



License Tracker

... maximizing value by understanding usage

Administration Manual

Version 3.2

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License Tracker 3.2 Administration Manual

This is the administrator's manual for *License Tracker 3.1*.

End-user information is available in the *License Tracker 3.1 User Manual*.

Document History

License Tracker 3.2, October 2009

Minor Release

Introduction of Token-Based Reporting, pg 19

Introduction of Enhanced Debug Log (.enh), pg 11

Introduction of attribute to feature model, pg 15

Introduction of Project Reporting, pg 20

Introduction of Global Licenses, pg 20

Introduction of Session Source Models, pg 16

License Tracker 3.1 August 2008

Minor release.

Introduction of time-variable end-user attributes.

Introduction of tree view and sort of data.

License Tracker 3.0 November 2007

Major release.

Introduction of MySQL and Oracle server databases and administration.

Administration capability removed from end-users.

License Tracker 2.8, January 2007

Minor release.

Improvements to reports and charts. Support for new log formats.

Legal Notifications

This section details various legal notifications.

Trademarks

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About this Document

This section describes this manual.

Purpose of this Document

This document is written for administrator's of *License Tracker* and *License Tracker MySQL* and Oracle license usage databases.

Topics include:

- installing *License Tracker*,
- setting up a database on a server or local file database,
- controlling access to *License Tracker* administrator functions,
- importing session data into the database,
- deleting selected session data,
- deleting complete session logs,
- managing
 - the user model,
 - the feature model,
 - the license models,
 - the budget models
- managing content scopes,
- managing report scopes,
- setting various thresholds for reporting denials, and
- setting up and running the *Auto Tracker* modules.

End-user information, including detailed instructions on

- selecting content scopes,
- creating charts and reports,
- using the filter capability,
- using the *Web Tracker* module, and

- general user interface interaction,
- managing the session source model

can be found in the *License Tracker 3.0 Users' Manual*.

Conventions Used in this Document

This document follows these conventions:

- Buttons and menu items are referenced in bold font, for example, **File**, or displayed as a screen capture.
- Menu paths are also displayed in bold font, for example, **File > Create Database**.
- References to the *License Tracker* application, the *Web Tracker* module, the *Auto Tracker* module, the *Auto Tracker Alerts* module and the *License Tracker Manual* are displayed in italics.
- In the sections that follow, references to the *License Tracker* application, the *Web Tracker* module, the *Auto Tracker* module and the *Auto Tracker Alerts* module are shortened to *License Tracker*, *Web Tracker*, *Auto Tracker* and *Auto Tracker Alerts* respectively.
- Clickable links such as cross references and Internet addresses are in blue font.
- Critically important information that affects the proper functioning of the software or the report generated is prefaced by the word **IMPORTANT**. For example:
***IMPORTANT:** An example of IMPORTANT information.*
- Clarifications and reminders are generally prefaced by the word **NOTE**. For example:
***NOTE:** An example of a note or clarification.*
- Graphic changes between minor releases are marked as **UPDATED**. New user interface elements are marked as **NEW**. Graphic changes between the last minor release and a new major release are not flagged in any way.
- User input, generally on the command line or in a dialog is in Courier font. For example
`This is text entered in a dialog or the command line.`

Menu Items and Dialogs

The pull-down menus and dialogs in the *License Tracker* screen follow these conventions:

- Menu items that are:

- Followed by dots (for example, **Tabular...**) open a dialog where you enter information.
- Followed by an arrow display a pull-down menu with further options from which you select one item.
- Without arrows or dots (for example, **Users**) immediately display the selected item.
- Check boxes are used as toggles to turn a parameters **ON** or **OFF**. A parameter or filter is active when it contains a check mark. Click in the box to place the check mark and click again in the box to deselect it.
- In dialogs there are areas that:
 - List items in a common category, for example users or licenses. These lists usually allow selection using the mouse and the **SHIFT** or **CONTROL** key. To select a single item, click on it. To select items in sequence, use the mouse and the **SHIFT** key. To select items out of sequence, use the mouse and the **CONTROL** key.
 - Display headings in a table format. These usually require some type of data entry using a button located near the window, for example **ADD**, or direct input using the keyboard.
 - Text fields require a typed response or a button click.
 - To fill in directory location and filename fields, for example **User Model**, click on **Browse...**

Fundamental Concepts

This section provides an overview of the fundamental concepts that must be understood to use the *License Tracker* toolset.

License Tracker analyzes a variety of software usage log formats generated by most high-value software packages. These logfiles are typically generated by license managers used to control access to the software packages, or in some cases they are directly generated by the software packages themselves.

License Tracker processes the supported logfiles and inserts the usage data into a *License Tracker* database.

Once the log information is captured in a database in a standard format, *License Tracker* can analyze the data further and generate useful cost and license usage information. This information, captured in reports and charts, can then be used for controlling and reviewing license usage and cost.

Users and administrators need to understand several key concepts to make effective use of the capabilities built into *License Tracker*. These concepts include logfiles, content scopes, report scopes, filters, models, administrator versus end-users and server databases versus file databases.

Log Files

Software license usage is recorded in log files (session login and logout times, denial of access, server startup and other events) on a continual basis. *License Tracker* accepts log files in the following formats and uses them to create a license usage database; *Auto Tracker Loader* also requires these formats and extensions:

Table 1: Table 1: Supported formats

Format	Extension
FLEXlm™ debug	.out
Flex Raw Report - RIF	.rif
Sentinel LM™	.sen
Reprise™	.rep
Petrel™ SLOG	.pet

Format	Extension
Petrel Usage Report	
IBM LUM™ Basic Report	.lum
License Tracker ASCII	.lta
Enhanced Flex Debug	.enh

Content Scopes

The concept of scopes is fundamental to getting the most value from *License Tracker* and *Web Tracker*.

From a technical point of view a content scope is simply a view into the database. It allows administrators to specify exactly the data that should be extracted and analyzed to produce reports and charts. In *License Tracker*, a content scope is a fairly coarse definition of a subset of the whole database.

Administrators define scopes for end-users. Typically a content scope will be used to provide the end-user access to all of license information for a particular location (Houston or Calgary), a management unit (Division 1, Division 2), or a particular vendor (Vendor A, Vendor B) or some combination of categories and attributes for users and features.

Defining a set of content scopes users will want to use has a significant impact on the load that will be placed on a server database. If every end-user has access to a useful content scope, then every report generated will require searching a dataset much smaller than the whole database.

Once an end-user selects a predefined content scope that best applies to them, the data can be further refined by the end-user with filters.

Report Scopes

Report scopes are used to specify the contents for a set of *Web Tracker* reports. They are used primarily as a control mechanism when using the *Auto Reporter* module of *Auto Tracker* to generate many (potentially different) sets of *Web Tracker* reports.

From a technical point of view a report scope report scope is simply a definition of the contents for a set of *Web Tracker* output. It allows administrators to specify which of types of reports (feature, user, group and analyses) should be produced, as well as which components of the selected reports are to be produced. The report scope also allows an administrator to specify

which user categories are to be included in the group reports and the group analysis component of the feature reports.

Defining a set of report scopes recognizes that different information is needed for various usage analysis requirements, and more importantly that certain reports are not needed for many purposes. Typically an organization will create a report scope specifying all reports and then create other report scopes reducing the number of reports generated (and therefore the computation time required to generate the set of *Web Tracker* reports) for specific purposes.

Once an end-user selects a predefined report scope that best applies to their Web Tracker reporting needs, they can further refine the report set definition in the Web Tracker report selection dialog.

Filters

Filters, like content scopes, also define a subset of data but at a finer level of detail. Filters are generally applied to data that has already been limited by a content scope defined by the administrator.

End-users generally select a scope that best applies to their situation, for example, a location such as “Calgary”. Within this content scope they can filter the data to define finer grained report criteria, for example specific users, groups, vendors, or features.

This combination of content scope and filter accomplish two objectives simultaneously:

- 1) Filters allow end-users complete freedom in defining exactly what information appears in their reports, based on any criteria available in the data.
- 2) Content scopes allow administrators to define commonly used views into the database.

End-users can apply filters to the entire database if they wish. If end-users do this frequently it may indicate that there is a mismatch between the existing content scopes and end-users reporting requirements. The easiest way to determine what the problem is to talk to end-users who apply filters to the entire database.

Models

License Tracker makes extensive use of

- user,
- feature,
- license

- budget, and
- session source

models in its interaction with software usage databases.

These models either:

- Add attributes to data captured from logfiles that can be used to refine a query (for example, Business Unit and Role associated with userIDs) or to control a computation (for example, a false denial threshold).
- Add information to data captured from logfiles that enhances understanding of the raw data in reports (for example, what is the first name, last name and telephone number for each userID).

All of these models are managed by the *License Tracker* administrator. They are important because they determine to a large extent what can appear in a *License Tracker* report.

Creating a *License Tracker* database usually involves collecting and assembling information in a user model, feature model, license models and budget models as well as importing the log files that will provide the basic data for the *License Tracker* reports and charts.

