
ngagent software License Manager

Version 4.9

User Guide

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Introduction

Engagent Software License Manager is the first program designed specifically to help IT professionals keep track of the software they license. Engagent Software License Manager offers:

- One ***central database*** for recording all software licenses.
- A ***software manager*** for managing the current status of all licenses.
- A powerful collection of ***reports*** to deliver a unified overview of software licenses.

Using Engagent Software License Manager allows IT managers to:

- Stop over purchasing software licenses.
- Coordinate purchases and receive better prices
- Reharvest unused licenses.
- Manage maintenance contracts and anticipate expirations
- Document license compliance for vendor audits.

To make most effective use of Engagent Software License Manager, see the "Best Practices" section of this document.

Requirements

Operating System

Engagent Software License Manager will run on Microsoft Windows 98, Windows ME, Windows 2000, Windows XP, Windows 2003, and Windows Vista in their various editions (server, professional, etc.)

Disk Space

Engagent Software License Manager will install in less than 100 megabytes of disk storage space. The license database you build using Engagent Software License Manager will continue to grow as you use it.

Windows Installer

Engagent Software License Manager is installed using the Windows Installer. Older versions of Windows operating systems (such as Windows 98) may require an update to the Windows Installer to correctly install Engagent Software License Manager.

If you need this update, the Engagent Software License Manager installer will prompt you for it. The free update, **InstMsiA.exe** (1.668 megabytes in size) is available on the Engagent web site at:

www.engagent.com/download/i386/InstMsiA.exe

Note: *Installing InstMsiA.exe requires rebooting your system.*

Windows .NET Framework

Engagent Software License Manager requires the Windows .NET framework, **Version 2.0**. If .NET is not installed on your system, the Engagent Software License Manager installer will prompt you to install it

Note: *Installing .NET may require rebooting your system.*

Downloading

To obtain your copy of Engagent Software License Manager, simply go to our web site and pick the “Download Now” text off the blue sidebar. This will put you into our “Download Center”,

The screenshot shows the Engagent Downloads page in Microsoft Internet Explorer. The browser's address bar displays the URL: <http://www.engagent.com/download.asp?Download=/i386/EngagentSoftwareLicenseManager.msi>. The page features a navigation bar with links to HOME, PRODUCTS, DOWNLOADS, CUSTOMERS, and CONTACT US. Below the navigation bar, there is a blue sidebar with the Engagent logo and contact information. The main content area contains a table of products for download.

Product	Version	Size (MB)	Download
Sentry II Comprehensive automated security tool: monitors event logs, services, processes, ports, counters, and network devices.	6.0.19	19.07	download
Engagent Discovery Fast, lightweight network discovery tool.	1.0	2.7	download
Engagent Domain Inventory The MOST ACCURATE inventory tool you can find anywhere.	2.11	1.5	download
Engagent Software Distribution Flexible, powerful patch management.	4.0	12	download
Engagent Domain Metering Measures and controls how users are using software on your network.	2.10	1.2	download
Engagent Software License Manager A unified view of the software licenses you own. Web Interface	2.3 2.3	24 8.63	download download
Engagent Remote Administration Control a remote desktop just as if you were there.	2.2	1.9	download
WinReporter Agent-less network information reporter.	2.03	19.7	download
RemoteExec Allows you to execute commands on multiple remote PC's at once.	3.05	.4	download

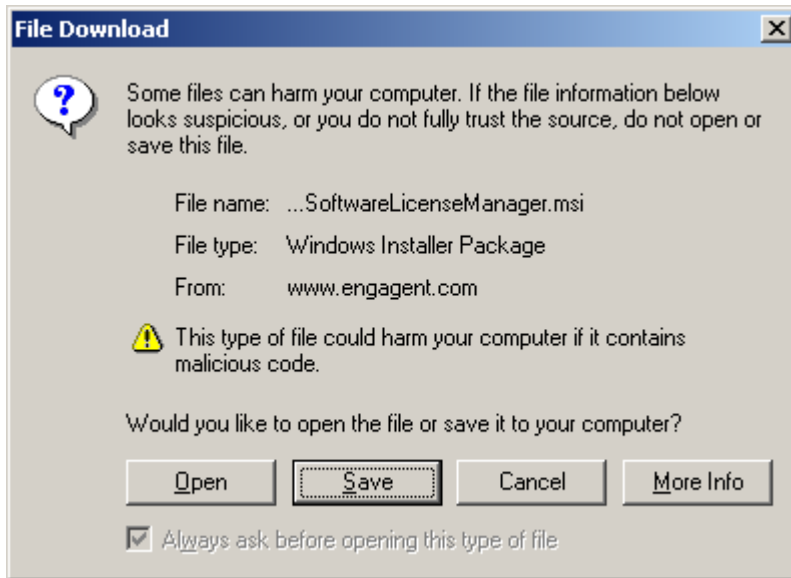
Place your cursor over the box in the “Download” column, in the appropriate row, and double click.

The first thing you will see is our registration page. Only the yellow fields are required, and none of the information is released outside of Engagent. When done, click the *Submit* button at the bottom of the registration page.

Look for an automatically generated email from Engagent, sent to the email address you specified on the registration page, that contains useful reference and contact information.

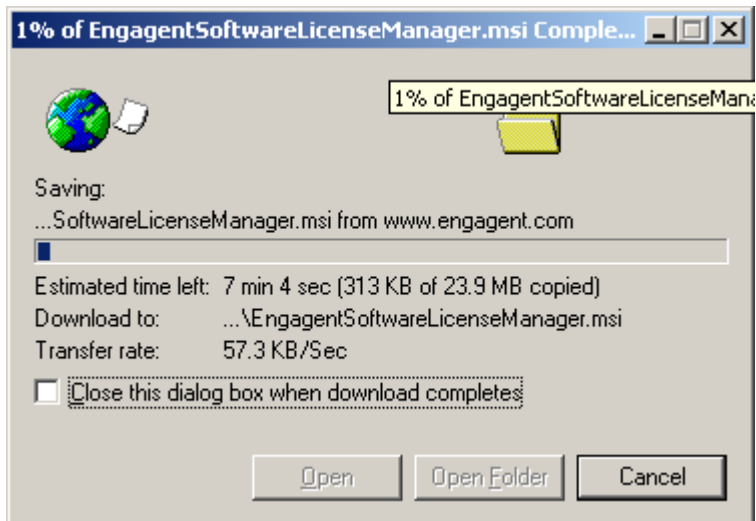
Downloading, continued

The second thing you will see is a *File Download* pop-up like the one shown below,



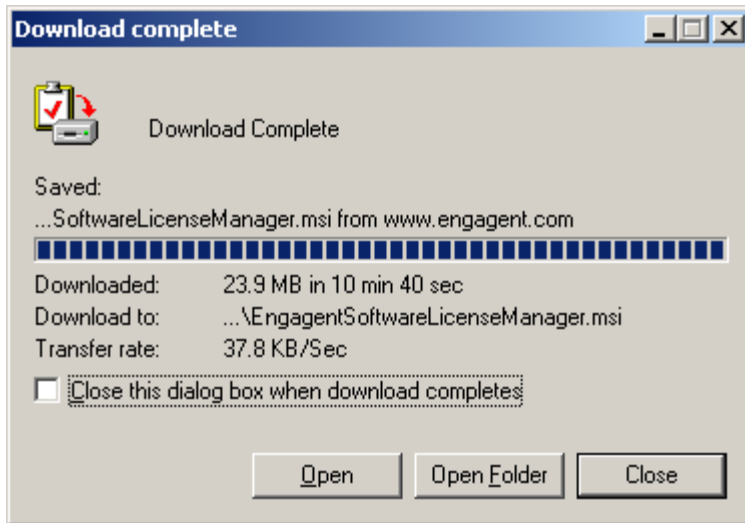
Click the *Open* or *Save* button.

You will see an informational pop-up like the one shown below, that lets you know the download has begun.



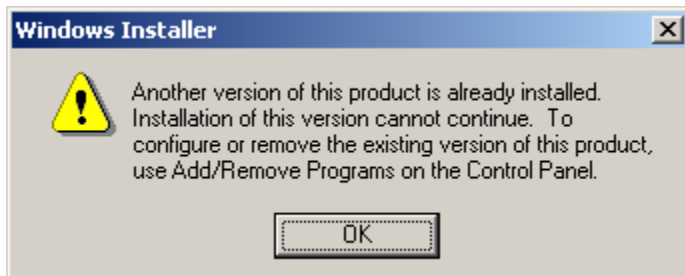
Downloading, continued

A successful download will result in a confirmation message on the pop-up, as shown below.



Click the *Open* or *Open Folder* button to Install.

If, by chance, you already have a copy of ESLM on your system, the Windows Installer will prevent you from accidentally overwriting it,



The next section of this User Guide describes the installation process in detail.

Installation

Double-click on **EngagentSoftwareLicenseManager.msi** to begin installation. The installer will prompt you through installation of the product.

The installer will ask you to select the directory into which the product is installed. The default is **c:\program files\engagent\engagent software license manager**.

The installer will also ask whether the Engagent Software License Manager should be available to all users of the system or just to the user who is installing it. In most cases, the sensible answer is *all users*.

Click on the Engagent Software License Manager icon (red lower-case "e") on your desktop to launch the license manager, or choose it from the Programs menu under Engagent.

Evaluation Version

Engagent Software License Manager is distributed with all its features enabled for an initial evaluation period of 30 days. Each time the evaluation-enabled version is launched, a splash screen announces the number of days remaining until the software will be disabled automatically.



Evaluation Version - Splash Screen

Registration is not required to use the initial evaluation version of Engagent Software License Manager. To extend the evaluation after the initial 30-day period has expired, you must obtain a registration “key” from Engagent, (see next section).

Registration

Obtaining the Registration Key

To use Engagent Software License Manager beyond the initial evaluation period, whether for an extended evaluation or for permanent use after purchase of the Enterprise or Professional edition, you must “register” it. This means you must obtain a registration “key” from Engagent, Inc.

The “key” is nothing more than a two-part text string, and it must be data-entered into a special panel within Engagent Software License Manager. Normally, the registration key is delivered via email.

<u>2-part ESLM registration key:</u>	<u>field name:</u>
(1) Company name (meaningful text string)	Company Name
(2) Alpha text string with dashes	Authorization Code

To receive your registration key,

Call (877) 820-7980 or
Fax (425) 485-8804 or
Email sales@engagent.com

Registration, continued

Using the Registration Key

After you have obtained the registration key from Engagent, start Engagent Software License Manager (ESLM). You may start the module you downloaded previously. You do not need to re-install ESLM before you enter your registration key.

Note: The software is always obtained by downloading it from Engagent's web site, (i.e., you do not have to request a CD). The downloaded ESLM is always an evaluation edition, by default. Depending on the type of registration key you receive entry of the key either, (1) extends your evaluation period a specified number of days, or (2) gives you permanent ownership of the software.

From the upper bar menu on the main panel of Engagent Software License Manager, choose *Help*, and then select *Register* from the pull down menu. The *Register* pop-up appears.



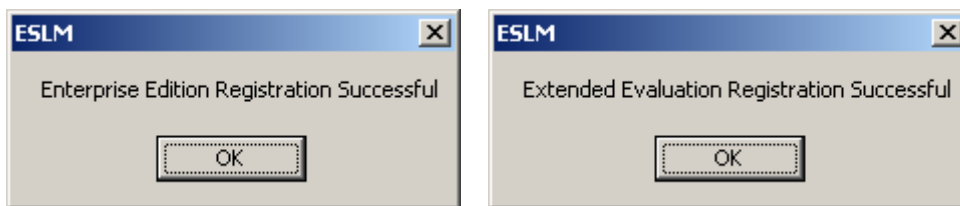
The screenshot shows a Windows-style dialog box titled "Register" with a blue header bar. The main content area has a light gray background. At the top, the Engagent logo (a red 'e' in a square) is followed by the text "engagent software" in a large, bold, black serif font, and "License Manager" in a slightly smaller, bold, black serif font below it. Below the title, the text "Use this form to enable Engagent Software License Manager." is displayed. There are two main input sections. The first is labeled "Company Name" in bold, with a note "(Must EXACTLY match company name submitted to Engagent.)" to its right. Below this is a text input field with "Company Name" as a placeholder. The second section is labeled "Authorization Code" in bold. To its right, there is text: "To obtain authorization code:", "Call (877) 820-7980", and "Or email sales@engagent.com". Below this is a text input field with "Paste Authorization Code Here" as a placeholder. In the bottom right corner, there is a button labeled "Register".

Register pop-up

Registration, continued

Enter the two-part registration key that was provided to you by Engagent, Inc., into the respective fields on the Registration pop-up shown on the previous page. Each part of the registration key must be data-entered *exactly* as provided by Engagent, (case sensitive, spaces and dashes included). To avoid mistakes, it is recommended that you “cut” the two-part key from email, and “paste” it into the respective data entry fields; in order for the key to work, both parts must be entered correctly.

Now, click the Register button in the lower, right-hand corner of the pop-up. You should see a confirmation pop-up like one of these:



You're good to go.

Call or Email us at Engagent if you experience any problems with the registration key.

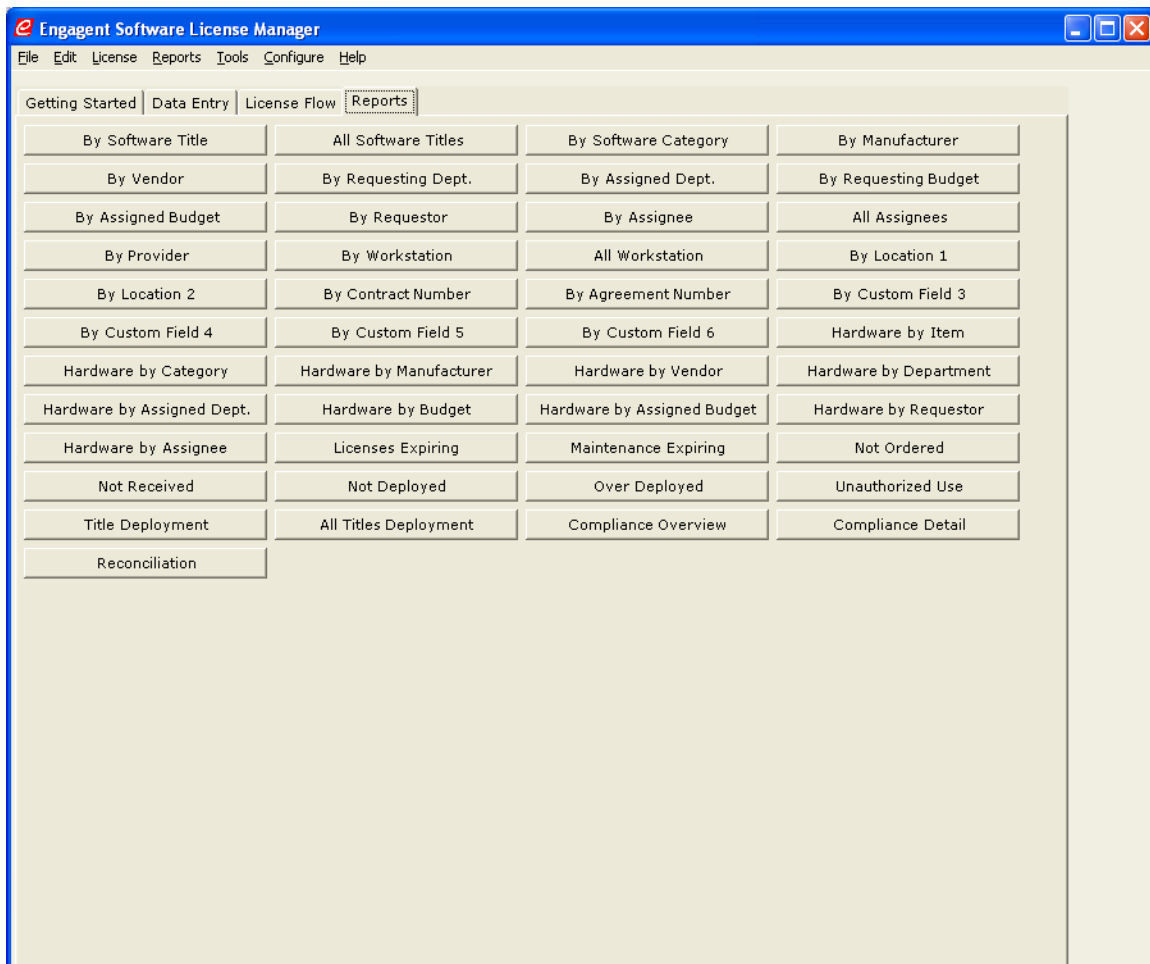
- * The Professional Edition is intended for a single user; the Enterprise Edition has additional features designed for multi-user, enterprise systems.

First Walk Through

ESLM Main Panel

The easiest way to become familiar with the organization of Engagent Software License Manager is to walk through its processes once. An initial tour of all the major functions should take no more than ten minutes.

Note that the ESLM Main Screen, illustrated below, has its functions organized into four tabs: a *Getting Started* tab, a *Data Entry* Tab, a *License Flow* tab, and a *Reports* tab.



Main Screen

Data Entry Tab

The leftmost pane on the main screen is for *Data Entry*. The buttons in the Data Entry pane allow you to create new database records or edit existing ones. If you're touring an initial installation of ESLM, your database will be empty. To familiarize yourself with the data entry function of ESLM, click the *New* buttons and enter test data.

ESLM Main Panel, continued

Press the *New* buttons (skip *Licenses*) and enter your test data:

- ❑ Create one *Department* (e.g., Sales).
- ❑ Give the department one *Employee* (e.g., Test Employee).
- ❑ Define one software *Manufacturer* (e.g., Microsoft).
(You can use the checkboxes to declare that the *Manufacturer* is also a *Vendor* from whom you can purchase software and a *Service Provider* who will support it software.)
- ❑ Specify a single *Software Title*, (e.g., Microsoft Office, or just Office *).

Note: Whether or not you include the software manufacturer in the title depends on your user preferences. Either way will work. The advantage of specifying the manufacturer name as part of the software title is that they will alphabetize together by manufacturer in the drop down selection list. But most users don't do that. In this example, they would title the software "Office" rather than "Microsoft Office", for exactly the same reason, only in reverse, so that when they're looking for it in the drop down list they can just type "O" and go straight to it.

ESLM Main Panel, continued

New License Information

LicenseID: Title: Quantity:

Department: Requestor: Price:

Vendor: Budget: P.O.:

License Type: Comment: Received:

Duration
☐ Perpetual Start:
☒ Expires End:

Upgrade
Upgrade from: < > >> >

Restrictions
☒ Unrestricted license ☐ Restricted license

Maintenance
Start Date: Provider: Renewal Cost:
End Date: Description:

SerialNumber: AuthorizationCode:

Custom Field 1: Custom Field 2:

Active: ☒ Active ☐ Inactive Invoice Number:

<< < 1 of 1 > >>

New License Information Screen

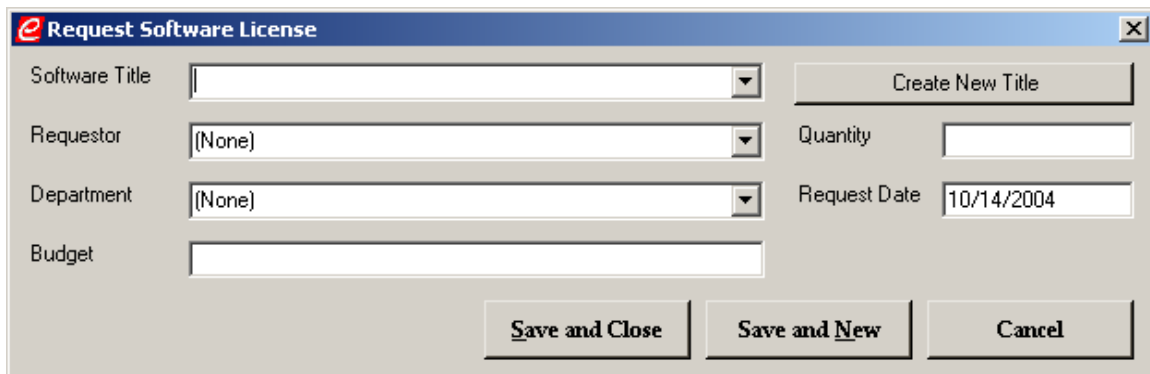
To expedite this quick tour, simply close the *New License Information* screen and move on.

