouts	X	
Changing logging settings	X	
Specifying a media information table to store technical metadata	X	
Private keys & connection information between the Media Manager and Collection Manager	X	
Configuring alternate values for accented text (characters with diacritics) to enable better searching		X
Configuring Service Wrapper properties	X	
Default Base URL for Themes	X	
Default Base Path for Themes (filesystem)	X	
Default BrowserInsight RemoteLaunch Base URL	X	
Default Java Client RemoteLaunch Base URL	X	
License Folder Location (pre-5.1)	X	

User Manager

The User Manager is controlled by InsightUserServer.dat, which is used to set up database connections and manage the server.

Configuration files for the User Manager can be found inside the "User Manager" directory inside the installation directory.

Task	InsightUserServer.dat
Changing the server's database connection - username - password - database name - hostname of the database server - database port	X
Changing database SQL properties - escape characters - etc.	X
Changing the debug mode	X
Changing the database debug mode	
Changing the Collection Manager's port	X
Changing Cross-Collection searching defaults (bg. Color / image)	X
Changing the server timeouts	X
Changing logging settings	X
Configuring Kerberos / LDAP authentication methods	X
Configuring Service Wrapper properties	X
License Folder Location (pre-5.1)	X

Media Manager

The Media Manager provides access to all images and media in Insight and runs as a servlet within Tomcat. The main configuration file for the Media Manager is the MediaManager.dat, located in the "media_manager" directory of the installation directory. A few other configuration settings (including the location of the mediamanager.dat are also specified in the server.xml.additions.txt and the web.xml).

Task	MediaManager.dat	Server.xml additions	Web.xml
Where the servlet is located and servlet startup / reload properties		X	X
Servlet name and URL		X	X
Where the mediaManager.dat file is located	X		
Where media is stored	X		
The max resolution managed by the Media Manager	X		
Debug level	X		
Where the SID Server is	X		
Private keys & connection information between the Media Manager and Collection Manager	X		
Logging information	X		
Ticketing properties for the Media Manager	X		
License Folder Location (pre-5.1)	X		

BrowserInsight

> BROWSER INSIGHT IS NO LONGER SUPPORTED BEYOND 6.2

BrowserInsight is the server component that manages access for the browser components and runs as a servlet within Tomcat. The main configuration file for BrowserInsight is BrowserInsight.conf, located in the "browserInsight" directory of the installation directory. A few other configuration settings (including the location of the BrowserInsight.conf are also specified in the server.xml.additions.txt and the web.xml).

Task	BrowserInsight.conf	Server.xml additions	Web.xml
Where the servlet is located and servlet startup / reload properties		X	X
Servlet name and URL		X	X
Where the BrowserInsight.conf file is located	X		
User Manager address	X		
Default username and password	X		
Debug level	X		
Access logging settings	X		
Private keys & connection information between the Media Manager and Collection Manager	X		
SSL settings	X		
Collection database configuration settings (per collection available in the browser)	X		
Max Values available in a speed search	X		
License Folder Location (pre-5.1)	X		

XML Gateway

The XML Gateway is a middleware component that provides access to Insight's content to XML-aware applications and runs as a servlet within Tomcat. The main configuration file for the XML Gateway is **web.xml**, located in the **xmlgateway/servlet/WEB-INF/** directory of the installation directory. The XML Gateway is also controlled by the server.xml.additions.txt.

Table 21: XML Gateway Configuration Files

Task	Server.xml additions	Web.xml
Where the servlet is located and servlet startup / reload properties	X	X
Servlet name and URL	X	X
Debug level		X
User Manager Address		X
Username and Password for User Manager		X
Unknown character replacement character		X
License Folder Location (pre 5.1)	X	

Insight Client Applications

Please see Table 20: Consolidated Properties by Client Application on page 176.

Insight Administrator Tools

The Administrator Tools maintains a configuration file (insightadminstore.dat) which should not be edited by hand.

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