Strictly speaking, only the log files are required before generating reports, but most organizations will want to access the reports based on information captured in the user model, feature model, license models and budget models.

The models can be prepared in other tools and imported as comma-separated value (CSV) files or created and modified with the *License Tracker* editors. The user model, feature model, license model and budget model files can be edited from within *License Tracker* -- this is the normal way of editing these files. However, .csv files can be built using other tools and then imported into *License Tracker*. This capability may be useful when setting up reporting for large numbers of users and groups.

You can obtain the information for a model from a computer-account-management system by exporting a .csv file containing the required information, and then edit the file in a spreadsheet program to ensure the correct column order and headings.

You can also create a model file from an existing database using the export option, for example, **File > Export > User Model...** Models created in one database can be exported for use in creating other databases in the future.

For more information on editing model files from within *License Tracker*, please see [“Managing Models”](#) on page 44.

User Model

The user model is a simple ASCII .csv file. It links a userID, called a **User Name**, found in the license usage data to a user's

- first name,
- last name,
- e-mail address, and
- phone number,
- and two built-in comment fields.

All of these fields in the user model provide information which is displayed in the header of the *Web Tracker* user reports.

There is only one user model per *License Tracker* database.

The default user model contains the following headings on the first line of the ASCII file. These heading names are reserved and significant to *License Tracker*. Heading order is not important in the model.

User Name

The computer login name (that is, the userID) found in the license server log files. UserName is the only required heading in a user model.

First Name

The real first name of the user.

Last Name

The real last name of the user.

Email Address

The user's e-mail address.

Phone Number

The user's phone number.

Comment 1 Date

A comment about the user.

Comment 2

A comment about the user.

Date

The date from which the user attributes specified in this row are valid.

Other headings may be added to the model by an administrator. These are treated as category names by *License Tracker*. For example:

- **Category_1 ... Category_n**

Categories (also known as group types) correspond to extra, administrator-defined columns in the user model. Category names usually correspond to something significant to the organization tracking license use. Examples included in the sample user model file are “Location”, “Division”, and “Role”.

Each cell in a category column is an attribute (also know as a group) that can be used to further refine categorization. For example, the category “Location” might be subdivided with the attributes “Calgary”, “Houston”, and “Denver”.

A sample user model is shipped with *License Tracker*. The sample contains all of the headings from the default model and some category columns with attributes entered in the cells.

User models are most often generated by exporting information from an LDAP or other account management system to a CSV file. Some modification of the headings may be required to make them match *License Tracker* user model requirements.

There is one user model per *License Tracker* database.

Feature Model

The feature model is a simple ASCII `.csv` file. It specifies features (or software packages) found in the logfiles providing

- a vendor name,
- feature name,
- license sharing strategy (no sharing, host, user, user + host, or vendor) and
- a false denial threshold value.

Each of these items corresponds to a column that appears in the `.csv` file and in the Feature Model window in *License Tracker*.

A sample feature model is shipped with *License Tracker*. The sample contains all of the headings from the default model and some category columns with attributes entered in the cells.

The sharing strategy specifies under what conditions License Tracker should deem multiple user sessions from the logfile are using the same license. Most often, computation intensive features have no sharing while interactive software frequently has user+host sharing (same user at the same computer may have multiple sessions of the software using the same license). Any sharing information provided in the license manager logfiles will override those specified in the feature model.

Removing denials caused by license server chains or high frequency failed requests can be particularly useful. The false denial threshold is used to control this. A duplicate denial (same feature, same user, same host) found within the threshold of another denial is deemed to be false; also, a denial for which a license is granted (same feature, same user, same host) within the threshold is also deemed false.

Other headings may be added to the model by an administrator. These are treated as category names by License Tracker. For example:

- Category_1 ... Category_n

Categories correspond to extra, administrator-defined columns in the user model. Category names usually correspond to something significant to the organization tracking license use. The examples included in the sample feature model file is “ApplicationType”.

Each cell in a category column is an attribute that can be used to further refine categorization. For example, the category “ApplicationType” might be subdivided with the attributes “finite element solver”, “layout” and “reservoir modeller”.

There is one feature model per *License Tracker* database.

Session Source Model

The Session Source Model provides details of each log file imported into a License Tracker database. It has default headings:

Name

The name of the file loaded.

Type

The format of the logfile.

Vendor

The name of the vendor whose usage data was in the file.

Import Date

The date the file was loaded into the License Tracker database.

Start Date

First date in the log file.

End Date

Last date in the log file.

Sessions Read

Number of sessions read from the file

Sessions Loaded

Number of sessions actually loaded (may have been filtered out due to date, length, etc.).

Server

Name of the license server that this log file came from.

Other headings may be added to the model by an administrator. These are treated as category names by License Tracker. For example:

- Category_1 ... Category_n

Categories correspond to extra, administrator-defined columns in the user model.

Each cell in a category column is an attribute that can be used to further refine categorization. For example, the category “ServerLocation” might be subdivided with the attributes “Kuala Lumpur”, “Calgary” and “London”.

License Models

The license model is a simple ASCII .csv file. It links feature names found in the log files to

- vendor names,
- the number of licenses owned,
- the ownership cost of licenses (average purchase and maintenance cost per license), and
- software rental details
 - rental rates: yearly, monthly, weekly, daily, or hourly;
 - rental mode: by the second, hourly, capped, etc.) and
 - minimum duration of sessions that are to be considered when calculating rentals.

Multiple license models can be created for different financial analyses of the software usage data.

NOTE: License models are associated with content scopes and will not be considered in any analyses until such an association is created. See “[Managing Scopes](#)” on page 58. A single license model may be associated with multiple content scopes.

A license model contains the headings listed below on the first line of the ASCII file. Only the **Feature Name** and **License Count** headings are required. If more than one line are in a license model for a single feature then they must have different valid “from” dates.

Vendor Name

The vendor's name. This is only used for adding new features found in the license model to the feature table of the *License Tracker* database. If the feature is already in this table then the contents of this field are ignored.

Feature Name

The software feature name as found in the license server logfiles.

Date

This is the date from which the data on this line is valid. This is to support the fact that license counts and costs change over time. Use the format YYYY-MM-DD.

License Count

The number of licenses purchased (owned, not rented).

Product Cost

The average cost to purchase a single license.

Maintenance Cost

The average annual maintenance fee for a single purchased license.

Annual Cost

The annual rental license fee.

Monthly Cost

Monthly rental license fee.

Weekly Cost

Weekly rental license fee.

Daily Cost

Daily rental license fee.

Hourly Cost

The hourly rental license fee. If rental billing is by the second, provide the hourly rate (PerSecondRate x 3600) in this column.

Mode

The type of rental mode. The rental mode, options are:

- ANNUAL
- MONTHLY
- WEEKLY
- DAILY
- HOURLY
- HOURLY_CAPPED.
If total hourly rentals exceed monthly rental costs then a monthly rental is added and hourly rentals are recalculated; superseded by HR_CAP_MON.
- HR_CAP_MON.
If total hourly rentals for a single rented license exceed monthly rental costs then it is deemed to be rented for the month and hourly rentals are recalculated.
- SECOND
- SC_CAP_MON.
If billing by the second for a single license exceeds the monthly rate then the license is deemed to be rented by the month and by the second rentals are recalculated.

Minimum Duration

This is minimum session length (in seconds) to be considered when calculating rentals costs. All sessions shorter in duration will be ignored.

NOTE: The last six columns in the license model file refer to rental fees (annual, monthly, weekly, daily and hourly rates), and minimum duration. The mode indicates which rental model should be used by License Tracker. If you do not use rental licenses, then leave these columns blank in your file.

Budget Models

The budget model is a simple ASCII .csv file. It is a simple list of the budgeted rental costs per month in an organization; if your organization does not have software rental arrangements with any of your software vendors then you will not need to create or use budget models.

Multiple budget models can be created for specific views of the software usage data. A typical example is a budget model for each budgeting unit in a corporation, or for rental budgets for specific software vendors.

NOTE: Budget models are associated with content scopes and will not be considered in any analyses until such an association is created. See “[Managing Scopes](#)” on page 58. A single budget model may be associated with multiple content scopes.

A budget model must contain the following headings on the first line of the ACII .CSV file:

Year

The year of the data.

Month

The actual calendar month name.

Amount

The money allotted to license usage for each month.

Types of Users

All users have administrative privileges for file databases.

Users who do have administration privileges on the *License Tracker* database do have access to the **Admin** menu.

From *License Tracker Admin* menu administrators can:

- import and delete software usage data,
- create and manage user, license, budget and feature models, and
- create and manage report scopes and content scopes for the organization.

Administrators can also use *License Tracker* as an end-user themselves.

License Tracker administrator privileges are also required to configure and run the *Auto Tracker* modules.

Token Based Reporting

Traditionally, software vendors have used a feature-based licensing system where the customer purchases or rents a certain number of per-user licenses for each software feature provided by the vendor.

This model creates the situation where at certain stages of business activity, one feature might run out of licenses while another does not, creating a situation where the business must pay for more licenses of one feature while those of an already paid for feature are not used.