ESLM Main Panel, continued

License Flow Tab

From the License Flow tab, you can see how Engagent Software License Manager helps you to control, document, and coordinate your software licenses throughout their lifecycle.

Click the *Request License* button. The *Request Software License* pop-up appears. This is how you request a license for the application software title you created in the *Data Entry* pane.

The image shows a 'Request Software License' dialog box. It has a title bar with a red 'e' icon and the text 'Request Software License'. The dialog contains several input fields: 'Software Title' (a dropdown menu), 'Requestor' (a dropdown menu with '(None)' selected), 'Department' (a dropdown menu with '(None)' selected), 'Budget' (a text box), 'Quantity' (a text box), and 'Request Date' (a text box with '10/14/2004' entered). There is a 'Create New Title' button next to the 'Software Title' dropdown. At the bottom, there are three buttons: 'Save and Close', 'Save and New', and 'Cancel'.

Request Software License pop-up

- ❑ Click the *Approve Request* button. The *Approve Software License Requests* pop-up appears.
- ❑ Click the *Order License* button. The *Order Software License* pop-up appears.

The manager or a purchasing agent uses the *Order Software* function to place a purchase order with a specified vendor for the software at specified terms.

- ❑ Click the *Receive License* button. The *Receive Software and Define License* pop-up appears.

The software manager *Defines the License* by recording all the details of the license, including,

- License Type* (single-user, per seat, concurrent, enterprise, etc.)
- Duration* (perpetual or specific period)
- Serial Number* and *Authorization Code*
- Copy of the license agreement if available
- Associated *Maintenance Agreement*, with *Renewal* date and price

In addition, the software license can be associated with a *Department*, *Employee* and *Budget Code*.

- ❑ Click the *Assign License* button. The *Assign License to Workstation* pop-up appears.

If you choose to manage software to the final level, you can record when the license is Assigned to a Workstation, its actual location, the responsible employee, and much more.

- ❑ Click the *Change Assignment* button. The *Update Installation* pop-up appears.
- ❑ Click the *Remove License* button. The *Remove License from Workstation* pop-up appears.

You can also remove a license from a workstation to return it to the license pool.

Reports Tab

Finally, press a button or two in the *Reports* tab to give you a preview of the many views of your enterprise software licenses that Engagent Software License Manager provides.

Set Up and Data Entry

Concepts and Vocabulary

Engagent Software License Manager is designed to be an exceptionally malleable and adaptable piece of software. Every IT installation presents different requirements; Engagent Software License Manager is designed to be as "soft" as possible, so software managers can configure it to meet their individual needs. Consistent throughout Engagent Software License Manager, though, is a simple conceptual framework which it is worth pausing a moment to internals.

Within Engagent Software License Manager, software is managed at three levels of abstraction:

<i>Software Title</i>	- one unique application
<i>License</i>	- an agreement by which you are allowed to use the software
<i>Instance</i>	- one installation of the licensed software

This is a descending one-to-many hierarchy. For example, you could define one application named AutoCAD, but you may purchase six different licenses for the one application. And each license (if it is not a single-user license) may be installed on many workstations. (The computers on which software is installed are called *Workstations* throughout Engagent Software License Manager, whether they might be servers, laptops, handhelds, telephones, or other kinds of devices.)

Software may be grouped into ***Software Categories***. As Engagent Software License Manager ships, some default categories are included in the SoftwareCategory Table, but these are merely suggestions and there is nothing in the design of Engagent Software License Manager that ties you to them. You should think about the ways you could usefully categorize software in your enterprise and revise the SoftwareCategory table to best meet your own individual needs. (See the *Configuration* section of this document for details on how to change the definitions of software categories.)

Software Licenses are associated with ***Manufacturers***, ***Vendors***, and ***Service Providers***. A *Manufacturer* is the source of the software. (For example, IBM is the Manufacturer of DB2.) You license the software from a *Vendor*. While software has only one manufacturer, you could license it from many different vendors: the manufacturer, a distributor, or the nearby warehouse store. A *Service Provider* supports the license through a Maintenance Agreement. For any given license, the Manufacturer, Vendor, and Service Provider could all be the same, or they could all be different.

Within your enterprise are ***Departments***, ***Employees***, and ***Budget Codes***. Each license, and each installation ("Instance") of licensed software, can have more than one associated department, employee, or budget code. For example, one employee who requested the

software, one who approved the request, and one who is responsible for the workstation on which it is now installed. *Budget Code* is the most flexible attribute, designed to be useful in many situations. For example, some users use it to associate costs with subsidiaries of their holding companies, others to charge back costs to specific projects.

Entering Initial Data

There are three main ways for data to get into Engagent Software License Manager:

1. You can *Enter* the data using the screens provided.
2. You can *Import* the data using the provided Importer.
3. You can *Integrate* with other applications to automatically populate the data.

The third method, Integration, is ideal for ongoing operations. For example, if your enterprise already has a purchasing system that records many software licensing details, it would make more sense to couple Engagent Software License Manager to the purchasing system directly rather than to build a new ongoing data entry task into your enterprise. Engagent Software License Manager's architecture is designed to facilitate integration; consult with an Engagent professional for more details.

To get your existing data into the system, though, you will be using one of the first two methods. The following section of this document describes Engagent Software License Manager's powerful Importer. If you have a great deal of existing data, and if that data is already fairly well organized, the Importer can save you vast amounts of time. Because Engagent Software License Manager is the first unified, coherent system for managing software licenses, however, most of the sites into which it is installed do not already have software license data in one consistent format. This presents the manager with a choice. Rather than trying to organize the existing data sufficiently so that it can be imported by software, it may often be faster, easier, and less expensive to enter the data using Engagent Software License Manager's screens.

It is worth noting that importing need not be a single monolithic process. In fact, it is often much more manageable, particularly if existing data is not coming from an existing database with its own referential integrity, to import different kinds of data separately. Information about the internal structure of the enterprise, for example — employees, departments, and budget codes — is ideally suited to quick, relatively simple bulk import operations. Defining software applications might be another separate import operation. And you may decide that the only way to handle the lack of coherence in the way software licenses have been previously recorded is to enter them one at a time into Engagent Software License Manager.

Engagent's technical professionals can offer not only advice but also assistance in making your data conversion as quick and easy as possible.

Editing Licenses

Most information about a software license may be viewed and edited from the *Edit License* form. (This same form will ultimately be invoked when creating new licenses, and also when receiving licenses, using the License Flow pane.)

From the *License* Menu, choose *Receive License*, or press the *Receive License* button in the License Flow pane.

The Edit License Form

Note: To go to a specified license, type the License ID in the LicenseID field in the upper left corner, then press the Tab key. To select a subset of your licenses, press the Filter button. (See below for more on Filters.)

This Edit License Form allows you to record a great deal of information about each software license. It is important to note, however, that ESLM does not *require* you to use all of its fields. Use as much as is germane to your environment.

Unit Price is a key field; many ESLM reports value software based on this field, and the reports will be less meaningful if you do not record the software price.

Likewise, because many ESLM reports selected records by date, the *Ordered* and *Received* date fields, which are by default set to today's date, need to be populated for licenses to show up in the reports.

ESLM allows you to associate a license with an Employee, a Department, and a Budget Code in two different ways: by requestor, and by assignee. This screen allows you to record the Employee, Department, and/or Budget Code that *requested* the software. The Assign License screen (described below), allows you to record the Employee, Department, and/or Budget Code the license is *assigned* to. The suite of reports included with ESLM contains reports that allow you to view your licenses either way.

Budget Code is a field that many users use in different ways: a holding company might put Company Name there; a job shop might put as Project Number. Budget Code is a good candidate for renaming. (See *Renaming Fields* in the *Configuration* section of this document.) The field will hold either alphabetic or numeric text. ESLM screens and reports do not parse the information in any way.

You can choose a *License Type* from the drop-down list box or type in a new License Type to describe the kind of license that has been purchased (for example, single-user, multiple seat, concurrent user, etc.) The *Type Comment* field here further describes the License Type. For example, if the license is a multiple seat license, the Comment field might contain the number of seats licensed.

The *Duration* section allows you to specify whether the license lasts forever or, if not, to enter the dates delimiting the period for which the license is valid.

The *Restrictions* section allows you to specify additional limitations on the use of the license which might not have been conveyed by the License Type. For example, use of the software might be restricted to development use only, for use only on workstations and not servers, or only within specified geographical boundaries.

The *Upgrade* section allows you to tie licenses together when one is an upgrade of another. For example, if you receive a special price on your purchase of Version 9 of a product because you own Version 8, the license for your upgrade purchase is dependent on the pre-existing license, and were you ever audited, you would want the two licenses tied together. To do so in ESLM, type the *License ID* of the license you are upgrading into the text box in the Upgrade section. The arrows in the Upgrade section allow you to follow a chain of upgraded licenses forwards and backwards.

Six Custom Fields allow you to record other information relevant to your site. See *Renaming Fields* in the *Configuration* section of this document.

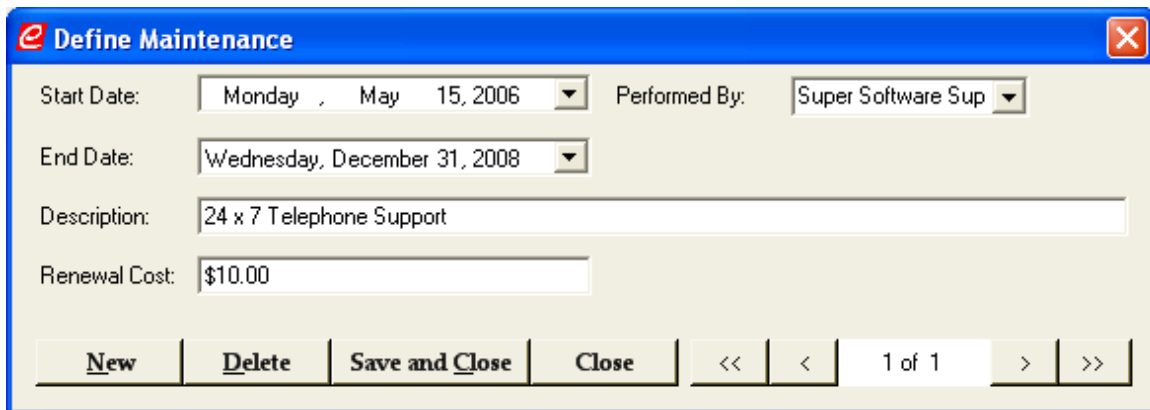
In addition to a *Comments* field, there is an *Extended Comments* button which will bring up a text editor allowing you to include text information of up to a gigabyte in length.

The *Serial Numbers and Authorization Codes* button brings up a form that allows you to record an unlimited number of Serial Numbers, Authorization Codes, and one other alphanumeric field associated with this license.

A pair of radio buttons with the *Active* section allows you to mark a license Active or Inactive. By default, all Licenses are Active. If you mark a license Inactive, it will not be displayed in any report. Marking licenses Inactive is often preferable to deleting them, for it preserves historical information valuable as an audit trail.

Maintenance Agreements

Pressing the Maintenance button brings up a form which allows you to manage maintenance agreements associated with the license. The Maintenance Form is illustrated below:



The Define Maintenance Form

Note that maintenance agreements can have start and end dates different than the start and end dates of the associated licenses. The maintenance is performed by a Maintenance Provider. Description is a free-form text field. Renewal cost is used in reports that help license administrator's budget maintenance renewals for future periods.

Note that one license may have more than one maintenance agreement associated.

Archiving License Agreements

Engagent Software License Manager allows you to store, view, and retrieve documents associated with each software license. You can archive an unlimited number of documents for each license.

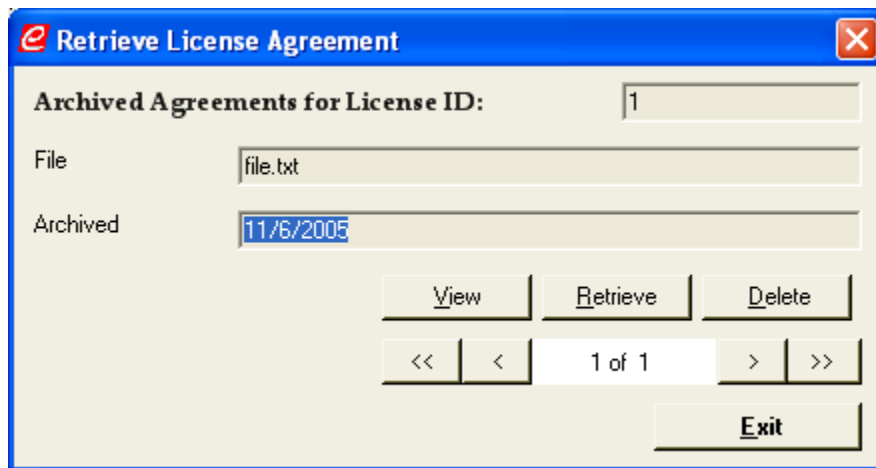
Pressing the *Archive License Documents* button at the bottom left of the *Receive Software and Define License* brings up a File Open dialog allowing you to select the file where the agreement may be found. Engagent Software License Manager will then copy the document into a License Agreements Archive database.

The digital images you archive can be any documents you choose, and they can be in any format you require. Engagent recommends that you archive at least the following for each license:

- The License Agreement
- A copy of the vendor's paid invoice
- Any certificates of authenticity or any other document required to demonstrate your right to possess and use the software.

Archived documents are stored as binary large objects in a separate database (the *Agreements* database). This database should be backed up and a copy saved off-site for assistance in documenting software licenses after disaster recovery.

To retrieve or view the agreement later, choose *Retrieve Archived Agreement* from the *Edit License* screen, which brings up the form illustrated below.



The *Retrieve License Agreement* Form

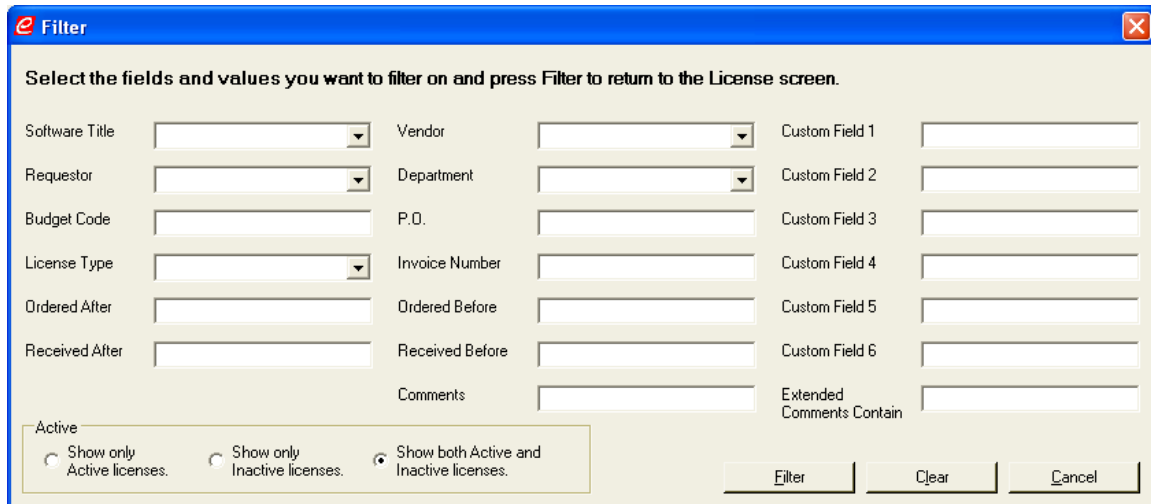
When you choose *View*, ESLM hands the document to Windows which depends on File Type Associations to determine which application to invoke to display the document. For example, if the document is a .PDF file, and if you have associated .PDF files with Acrobat Reader on your system, Windows will invoke Acrobat Reader to display the document.

When you choose *Retrieve*, ESLM presents a File Save dialog prompting you for the location where you would like the document saved. The *Delete* button allows you to remove a document you no longer need to archive.

Filters

When you have thousands of licenses in your database, how do you navigate to just the ones you want to see? By pressing the *Filter* button on the *Edit License* form. This invokes a filter which selects just the licenses you are interested in at the moment.

Pressing the Filter button brings up the form illustrated below:



The Filter Form

You can choose to filter on most of the key fields from the Edit License screen. For example, if you wanted to see only licenses for Microsoft Word, you would select Microsoft Word from the drop-down box beside the label *Software Title*. If you wanted to see all titles purchased by George Washington, you would select Washington, George in the drop-down box beside the label *Requestor*.

For free form text fields (such as Budget Code or Custom Field 1), type in the text box the information for the records you would like to see.

Note that you can select more than one filter. For example, you might want to see only the licenses that George Washington purchased in a specific month.

Note the filter on Extended Comments, which allows you to go quickly to any license where the Extended Comments contain the search string you type in the box.

The Active box at the lower left allows you to choose whether to see all licenses, only Active licenses, or only Inactive licenses.

When filtering is on, the top bar of the Edit License screen will contain the banner *Filtered*.

To remove all filters, press the *Filter Off* button

Hardware

To create a license record for a Hardware item rather than a Software title, press the *Switch to Hardware* button at the lower left

Importing Data

To bring existing data into Engagent Software License Manager, invoke the Import facility by choosing *Import* from the *Tools* menu bar on the main screen.

Back up your database First

There is no way to "undo" an import operation. Always make a copy of the Engagent Software License Manager database before importing data, so you can revert to the saved copy of the database if you would like the opportunity to rework the import file and try again.

Import File Format

The import file must be in a **Comma Separated Value** (CSV) format. In a CSV file, records are separated by carriage return or newline characters, and within each record, fields are separated by commas. Most database and spreadsheet programs can produce CSV files as output.

Below is an example of a short CSV file containing three data records of five fields each:

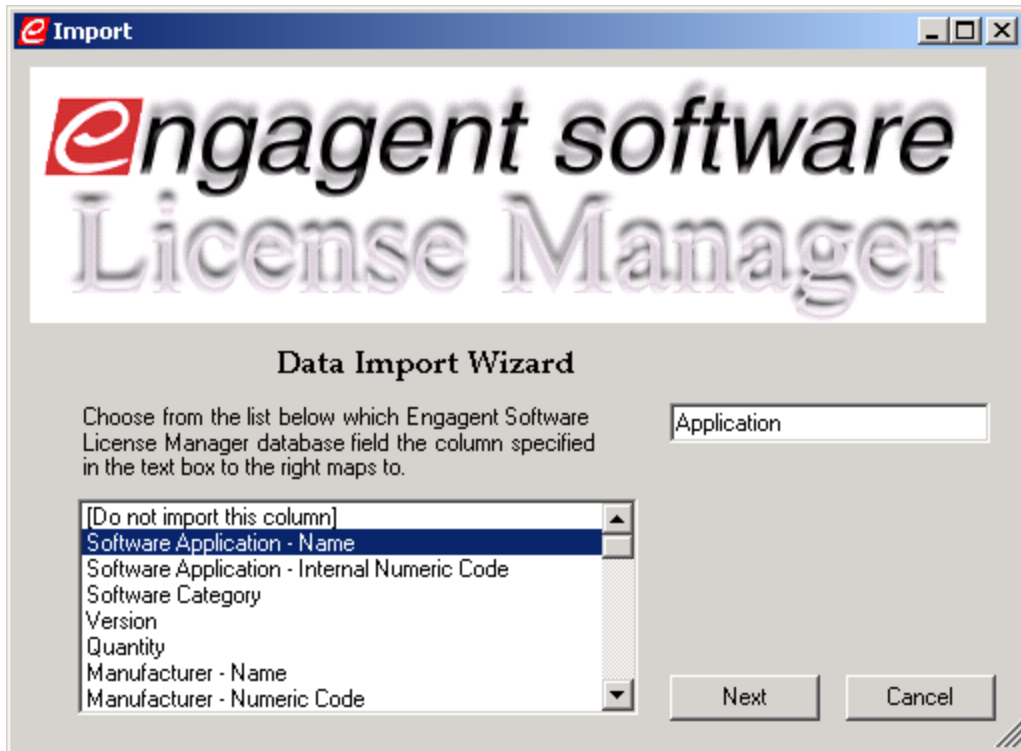
```
Application, Manufacturer, Category, Version, Quantity
iTunes, Apple, Music, 1, 8
Access, Microsoft, Database, 2000, 2
FoxPro, Microsoft, Database, 98, 1
```

Engagent Software License Manager's Importer expects the fields in the first record to contain **Field Names**. The first field in the first record is "Application," indicating that "iTunes," "Access," and "FoxPro" in subsequent records are "Applications," just as "Apple" and "Microsoft" are "Manufacturers" in the second field.