A token-based licensing system differs from a feature-based system in that instead of buying licenses for each user, the business buys a certain number of tokens that go into a 'token pool'. The software vendor then defines how many tokens each software feature is worth, and when that software feature is in use by any user, the corresponding number of tokens is removed from the pool. When the user stops using the software, the tokens are added back into the pool. When a user tries to use a piece of software, the token pool is checked to see if there are enough tokens. If so, the user is allowed to use the software, if not, the user is denied.

License Tracker version 3.2 allows for the analysis and tracking of this sort of license model. Typically with a token model, it is only possible to analyze the usage of the tokens. With License Tracker version 3.2 it is possible to track the actual usage of each software feature within a token pool.

Project Reporting

Frequently software usage is associated with a specific project within an enterprise. Whenever this information is provided in a log file License Tracker will capture this information and store it in its database. This information can then be used to divide software costs among projects within the enterprise.

Global Licenses

Global licenses are purchased by software vendors to make License Tracker available to their customers for the analysis of usage data from that vendor only. Users can download global licenses from the License Tracker website at no cost; global licenses from many software vendors can be installed at once, allowing the user to analyse data from all of them in a single database. Enterprises making use of global licenses have complimentary access to the User Manual and the Administrator Manual; access to all other support capabilities (such as User Forum and regularly schedule webinars) requires a separate support contract.

Editions of *License Tracker*

This section describes the editions of *License Tracker* available for different data usage requirements.

Server DataBase Edition

The Server DB Edition of *License Tracker* maintains its databases by interacting with a database server. The two databases that are supported are: Oracle 10 and MySQL 5. The database server and the *License Tracker* software may be running on the same machine, or they may be running on separate machines. A separate license is required for the database server. The Server DB Edition may be used on all platforms supported by the Java Runtime Environment 1.5 (i.e., Windows, Solaris, and Linux).

The Server DB Edition is appropriate for large organizations that need to analyze usage data measured in the 100,000s to 100,000,000s of user sessions.

File DataBase Edition

The File DB Edition of *License Tracker* maintains its databases in MS-Access files. The files are always created and used within the filesystem that is accessible from the user's computer. A separate copy of MS-Access is not required. The File DB Edition can only be used with Windows systems.

The File DB Edition is appropriate for organizations with small or moderate usage analysis volumes measured in the 10,000s to low 100,000s of user sessions.

Limited Edition

The Limited Edition of *License Tracker* is a special version of the File DB Edition. This is the default mode of *License Tracker* when started without a *License Tracker* license. The Limited Edition restricts all databases to a maximum of 10 users and 15 software features. In addition, the Limited Edition does not provide access to the *Auto Tracker* capabilities.

The Limited Edition is appropriate for small organizations with very low software usage. It may also be used for evaluation of the *License Tracker* product.

Installing *License Tracker*

License Tracker is easy to install, just ensure that your system is sufficient for the application and follow the installation procedure.

How to Install *License Tracker*

PREREQUISITE The minimum system requirements for running *License Tracker* are:

- Windows XP operating system when accessing file databases,
- Windows XP, Linux or Solaris operating systems when accessing server databases,
- 1 GB of RAM, 2 GB is suggested,
- Java run-time environment, version 1.5 or higher, and
- a screen resolution of 1024 X 768 pixels or greater.

To install *License Tracker* follow this procedure:

TASK

1. Access the *License Tracker* web site `www.licensetracker.ca` and download the zip file onto your hard drive.
2. Extract the following folders from the zip file into a *License Tracker* directory:
 - `bin` contains executable files (extension `.jar`), a license file (extension `.lic`) and startup scripts and shortcut files.
 - `conf` this is where you install the license file (extension `.ltlic`).
 - `data` contains sample user, license and budget models.
 - `doc` contains the files for the *License Tracker Manual* (with extension `.pdf`).
3. Install the `<your_license_filename>.ltlic` file in the `conf` folder. This file was e-mailed to you as part of the download and evaluation or purchase process.

4. To start *License Tracker*, open the `bin` directory and double-click on:
 - for Windows XP, the `LicenseTracker.lnk` shortcut
 - for Linux/Solaris, the `LicenseTracker.unix` script file.
-

Getting a Valid *License Tracker* License

Part of the *License Tracker* download process is requesting a demonstration or regular license. You should have received the appropriate license by e-mail from `licensetracker.ca` before installation.

If you did not receive an e-mail with the appropriate license, please contact `sales@licensetracker.ca`.

As of version 2.7, the *License Tracker* license (`<your_license_filename>.ltlic` in the `conf` directory) is tied to the version number of the software. A new license is required for each new version of the *License Tracker* software.

“License not for this release” Problem

If *License Tracker* reports an “invalid license” problem when the software is started after an update, follow this procedure.

TASK

1. Reinstall the license file received from *License Tracker* as part of the upgrade process. Make sure that you have copied the correct `<your_license_filename>.ltlic` file to the `conf` directory.
STEP RESULT: If the problem persists go to the next step.
 2. Reinstall the software update as described in “[Installing License Tracker](#)” on page 23
STEP RESULT: If the problem persists go to the next step.
 3. Contact *License Tracker* support. See “[Support and Contact Information](#)” on page 78.
-

Setting Up a Server Database

The normal installation of *License Tracker* requires a MySQL or Oracle database on a server to hold the license usage data. A separate license and support agreement is required for your selected database server and is beyond the scope of your agreement with License Tracker Inc.

This section describes how to create and populate the *License Tracker* database in both MySQL and Oracle.

How to Set Up a MySQL Server Database

Follow the steps in this section to create a MySQL database for License Tracker.

- 1) Select the computer system for the database server (ensure that this system has sufficient memory and computation power to handle queries for the scale of data you intend to store and analyze).
- 2) Install the MySQL 5 server software. See [“Install the MySQL Server”](#) on page 26.
- 3) Customize the MySQL server configuration file for License Tracker operation. See [“Customize the MySQL Server Configuration File for License Tracker Operation”](#) on page 26.
 - a) Create the *License Tracker* database.
- 4) Create the License Tracker database tables. See [“Create License Tracker Tables in a MySQL Server Database”](#) on page 29.
- 5) Create administrator database user(s). See [“How to Create a License Tracker Administrator in a MySQL Database”](#) on page 28.
- 6) Create reporting-only database user(s). See [“How to Create License Tracker Users in a MySQL Database”](#) on page 28.
- 7) Pass necessary information on to users. See [“Pass Necessary Information on to Users”](#) on page 29.

Prerequisites

- 1) Basic administration familiarity with MySQL including starting, stopping, and restarting a MySQL database server.
- 2) The administrator must have full administration access to the server machine.

Install the MySQL Server

NOTE: If a MySQL server instance already exists, you may go to directly to step three (3) of the following procedure immediately.

TASK

1. Go to <http://dev.mysql.com/downloads/> and download a MySQL server (community or enterprise) installation package, version 5 or higher.
2. Start the installation wizard.
 - In this document we assume that all of the defaults have been accepted during the installation process.
 - Set the password to something you will remember. In this document we assume the password is set to `lt_admin_pw`.

STEP RESULT: The database server installation completes normally.

Customize the MySQL Server Configuration File for *License Tracker* Operation

TASK

1. Open the `my.ini` (Windows) or `my.cnf` file (Linux/Solaris) file in the MySQL installation folder with a text editor.
2. Add these lines in the `[mysqld]` section of the `my.ini` (Windows) or `my.cnf` file (Linux/Solaris) file.

```
[mysqld]
# LTI - DEBUGGING
log_slow_queries
long_query_time = 1
# LTI PRODUCTION
innodb_file_per_table
datadir="C:/INSTALL_LOCATION/MySQL/MySQL Server 5.0/Data/"
query_cache_size=64M
query_cache_limit = 8M
```

ADDITIONAL INFORMATION: These options enable correct interaction between the database server and *License Tracker*. The query cache size and limit values are the minimum recommended for *License Tracker* operation.

3. Save the `my.ini` (Windows) or `my.cnf` file (Linux/Solaris) file.

- Restart the database server in order to force it to pick up the changes in the `my.ini` (Windows) or `my.cnf` file (Linux/Solaris) file.

RESULT:

The changes to the `my.ini` file have the effect described in “[Table 2: Effects of changes to my.ini](#)” on page 27.

Table 2: Effects of changes to `my.ini`

my.ini value	Effect
<code>log_slow_queries</code>	Creates a log file that captures any query that takes a long time. This is useful to debug performance issues.
<code>long_query_time = 1</code>	Sets the threshold for long queries to 1 second.
<code>innodb_file_per_table</code>	Creates one file for each table in the InnoDB data directory. This allows the administrator to manage disk space more effectively.
<code>datadir="C:/MySQL_INSTALL_LOCATION/MySQL/MySQL Server 5.0/Data/"</code>	Name of the folder to hold the database files.
<code>query_cache_size=64M</code>	Sets the cache size to 64M. This makes repetitive queries very efficient. This value should be set to the largest size possible given the limits of RAM on the server.
<code>query_cache_limit = 8M</code>	Sets the maximum size of any single query. This should be set large enough to hold the time consuming large queries, but not too large relative to the <code>query_cache_size</code> . If set too large this value will restrict the number of queries held in cache to too small a number.

How to Create a *License Tracker* Database

License Tracker requires its own database. Follow these steps to create one.

TASK

- Start the MySQL command line tool.

2. Type
`mysql -u root -p password: [enter your root password]`
 3. To create an *License Tracker* database, type the following command:
`create database License_Tracker_Database_Name;`
-

How to Create a *License Tracker* Administrator in a MySQL Database

If an administrator other than the database server administrator will be handling the *License Tracker* database, the server administrator needs to create a *License Tracker* database administrator or userID.

TASK

1. Start the MySQL command line tool.
2. Type
`mysql -u root -p password: [enter your root password]`
3. To create an *License Tracker* administrator, type the following command:
`GRANT DELETE, INSERT, SELECT, UPDATE ON
License_Tracker_Database_Name.* TO 'Admin_User_Name'@'%'
IDENTIFIED BY
'Admin_User_Password';`

How to Create *License Tracker* Users in a MySQL Database

The *License Tracker* database administrator needs to create a MySQL userID for every user who will access the database on the server through *License Tracker*.

The steps below describe creating a single user. Repeat step #3 as needed for additional users.

TASK

1. Start the MySQL command line tool.
 2. Type
`mysql -u root -p password: [enter your root password]`
 3. To create a *License Tracker* user, type the following command:
`GRANT SELECT ON License_Tracker_Database_Name.* TO
'License_Tracker_User_Name'@'%' IDENTIFIED BY
'License_Tracker_User_Password';`
-

Create *License Tracker* Tables in a MySQL Server Database

Before you can populate the *License Tracker* database, tables have to be created to hold the software usage data. Follow this procedure to create the required tables.

TASK

1. Start the MySQL command line tool.
2. Type `mysql -u root -p password: [your root password]`
3. Type `use [License_Tracker_Database_Name];`
4. To create the required *License Tracker* tables, copy and paste the text in this file `/License Tracker Installation Folder/conf/MYSQLscript.txt` onto the MySQL command line or run the contents of the file as a script.

STEP RESULT: All of the tables required by *License Tracker* are created in the database.

Pass Necessary Information on to Users

All *License Tracker* users (both administrator and reporting-only) will need to be provided with:

- a server name and port number,
- a database name,
- their userID and password.

Upgrading the MySQL Database from a Previous *License Tracker* Database version

To upgrade an earlier version *License Tracker* database to the current version, use the following procedure.

TASK

1. Start the MySQL command line tool.
2. Type `mysql -u root -p password: [your root password]`
3. Type `use [License_Tracker_Database_Name];`
4. To determine the current database version, type:
`SELECT databaseVersion FROM LTVersion;`
5. To upgrade the *License Tracker* database, copy and paste the text in this file `/License Tracker Installation Folder/conf/`

MYSQL-UPDATE-[old_version_number]-[old_version_number + 1]-script.txt onto the MySQL command line or run the contents of the file as a script.

STEP RESULT: All of the tables in the *License Tracker* database have been upgraded to the next version.

6. Repeat the previous step as necessary with increased version numbers until you have upgraded to the latest version
-

How to Set Up an Oracle Server Database

Follow the steps in this section to create an Oracle database for *License Tracker*.

- 1) Select the Oracle server and instance in which you want to place the *License Tracker* database. Ensure that this system has sufficient memory and computation power to handle queries for the scale of data you intend to store and analyze.
- 2) Create a tablespace for the *License Tracker* database.
 - Ensure the initial size is adequate, suggested minimum size is 100MB.
 - Ensure that autoextend is enabled.
 - For purposes of the rest of the examples in this section we will assume that a tablespace 'ltrack' has been created.
- 3) Create roles for read-write and read-only. See [“Creating Roles for Read-write and Read-only Users”](#) on page 31.
- 4) Create the schema owner. See [“Creating the Schema Owner”](#) on page 31.
- 5) Create the *License Tracker* database tables. See [“Creating the License Tracker Database Tables”](#) on page 32.
- 6) Define the privileges for the two roles. See [“Defining the Privileges for the Roles”](#) on page 32.
- 7) Create administrator database user(s). See [“Creating a License Tracker Administrator in an Oracle Database”](#) on page 33.
- 8) Create reporting-only database user(s). See [“Creating License Tracker Users in an Oracle Database”](#) on page 33.
- 9) Pass necessary information on to users. See [“Pass Necessary Information on to Users”](#) on page 33.

Prerequisites

- 1) Basic administration familiarity with Oracle including starting, stopping, restarting, creating tablespaces, and administering users on an Oracle database.
- 2) Basic familiarity with creating and using tables and creating and using scripts.
- 3) Basic familiarity with running SQLplus, the Oracle command line tool.
- 4) The administrator must have full administration access to the server machine and the database server.

Creating Roles for Read-write and Read-only Users

License Tracker identifies administrator and view-only users of an Oracle License Tracker database by which of the read-write or read-only roles they have had assigned to them by the Oracle DBA.

You may call these roles by whatever name you choose; for clarity they will be called LT_RW and LT_RO for the rest of this section.

To create the required roles, follow his procedure.

TASK

1. Log into the desired Oracle instance as the DBA (root user)
2. In the SQLplus command window type:

```
create role LT_RO not identified;  
create role LT_RW not identified;
```

Creating the Schema Owner

To create the schema owner follow this procedure.

TASK

1. Select the name for your License Tracker schema instance (suggested default is 'lt').
2. Log into the desired Oracle instance as the DBA (root user).
3. In the SQLplus window type:

```
create user lt identified by <lt_passwd>  
temporary tablespace temp  
default tablespace ltrack
```

```
quota unlimited on ltrack;  
grant create session, connect, resource to lt;
```

ADDITIONAL INFORMATION: Note: If the schema owner will be logging into the database as a License Tracker administrator then you will also have to:

4. In the SQLplus command window type:

```
grant lt_rw to lt;
```

Creating the License Tracker Database Tables

A License Tracker database consists of a combination of tables and sequences. To create the database tables follow this procedure.

TASK

1. Log into the desired Oracle instance as the License Tracker schema owner
2. In the SQLplus command window copy and paste the from this file /<License Tracker Installation Folder>/conf/ORACLEscript.txt

Defining the Privileges for the Roles

To define the privileges for the LT_RW and LT_RO roles follow this procedure.

TASK

1. Open the /<License Tracker Installation Folder>/conf/ORACLEroles.txt in a text editor
2. Edit the file as needed:
 - If you have chosen role names other than the default (default are LT_RW and LT_RO) you will have to update to your names.
 - If you have chosen a schema name other than the default of 'lt' you will have to update to your name.
3. Log into the desired Oracle instance as the DBA (root user).
4. Copy and paste the text from the editor into the SQLplus command window.

ADDITIONAL INFORMATION: If you are creating more than one instance of the *License Tracker* schema you will have to add these privileges for each one.

Creating a License Tracker Administrator in an Oracle Database

Repeat the following steps for all administrator type users of *License Tracker*.

TASK

1. Log into the desired Oracle instance as the DBA (root user).
2. In the SQLplus command window type:

```
create user ltadmin identified by <ltadmin_passwd>  
temporary tablespace ltrack  
quota unlimited on ltract  
grant create session, connect, resource to ltadmin;  
grant lt_rw to ltadmin;
```

Creating *License Tracker* Users in an Oracle Database

Repeat the following steps for all reporting-only type users of License Tracker follow this procedure.

TASK

1. Log into the desired Oracle instance as the DBA (root user)
2. In the SQLplus command window type:

```
create user ltuser identified by <ltuser_passwd>  
temporary tablespace temp  
default tablespace ltrack  
quota unlimited on ltrack;  
grant create session, connect, resource to ltuser;  
grant lt_ro to ltuser;
```

Pass Necessary Information on to Users

All *License Tracker* users (both administrator and reporting-only) will need to be provided with:

- a server name, an instance name, and a port number,
- a schema name, and
- their userID and password.

Upgrading the Oracle Database from a Previous *License Tracker* Database version

To upgrade an earlier version *License Tracker* database to the current version, use the following procedure.

TASK

1. Log into the desired Oracle instance as the DBA (root user).
 2. To determine the current database version, in the SQLplus command window type:

```
SELECT databaseVersion FROM LTVersion;
```
 3. To upgrade the *License Tracker* database, copy and paste the text in this file
/License Tracker Installation Folder/conf/
ORACLE-UPDATE-[old_version_number]-[old_version_number + 1]-script.txt
onto the MySQL command line or run the contents of the file as a script.

STEP RESULT: All of the tables in the *License Tracker* database are upgraded to the next version.
 4. Repeat the previous step as necessary with increased version numbers until you have upgraded to the latest version
-

Updating an Oracle Server Database

An Oracle Server Database, created in *License Tracker* version 3.0, must be updated to properly function in *License Tracker* version 3.1. Follow the following steps to perform this update.