It does not matter what the fields in your CSV file are named, so long as you know what they mean. Any data in the first record is not imported into the Engagent Software License Manager database, and the Importer does not attempt to parse the Field Names. Rather, as explained below it gives you the opportunity to map them onto Engagent Software License Manager fields.

Mapping Fields for Import

The Importer will show you each field name and ask you which Engagent Software License Manager field the data should be mapped to. The illustration below shows an example of one such mapping:



Mapping Import Fields

The scroll box at the lower left of this screen contains a list of all the fields in the Engagent Software License Manager database into which you can import data. The Field Names in your import file will appear in the text box at the upper right, one at a time, in the same order they are found in the import file. For each Field Name in the import file, choose the Engagent Software License Manager field into which the data for that Field Name should be imported.

The example above illustrates the first mapping that would be needed if you imported the tiny CSV file listed above. The first Field Name encountered is "Application." As the screen shot indicates, the most appropriate place in the Engagent Software License Manager for the contents of "Application" would be the field described as "Software Application - Name." When you highlight that entry and click the Next button, the Importer will ask you which field "Manufacturer" maps to.

Note that one choice for any field in your import file is "Do Not Import This Field."

When you have come to the end of the Field Names in your import file, the Importer will present you with a confirmation screen to make sure that you want to go through with the irreversible import operation.

At the end of the operation, the Importer will show the number of records imported.

Field Formats

Most of the fields in the Engagent Software License Manager database are **Text** fields. Text fields can contain freely formatted data containing up to 50 alphabetical, numerical, or punctuation characters.

The following fields are type-checked. Any data which does not conform to the specified type is not imported.

Date fields

Approval Date
Install Date
License End Date
License Start Date
Maintenance Agreement End Date
Maintenance Agreement Start Date
Receive Date
Request Date
Requisition Date
Vendor Paid Date

Numeric fields

Installed Count
Media Status
Quantity

Currency fields

Maintenance Agreement Renewal Cost
Maintenance Amount Paid
Price
Price - List
Price - Periodic

Unique Fields

The logic of the Engagent Software License Manager is that each category of information is kept in its own table, and each representative of that category appears in the table only once. Each department is described by one entry in the Department table, each employee by one entry in the Employee table, each software application by one entry in the Software table.

When you map import information into one of these tables, the Importer will only create a new record if the data in the field is not already in the database. To continue with the example of our tiny CSV file above: If you map the second field in the CSV file

("Manufacturer") onto the "Manufacturer" field in Engagent Software License Manager's database, here is what the importer will do:

1. When the Importer encounters a Manufacturer named "Apple" in the first data record in the CSV file, it will search the existing contents of the Manufacturer Table. If "Apple" is not found, the Importer will create a new record for the Manufacturer "Apple".
2. When the Importer encounters "Microsoft" as the manufacturer in the second record, it will do the same.
3. When the Importer encounters "Microsoft" again in the third record, it will not create a new Manufacturer record, because Microsoft already appears in the Manufacturer table. (That is, the records for "Access" and for "FoxPro" in the Software table will both point to the same record for Microsoft in the Manufacturer table.

It is important to note that the Importer demands exact matches, and contains no logic to consolidate similar entries. If your import file contains "Apple" and "Apple Computer," those will become separate, unrelated Manufacturers. Similarly, "Bill Rasmussen," "Bill Rassmussen," "William Rasmussen," "W. Ramussen" will become four different employees.

The single most valuable investment of your time in the import process is to carefully prepare the import file to use uniform wording for entities that are in fact the same.

Managing Software

The Software Lifecycle

As described in the *Initial Walk Through* section of this document, Engagent Software License Manager is designed to manage the following steps of the software life cycle:

Define Software Title

The name, version, and characteristics of the software are defined in the database.

Request License

An employee asks for a license to an application

Approve Requests

A manager uses the *Approve Requests* function to approve or deny the request.

Order License

The manager or a purchasing agent places a purchase order with a specified vendor for the software at specified terms.

Receive License

The software manager records all the details of the license.

Request Assignment

A user requests that software be assigned to their workstation.

Approve Assignment

A manager approves or denies the assignment request.

Assign License to Workstation

IT personnel record when the license is assigned to an individual computer.

Change Assignment

IT personnel modify details of the license's assignment.

Remove License from Workstation

When the software or the workstation is no longer in use, the license is returned to the license pool.

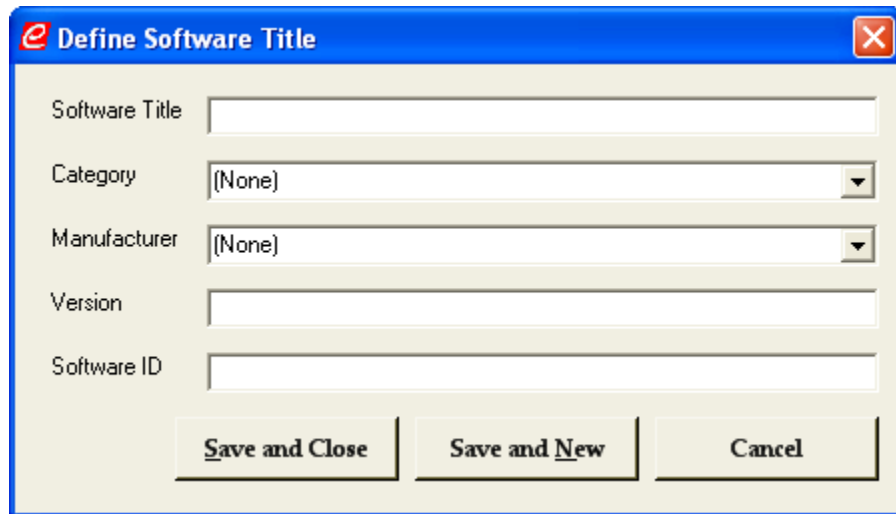
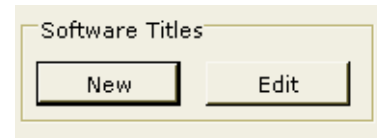
Note that Engagent Software License Manager does not require that you manage all these details of your software licenses. Many IT installations, for example, do not go so far as to document the association of particular licenses with particular workstations.

You can configure ESLM to hide any License Flow buttons you do not need to meet your IT administration requirements. Choose *Buttons* from the *Configuration* menu and remove the checkbox for any button you wish to remove from the License Flow tab.

Each of these stages in the license flow corresponds to one set of Engagent Software License Manager screens, and each of them is documented in a following section.

Defining Software Titles

From the *File* Menu, choose *New* and then *Software Title*. Or from the *Data Entry* panel, select the *Software Titles* section and press *New*.

A dialog box titled "Define Software Title" with a blue header bar and a red close button in the top right corner. The dialog contains five input fields: "Software Title" (a text box), "Category" (a drop-down menu showing "[None]"), "Manufacturer" (a drop-down menu showing "[None]"), "Version" (a text box), and "Software ID" (a text box). At the bottom, there are three buttons: "Save and Close", "Save and New", and "Cancel".

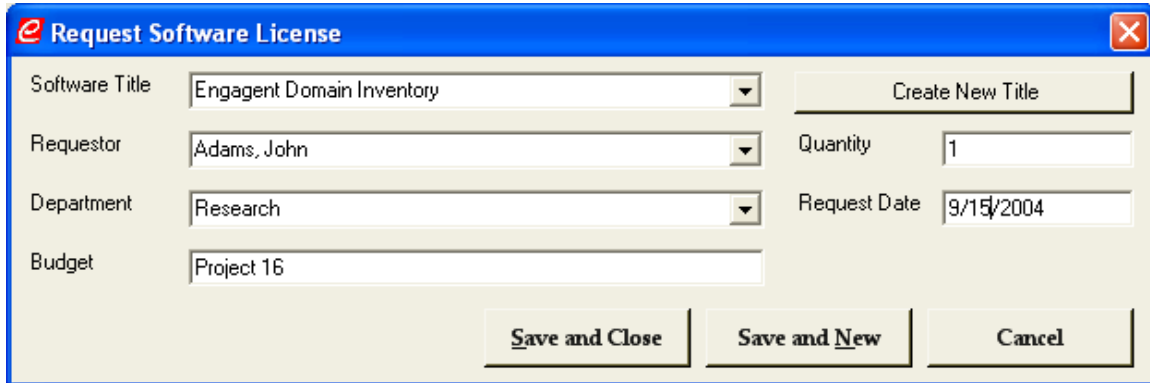
The Define Software Title Form

The *Name* of the software can be anything meaningful to you. The *Numeric Identifier* is not the code by which this software will be referenced inside the Engagent Software License Manager database; rather it is a number that you wish to associate with the software – for example, a Vendor's SKU for the software, or an internal asset ID number. If you enter non-numeric data in the Numeric Identifier field, no data will be recorded. The *Version* is the release version of the software. Choose the software *Manufacturer* from the drop-down box or type in the name of a new manufacturer. You can also associate a *Software Category* with the software by choosing an existing category or typing in a new one.

Note: It is generally a good idea to make your Software Titles as specific as possible: for example, to say "Adobe Acrobat Reader 6" rather than "Acrobat."

Requesting Software

From the *License Menu*, choose *Request License*, or press the *Request License* button in the *License Flow* pane.

The image shows a software window titled "Request Software License" with a blue header bar and a red close button. The form contains several input fields: "Software Title" with a dropdown menu showing "Engagent Domain Inventory" and a "Create New Title" button; "Requestor" with a dropdown menu showing "Adams, John"; "Department" with a dropdown menu showing "Research"; "Budget" with a text field showing "Project 16"; "Quantity" with a text field showing "1"; and "Request Date" with a text field showing "9/15/2004". At the bottom, there are three buttons: "Save and Close", "Save and New", and "Cancel".

Software Title	Engagent Domain Inventory	Create New Title	
Requestor	Adams, John	Quantity	1
Department	Research	Request Date	9/15/2004
Budget	Project 16		
Save and Close		Save and New	Cancel

The Request Software License Form

You can choose from software applications that have already been defined, or type in the name of a new one. *Budget Code* is a field that can be used many different ways, depending on the information you need to record in your enterprise. For example, Budget Code can refer to a project, a subsidiary, or a customer job. In any case, it can be useful for associate the request with an entity, allowing the potential of charging back the associated costs.

Approving Software Requests

From the *License Menu*, choose *Approve Requests*, or press the *Approve Requests* button in the *License Flow* pane.

The image shows a software window titled "Approve Software License Requests" with a blue header bar and a red close button. The form contains several input fields: "Title" with a text field showing "Engagent Domain Inventory"; "Requestor" with a text field showing "Adams, John"; "Department" with a text field showing "Research"; "Budget" with a text field showing "Project 16"; "License ID" with a text field showing "1"; "Quantity" with a text field showing "1"; "Requested" with a text field showing "9/15/2004"; and "Approval Code" with an empty text field. At the bottom, there are three buttons: "Approve", "Deny", and "Close". There is also a pagination control showing "<<" "<" "1 of 1" ">" ">>".

Title	Engagent Domain Inventory	License ID	1
Requestor	Adams, John	Quantity	1
Department	Research	Requested	9/15/2004
Budget	Project 16	Approval Code	
<< < 1 of 1 > >>			
Approve		Deny	Close

The Approve Software License Requests Form

License ID is the internal identifier by which Engagent Software License Manager refers to the request. This field is not updatable. Note that the manager can change the *Budget Code* of the request. It is also possible to add an *Approval Code*. Like Budget Code, Approval Code is a flexible field that can be used in many ways depending on the individual needs of your installation. Most sites use it simply to identify the approver; it could alternatively be used to provide yet another level of budget tracking.

When you click on the *Approve* or *Deny* button, the request is marked appropriately and the next request fills in the text fields on the form. You can move forward and back through the list of requests. The form will not close until you click the *Close* button.

Ordering Software

From the *License Menu*, choose *Order License*, or press the *Order License* button in the *License Flow* pane.

Order Software License

LicenseID: 14 [New] Quantity: 2

Software Title: Norton AntiVirus 2004 Requestor: Caesar, Julius

Department: Legal Budget: Forum

Requested: 11/7/2005 Approved: 11/7/2005

Actions

Set Purchase Price: 35

Select Terms: Net 30

Select Vendor: Software House International

Purchase Order

☒ Use ESLM PO ☐ Use Own PO

300002 [Generate PO]

<< < 1 of 1 > >>

Save and Close Save and New Cancel

The Order Software License Form

You will observe that the Order Software License form is divided vertically into two zones. The upper zone contains information that has been recorded in previous steps of the process. It may be changed at this point, but it is primarily shown on the screen for purposes of reference. The bottom zone contains *Actions* for the manager or purchasing agent to undertake at this point: setting a purchase price and purchase terms, selecting a vendor, and generating or recording a purchase order number. Note that you can use PO numbers from other systems or use Engagent Software License Manager as your purchase order system. Some IT managers use the Engagent Software License Manager

"PO" number as a "Software Purchase Authorization Number" forwarded to the purchasing department, without which no software purchases are allowed.

See the *Configuration* section of this document for instructions on how to set the Initial Purchase Order number.

Generating Purchase Orders

Pressing the *Generate PO* button on the Order Software License form will create a purchase order document with the information a vendor needs to supply the order. . The template for the purchase order is found in the Purchase Orders directory. (By default, the PurchaseOrders directory is found beneath the Engagent Software License Manager directory. You can change its location by editing the CurrentPurchaseOrdersPath node in ESLM.exe.config.)

The template is in the file POtemplate.RTF. Before generating purchase orders, edit this file to set your address, include your logo, etc. This is a Rich Text Format file, and may be edited with any application (such as a word processor) that will manage rich text format.

When you press the Generate PO button, creates a new purchase order document with the name <<PONUMBER>>.rtf, where <<PONUMBER>> is the current purchase order number. The new purchase order document will be built by replacing the parameters found in POtemplate.RTF with the appropriate information from the current purchase order. For example, POtemplate.RTF contains the parameter <<@VENDOR>>. This will be replaced by the name of the vendor from the Order Software License screen.

ESLM then invokes the default RTF editor for your system, from which the new Purchase Order may be saved, printed, emailed, etc.

Recording Software License Information

When ordered software is received, choose *Receive License* from the License Menu, or press the *Receive License* button in the License Flow pane.

This brings up a form identical to the Edit License form. See "Editing License Information" above for explanation of the fields and functions available on this form.

Requesting a License Assignment

End users can request that they be assigned a software license by using the Request Assignment form. Request Assignment brings up the search screen illustrated below.

The Request Assignment Form

The requestor uses one of the drop-down boxes to choose which license to request. The most common use, as illustrated above, is to request a software title.

Approving an Assignment Request

Managers can approve or deny users' requests for license assignments by using the Approve Assignment form, similar to the Approve Request form described above. One feature of the Approve Request form is the Load Directive button, which allows managers to generate a form documenting the assignment authorization. The Load Directive is generated in the LoadDirective directory (by default, c:\Program Files\Engagent\Engagent Software License Manager\LoadDirective) based on the template LoadDirective.rtf. You can customize this template using a word processor such as Microsoft Word to contain the information and formatting you required. The special fields in pointed brackets (such as <<@SOFTWARE>>, <<@VERSION>>, <<@DEPARTMENT>>, <<@EMPLOYEE>>) will be replaced by the current value at run-time.

Deploying Licenses

From the License Menu, choose *Assign License*, or press the *Assign License* button in the License Flow pane.

The Assign License Form

The *Assign License* form creates an *Instance* of the licensed software, recorded as associated with a particular piece of hardware (here called a *Workstation*, although it could equally well be any other kind of system).

You can choose a *Workstation* from the drop-down list box or enter the name of a new one; the *Department* and *Employee* fields work similarly. The *Budget Code* for the Instance need not be the same budget code as for the license as a whole. The *Version* and *Service Pack* fields allow you to track the currently licensed version on each workstation. *Location* and *Location 2* are descriptive fields. That is to say, locations are not kept in a Location table in the database and checked for referential integrity; you can type into the Location fields any text information that will help you track the software.

Deploying Multiple Titles

Often it is convenient to assign more than one title at a time. For example, when a new workstation is commissioned, the IT staff will want to put a standard profile of applications on the workstation. To assign a profile, choose *Assign Profile* from the License Menu, or press the *Assign Profile* button in the License Pane. This brings up the Assign Profile form illustrated below.

The Assign Profile Form

Press the Select Profile button to choose among existing profiles. (To create profiles, see *Profiles* in the Configuration section of this document. The text box in the upper right of the form will display the titles in the selected profile. The remainder of the Assign Profile form is the same as the Assign License form. Choose the Workstation, Department, Employee, Location, etc. where you wish the profile assigned.

Changing Assignments

When the license is moved from one workstation to another, or when the workstation is assigned to another employee or department, or moved to another location, or when the version is updated, you can use the Change Assignment screen to keep the Engagent Software License Manager database up to date. Choose Change Assignment from the License Menu or press the Change Assignment button on the License Pane.

Transferring Licenses

Sometimes an asset manager will want to transfer all the assets of one employee to another, or move assets from one department or location to another. To do so, choose *Transfer Licenses* from the License Menu or press the *Transfer Licenses* button on the License Pane, bringing up the Transfer License Assignments form illustrated below.

The Transfer License Assignments Form

Choose the radio button on the left to indicate which kind of transfer you would like to perform. In the example illustrated, the *Employee* button is checked, which activates the Employee drop-down boxes in the *Transfer From* and *Transfer To* columns. Clicking the Transfer button on the form as illustrated will transfer all licenses from Edgar Alan Poe to Johann Sebastian Bach. Checking the Department radio button, on the other hand, would let you transfer all licenses from one department to another, etc.

Removing Software

When the software is no longer being used on the workstation on which it was installed, you can remove the license and return it to the license pool so that it can be reused elsewhere. From the *License Menu*, choose *Remove License*, or press the *Remove License* button in the License Flow pane.

The Remove License Form

Use this form choose the workstation, location, employee, etc., from which you want to remove the software.

Then select the licenses you wish to remove (or press the "Select All" button to select all licenses for removal) and press the "Remove" button to remove the software license assignment.

Reports

The collection of reports built in to Engagent Software License Manager is designed to allow you to quickly view your licenses by any field in the database.

Getting Started	Data Entry	License Flow	Reports
By Software Title	All Software Titles	By Software Category	By Manufacturer
By Vendor	By Requesting Dept.	By Assigned Dept.	By Requesting Budget
By Assigned Budget	By Requestor	By Assignee	All Assignees
By Provider	By Workstation	All Workstations	By Location 1
By Location 2	By Contract Number	By Agreement Number	By Custom Field 3
By Custom Field 4	By Custom Field 5	By Custom Field 6	Hardware by Item
Hardware by Category	Hardware by Manufacturer	Hardware by Vendor	Hardware by Department
Hardware by Assigned Dept.	Hardware by Budget	Hardware by Assigned Budget	Hardware by Requestor
Hardware by Assignee	Licenses Expiring	Maintenance Expiring	Not Ordered
Not Received	Not Deployed	Over Deployed	Unauthorized Software
Not Discovered	Title Deployment	Compliance Overview	Compliance Detail
Reconciliation			

The Reports Tab

As the report collection above illustrates, you can, view your licenses sorted by software title or by essentially any other field. In each report, you can select one item (for example, one title), or report on all titles. Most reports allow you to choose a time period for the report. So you can quickly answer a question such as “How many copies of Microsoft Office have we purchased in the past quarter,” or “What software licenses are expiring in the *next* quarter?”