Setting Up a New File Database

Prerequisites

File databases can only be created and/or opened on a Windows XP computer system.

How to Set up a File Database

To create a *License Tracker* file database follow this procedure.

TASK

1. Click **File > Create File DB...** to open the **Create a New Database** dialog.
ADDITIONAL INFORMATION: When the *License Tracker* screen first opens, many of the menu items are shadowed and unavailable.
2. Click **Browse...** to open a directory window and enter a filename for your *License Tracker* file database. The Microsoft Access Database filename extension `.mdb` is added automatically. Click **Next** to open the next dialog.
3. In the **Import Models** dialog, click **Browse...**, beside each text field, and select the model filenames for this database. Click **Next** to open the next dialog.

ADDITIONAL INFORMATION: If this data are not yet available, then *License Tracker* allows you to leave these text fields blank and continue with the database creation. However, before you can use the *License Tracker* features (for example produce group-based and financial reports), you must eventually add these models with the **Import** feature or edit the empty models in your database using the editors in *License Tracker*.

For more information, go to **“Importing License Usage Data”** on page 39 and **“Managing Models”** on page 44.

ADDITIONAL INFORMATION: If you include a license model or a budget model, *License Tracker* with create a default content scope and assign these models to it.

4. In the **Import Session Data** dialog, click **Add** and select the log files containing your session data. The filename(s) appear in the window.
 - a Repeat this procedure until all of the files for your database are listed in the window. Click **Next** to open the next dialog.

ADDITIONAL INFORMATION: You **MUST** select the format of the file being imported from the pull down menu at the top of the dialog. Your input file type must match your incoming data format or the session data will not be interpreted correctly.

If your session data are not yet available, then *License Tracker* allows you to leave these text fields blank and continue with the database creation. However, before you can use any *License Tracker* features, you must add these files later using the procedure described in “**Importing License Usage Data**” on page 39.

5. In the **Set Data Preferences** dialog, identify the filters for the incoming data. Click **Finish** to open the **Create Database** dialog and start creating your database.

ADDITIONAL INFORMATION: Choose any, all or none of the following filters. If you leave the screen blank, then all data are accepted.

Remove identical sessions (recommended option)

Select this option to prevent duplicating data in the database.

Limit sessions to users in the User Model

Select this option to include only the session data that matches userIDs listed in the user model file.

Limit sessions to licenses in the License Model

Select this option to include only the session data that matches licenseIDs listed in the license model.

Session Duration

Select this option to specify the range of seconds defining a session length that you want contained in the database. Type in the minimum and maximum time values (in seconds).

Session Duration

Select this option to specify the range of seconds defining a session length that you want contained in the database. Type in the minimum and maximum time values (in seconds).

All Data

This accepts all the data in the file without imposing time period filtering.

Date Range

You define the date range in two separate text fields using the same procedures. Fill in the **Start Date** first, and then the **End Date**. Choose one of the following procedures:

A) Double-click on the text field values and type in new ones using the format **YYYY-MM-DD** (i.e., year-month-day), or

B) Open the calendar by clicking the square button beside the text field. Select the year and month from small pull-down menus and then click on the actual calendar day. Close the calendar by clicking the square button, in the upper right corner, to display the date in the text fields. If the calendar is shadowed and is not accessible, then you have selected a date when no data exists in your *License Tracker* database. At this point, you can choose another date when data exists, or import more data to cover the time you need for the report.

Previous ___ days

This accepts all the data in the file generated over the previous “n” days.

6. When *License Tracker* finishes creating your database, it displays the message **Task Complete** in the **Create Database** dialog. Click **Close** to display a screen of the resulting database information.

Managing Usage Data

Prerequisites

File databases can only be created and/or opened on a Windows XP computer system.

Opening an Existing Server Database

To open an existing *License Tracker* database follow this procedure.

TASK

1. Click **File > Connect to Server DB...** to open the **Connect to a License Tracker Server Database** dialog.
ADDITIONAL INFORMATION: You can also select a previously opened database from the list at the bottom of the **File** menu. *License Tracker* displays the last ten (10) databases opened.
2. Fill in the **License Tracker Server Database** dialog and click **OK** to have *License Tracker* display the database information, data sources and session statistics. At this point, the menu items are active and you can start using any of the *License Tracker* features.

Opening an Existing File Database

To open an existing *License Tracker* database follow this procedure.

TASK

1. Click **File > Open File DB...** to open a window, find the appropriate database and select it.
ADDITIONAL INFORMATION: You can also select a previously opened database from the list at the bottom of the **File** menu. *License Tracker* displays the last ten (10) databases opened.
2. Click **Open** to have *License Tracker* display the database information, data sources and session statistics. At this point, the menu items are active and you can start using any of the *License Tracker* features.
ADDITIONAL INFORMATION: Whether or not the **Admin** menu is accessible to you after opening a database depends on the privileges you have on that database. The **Admin** menu is only available to users who have administration privileges on the server or local database.

Importing License Usage Data

PREREQUISITE

- 1) If you do not have an existing *License Tracker* database, then you must create one. See one of the following:
 - “[How to Set Up a MySQL Server Database](#)” on page 25,
 - “[How to Set Up an Oracle Server Database](#)” on page 30,
 - “[Setting Up a New File Database](#)” on page 35.
- 2) You must be connected to the database.

To add data into an existing *License Tracker* database, follow this procedure.

TASK

1. Click **Admin > Import Sessions...** to open the panel of the **Import Session** dialog.
2. In the **Import Session Data** dialog, click **Add** to open the **Add Session Data** dialog.
3. Click **Browse...** to select a log file containing your session data. The filename appears in the window.
 - a You **MUST** select the type file being imported from the **Format** pull down menu. Your input file type must match your incoming data format or the session data will not be interpreted correctly.
 - b Optional step: **Timezone**: The timezone pull-down menu allows you to select the timezone where the data originated. License Tracker will adjust all times in the logfile to the local time of the database.
 - c Optional step: **Vendor**: You may select or create a new Vendor name to associate with this logfile. This is used both for associated a Vendor with any new features found in this logfile as well as to enable the **AutoDelete** capability in **AutoLoader**.
 - d Optional step: **Server**: You may associate a server with a logfile. This is used both in the **Filter** as well as in the **AutoDelete** capability in **AutoLoader**.
 - e Repeat this procedure until all of the files for your database are listed in the window. Click **Next** to move to the **Set Data Preferences** panel.

4. In the **Set Data Preferences** dialog, identify the filters for the incoming data. Click **Finish** to open the **Create Database** dialog and start creating your database.

ADDITIONAL INFORMATION: Choose any, all or none of the following filters. If you leave the screen blank, then all data are accepted.

- **Remove identical sessions**
Select this option to prevent duplicating data in the database.
 - **Limit sessions to users in the User Model**
Select this option to include only the session data that matches userIDs listed in the user model file.
 - **Limit sessions to licenses in the License Model**
Select this option to include only the session data that matches licenseIDs listed in the license model.
 - **Session Duration**
Select this option to specify the range of seconds defining a session length that you want contained in the database. Type in the minimum and maximum time values (in seconds).
 - **All Data**
This accepts all the data in the file without imposing time period filtering.
 - **Date Range**
You define the date range in two separate text fields using the same procedures. Fill in the **Start Date** first, and then the **End Date**. Choose one of the following procedures:
 - A) Double-click on the text field values and type in new ones using the format **YYYY-MM-DD** (i.e., year-month-day), or
 - B) Open the calendar by clicking the square button beside the text field. Select the year and month from small pull-down menus and then click on the actual calendar day. Close the calendar by clicking the square button, in the upper right corner, to display the date in the text fields. If the calendar is shadowed and is not accessible, then you have selected a date when no data exists in your *License Tracker* database. At this point, you can choose another date when data exists, or import more data to cover the time you need for the report.
 - **Previous ___ days**
This accepts all the data in the file generated over the previous “n” days.
5. When *License Tracker* finishes adding the logfiles to your database, it displays the message **Task Complete** in the **Import Sessions** dialog. Click **Close** to display a screen of the resulting database information.

Exporting Information from a Database

To export information from a *License Tracker* database follow this procedure.

TASK

1. Click **File > Export** to open a list of export options.
2. Select the type of data files you want to export.

ADDITIONAL INFORMATION: *License Tracker* exports all files, except for charts, in simple ASCII format and automatically adds the extension `.csv`. Charts are exported as `.png` files.

- The options **Users Model...**, **Licenses Model...**, and **Budget Model...**, refer to the user model, the license model and the budget model files.
- The option **Sessions...**, refers to session data that are saved as log files.
- The option **Reports/Charts...**, refers to the currently displayed report.

If the **Report/Chart...** option is shadowed and not available, you need to create and display a report or chart.

STEP RESULT: A directory window opens where you identify the location and filename for the exported data.

Editing Session Information

License Tracker offers you the following procedures under **Admin** that allow you to modify information in your database:

- Delete Import Source...
- Delete Sessions...