Any report may be customized, and the list of reports itself may be customized. You can create new reports and add them to the report list, or remove from the list reports that will not be meaningful for your enterprise. The *Configuration* section of this document explains how to do so.

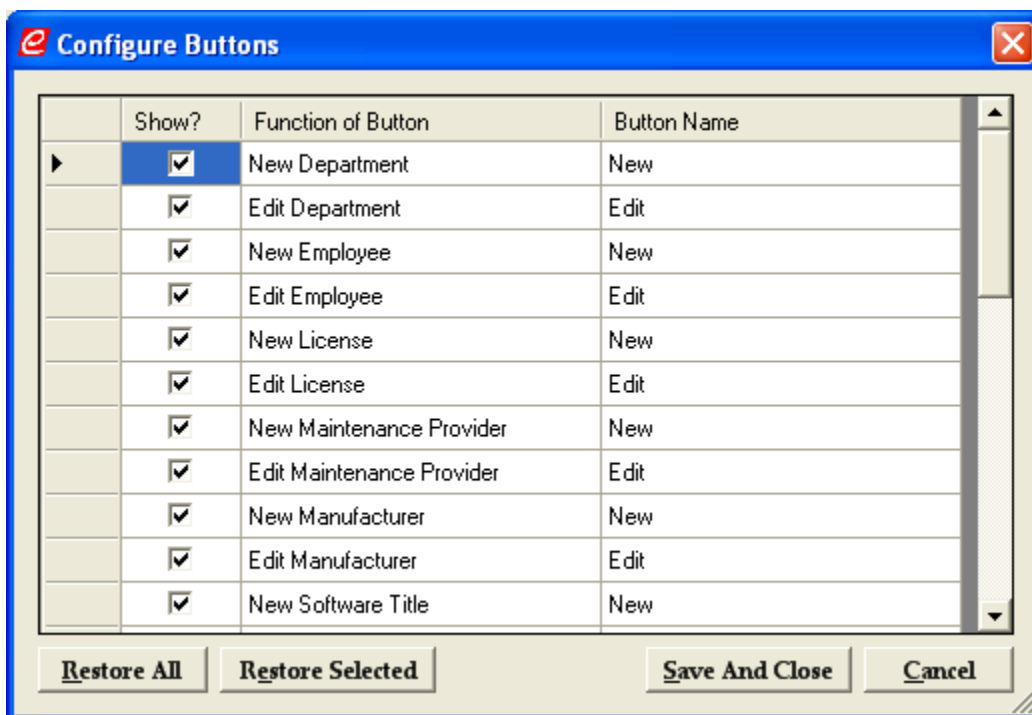
Check the Engagent web site for new reports that have been developed since you downloaded Engagent Software License Manager. If you need a report that is not in the existing collection, please contact Engagent. We are continually developing new reports and would be interested in adding your request to the list.

Configuration

Because no one designs for a license management scheme can anticipate all the needs of every customer, Engagent Software License Manager is designed to be extremely flexible. Most aspects of Engagent Software License Manager's appearance and functionality can be changed at your local site to work in the way that most meaningfully maps your license management process. In addition to the built-in configuration menu options described below, other custom configuration options are possible. Contact an Engagent customer representative to discuss how to make Engagent Software License Manager work *exactly the way you need*.

Buttons

Engagent Software License Manager contains more functionality than most software license managers need. To hide the functionality you do not use, choose *Buttons* from the *Configure* menu. All of the buttons on the Data Entry and License Flow tabs of ESLM are listed in the data grid illustrated below.



	Show?	Function of Button	Button Name
▶	<input checked="" type="checkbox"/>	New Department	New
	<input checked="" type="checkbox"/>	Edit Department	Edit
	<input checked="" type="checkbox"/>	New Employee	New
	<input checked="" type="checkbox"/>	Edit Employee	Edit
	<input checked="" type="checkbox"/>	New License	New
	<input checked="" type="checkbox"/>	Edit License	Edit
	<input checked="" type="checkbox"/>	New Maintenance Provider	New
	<input checked="" type="checkbox"/>	Edit Maintenance Provider	Edit
	<input checked="" type="checkbox"/>	New Manufacturer	New
	<input checked="" type="checkbox"/>	Edit Manufacturer	Edit
	<input checked="" type="checkbox"/>	New Software Title	New

Restore All Restore Selected Save And Close Cancel

The Configure Buttons Form

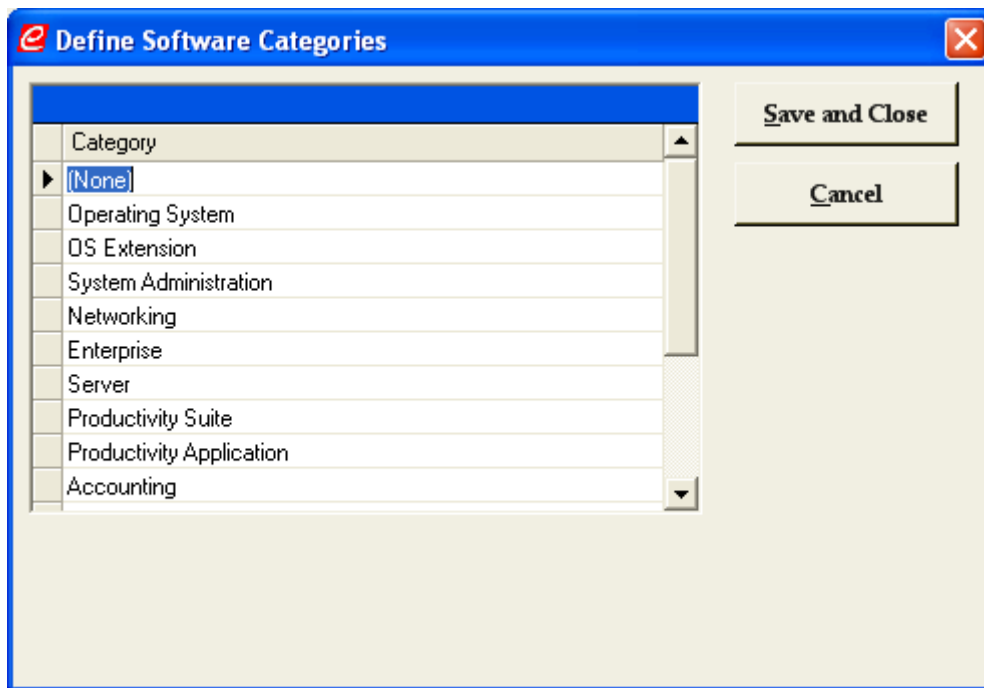
To remove a button from the ESLM user interface, remove its checkbox in this form and press the Save and Close button.

To return ESLM to its default interface, press the Restore All button

Categories

The *Define Software* function of Engagent Software License Manager allows you to assign software to *Categories*. The categories themselves are merely the contents of the *Categories Table* in the Engagent Software License Manager database, and they are referred to internally in the software by the ID fields of that table.

To change the categories, Choose *Categories* from the *Configure* Menu. A data grid like the one pictured below will appear:



The Defining Software Categories Form

You can change the name of any existing categories and add as many new categories as you want.

Note: *If you change category names after you have already assigned categories to software, the new category names will be applied to all the existing software.*

Field Names

Many of the fields you see in the Edit License screen and elsewhere in Engagent Software License Manager are renamable. Of course the six Custom Fields can be changed to something more applicable to your environment. If for example, you want to use Custom Field 1 to hold the software media type, you can change the name of the field to Media Type, and then wherever the ESLM user interface now says "Custom Field 1," it will instead say "Media Type." But in addition to the custom fields, many of the basic informational types of ESLM, such as Department or Workstation, may also be renamed.

To renamed fields, choose *Field Names* from the *Configure* Menu.

Field Name	Current Value
Label for Authorization Code Field	Authorization Code
Label for Budget Code Field	Budget Code
Label for Comments Field	Comments
Label for Custom Field 1	Custom Field 1
Label for Custom Field 2	Custom Field 2
Label for Custom Field 3	Custom Field 3
Label for Custom Field 4	Custom Field 4
Label for Custom Field 5	Custom Field 5
Label for Custom Field 6	Custom Field 6
Label for Department Field	Department
Label for Invoice Number	Invoice Number
Label for Location 1 Field	Location 1
Label for Location 2 Field	Location 2
Label for P.O. Field	P.O.
Label for Serial Number Field	Serial Number
Label for Workstation Field	Workstation

Buttons: Save, Cancel

The Configure Field Names Form

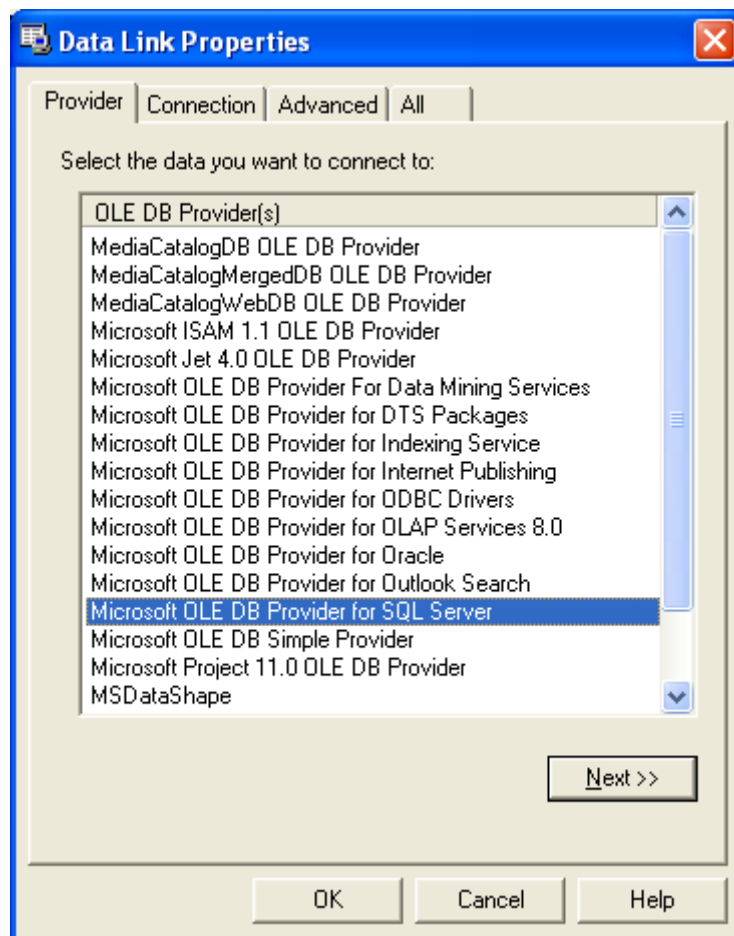
Database

The default configuration of Engagent Software License Manager keeps its data in Jet (Access) databases in the Data directory (usually c:\program files\engagent\engagent

software license manager\data). The primary database for all administrative details of software licenses is License.MDB. Digital image of license documents are kept in Agreements.MDB.

Engagent Software License Manager uses Microsoft ADO.NET for all data access. ADO.NET can attach to any database that exposes OLEDB Provider interfaces (essentially any commercial database.)

To change the location of the Jet databases, or to switch to another OLEDB Provider, choose Database from the Configure menu, bringing up the standard Microsoft Data Link Properties Dialog illustrated below.



The Data Link Properties Dialog

If you are moving your Engagent Software License Manager database to another provider such as Microsoft SQL Server, you will want to get the appropriate provider kit from the Engagent Web site, which will contain SQL scripts to create the database, a collection of Crystal Reports optimized for SQL Server, and a step-by-step guide to migration.

If you choose to keep your License data in a Microsoft SQL Server database, see the SQL Server section of this document, below, for important configuration notes. .

The License database and the Agreements database are separately configurable. You can have them in separate locations or separate providers.

In some cases it may be more convenient to directly edit the OLEDB connection strings. The OLEDB connection is kept in the application configuration file, which is in the same directory as the application executable and has the same name with *.config* appended. That is, normally it will be

```
c:\program files\Engagent\Engagent Software License
Manager\ESLM.EXE.Config
```

The config file is in XML format, and will look something like the sample below:

```
<?xml version="1.0" encoding="Windows-1252"?>
<configuration>
  <appSettings>
    <!-- User application and configured property settings go
here.-->
    <!-- Example: <add key="settingName" value="settingValue"/>
-->
    <add key="CurrentReportPath" value="c:\Program
Files\Engagent\Engagent Software License Manager\Reports" />
    <add key="CurrentDatabasePath" value="c:\Program
Files\Engagent\Engagent Software License
Manager\Data\License.MDB" />
    <add key="engOleDbConnection.ConnectionString"
value="Provider=Microsoft.Jet.OLEDB.4.0;Password=&quot;&quot;;User
ID=Admin;Data Source=c:\Program Files\Engagent\Engagent
Software License Manager\Data\License.mdb;Mode=Share Deny
None;Extended Properties=&quot;&quot;;Jet OLEDB:System
database=&quot;&quot;;Jet OLEDB:Registry Path=&quot;&quot;;Jet
OLEDB:Database Password=&quot;&quot;;Jet OLEDB:Engine Type=5;Jet
OLEDB:Database Locking Mode=1;Jet OLEDB:Global Partial Bulk
Ops=2;Jet OLEDB:Global Bulk Transactions=1;Jet OLEDB:New Database
Password=&quot;&quot;;Jet OLEDB:Create System Database=False;Jet
OLEDB:Encrypt Database=False;Jet OLEDB:Don't Copy Locale on
Compact=False;Jet OLEDB:Compact Without Replica Repair=False;Jet
OLEDB:SFP=False" />
  </appSettings>
</configuration>
```

As you can see, the second key in this file gives the path to the database, and the third key gives an OLEDB connection to the database. To change the location of the database, or to use a database other than Jet, change the database path and connection string. The database contains many *Custom Fields* that can be used to store any data you wish to record. You can also add fields to any table.

Deleting any fields, changing the name of any existing fields, or changing any existing field definitions in the database will cause Engagent Software License Manager to return incorrect results.

Hardware Categories

The *Define Hardware* function of Engagent Software License Manager allows you to assign hardware to *Categories*. The categories themselves are merely the contents of the *HardwareCategories* Table in the Engagent Software License Manager database, and they are referred to internally in the software by the ID fields of that table.

To change the categories, choose *Hardware Categories* from the *Configure* Menu. A data grid similar to the Software Categories form described above will appear, with which you can change the name of any existing categories and add as many new categories as you want.

Note: If you change category names after you have already assigned categories to hardware, the new category names will be applied to all the existing hardware.

License Types

The *New License*, *Edit License*, and *Receive License* forms allow you to describe software licenses by the *License Type*. For example, is this a single-user license, or is more than one user permitted to use the software? The available types are defined by the *LicenseType* table in the Engagent Software License Manager database. To edit, change, or add to this list, choose *Configure* from the *Tools* menu, then select *License Types*. A data grid like the one pictured below will appear:

The Define License Types Form

There is essentially no limit to the number of license types you can create. License types do not need to be mutually exclusive.

Note: *If you change license type names after you have already assigned license types to licenses, the new license type names will be applied to all the existing licenses.*

Notification

By using the extensive suite of reports built into Engagent Software License Manager, you can monitor the flow of licenses through your enterprise. The Licenses Expiring report, for example, allows you to set a period and see all the licenses that will expire in that period. It is also sometimes desirable, however, to be notified of these conditions. ESLM serves this need by providing email notification. The notifications ESLM will send come in two broad categories: Expiration Notifications, and License Flow Notifications.

Expiration Notifications

You can set ESLM to notify you when software licenses are about to expire. Separately, you can receive notification of maintenance contracts about to expire. The expiration threshold is configurable, as described below. That is, you can choose to receive notification 30 days before expiration, 60, 90, or any figure you choose.

License Flow Notification

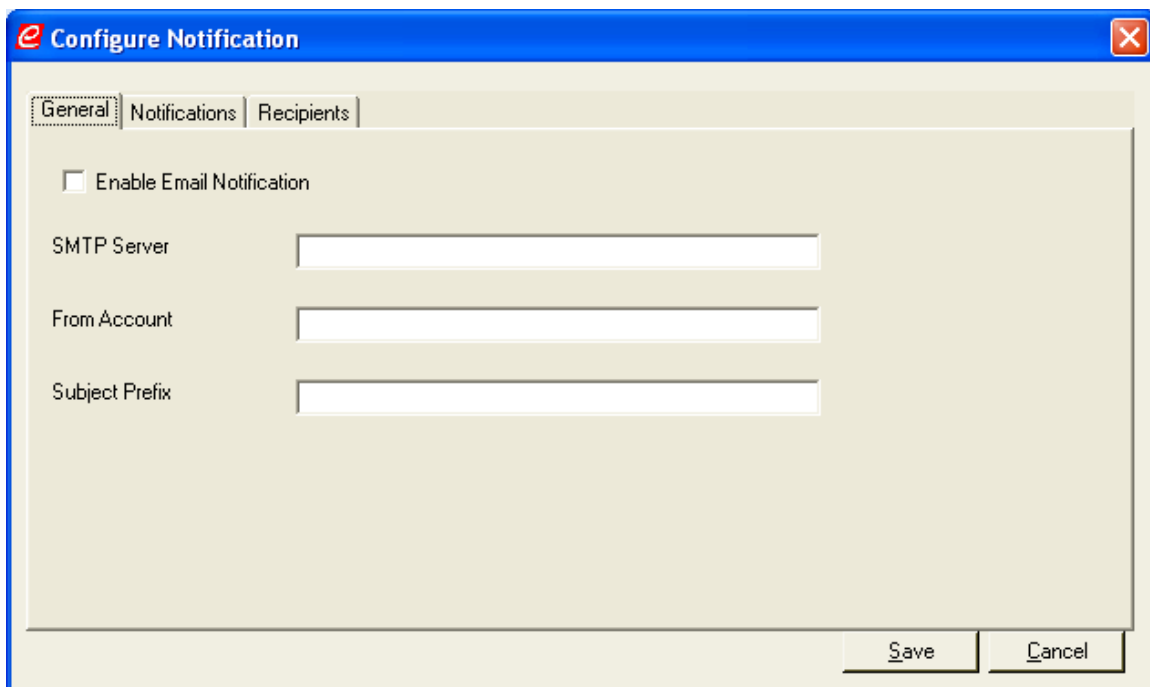
The Managing Licenses section of this document explains how you can use ESLM to allow employees to request software, managers to approve the requests, etc. But how

does a manager know that an employee has made the request? This is where License Flow Notifications come in. As described below, you can configure ESLM to send email notification when selected license flow events occur.

Recipients

Who receives notifications? You can configure some recipients to receive all notifications in a certain category (for example, all notifications of maintenance expirations). But you can also select the appropriate recipients for events in a specified Department or Budget Code.

To configure notifications, choose *Notification* from the Configure Menu. The configure notification form is a tabbed dialog, with separate tabs for general notification configuration, configuration of notification events, and configuration of recipients.



Enabling Notification

By default, ESLM does not send notifications. To turn notifications on, check the *Enable Email Notification* box and fill in the three text boxes. *SMTP Server* is the name of an outgoing mail server to which ESLM can send mail. *From Account* is the account that the mail will be sent from. This must be a valid email account on the SMTP Server. When people receive email notifications, the email will come from the From Account. Note: If you want people to be able to respond to notifications, the From Account should be the address of the person who will read the responses. Each email notification sent by ESLM has a specific subject line (configurable, as explained below.) If you want all email notifications to start with a general prefix, you can specify it in the *Subject Prefix* here.

The screenshot shows a 'Configure Notification' dialog box with three tabs: 'General', 'Notifications', and 'Recipients'. The 'Notifications' tab is active. It contains two columns of checkboxes. The left column has: 'Notify Requestor on Approval', 'Notify Requestor on Order', 'Notify Requestor on Receipt', 'Notify Approvers on Request', 'Notify Approvers on Order', and 'Notify Approvers on Receipt'. The right column has: 'Send License Expiration Notifications' (checked), 'License Expiration Threshold' (30 Days), 'Send Maintenance Expiration Notifications' (checked), and 'Maintenance Expiration Threshold' (30 Days). At the bottom right are 'Save' and 'Cancel' buttons.

Notification Type	Threshold (Days)
<input type="checkbox"/> Notify Requestor on Approval	
<input type="checkbox"/> Notify Requestor on Order	
<input type="checkbox"/> Notify Requestor on Receipt	
<input type="checkbox"/> Notify Approvers on Request	
<input type="checkbox"/> Notify Approvers on Order	
<input type="checkbox"/> Notify Approvers on Receipt	
<input checked="" type="checkbox"/> Send License Expiration Notifications	30
<input checked="" type="checkbox"/> Send Maintenance Expiration Notifications	30

Configuring Which Notifications to Send

The Notifications tab allows you to choose which notifications to send. Check the box beside the type of notification you wish to send, and then, if you have chosen expiration notifications, choose the expiration threshold. In the example illustrated above, notifications will be sent 30 days before license expiration and 30 days before maintenance expiration.

Configure Notification

General | **Notifications** | Recipients

All Notifications

Bonarroti, Michelangelo ☐ All Approval Notifications ☒ All Expiration Notifications

Department Notifications

Department: Accounting Person to receive notifications for this department: Beethoven, Ludwig Van

☐ Department Approval Notifications ☒ Department Expiration Notifications

Budget Code Notifications

Budget Code: BFD511 Person to receive notifications for this budget code: Bohr, Niels

☐ Budget Code Approval Notifications ☒ Budget Code Expiration Notifications

Save Cancel

Configuring the Recipients for Notifications

The Recipients tab lets you choose who gets notified for specified events. You can select certain recipients, such as license administrators, who get notified of all events. You can also select other recipients who get notified only of events in specified departments or budget codes. For each recipient, you can choose whether they get notified of expiration events, license flow events, or both.

In the example illustrated above, for example, we have specified that Michelangelo Buonarroti will get notifications for events in all departments and all budget codes. (But he will get only expiration notifications, not license flow notifications.) If a license is expiring in the Accounting department, however, Ludwig van Beethoven will also get a notification. And if the license is associated with budget code BFD511, Niels Bohr will receive a notification as well.

Note that you can specify an unlimited number of recipients for email notifications, but only one recipient per department or per budget code. (If you need multiple recipients per department or budget code, this can usually be accomplished with email aliases on the mail server.)

Notification Contents

The email that is sent is created from templates stored in the Notification directory. By default, the Notification directory is stored beneath the Engagent Software License Manager directory; you can configure this by editing the CurrentNotificationPath in ESLM.exe.config.)

The files are plain text files. To change the wording of the email body or its subject line, you can edit the text files in the Notification directory. Parameters replaced at runtime are embedded in the text in the form <<@PARAMETER>>. If you change or remove any parameter, the email sent will not include this information.

For example, the template email that will be sent when a license expires is contained in the file LicenseExpirationNotificationBodyText.txt. Its contents are reproduced below:

```
This is an automated notification from Engagent  
Software License Manager.
```

```
LicenseID <<@LICENSEID>> for software title <<@TITLE>>  
expires on <<@EXPIRATIONDATE>>.
```

If your enterprise calls software titles applications, for example, you could replace "software title" with "application" in this file, and the emails sent will henceforth say "application" rather than "software title." If you deleted the parameter <<@LICENSEID>>, the License ID of the expiring license would not be included in the email.

Similarly, the subject line for the email will be contained in the file LicenseExpirationSubjectLine.txt. If you desire a different subject line, edit this text file. (Note that all subject lines will be preceded by any prefix specified in the General Notification tab, described above.)

Purchase Order Number

Engagent Software License Manager allows you to use purchase order numbers generated by an external application (such as your accounting system), but it also has the capability of generating its own numbers. You can set the starting purchase order number by choosing *PO Number* from the Configuration Menu.

You can change the initial purchase order number at any time, without affecting existing orders. For example, if your enterprise changes purchase order numbers at the beginning of each year, you can set the new purchase order number on January 1 without affecting any orders which have been entered previously.

Each purchase order is created with a number one higher than the previous purchase order number.

Profiles

Engagent Software License Manager allows you to assign several software titles at once by grouping them into a Profile. You can create profiles by choosing *Profiles* from the Configuration Menu, bringing up the Configure Profiles form illustrated below.

In Profile	Software Title	ID	Comcode	Category	Manufacturer	Version	Version Date
<input checked="" type="checkbox"/>	WinZip 9.0	1	120	15	2	9	
<input type="checkbox"/>	Office 2003 Professional	2	121	9	3	2003	
<input type="checkbox"/>	Acrobat 6.0 Standard	3	122	9	4	6	
<input type="checkbox"/>	Dreamweaver MX 2004	4	123	9	5	2004	
<input type="checkbox"/>	SnagIt 7.0	5	124	15	6	7	
<input type="checkbox"/>	Norton AntiVirus 2004	6	125	16	7	2004	
<input type="checkbox"/>	Nero Burning ROM 6.0	7	126	15	8	6	
<input type="checkbox"/>	Partition Magic 8.0	8	127	4	7	8	
<input type="checkbox"/>	Visual Studio.Net 2003	9	128	9	3	2003	
<input type="checkbox"/>	Quicken 2005 Premier	10	129	10	9	2005	
<input type="checkbox"/>	ACD See 7.0	11	130	15	10	7	
<input type="checkbox"/>	Photoshop CS2	12	131	9	4	0	

Buttons: Load Profile, Save Profile, Save As, Clear, Close

The Configure Profiles Form

The Configure Profiles form features a grid control with all the available software titles. Check the checkbox in the *In Profile* column to include the title in the profile. Press the *Save Profile* button to save the profile. You will be prompted for a name under which the profile will be saved.

You may edit existing profiles by pressing the *Load Profile* Button.

Profiles are stored in the Profiles directory, which by default is beneath the Engagent Software License Manager directory. (The location of the Profiles directory can be configured by editing the CurrentProfilesPath key of ESLM.exe.config.) Profiles are in comma separated value (CSV) format and may also be edited by hand.

Reports

The built-in reports that ship with Engagent Software License Manager are created with Crystal Reports. (They are currently created with Crystal Reports Version 11 R2.) Reports are kept in the directory pointed to by the configuration file. (For more details

on the configuration file, see the *Database* section above.) By default the reports directory will be

c:\program files\Engagent\Engagent Software License Manager\Reports

There can be only one report directory, and all reports must be in this directory.

You can change the appearance or behavior of any of the reports using Crystal Reports, and your changes will automatically be incorporated into Engagent Software License Manager.

You can change the name of any existing report, remove reports from the list so that they do not appear in the Reports menu or on the Reports pane, or add new reports by choosing *Reports* from the *Configure* menu, bringing up the data grid illustrated below.

Move Up	Move Down	Show?	Title	File Name
Move Up	Move Down	<input checked="" type="checkbox"/>	By Software Title	Title.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	All Software Titles	AllTitle.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Software Category	Category.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Manufacturer	Manufacturer.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Vendor	Vendor.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Requesting Dept.	Department.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Assigned Dept.	AssignedDepartment.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Requesting Budget	BudgetCode.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Assigned Budget	AssignedBudgetCode.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Requestor	Employee.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Assignee	Assignee.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	All Assignees	AllAssignees.rpt
Move Up	Move Down	<input checked="" type="checkbox"/>	By Provider	Provider.rpt

Show Y/N ☐ Title FileName **Find**

Add Row

Delete Selected Row **Save and Close** **Cancel**

The Configure Profiles Form

You can use the *Move Up* and *Move Down* buttons to control where the report appears in the list of reports on the Reports Tab. You control whether a report appears at all by

checking or clearing the box in the *Show* column. You can add your own reports with the *Add Row* button.

You can also edit the Reports.Config file directly. Reports.Config is an XML file located in the reports directory. which determines the list of reports that appears in the *Reports* menu and on the *Reports* tab of the main screen The excerpt below illustrates its format:

```
<report title="By Software Title" filename="Title.rpt" show_yn="Y">
</report>
<report title="All Software Titles" filename="AllTitle.rpt"
show_yn="Y">
</report>
```

Each report is described by a single line (node) in the file. An empty node would be delimited in this form:

```
<report></report>
```

Each node must specify two values: *title*, and *filename*. It can also include the value *show_yn*.

```
<report title="" filename="" show_yn="">
```

Title

Gives the name of the report as it will appear in the Reports menu and on the buttons in the Reports pane of the Main Screen. (Only about 22 characters of this name will fit in the buttons on the Reports pane.)

Filename

The name of the file in the reports directory. Note that this should not be a full pathname, but only the name of the file. The file *must* be located in the reports directory; it cannot be loaded from elsewhere. Reports must be Crystal Reports rpt files and referred to with the suffix .RPT – for example, “NewReport.RPT.”

Show_yn

If set to "Y," the report will appear in the ESLM reports menu and on the Reports tab of the main screen, if "N," the report will not appear.

Report Limits

The maximum number of parameters that can appear in a Crystal Reports parameter selection box is limited to optimize performance. The default limit is 1000. If you need more than 1,000 parameters in your report parameter selection boxes, you can increase this limit by choosing *Report Limits* from the Configuration menu. Note that increasing the limit does extract a performance penalty, so care should be exercised not to set the limit higher than absolutely necessary.

Startup Tab

When you launch Engagent Software License Manager, the main screen will show the *Startup Tab*. As delivered, this panel contains instructions to the user in how to begin using Engagent Software License Manager. More experienced users may no longer wish to see these instructions. ESLM allows you replace the startup instructions with specific details useful on an ongoing basis to the users of Engagent Software License Manager in this enterprise, or, alternatively, not to show the Startup Tab at all.

Choose *Startup* from the Configuration Menu.



The Configure Startup Panel Form

To remove the Startup Panel from the Main Screen, remove the click from the *Show Startup Panel* checkbox. To show something else in the Startup Panel, click on the *Select File* button.

The Startup Panel file must be in Rich Text Format (ending in the suffix .RTF). Most word processors and many other tools can create files in Rich Text Format. The text you choose to display in the panel can include formatting such as type sizes, font changes, and color.

Terms

The *Order Software* form of Engagent Software License Manager allows you to define the *Terms* of a purchase order (for example, to specify that the order will be paid "Net 30"). The terms are kept in of the *Terms Table* in the Engagent Software License Manager database, and they are referred to internally in the software by the ID fields of that table.

To define new terms or to change the working of existing terms, choose *Terms* from the Configuration Menu.

Note: *If you change the definitions of terms after you have already assigned terms to purchase orders, the new definition of the terms will be applied to all the existing orders.*

Web Interface

Overview

Engagent Software License Manager has three parts:

- A database
- Windows interfaces to the database
- Web interfaces to the database

The Windows interfaces

- Expose all the functionality of Engagent Software License Manager.
- Are designed for one or a few key users – IT asset managers.
- Are designed for heavy, day-in, day-out use, coordinating all the administrative details of software licenses.

The Web interfaces

- Expose key subsets of ESLM's functionality.
- Are designed to be published to users at large.
 - Employees who want to request software.
 - Budget managers who approve the requests.
 - Financial managers who need reports on software license usage.

The database and the Windows interfaces are installed by the main Engagent Software License Manager package: *EngagentSoftwareLicenseManager.msi*. The Web interfaces are installed by a separate package: *ESLMweb.msi*.

Architecture

The web interfaces to Engagent Software License Manager are an ASP.NET web application. They consist of several parts:

- Several Active Server Pages
 - Suffix .aspx
 - Written in a mix of HTML and Active Server Script
- A DLL containing the code behind the Active Server Pages
- Several Crystal Reports
 - The Crystal Reports runtime engine that allows viewing the reports via the Web.

When you install the ESLM web interfaces, you have the source code to all the web pages, and you can customize them to resemble the rest of your Intranet, thus being more familiar and intuitive to your users. You can decide how much of the functionality of ESLM to expose to various groups of your users. The *Configuration* section of this document has more detail on how to configure the web interfaces.

Requirements

Operating System

The web interfaces to Engagent Software License Manager require Microsoft Internet Information Server (IIS). Microsoft IIS is included as a part of Microsoft's server operating systems. The web interfaces to Engagent Software License Manager have been tested on, and are supported on, Microsoft Windows 2000 Server and Microsoft Windows 2003 Server.

.NET

Microsoft .NET Version 1.1 is required. .NET 1.1 is available for free download from Microsoft and from the Engagent Software License Manager web site.

ASP.NET

ESLMweb is an ASP.NET application. It runs on Microsoft IIS. The main pages are simple HTML code. When processing is needed, IIS invokes ASP.NET to run the ESLMweb code.

ASP.NET must be installed and correctly configured on your IIS server in order to run ESLMweb. In nearly all installations, this is the case. If you find that ASP.NET is not installed on your server, the following document from Microsoft will guide you through installing it:

<http://technet2.microsoft.com/WindowsServer/en/Library/e56114ea-d5d1-4c79-8e97-0a009282cf301033.mspx>

Hardware

Engagent Software License Manager will perform well on any system meeting the recommended specifications for Microsoft Internet Information Server.

Disk Space

Reserve 100 megabytes for the installation of Engagent Software License Manager. (The database may grow depending on the number of software licenses you track.)

ESLM

The web interfaces require the previous installation of the main Engagent Software License Manager package. The Web interfaces and the Windows interfaces do *not* need to be installed on the same system. The Web interfaces *do* need access (for example, via a network share) to the ESLM database.

Administrative Rights

You must have administrative rights on the Server system to install the ESLM web interfaces.

Crystal Reports

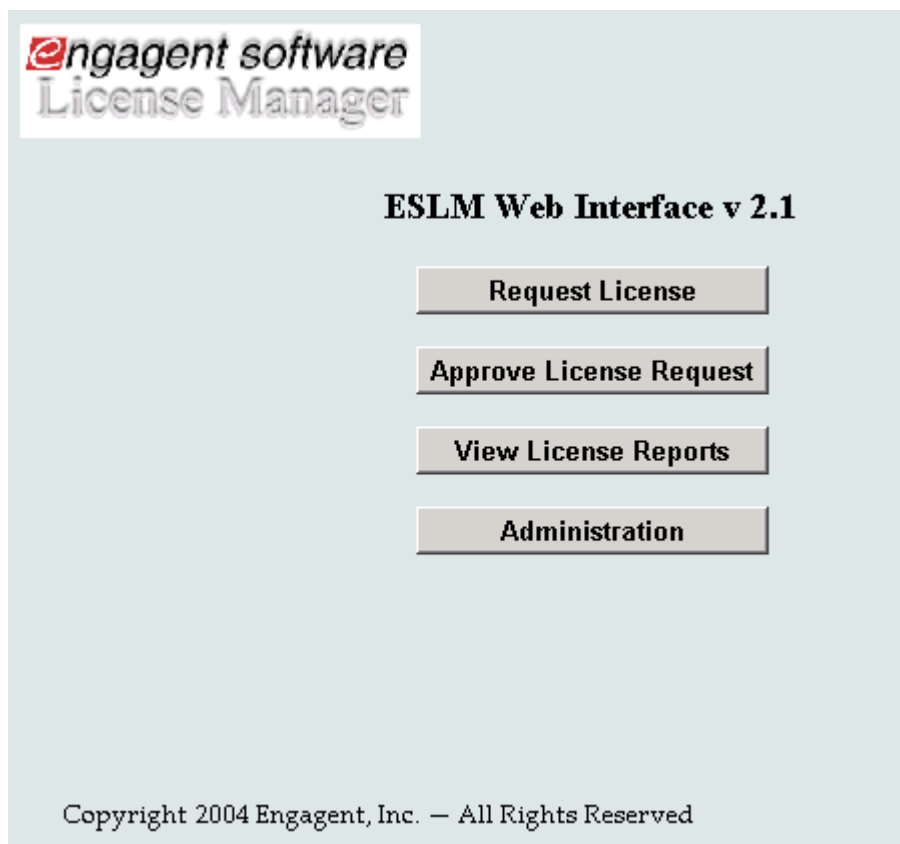
The Crystal Reports run-time engine *is included* with Engagent Software License Manager. You do *not* have to purchase a license from Crystal to view Engagent Software License Manager reports via the web. (You *do* need a Crystal Reports license if you wish to modify any reports.)

Installation

Double-click on **ESLMweb.msi** to begin installation. The installer will prompt you through installation of the product.

The only user input requested by the installer is to select the directory into which the product is installed and therefore the URL to the web interfaces. The default, **<wwwroot>/ESLMweb**, where **<wwwroot>** is the URL to your web site.

When the installation completes, you can use that URL to access the main page of the Engagent Software License Manager web interface, illustrated below:



Web Interface Main Page

Configuration

The **Web.Config** file in the installation directory contains all the configuration information that directs the operation of Engagent Software License Manager. (In a default IIS environment, the path to this file is

C:\Inetpub\wwwroot\ESLMWeb\web.config.)

Web.Config is an XML file in a standard format common to Microsoft .NET web applications. Web.Config may be viewed in a web browser; it should be opened in a text editor such as Notepad in order to change values.

All application settings are in the appSettings section of this file, an excerpt from which is illustrated below:

```
<appSettings>
  <add key="engOleDbConnection.ConnectionString" value="Jet
OLEDB:Global Partial Bulk Ops=2;Jet OLEDB:Registry Path=;Jet
OLEDB:Database Locking Mode=1;Jet OLEDB:Database Password=;Data
Source=&quot;c:\Program Files\Engagent\Engagent Software License
Manager\data\license.mdb&quot;;Password=;Jet OLEDB:Engine Type=5;Jet
OLEDB:Global Bulk
Transactions=1;Provider=&quot;Microsoft.Jet.OLEDB.4.0&quot;;Jet
OLEDB:System database=;Jet OLEDB:SFP=False;Extended
Properties=;Mode=Share Deny None;Jet OLEDB:New Database Password=;Jet
OLEDB>Create System Database=False;Jet OLEDB:Don't Copy Locale on
Compact=False;Jet OLEDB:Compact Without Replica Repair=False;User
ID=Admin;Jet OLEDB:Encrypt Database=False" />
  <add key="CurrentReportPath"
value="c:\inetpub\wwwroot\ESLMweb\Reports" />
  <add key="HomeURL" value="default.aspx" />
</appSettings>
```

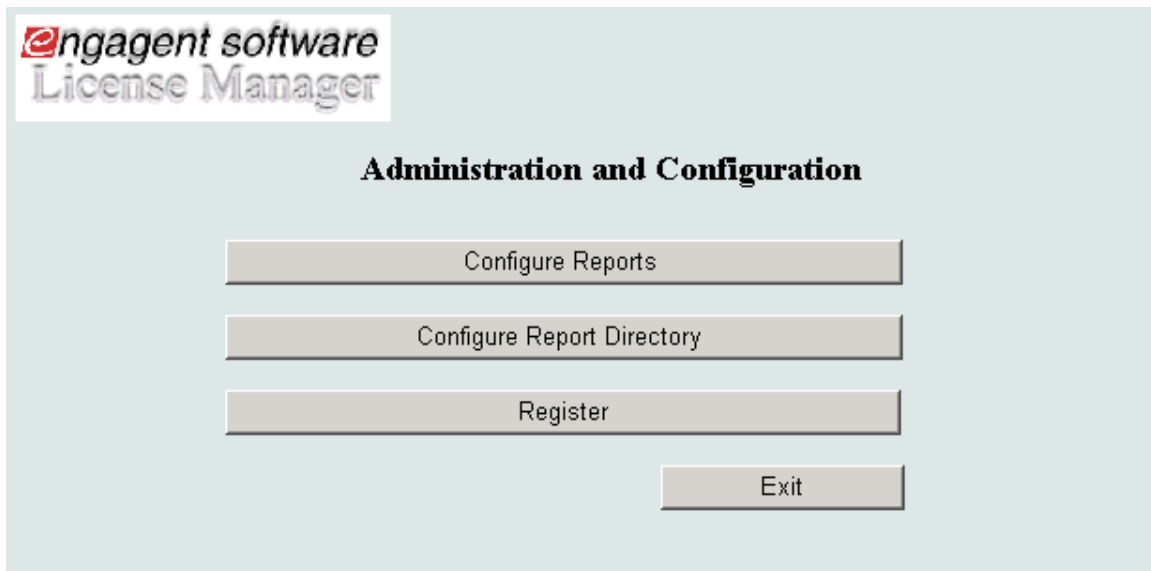
The connection string to the ESLM database is in the key *engOleDbConnection.ConnectionString*. By default, it points to the default installation path for the ESLM database: *c:\Program Files\Engagent\Engagent Software License Manager\Data\License.MDB*. To point to a Jet (.MDB) database in a different location, replace that path in the key with the correct path. To connect to a different database (for example, SQL Server or Oracle), replace the entire connection string. Note that you must ensure appropriate permissions to access the database, as detailed in the *Permissions* section below.