Deleting Sessions

In a *License Tracker* database you use the filter dialog to select the data you want to delete. Note that this is a change from Version 2.8 where you selected the data you wanted to keep and let *License Tracker* remove the rest.

How to Delete Sessions

TASK

1. Click **Admin > Delete Sessions...** to open the **Describe the data that you would like to delete** dialog.
2. Select one of the tabs in the dialog.
3. Make your data filtering selections in the area below the tabs.
4. Click **OK** to delete the selected data.

STEP RESULT: Sessions matching your data filtering selections will be deleted from the database.

Setting System Preferences

You may set the following system preferences:

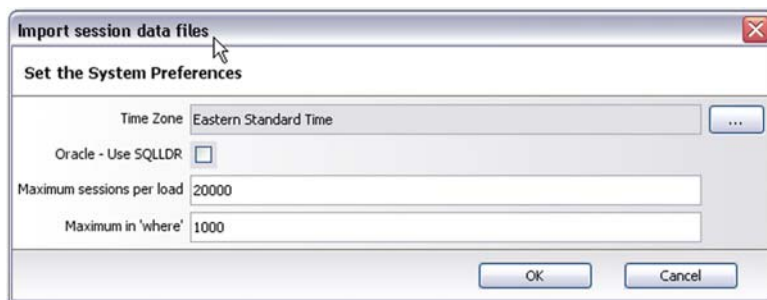
- Time One
- Oracle - Use SQLLDR
- Maximum sessions per load
- Maximum in 'where'

How to set system preferences

TASK

1. Click **Admin>System Preferences...** to open the **Set the System Preferences** dialog.

STEP RESULT:



2. In the **Set the System Preferences dialog** enter the required information.
 3. Click OK.
-

Managing Models

License Tracker uses four types of models to define how license usage information is analyzed: a user model, a feature model, license models, and budget models. Each one of these models is in turn used to define content scopes and report scopes, as described under “[Managing Scopes](#)” on page 58.

License Tracker allows you to edit these model files from inside the application. The following sections describe these procedures.

The Model Manager

License Tracker provides a model management and editing interface.

Clicking on these items brings you directly to the appropriate editing dialog.

- **Admin > Manage User Model**
- **Admin > Manage Feature Model**

License Tracker uses only one user model and feature model at a time. These contain information on all of the potential users and licenses in the license usage data.

Clicking on the following items brings you first to a model manager dialog containing a list of models. Clicking on a model then brings you to the appropriate editing dialog.

- **Admin > Manage License Models**
- **Admin > Manage Budget Models**

Model Management Dialog

Each of the model management and editing dialogs has the same basic structure and functionality.

When a model manager is first displayed, the dialog shows a list of the existing models available for editing. A button at the bottom of the dialog, **Add...**, allows you to add a new model immediately.

License Tracker can use more than one license and budget model that can be applied in analyzing the license usage data.

Selecting one of the existing models in the list activates the other buttons at the bottom of the screen: **Delete**, **Rename**, **Copy**, and **Edit**.

The **Copy** button is used primarily to allow for copying a model, giving it a new name, and then making adjustments to the model.

Double-clicking a model name or pressing the **Edit** button, displays a new dialog designed for editing the selected model. Editing the user, feature, license and budget models is described below. Editing the content and report scopes is described under “**Managing Scopes**” on page 58.

Standard Editing Procedures

This section describes editing procedures that are specific to the user model.

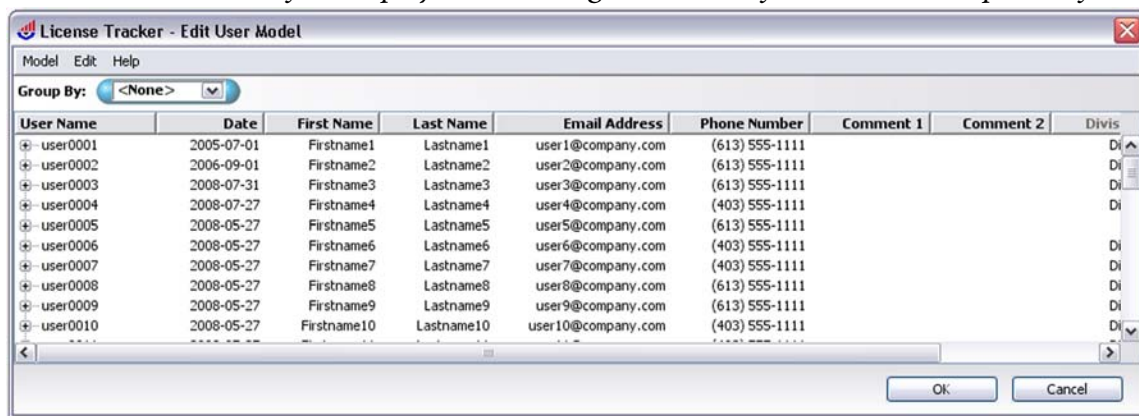
IMPORTANT: *The following procedures assume that you have already opened your user model in edit mode with **Admin > Manage User Model**.*

There are two basic procedures for editing model files: direct editing and copying and pasting.

How to prepare a model for editing

To prepare a model for editing follow this procedure

NOTE: *When a model is first displayed, the dialog shows the information in compressed form:*

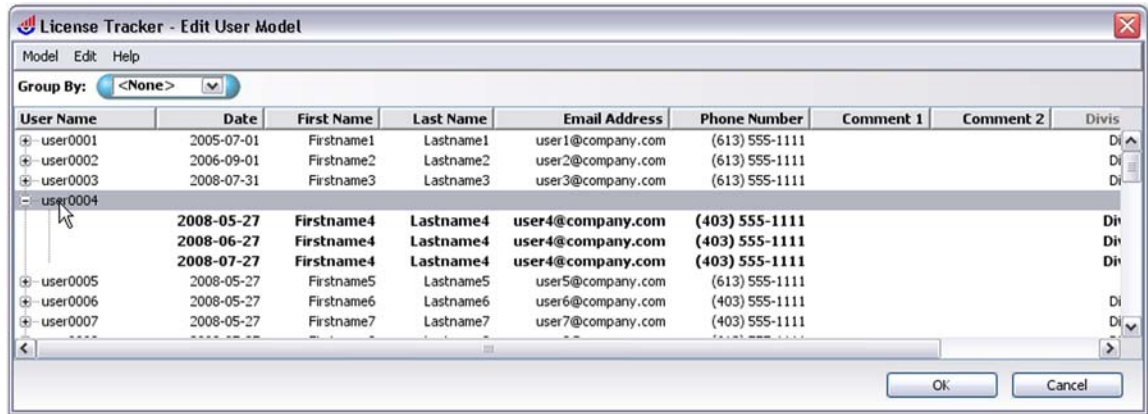


TASK

1. Click on the + sign in front of the parameter(s) that you intend to edit, or double-click on the parameter(s). This will expand the data into an additional number of so-called

“Items”, rows of date-related information. repeat this step till you are seeing the items you need to edit.

STEP RESULT: The display will now look like this:



How to Edit a Row

To edit a row follow this procedure.

TASK

1. Select the desired model name in the **Model Manager** dialog and open the editing dialog by double-clicking the model name or pressing the **Edit** button at the bottom of the **Model Manager** dialog.

STEP RESULT: **Edit Model** dialog is displayed.

NOTE: As the information is initially displayed in collapsed tree form, you may need to expand the item that you are interested in by clicking on the +sign.

2. Click on the +sign in front of the row that you want to edit. Repeat this until you have reached the level (row) that you actually want to edit.
3. Double-click the row that you want to edit. You can also right-click and select **Edit** or select **Edit** under the **Edit** menu.

STEP RESULT: The **Edit Item** dialog is displayed. This dialog presents data fields appropriate to the model and item you want to edit. Every column in the model has its own field.

4. Enter your new information.
5. Press **OK** to accept your changes.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Model** dialog

6. Continue to make changes as desired and then click **OK** or **Cancel**.

ADDITIONAL INFORMATION: Clicking **Cancel** brings you back to the **Model Manager** dialog without saving your changes in the database.

STEP RESULT: Clicking **OK** saves your changes in the database and brings you back to the **Model Manager** dialog.

How to Edit More than one Row at a Time

To edit more than one row at a time, follow this procedure.

TASK

1. Select the desired model name in the **Model Manager** dialog and open the editing dialog by double-clicking the model name or pressing the **Edit** button at the bottom of the **Model Manager** dialog.

STEP RESULT: **Edit Model** dialog is displayed.

NOTE: As the information is initially displayed in collapsed tree form, you may need to expand the item that you are interested in by clicking on the +sign.

2. Click on the +sign in front of the row that you want to edit. Repeat this until you have reached the level (rows) that you actually want to edit.
3. Shift-click to select the rows you want to edit then right-click and select **Edit** or select **Edit** under the **Edit** menu.

STEP RESULT: **Edit Item** dialog is displayed.

This dialog presents data fields appropriate to the model and item you want to edit. Every column in the model has its own field. Some fields will be greyed-out because changes in these fields cannot be applied to more than one item at a time.