All pages in the ESLM web interface contain an *Exit* key. The destination URL of the Exit key is controlled by the *HomeURL* key. By default, this points to the main ESLM page (default.aspx). You can replace this destination with another page of your design.

The location of the reports directory is controlled by the *CurrentReportPath* key. This is most conveniently configured by using the Administration interface described below.

Administration Interface

Click the *Administration* button from the main ESLM web page to bring up configuration options illustrated below:



Web Interface Administration Page

Register

The *Register* button allows you to register the Engagent Software License Manager web interface. You *do* need to register the web interface, even if you have already registered the Windows interface. You can use the *same authorization code* for both the web and Windows.

You do not need to re-install the product when you enter your Authorization code.

Enter your company name as you gave it to Engagent and the sixteen-character authorization code you received, and then press the *Register* button.

Note that your company name must exactly match what you submitted to Engagent. Case matters. Punctuation matters. Spaces matter. Cut-and-paste is recommended.

Configure Reports

You can choose which reports to expose via the web and what to call them. You can change any reports, and you can add custom reports you have developed. (Engagent developers can also create custom reports for you.)

To configure reports, click the *Configure Reports* button from the Administration page. This brings up a report configuration page, a portion of which is illustrated below:

Configure Reports					
	Title	Parameter	DateRange	FileName	PreSelect
Edit	By Software Title		True	ByTitle.rpt	
Edit	One Software Title	parTitle	True	Title.rpt	Title
Edit	By Software Category		True	ByCategory.rpt	
Edit	One Software Category	parCategory	True	Category.rpt	Category
Edit	By Manufacturer		True	ByManufacturer.rpt	
Edit	One Manufacturer	parManufacturer	True	Manufacturer.rpt	Manufacturer
Edit	By Vendor		True	ByVendor.rpt	
Edit	One Vendor	parVendor	True	Vendor.rpt	Vendor
Edit	By Department		True	ByDepartment.rpt	
Edit	One Department	parDepartment	True	Department.rpt	Department
Edit	By Requestor		True	ByEmployee.rpt	
Edit	One Requestor	parEmployee	True	Employee.rpt	Employee
Edit	By Workstation			ByWorkstation.rpt	
Edit	One Workstation	parWorkstation		Workstation.rpt	Workstation

Web Interface Report Configuration

Each report has five values you can alter:

Title

The *Title* is the name of the report as it will appear to your users in the button on the View Reports page. Note that to fit onto the button you should limit the title to about 20 characters.

FileName

The *FileName* is the name of the actual report in the reports directory. The report must exist. It must be in the reports directory. (You cannot include a complete path in the FileName value, only a file name.) The file name must end in the suffix .RPT, and the file must contain a valid Crystal Report (version 9).

Parameter

If the report requires a parameter, you can include the name of the parameter here, and the user will be prompted for the parameter before running the report. (See PreSelect, Below.)

PreSelect

If the report returns results for a single value (for example, on just one workstation), a drop-down box will be presented to the user before running the report. The contents of the *PreSelect* value determine which drop-down list the user sees. Note that there is a limited set of selections available; you can *change* PreSelect values, but you *cannot add* values you do not already see there.

The value selected by the user from the drop-down list will be passed to the report in the field specified by the *Parameter* value (see above). *PreSelect* and *Parameter* is a matched set: if you have one, you must have both. Any one report can have only one Parameter. Reports can also specify a date range (see below).

DateRange

If the *DateRange* value is *True*, the user will be prompted for beginning and ending dates before running the report. This prompting is in addition to and independent of any prompting for a selection parameter. Date ranges are *not* required by selection parameters or selection parameters by date ranges.

Configure Report Directory

The *Configure Report Directory* button allows you to specify a different directory for reports. Note that all reports must be in one directory.

Configuring Permissions

Because web security is such a vital matter these days, the default permissions for Microsoft Internet Information Services and its components such as ASP.NET have been set lower and lower in successive releases. Depending on the version of your components, ESLMweb may not function correctly without reconfiguring access permissions. The following subsections explain how to set the permission levels that are most frequently at issue. For more detail, consult with your web administrator or Engagent's technical personnel.

Configuring ASP.NET Account Permissions

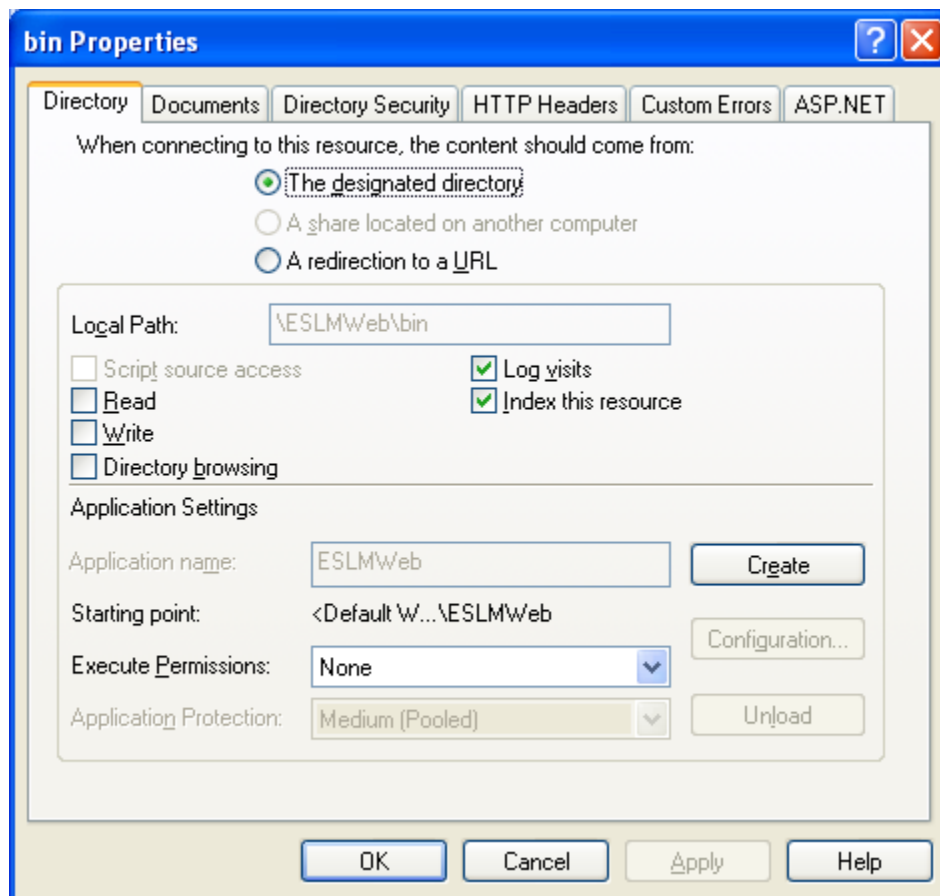
The *Configure Report Directory* button allows you to specify a different directory for reports. Note that all reports must be in one directory.

ESLMweb is an ASP.NET application. When the web page invokes ESLM code, that code will be run in the context of the ASP.NET account. The ASP.NET account needs appropriate permissions.

- By default, the ASP.NET account is often set up not to be able to access the file system. ESLMweb needs to be able to read its own config file, etc.
- The ASP.NET account needs to be able to access the database. If the database is on SQL Server, the ASP.NET account needs to be added to the list of users authorized to access the database.

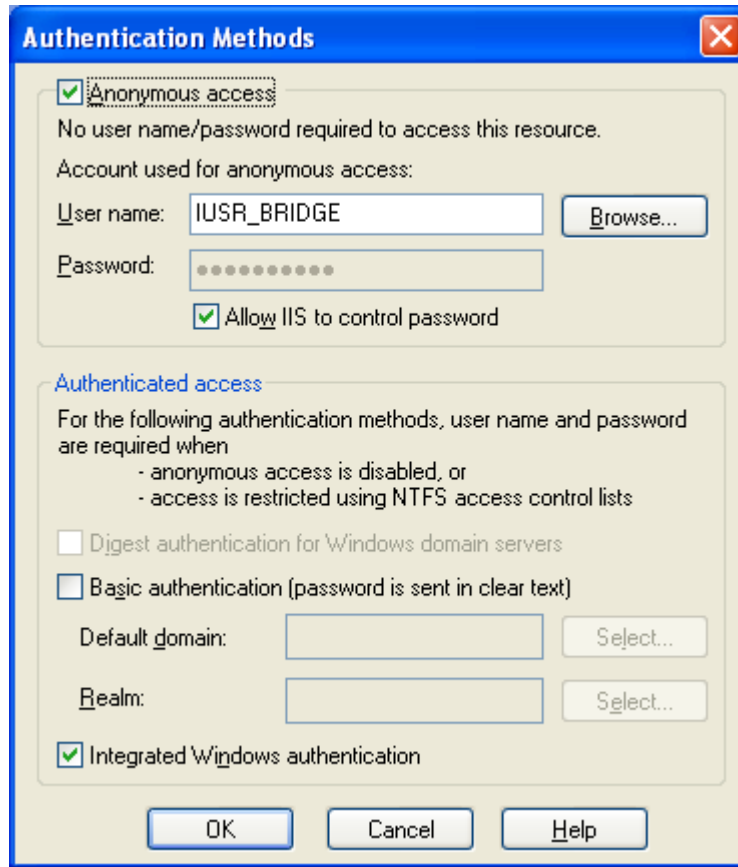
The user context in which ESLMweb runs is determined by settings in IIS. To view or change the account:

- Bring up the IIS configuration applet (for example, by opening Control Panel, choosing Administrative Tools, then Internet Information Services).
- In the explorer pane on the left side of the IIS configuration applet, find ESLMweb (which is conventionally found beneath Local Computer, Web Sites, Default Web Site).
- Right-click on the bin directory beneath ESLMweb.
- Choose *Properties*, bringing up the tabbed dialog illustrated below:



The ASP.NET Application Properties Dialog

Select the *Directory Security* tab and press the *Edit* button bringing up the dialog illustrated below:



The Authentication Methods Dialog

As illustrated in this example, by default, anonymous users are allowed to access ESLMweb. If you do not want anonymous users to be able to access ESLMweb, uncheck the Anonymous Access box at the top of this dialog and set the appropriate access permissions in the section at the bottom of the box.

If you do allow anonymous access, ASP.NET needs to run in the context of some user. The system default user will be listed in the User Name box. By default, the ASP.NET account may not have sufficient permissions to run ESLMweb successfully.

If you allow anonymous access, you have two configuration choices for ESLMweb:

1. Change the default account so that it has the requisite permissions.
2. Configure ESLMweb to use a different account.

Changing the permissions of an account is accomplished in different ways on different Microsoft Operating Systems. Check with your system administrator or consult

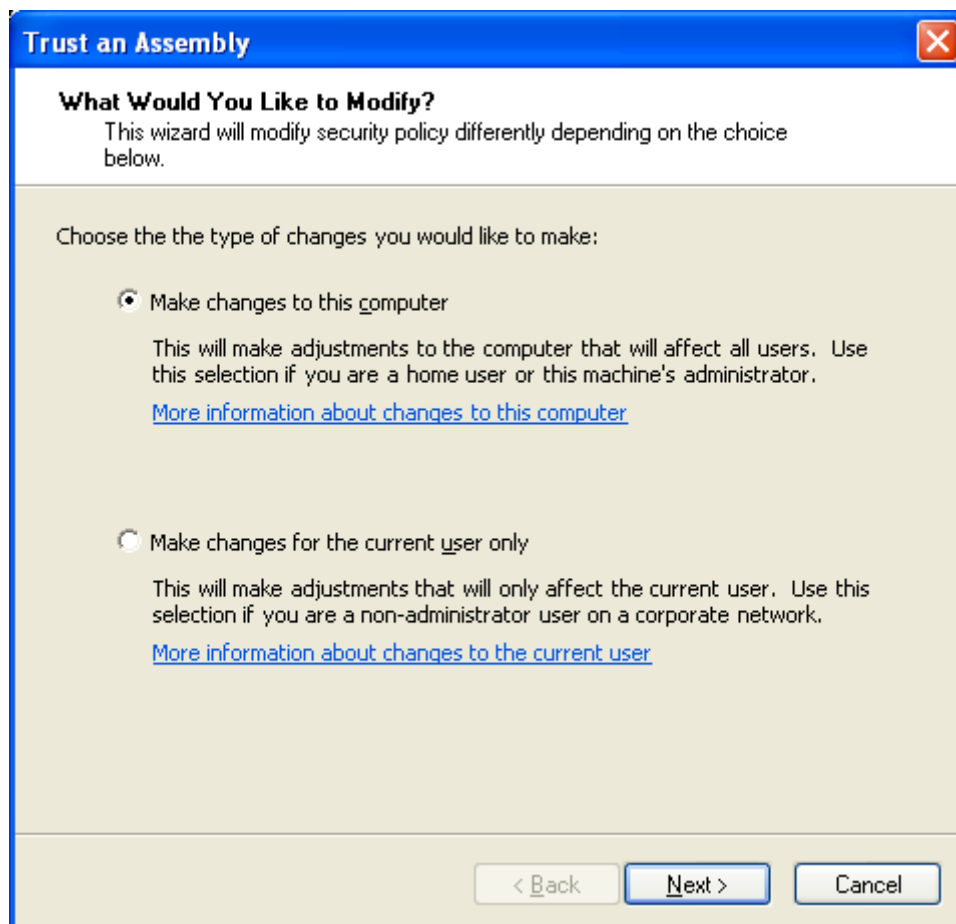
Engagent technical personnel for additional instructions on how to configure account permissions.

In either case, if your data is in a Microsoft SQL Server database, you must configure SQL Server (for example, using Enterprise Manager), to allow this account DB_Owner permissions to the ESLM databases.

Configuring .NET Trust

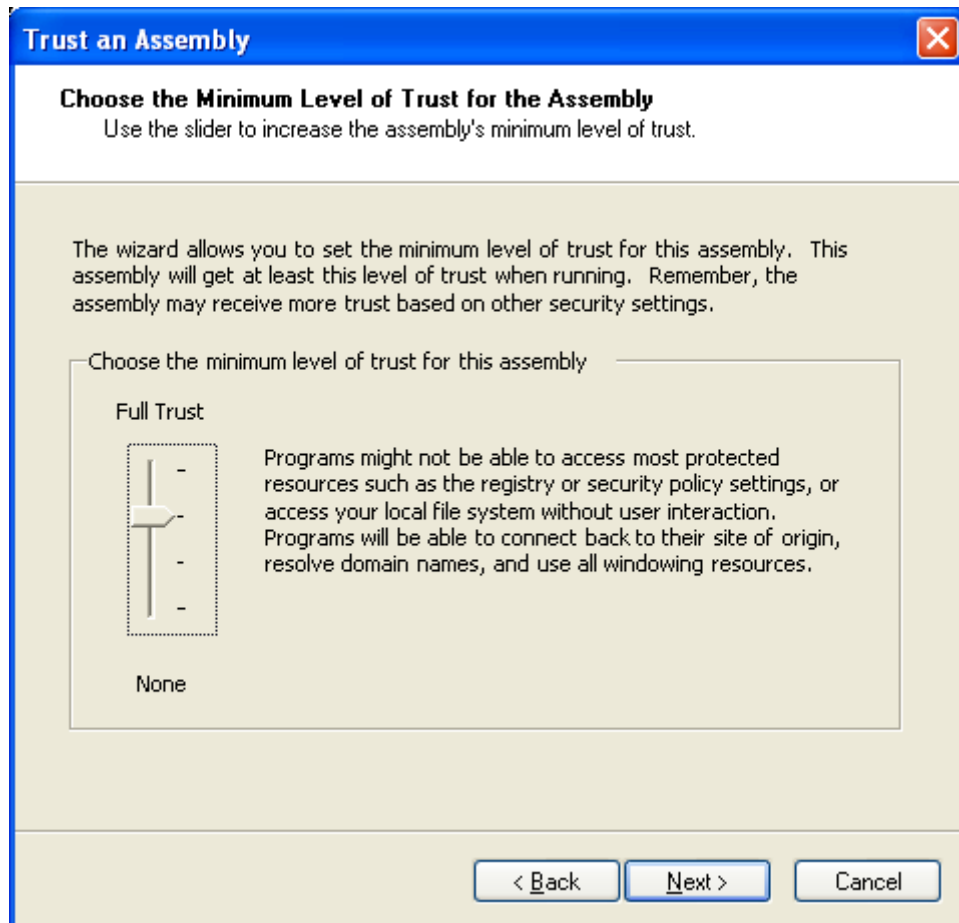
Bring up the .NET configuration wizard, for example, by opening Control Panel, choosing *Administrative Tools*, then selecting *Microsoft .NET Framework 1.1 Configuration*.

From the first page of the .NET configuration wizard, select *Configure Code Access Security Policy*, then *Increase Assembly Trust*, bringing up the dialog illustrated below:



Choose "Make changes to this computer" and press the *Next* button. In the following dialog, browse to ESLM.DLL, which is conventionally located in

Inetpub\wwwroot\ESLMweb\bin. Select ESLM.DLL and press the Next button, bringing up the dialog illustrated below:



The Trust an Assembly Dialog

By default, assemblies are granted no trust at all. ESLMweb must be trusted enough to read and write the file system. Move the slider up to the second hash mark (the "Medium Trust" level), to give ESLMweb permission to read and write the database. Press Finish to apply the new permissions.

Registering IIS with ASP.NET

Because ESLMweb is an ASP.NET application, it will not run if ASP.NET is not running. There are several reasons why ASP.NET may not be operating on your system. The most common is that IIS was installed *after* .NET on your system. Normally, .NET is installed last, and it updates IIS. If IIS was installed last, .NET did not get a chance to update it.

Run the following from the command line to fix this:

%systemroot%\microsoft.net\framework\v1.0.3705\aspnet_regiis.exe -i

Inventory Interface

Introduction

The Engagent Software License Manager ESLM Inventory Interface connects deployment information from an Inventory solution with license information from Engagent Software License Manager, allowing you to see both together in the form of compliance reports that match what you have purchased with what is actually discovered on your network.

The ESLM Inventory Interface is a flexible tool designed to work with a variety of third-party Inventory solutions. Consult with an Engagent professional to determine whether your Inventory solution is supported.

Requirements

The Engagent Software License Manager ESLM Inventory Interface requires an existing installation of Engagent Software License Manager, authorized with an Inventory Interface authorization code.

The storage requirements for the ESLM Inventory Interface are minimal: Installation requires less than ten megabytes. Using the ESLM Inventory Interface can cause your Engagent Software License Manager database to grow in size. The exact growth will depend on the amount of data in your Inventory database. It would be a rare case where the data would consume more than another ten megabytes of storage.

Note: Engagent Software License Manager does not include an Inventory tool. The ESLM Inventory Interface requires you to have already installed and configured a functioning third-party Inventory solution.

Architecture

The Engagent Software License Manager ESLM Inventory Interface is an add-in tool. The architecture of Engagent Software License Manager allows tools to be added at run-time. Add-in tools are placed in the ESLM Tools directory and, if described in the Tools.Config file, appear in the ESLM Tools menu.

Using Microsoft OLEDB, the ESLM Inventory Interface imports data from a relational database maintained by an inventory solution. This information is placed in the Engagent Software License Manager database and used by Engagent Software License Manager's compliance reports to compare purchased to deployed software licenses.

Components

The distribution package for the ESLM Inventory Interface, InventoryInterface.zip, is a compressed archive containing the following components

1. InventoryImport.DLL – the add in tool itself
2. InventoryImportDLL.Config – the configuration file for the tool
3. Tools.Config – the configuration file for the tools menu
4. ADODB.DLL – a system extension
5. Interop.ADOX.DLL – a system extension
6. InventoryInterface.PDF – documentation for the Inventory Interface

Installation

1. If you have made any previous alterations to your Tools.Config file (by installing other add-in tools since you installed Engagent Software License Manager), save a copy of Tools.Config file with the changes you have made.
2. Extract the archive InventoryInterface.zip.
3. When prompted for the location where files should be extracted, browse to the Engagent Software License Manager Tools directory – by default, c:\Program Files\Engagent\Engagent Software License Manager\Tools.
4. When asked whether to over-write existing files, choose Yes.
5. If you have previously altered your Tools.Config file, copy the saved Tools.Config file back and add the following line to it:

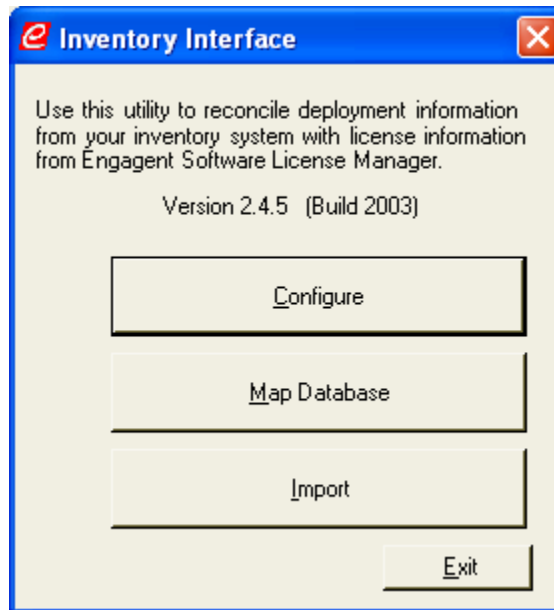
```
<tool title="Inventory Import" filename="C:\Program
Files\Engagent\Engagent Software License
Manager\Tools\inventoryimport.dll">
</tool>
```

6. If your installation is in a location other than the default, edit this path in the Tools.Config directory to point to the correct location.

Invoking the ESLM Inventory Interface

To invoke the ESLM Inventory Interface, Select the Tools Menu and Choose Inventory Import. (If Inventory Import does not appear in your Tools menu, there is a problem with your installation. Review the installation steps above or contact Engagent technical support for assistance.)

The ESLM Inventory Interface will present the following dialogue, with three buttons: Configure, Map Database, and Import.



Inventory Interface Initial Dialog

The following sections of this document explain these in detail. In overview:

Configure is used the first time you set up the ESLM Inventory Interface, to connect to the Inventory database and determine which data to import from it.

Map Database is used to match up the software titles your Inventory solution finds with the software titles you keep in your Engagent Software License Manager database.

Import actually performs the import operation.

Configuration

To configure the ESLM Inventory Interface, click the *Configure* button on the main ESLM Inventory Interface screen, bringing up the Options Form illustrated below.

Inventory Interface Configuration

Inventory Database

Database: C:\Demo\WinReporter.mdb Browse

Table:

Inventory System

☐ Altiris
☐ Engagent Domain Inventory
☐ SMS
☒ WinReporter
☐ Other
☐ Custom Query

Fields

☒ Title
☒ Version
☐ Workstation
☐ Date
☐ Budget
☐ Location
☐ Quantity

Map File

☒ Use Map C:\Program Files\Engagent\Engagent Software License Manager\To Browse

Options

☐ Skip Duplicates
 ☐ Create Missing Titles
 ☒ Clear Instance Table

☐ Alternate Instance Table AltInstTab Create

Save Revert Cancel

Inventory Interface Configuration

Most of the options that can be set from the configuration menu are just that—options, not requirements. But for the ESLM Inventory Interface to function, you must specify the *Inventory System* and the *Database*.

Inventory System

The ESLM Inventory Interface works by going directly to the database of the inventory system and reading the relevant fields. Essentially any inventory system that keeps the information it discovers in a relational database will work with the ESLM Inventory Interface. The list of inventory systems on the configuration screen is emphatically not a complete and exclusive list of the inventory systems that will work with the ESLM

Inventory Interface! Most inventory systems are covered by the general category "Other." The inventory systems listed by name are those which require special handling (such as joins of multiple tables), or for which Engagent has created particularly close ties.

A screenshot of a software dialog box titled "Inventory System". It contains a vertical list of seven radio button options: "Altiris", "Engagent Domain Inventory", "SMS", "WinReporter", "Other", and "Custom Query". The "WinReporter" option is currently selected, indicated by a filled circle next to its text.

Inventory System Selection

If your Inventory System is explicitly listed, select the radio button next to its name. If not, choose "Other."

Custom Query

When the inventory system keeps its information in more than one table, a custom SQL query must be created to join the tables.

The SQL Query is contained in a value in the InventoryImport.DLL.Config file. The form of the query is similar to the follow:

```
<add key="Query" value="SELECT DISTINCT APP.<<Field Where Software  
Title Is>> as ProductField, APP.<<Field Where Software Version Is>> As  
VersionField, APP.<<Field Where Install Date Is>> As DateField,  
SYS.<<Field Where Workstation Name Is>> As WorkstationField FROM  
(((<<Table Where the Software ID Is>>) SOF INNER JOIN [<<Table Where  
Workstation Information Is>>] SYS ON SOF.ID=SYS.ID) INNER JOIN <<Table  
Where Software Information Is>> APP ON APP.ApplicationID =  
SOF.ApplicationID)" />
```

In this example,

<<Table Where The Software ID Is>> contains an ID that is used to join
<<Table Where the Software Information Is>> to <<Table Where the

Workstation Information Is>>. You would replace the information in pointy brackets with table and field names from your actual database.

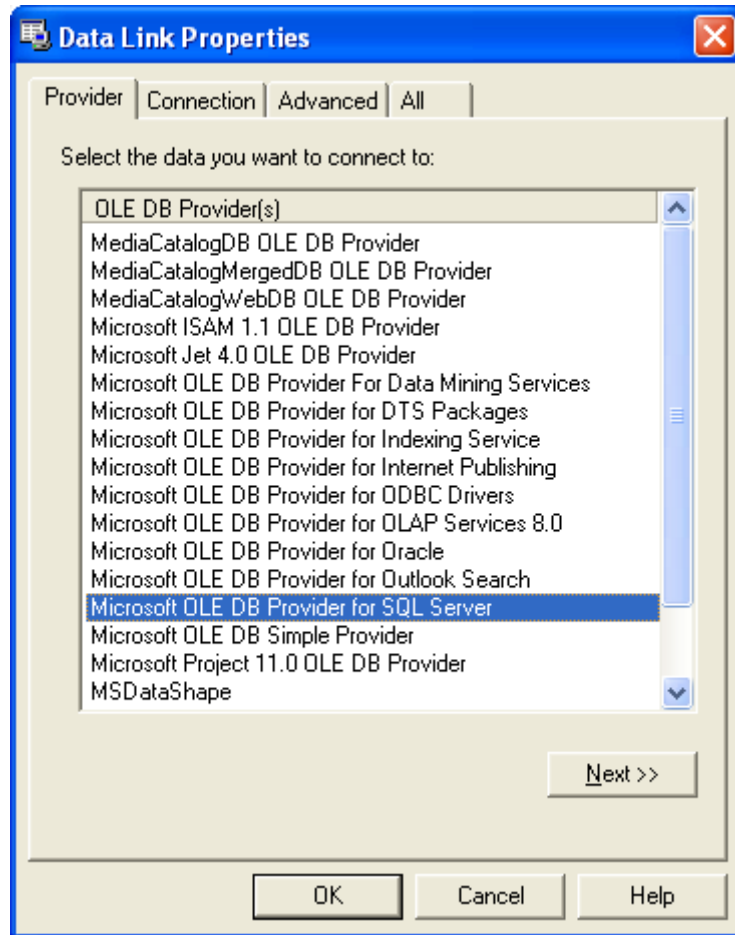
Of course, the schema of your actual database will probably differ from the schema of this example. Engagent technical personnel can guide you through creating a custom query that will work with your database, or create the query for you

Note that, as illustrated in the example above, the "As" names in the SQL query have to match those that the Inventory Interface is looking for:

Field	"As" Name
Software Title	ProductField
Workstation	WorkstationField
Version	VersionField
Date	DateField
Location	LocationField

Database

No matter which inventory system you choose, you need to specify where its database is. When you click on the *Browse* button in the Database configuration section, you are presented with a Microsoft Data Link Properties Dialog, as illustrated below.



OLEDB Data Link Properties Dialog

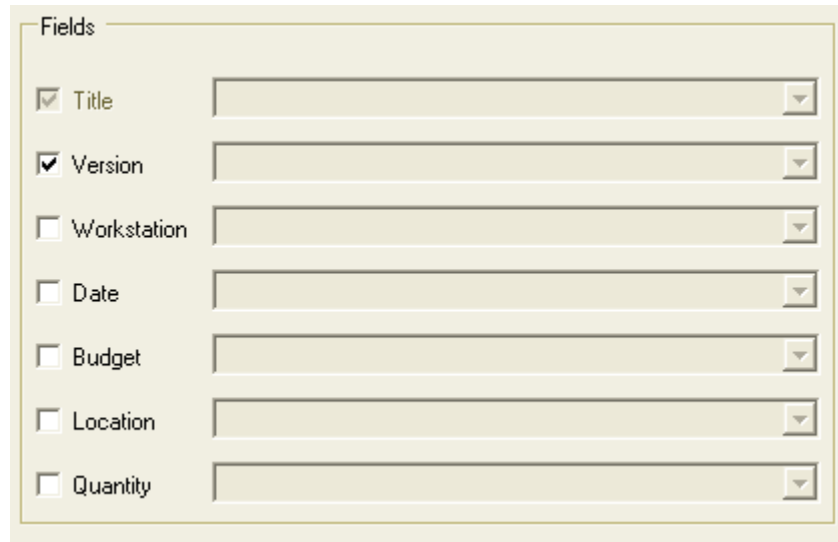
In the Data Link Properties Dialog, first choose the appropriate *Provider*. In most cases, this will be the Provider for SQL Server or Jet 4.0 OLE DB Provider. Then press the Next button and choose the appropriate server or browse to the Jet (Access MDB) database.

Specifying Tables

If your inventory system is one of those named in the configuration screen, the ESLM Inventory Interface knows which tables to read from the database. If your inventory system is "Other," you need to specify which tables to query. When you have connected to a database, the *Table* drop down box will be populated with the tables in that database. Choose the table where the inventory information is located. Whenever you choose a table, the *Fields* drop-down boxes below will be populated with the fields from that table.

Field Options

The ESLM Inventory Interface will always return the Title of the application discovered by the Inventory System. You can also optionally specify other fields to be queried.

A screenshot of a 'Field Options' dialog box. It has a title bar 'Fields' and a list of seven fields, each with a checkbox and a corresponding drop-down menu. The fields are: Title (checked), Version (checked), Workstation (unchecked), Date (unchecked), Budget (unchecked), Location (unchecked), and Quantity (unchecked). The drop-down menus are currently empty.

Field	Selected
Title	Selected
Version	Selected
Workstation	Not Selected
Date	Not Selected
Budget	Not Selected
Location	Not Selected
Quantity	Not Selected

Field Options

Place a checkmark by the name of any fields you want returned to ESLM. (Note that not all fields are supported for all inventory systems.) (Also note that, as explained below, if you specify the "Skip Duplicates" option, you must also specify the "Workstation" field.)

If your inventory system is explicitly named in the Configuration screen, you need only check the checkbox to include the field. If your inventory system is "Other," you also need to use the drop-down boxes to select the field in the inventory system database that includes the desired information.

Map File

The following section of this document describes how to create Maps that translate between the titles as kept in the Inventory database and the titles as kept in the Engagent Software License Manager database. The Map File section of the Configuration screen allows you to control this behavior.

Check the *Use Map File* checkbox to use a map file. If you uncheck this box, titles in the Inventory database and the Engagent Software License Manager database must match exactly – and there are very few cases in which this will be true.

If you have saved Map Files, you can use the *Browse* button to select the Map File to use.

Skip Duplicates

The *Skip Duplicates* option instructs Inventory Import to only recognize one instance of a given application on a given workstation. Any further copies of the same application on the same workstation will be disregarded.

Note: *the Skip Duplicates option will only function if the Import Workstation option is checked.*

One particularly valuable use of the Skip Duplicates option is in correctly accounting for the components of an application suite. To take a common example, suppose you wish to count the copies of Microsoft Office found by your Inventory solution. Create a Map File (as explained below) that says that Microsoft Word in the Inventory database should map to Office in the ESLM database, and so should Excel, PowerPoint, Outlook, etc. Then set the Skip Duplicates option to ensure that if your Inventory found Word, Excel, PowerPoint, and Outlook, you will count *one* copy of Office, not *four*.

Clear Instance Table

When the *Clear Instance Table* option is checked, the Instance table in the ESLM database is cleared each time the Import operation begins.

Note: *Unless the Alternate Instance Table option is selected, this will wipe out any information entered using ESLM's Assign Software screen.*

Clearing the Instance table is the normal case when you want a fresh view in ESLM of the software applications discovered in your enterprise. Sometimes, however, you might want to append the information in the inventory to information already in ESLM. (For example, you may want to combine the results of two different inventory scans.) When this is what you want, uncheck the Clear Instance Table option.

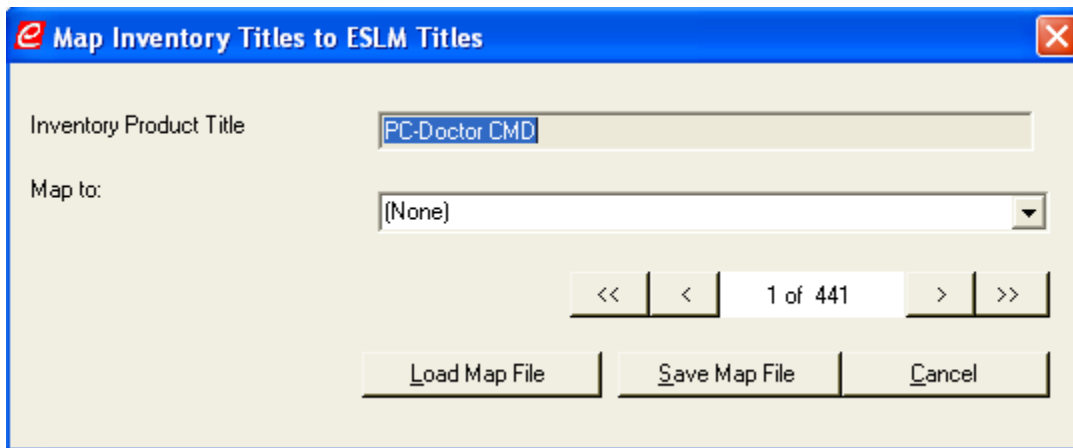
Alternate Instance Table

Most ESLM sites use *either* the Inventory Import feature *or* the Assign License function. If you want to use *both*, select the Alternate Instance Table option to specify the Table in which Inventory information should be kept.

To create an alternate instance table, type the name of a new table into the text box and press the *Create* button to create the alternate table.

Map Database

Choosing “Map Database” brings up the following dialog:



Inventory Interface Map Wizard

This dialog will present the product names presented by the inventory solution, one at a time, in the upper text box labeled “Inventory Product Title.” You can choose to map them to Software Titles defined in Engagent Software License Manager in the lower text box labeled “Map to”. When you have finished mapping, you can save the map you have created by pressing the “Save Map File” button, which will present a system file save dialog allowing you to choose where to save the map and what to call it. Maps are saved in comma separated value (CSV) format, and can be edited by hand using any spreadsheet software.

When you need to re-map, as when your inventory solution finds new products, you can load an existing map using the “Load Map File” button, make any desired changes, then save to the same or a different name.

Import

When you press the Import button, the ESLM Inventory Interface will load the information from your inventory solution into the Engagent Software License Manager database. Information is loaded into the License Count field of the License table, replacing any information you may have manually entered using the “Assign” screen in Engagent Software License Manager. The following reports will use information from the License Count field to report how many instances of a software title have been deployed:

- Compliance Overview
- Compliance Details
- Undeployed Software Report
- Overdeployed Software Report

SQL Server

Requirements

Engagent Software License Manager is supported on Microsoft SQL Server 2000 and 2003. Previous versions, such as Microsoft SQL Server 7, are not supported.

Server and Client Access Licenses for Microsoft SQL Server are the responsibility of the user and are not included in Engagent Software License Manager

Architecture

Engagent Software License Manager communicates with its databases using Microsoft ADO.NET, a database middleware layer, and employs OLEDB interfaces. Microsoft SQL Server is an OLEDB provider.

Creating a SQL Server database for Engagent Software License Manager is accomplished through provided SQL Scripts.

Importing data from a previous Engagent Software License Manager databases such as the Microsoft Access (Jet) MDB files used by the default ESLM installation is accomplished using Microsoft Data Transformation Services (DTS).

Attaching to the databases is accomplished using the Configure Database menu item in Engagent Software License Manager.

Components

The distribution package for the SQL Server contains the following components:

1. License.SQL – the SQL Script to create the License database.
2. Agreements.SQL – the SQL Script to create the Agreements database.
3. ESLM on SQL Server.PDF – This section of the User Guide
4. Reports Directory – Copy of Reports optimized for SQL

Creating the License Database

If you are experienced using SQL Scripts in Microsoft SQL Server, execute License.SQL using the interfaces with which you are familiar. If you are not familiar with using SQL Scripts in Microsoft SQL Server, the following steps explain how to execute the script.

1. Enter SQL Server Enterprise Manager.
2. Using the tree structure in the left pane, browse to the server where you want the Engagent Software License Manager.

3. Highlight *Databases* and right-click. Choose *New Database* to create the Engagent License Manager database. You may name the database whatever you choose, although *License* is conventional.
4. From the *Tools* menu, choose *SQL Query Analyzer*.
5. From the *File* menu, choose *Open*, and browse to License.SQL.
6. From the *Query* menu, choose *Change Database*, and browse to the new database you have just created.
7. From the *Query* menu, choose *Execute* to create the database.

Note that the SQL Script not only creates the tables needed by Engagent Software License Manager, but also loads some data, including default records for License Types, Software Categories, and Terms. These items are all configurable using the Configuration menu within Engagent Software License Manager; they may also of course be edited directly within the script.

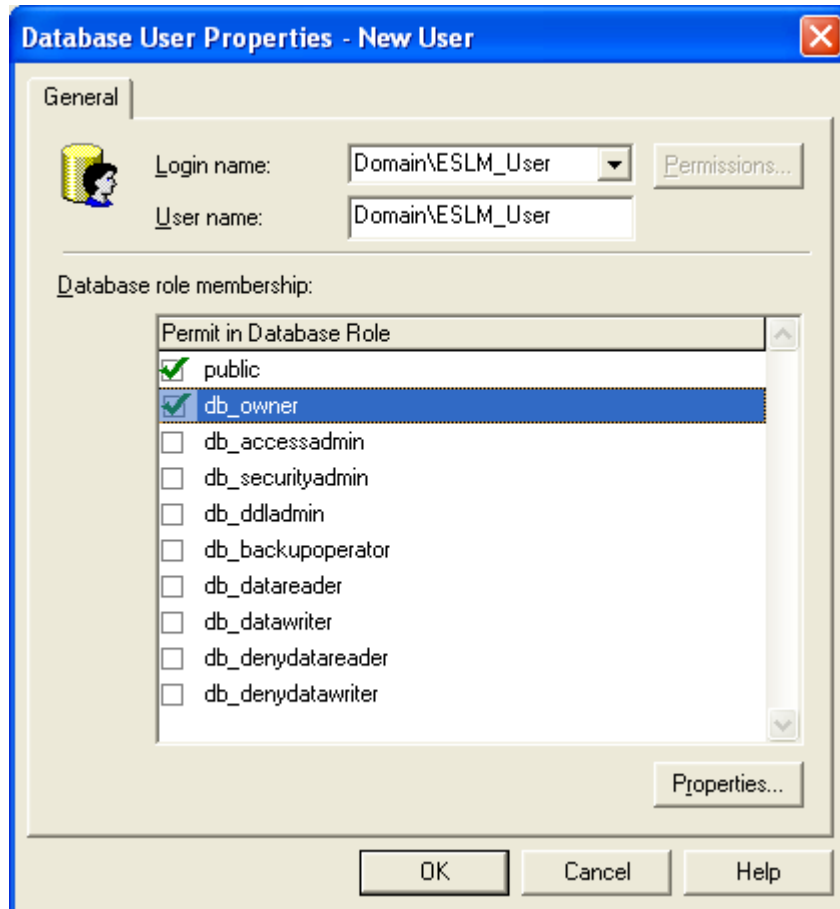
If you are going to import data from an existing Engagent Software License Manager database using DTS (see below), then you may delete the entire “INSERT INTO” section of the script.