4. Select the checkbox beside a field you want to change for all of the selected rows and change the value in field beside the checkbox. You can make changes to more than one field at a time.
5. Press **OK** to accept your changes.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Model** dialog

6. Continue to make changes as desired and then click **OK** or **Cancel**.

STEP RESULT: Clicking **OK** saves your changes in the database and brings you back to the **Model Manager** dialog. Clicking **Cancel** brings you back to the **Model Manager** dialog without saving your changes in the database.

Working with the User Model

Importing a User Model file

Editing the User Model

Use the procedures described under “**Standard Editing Procedures**” on page 45 to guide you through the general editing of the user model.

This section describes editing procedures that are specific to the user model.

***IMPORTANT:** The following procedures assume that you have already opened your feature model in edit mode with **Admin > Manage User Model**.*

How to Add a New User

TASK

1. In the open user model, right-click anywhere and select **Add User...** or select the **Edit > Add User...** menu item.

STEP RESULT: **Add User...** dialog is displayed.



- This dialog presents user data fields. Every column in the **User Model** has its own field.
2. In the **Add User...** dialog, enter a unique username and other information.
 3. Click **OK** to insert the name in the model in alphabetical order.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Edit an Existing User

TASK

1. In the open user model, select the **User** that you want to edit, and select **Edit > Edit User...** menu item.

STEP RESULT: **Edit User...** dialog is displayed.

- This dialog presents user data fields. Every column in the **User Model** has its own field.
2. In the **Edit User...** dialog, change the values in the bolded fields in the dialog box as required.

ADDITIONAL INFORMATION: The greyed-out fields in the dialog cannot be changed.

3. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Delete a User

TASK

1. In the open user model, select one or more rows containing the user names that you want to remove.
2. Click **Edit > Remove User...** or right-click and select **Remove User...** to remove the row of information associated with the username or names.
3. Click **OK** at the bottom of the window to save the change.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Add an Item

TASK

1. In the open user model, right-click the **User** whose **Item** you want to add, and select **Add Item...**

STEP RESULT: **Add Item** dialog is displayed.

- This dialog presents user data fields. Every column in the **User Model** has its own field.

2. In the **Add Item** dialog change the values in the bolded fields in the dialog box as required.

ADDITIONAL INFORMATION: The greyed-out fields in the dialog cannot be changed.

3. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Edit an Existing Item

TASK

1. In the open user model, double-click the **User** whose **Item** you want to edit, or by clicking on its + sign.

STEP RESULT: One or more **Items** (rows of date-related user information) are displayed.

2. Double-click the **Item** that you want to edit. You can also right-click the **Item** and select **Edit Item...** .

STEP RESULT: **Edit Item** dialog is displayed.

- This dialog presents user data fields. Every column in the **User Model** has its own field.

3. Change the values in the bolded fields in the dialog box as required.

ADDITIONAL INFORMATION: The greyed-out fields in the dialog cannot be changed.

4. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Delete an Item

TASK

1. In the open user model, double-click the **User** whose **Item** you want to delete, and right-click the item in question, and then select **Remove Item**.

STEP RESULT: **Confirm** dialog is displayed.

- This dialog asks for confirmation of the **Remove Item** request.

2. Click **Yes**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **No**.

STEP RESULT: You return to the **Edit User Model** dialog.

How to Add a User Category

TASK

1. In the open user model, click **Edit > Add Column** or right-click anywhere and select **Add Column**.

STEP RESULT: The **New Column Title** dialog appears.

2. Enter the name of the user category in the **New Column Title** dialog.

3. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog. A new user category column appears on the right-hand side of the **Edit User Model** dialog.

How to Add or Edit Attributes Under a User Category

TASK

1. Follow the procedure described under “[How to Edit a Row](#)” on page 46 or “[How to Edit More than one Row at a Time](#)” on page 47.

ADDITIONAL INFORMATION: You will notice that the **Edit User** dialog has a field for the various user categories you have defined. Fill in the appropriate field with the appropriate information. You can also define an attribute name for an individual user by following the procedure described under “[How to Edit an Existing User](#)” on page 49.

How to Delete a User Category

TASK

1. In the open user model select any cell in the column of the **User Category** you want to delete.
2. Click **Edit > Remove Column** or right-click anywhere and select **Remove Column**.

STEP RESULT: A **Remove Column** confirmation dialog appears.

3. Click **OK** to confirm the deletion.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit User Model** dialog.

Editing the Feature Model

Use the procedures described under “[Standard Editing Procedures](#)” on page 45 to guide you through the general editing of the feature model.

This section describes editing procedures that are specific to the feature model.

IMPORTANT: The following procedures assume that you have already opened your feature model in edit mode with **Admin > Manage Feature Model**.

How to Add a New Feature

TASK

1. In an open feature model right-click anywhere and select **Add Feature...** or select the **Edit > Add Feature...** menu item.

STEP RESULT: The **Add Feature** dialog is displayed.

- This dialog presents feature data fields. Every column in the feature model has its own field.
2. In the **Add Feature** dialog,
 - a Enter a unique feature name beside **Feature Name:**.
 - b Fill in the fields beside **Vendor Name:**, **Feature Sharing Strategy:** and **False Denial Threshold:** as necessary.
 3. Click **OK** to insert the feature in the model in alphabetical order.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Feature Model** dialog.

How to Edit an Existing Feature

TASK

1. In the open feature model double-click the **Feature** that you want to edit. You can also right-click and select **Edit Feature...** or select the **Edit > Edit Feature...** menu item.

ADDITIONAL INFORMATION: You may want to expand the displayed information by clicking on the + sign in front of the vendor name concerned.

STEP RESULT: The **Edit Feature** dialog is displayed.

- This dialog presents feature data fields. Every column in the feature model has its own field.
2. In the Edit Feature... dialog, change the values in the bolded fields in the dialog as required.
 3. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Feature Model** dialog.

How to Delete a Feature

TASK

1. In the open feature model select one or more rows containing the feature name that you want to remove.

ADDITIONAL INFORMATION: You may want to expand the displayed information by clicking on the + sign in front of the vendor name concerned.

2. Click **Edit > Remove Feature...** or right-click and select **Remove Feature...** to remove the row of information associated with the feature name or names.
3. Click **OK** at the bottom of the dialog to save the change.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Feature Model** dialog.

Editing a License Model

Use the procedures described under “**Standard Editing Procedures**” on page 45 to guide you through the general editing of a license model.

This section describes editing procedures that are specific to a license model.

ATTENTION: The following descriptions assume that you have already opened a license model in edit mode with **Edit > License Model**.

How to Add a New License

This procedure consists of adding a new row with a unique license name.

TASK

1. In an open license model click **Edit > Add License...** to open a dialog for entering information. If data are already present in the model, then you can also right-click and select **Add License...**

ADDITIONAL INFORMATION: You may want to expand the displayed information by clicking on the + sign in front of the vendor name concerned.

2. In the **Add License** dialog, select a vendor name and feature name from the pull-down menus at the top of the dialog.
3. Select or type in a date in the **Date** field.

4. Fill in the other fields with the new license information.
ADDITIONAL INFORMATION: Only enter data in those fields that require information for your purposes and leave the other fields blank (with zero values).
ADDITIONAL INFORMATION: You can move between fields with the **TAB** key.
5. Click **OK** at the bottom of the dialog to save the change.
ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.
STEP RESULT: You return to the **Edit Feature Model** dialog.

How to Edit an Existing License

To edit an existing license in a license model:

TASK

1. In the open license model double-click the license that you want to edit. You can also right-click and select **Edit License...** or select the **Edit > Edit License...** menu item.
ADDITIONAL INFORMATION: You may want to expand the displayed information by clicking on the + sign in front of the vendor name concerned.
STEP RESULT: The **Edit License** dialog is displayed.
 - This dialog presents license data fields. Every column in the feature model has its own field.
2. Change the values in the fields in the dialog as required.
3. Click **OK**.
ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.
STEP RESULT: You return to the **Edit License Model** dialog.

How to Delete License Items

To delete one or more licenses from a license model:

TASK

1. In an open license model select the license or licenses you want to delete.
ADDITIONAL INFORMATION: You may want to expand the displayed information by clicking on the + sign in front of the vendor name concerned.
2. Click **Edit > Remove License...** or right-click and select **Remove License....** to remove the row of information associated with the feature name or names.

3. Click **OK** at the bottom of the dialog to save the change.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit License Model** dialog.

Editing a Budget Model

Use the procedures described under “**Standard Editing Procedures**” on page 45 to guide you through the general editing of a budget model. This section describes editing procedures that are specific to editing budget models.

ATTENTION: The following descriptions assume that you have already opened a budget model in edit mode with **Edit > Budget Model**.

How to Add a Year to a Budget Model

To add a new budget item:

TASK

1. In an open budget model click **Edit > Add Year...** to open the **Add Year** dialog for entering information.
 - a. If data are already present in the model, you can select an existing year and right-click and select **Add Year...** or click **Edit > Add Year...**. Values in the selected year are copied into the **Add Year** dialog automatically.
2. In the **Add Year** dialog, select a year from the pull-down menus at the top of the dialog.