Creating the Agreements Database

Using the same method described above, create an Agreements Database and execute Agreements.SQL.

Setting SQL Server Permissions

ESLM users must have db_owner permissions on the ESLM databases. To set permissions in SQL Server, use SQL Server Enterprise Manager. In the left pane of Enterprise Manager, click on the plus sign next to the ESLM database and choose *Users*.



SQL Server User Permissions

Add all ESLM users as SQL Servers (Right-click in the right pane of Enterprise Manager and choose *New User*.) As illustrated above, note that the user needs both public and db_owner permissions.

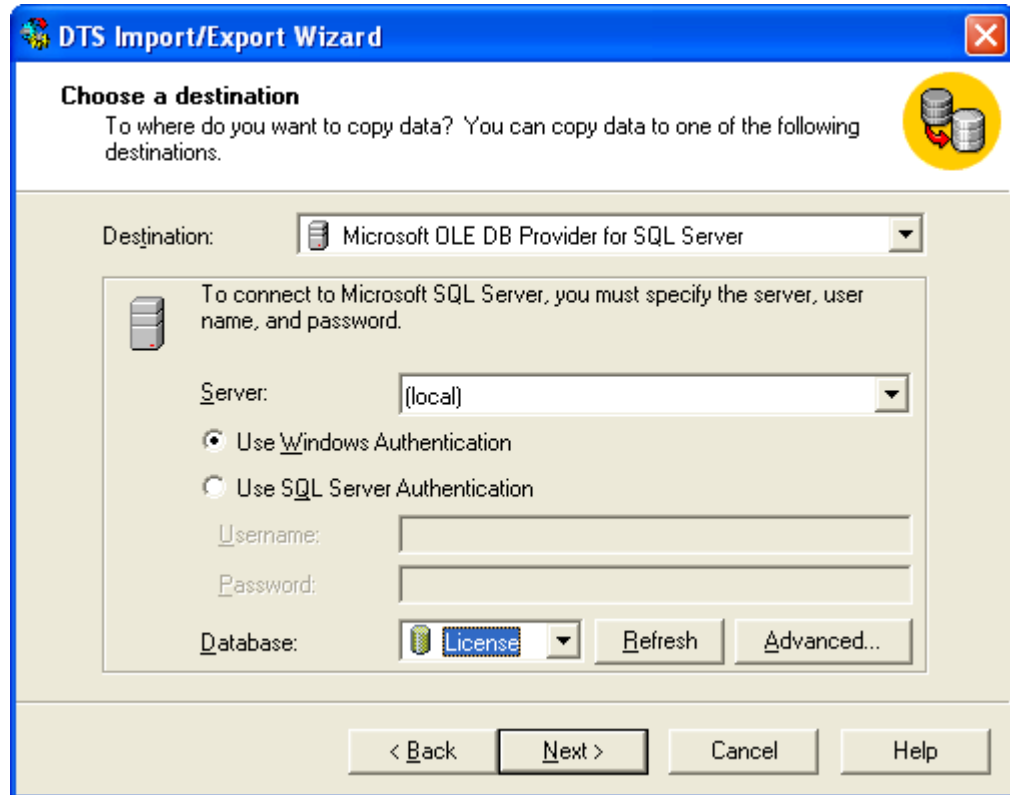
Note: *If the SQL database is to be accessed by the ESLM Web Interface, make sure that you appropriately configure the ASP.NET account, as described in "Configuring ASP.NET Account Permissions" in the Web Interface section of this document.*

Importing Data from Access

By default, Engagent Software License Manager installs with a Microsoft Access (Jet) database. If you have already been using Engagent Software License Manager, and wish to move the database you have created to Microsoft SQL Server, use the following steps:

1. Enter SQL Server Enterprise Manager.

2. From the *Tools* menu, choose *Data Transformation Services*, and then choose *Import Data*, bringing up the Choose Data Source dialog.
3. Select Microsoft Access as the data source and browse to the location of the existing License database (by default, c:\Program Files\Engagent\Engagent Software License Manager\Data\License.MDB).
4. Choose next and browse to the location of the SQL database you have created.



Note that in the Database drop-down near the bottom of this dialog, you must choose the License database you have created.

(As illustrated, choose “Use Windows Authentication.”)

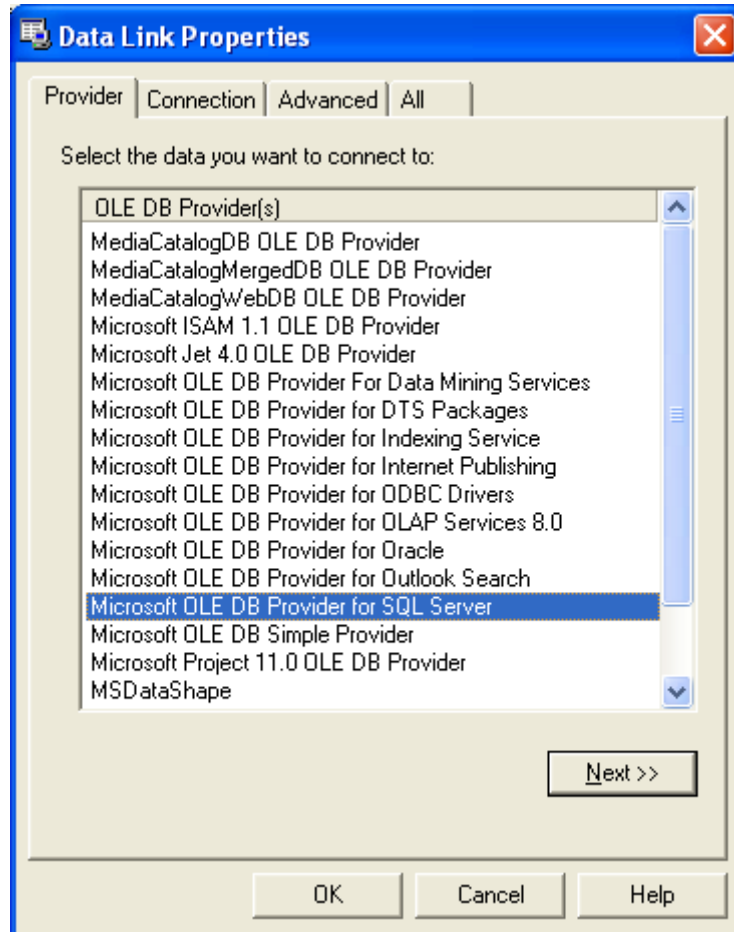
5. Accept the default “Copy tables and views” from the next dialog.
6. Repeat the above process for the *Agreements* database.

Updating the Reports Directory

Copy the contents of the Reports directory in the SQL Kit over the ones in the Installation Reports directory (by default, c:\program files\engagent\engagent software license manager\reports).

Connecting to SQL Server Databases

To connect to the new SQL Server Databases in Engagent Software License Manager, from the *Tools* menu, choose *Configure*, then *Configure Databases*. This brings up a standard Microsoft Data Link Dialog.



From this dialog, choose Microsoft Ole DB Provider for SQL Server (as illustrated above), and then from the Connection tab choose the Server and Database you set up above.

Note that you may accomplish the same purpose by manually editing the ESLM.exe.config file and changing the connection strings:

```
engOleDbConnection.ConnectionString and  
AgreementArchiveOleDbConnection.ConnectionString
```

A sample connection string is included below:

Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security
Info=False;Initial Catalog=License;Data Source=SERVERNAME"

In this example, the server name is "SERVERNAME"; you would use the name of an actual server. In this example the database name ("Initial Catalog") is "License."

Best Practices

Database Design and Data Entry

Many of the reports in Engagent Software License Manager are designed to give you as much information as possible about the economic aspects of Software Asset Management, to help reduce the cost of software to the enterprise, and to quantify the savings. In order for these reports to deliver their full value, the Engagent Software License Manager database must be populated with appropriate information about software cost.

It is particularly important that the Unit Price field in the license database be populated with the unit price of the software.

Controlling Access to the License Manager

Much of the information available in Engagent Software License Manager is confidential and should not be widely published in the enterprise. But other license management functions (such as requesting software, for example) are most effective if they are available to everyone.

The flexibility of Engagent Software License Manager allows several different configurations to balance between security and productivity. The most practical configuration for most sites will be to: 1) Only allow Software Asset Managers access to the administrative functions of ESLM (through the Windows interface); and 2) Use the Web interface to publish selected subsets of ESLM functionality to larger populations of users who will benefit from them.

Support

The Engagent web site always contains the latest release of Engagent Software License Manager. In addition it includes a wealth of other resources for configuring and using Engagent Software License Manager, including an extensive Frequently Asked Questions (FAQ) page.

www.engagent.com

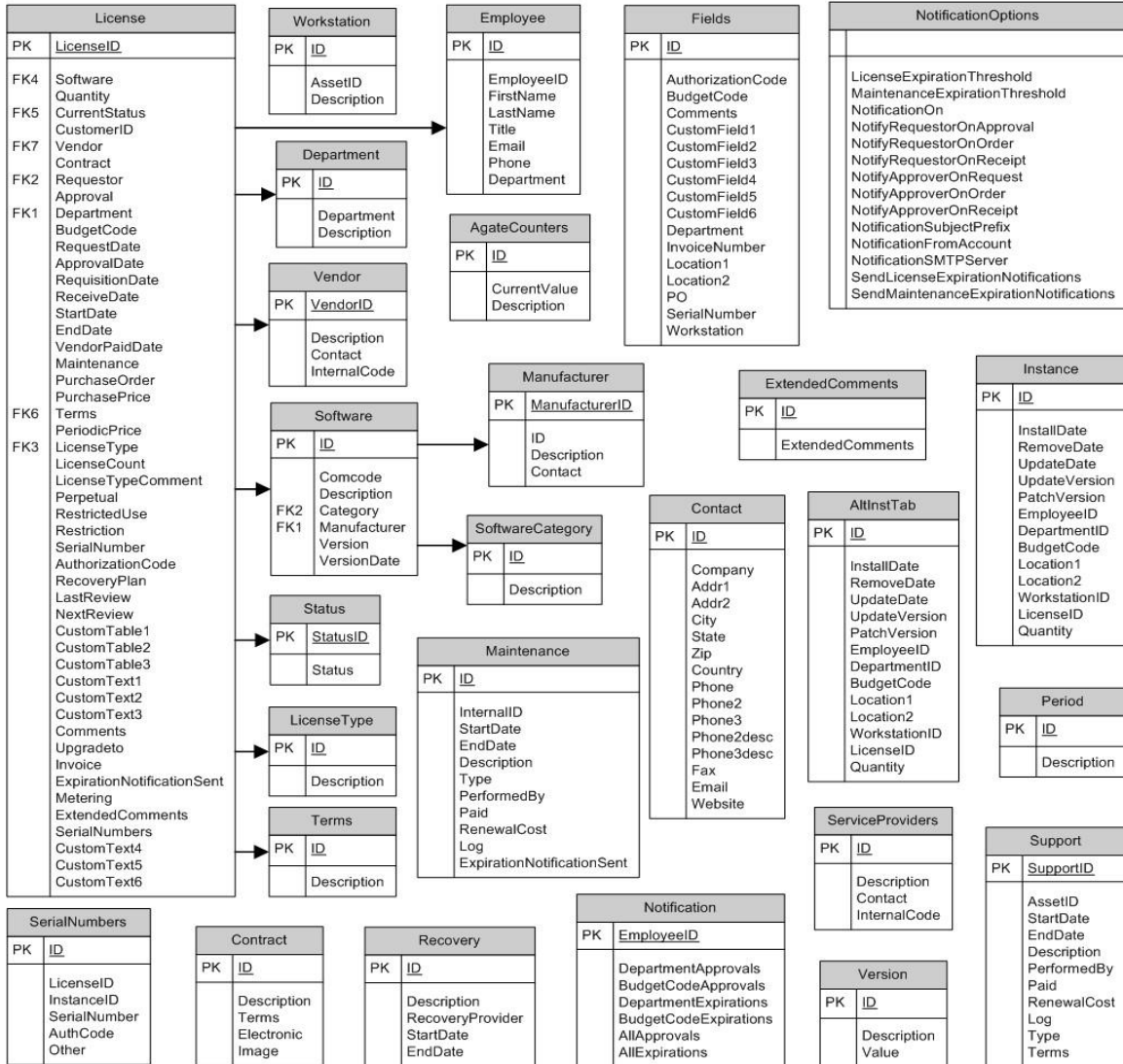
Technical support questions may be emailed to support@engagent.com.

Telephone support is normally available from 7 a.m. to 3 p.m. Pacific Time, Monday through Friday, at the toll-free number 877-820-7980.

Appendix One: Database Schema



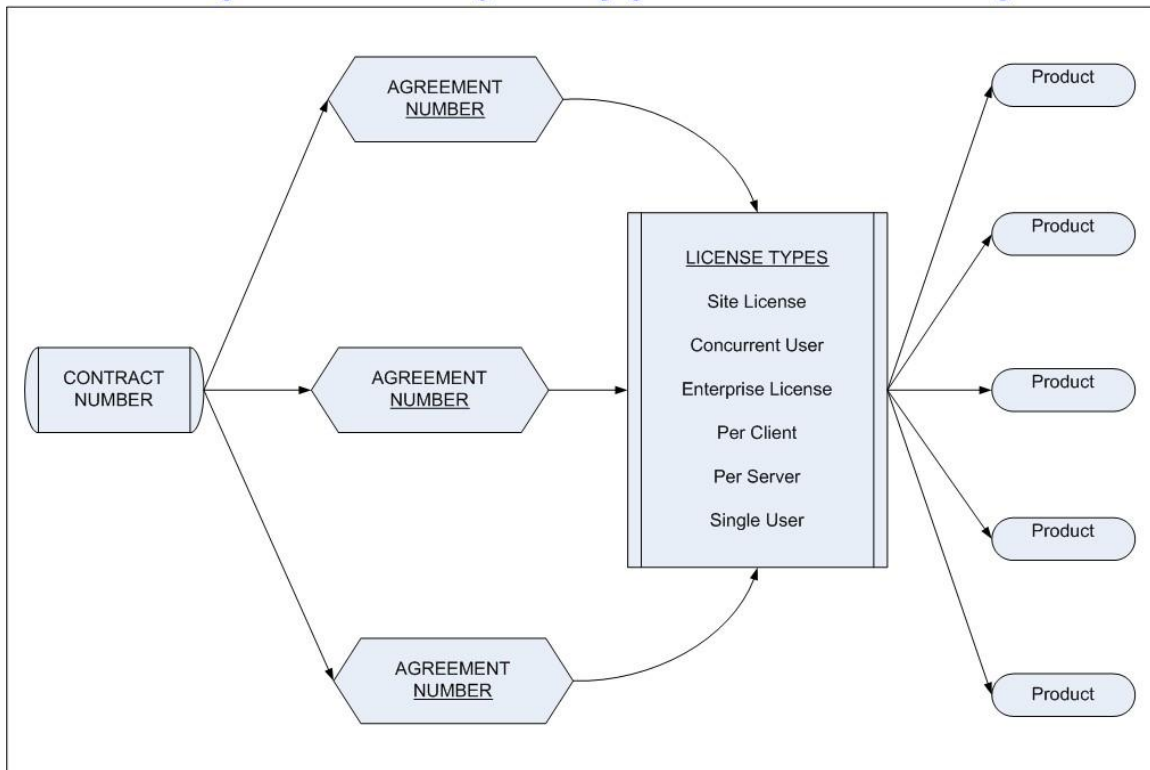
Engagent Software License Manager Database Schema



Appendix Two: Managing Volume Licensing

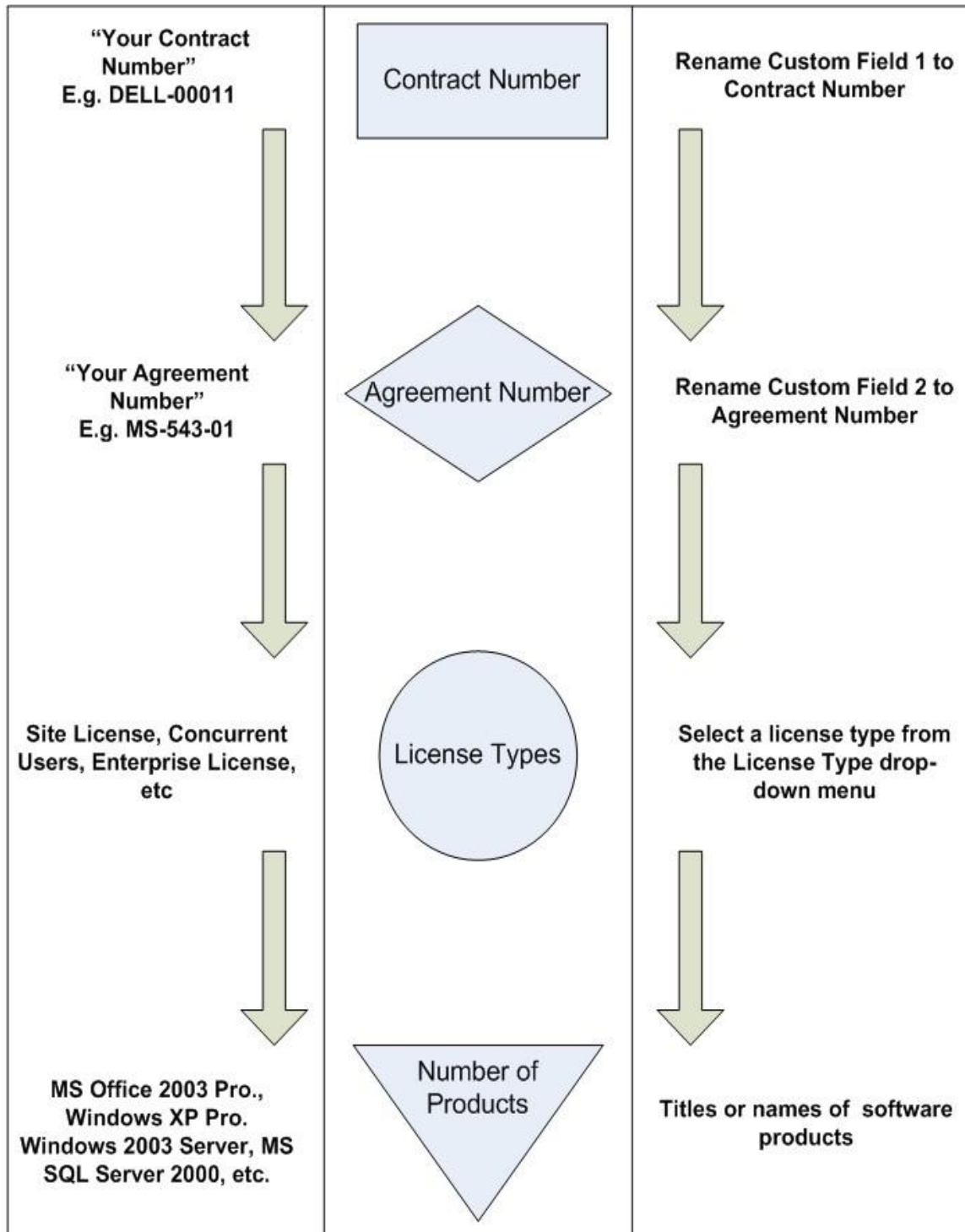


Manage Volume Licensing with Engagent Software License Manager



How To Manage Volume Licensing With Engagent Software License Manager

Volume Licensing
ESLM Fields



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