ADDITIONAL INFORMATION: You can move between fields with the **TAB** key.
3. Fill in the other fields with the monthly budget information as required.

ADDITIONAL INFORMATION: Only enter data in those fields that require information for your purposes and leave the other fields blank (with zero values).
4. Click **OK** at the bottom of the dialog to save the change.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Budget Model** dialog.

How to Edit an Existing Budget Model

To edit an existing budget item:

TASK

1. In the open budget model double-click the budget year that you want to edit.
 - a You can also select the year and right-click and select **Edit Year...** or
 - b You can also select the year and then select the **Edit > Edit Year...** menu item.

STEP RESULT: The **Edit Year** dialog is displayed.

- This dialog presents budget year data fields. Every column in the budget model has its own field.
2. Change the values in the fields in the dialog as required.
 3. Click **OK**.

ADDITIONAL INFORMATION: To leave the dialog without making any changes, press **Cancel**.

STEP RESULT: You return to the **Edit Budget Model** dialog.

Managing Scopes

License Tracker uses the concept of “scopes” to help make using *License Tracker* easier for end-users.

Administrators can create two types of scopes:

Content Scopes

Allow an administrator to give a name to a view into the license usage data. For example, a content scopes called “Office-Houston” and “Office-Calgary” might be used to generate reports on license usage in those locations. Another set of content scopes called “Vendor-1” and “Vendor-2” might be created to generate reports on particular software packages or features, in all locations.

Report Scopes

Allow an administrator to give a name to preselected suite of reports. For example a report scope called “Division-Quarter-End” might be used to generate reports on budgeted versus actual expenditure on software licensing at the divisional level for regular quarterly budget reviews. Another report scope called “Weekly-Feature-22-Div-2” might be used to generate reports on a particular software license in a particular division.

License Tracker allows you to edit scopes from inside the application. The following sections describe these procedures.

The Scope Manager

License Tracker provides a scope management and editing interface.

Clicking on these items brings you directly to the appropriate editing dialog.

- **Admin > Manage Report Scopes...**
- **Admin > Manage Content Scopes...**

Clicking one these menu items brings you directly to a scope manager dialog containing a list of scopes. Clicking on a scope then brings you to the appropriate editing dialog.

Scope Management Dialog

Both scope management dialogs have the same basic structure and functionality.

When a scope manager is first displayed, the dialog shows a list of the existing scopes available for editing. A button at the bottom of the dialog, **Add...**, allows you to add a new scope immediately.

Selecting one of the existing models in the list activates the other buttons at the bottom of the screen: **Delete**, **Rename**, **Copy**, and **Edit**.

The **Copy** button is used primarily to allow for copying a model, giving it a new name, and then making adjustments to the model.

Double-clicking a scope name or pressing the **Edit** button, displays a new dialog designed for editing the selected scope.

Editing a Content Scope

Use the procedures described under “**Standard Editing Procedures**” on page 45 to guide you through the general editing of a content scope.

This section describes editing procedures that are specific to a content scope.

NOTE: When defining a content scope you select user and feature attributes to restrict the content (or view into the database). If no attributes are selected then there are no restrictions (ie. all of the users or features will be part of the content scope).

How to Add a New Content Scope

This procedure consists of adding a new row with a unique content scope name.

TASK

1. Click on **Admin > Manage Content Scopes...** to display the **Edit Content Scope** dialog.
2. In the open **Edit Content Scope** dialog, click **Add...** at the bottom of the screen to open a second-level **Edit Content Scope []** dialog.
3. In the open **Edit Content Scope []** dialog you may type a brief description of the scope in the text field beside **Description** (optional).

4. Click on the **Users** tab below the scope name field.

STEP RESULT: The dialog shows three active areas:

- A pull-down selection box containing a list of user categories (or group types) immediately below the tabs.

NOTE: The categories listed in this box reflect the contents of the **User Model**. New categories can be created by editing the **User Model**. See [“Editing the User Model” on page 48](#) for more information.

- A list of attributes for the user categories (or groups) below the selection box.
 - An empty area on the right hand side of the dialog.
5. Select a category from the pull-down selection box to display a list of attributes in that category.
 6. Select the attributes you want included in this scope and use the right-hand arrow to move the user(s) into the into the empty area on the right-hand side of the dialog. Users having these attributes in this area will be included in the scope.
 7. Repeat the previous two steps until all of the attributes in all of the categories you want are included in the scope are listed on the right hand side of the dialog. Note that if attributes from multiple categories are included that only users with one of the attributes from each of the categories will be included in the content scope.
 8. Click on the **Features** tab below the scope name field.

STEP RESULT: The dialog shows two active areas:

- A list of vendors below the tab.

NOTE: The features listed in this dialog reflect the contents of the **Feature Model**. New features can be created by editing the feature model. See [“Editing the Feature Model” on page 52](#) for more information.

- An empty area on the right hand side of the dialog.
9. Select the vendors whose features you want included in this scope and use the right-hand arrow to move the vendor(s) into the into the empty area on the right-hand side of the dialog. Features from the vendors in this area will be included in the scope.
 10. Click on the **Models** tab below the scope name field.

STEP RESULT: The dialog shows two pull-down selection boxes:

- A **License Model** selection box.
- A **Budget Model** selection box.

NOTE: The models listed in these selection boxes in this dialog reflect the license and budget models associated with the license usage data. New license and budget models

can be created. See [“Editing a License Model” on page 54](#) and [“Editing a Budget Model” on page 56](#) for more information.

11. Select the license and budget models you want included in this scope. The selected models will be included in the scope, and used for all financial analyses.
12. Click on **OK** at the bottom of the dialog to display the **Content Scope Name** dialog.
13. Type the name of the new scope in the text field beside **Scope Name**.
14. Click on **OK** at the bottom of the dialog.

STEP RESULT: You returned to the list of content scopes. The scope you have created is included in the list.

How to Edit a Content Scope

TASK

1. Click on **Admin > Manage Content Scopes...** to display the **Edit Content Scope** dialog.
2. In the open **Edit Content Scope** dialog, select a scope you want to edit.
3. Click **Edit...** at the bottom of the screen or double-click a scope name to open a second-level **Edit Content Scope [scope name]** dialog.
4. Follow the procedures already described under [“How to Add a New Content Scope”](#) on page 59 to modify the scope.

How to Delete a Content Scope

TASK

1. Click on **Admin > Manage Content Scopes...** to display the **Edit Content Scope** dialog.
 2. In the open **Edit Content Scope** dialog, select a scope you want to delete.
 3. Click **Delete** at the bottom of the screen to delete the scope.
-

Editing a Report Scope

Use the procedures described under [“Standard Editing Procedures”](#) on page 45 to guide you through the general editing of a report scope.

This section describes editing procedures that are specific to a report scope.

How to Add a New Report Scope

This procedure consists of adding a new row with a unique report scope name.

TASK

1. Click on **Admin > Manage Report Scopes...** to display the **Edit Report Scopes** dialog.
2. In the open **Edit Report Scopes** dialog, click **Add...** at the bottom of the screen to open a second-level **Edit Report Scope []** dialog.
3. In the open **Edit Report Scope []** dialog you may type a brief description of the new scope in the text field beside **Description** (optional).
4. Type the name of the new scope in the text field beside **Scope Name**.
5. Click on a tab below the scope name to display a list of available reports.
6. Select a report to be included in the scope by clicking the checkbox beside a report name. Reports with green checkmarks beside the name will be included in the scope.
7. Repeat the previous two steps until all of the reports you want in the scope have been selected.
8. Click on **OK** at the bottom of the dialog to display the **Content Report Name** dialog.
9. Type the name of the new scope in the text field beside **Scope Name**.
10. Click on **OK** at the bottom of the dialog.

STEP RESULT: You returned to the list of report scopes. The scope you have created is included in the list.

How to Edit a Report Scope

TASK

1. Click on **Admin > Manage Report Scopes...** to display the **Edit Report Scope** dialog.
2. In the open **Edit Report Scope** dialog, select a scope you want to edit.
3. Click **Edit...** at the bottom of the screen or double-click a scope name to open a second-level **Edit Report Scope [scope name]** dialog.
4. Follow the procedures already described under **“How to Add a New Report Scope”** on page 62 to modify the scope.

How to Delete a Report Scope

TASK

1. Click on **Admin > Manage Report Scopes...** to display the **Edit Report Scope** dialog.
2. In the open **Edit Report Scope** dialog, select a scope you want to delete.
3. Click **Delete** at the bottom of the screen to delete the scope.

Automating *License Tracker*: AutoTracker Modules

License Tracker has a built-in capability for automating certain functions through the AutoTracker modules. These functions include:

- loading data with **AutoLoader**,
- generating Web Tracker reports with **AutoReporter**, and
- generating and sending alerts by e-mail with **AutoAlerter**

Each of these functions is controlled by a batch process that can be set up by an administrator. An individual batch or script file can contain many lines, each one controlling an individual invocation of one of the **AutoTracker** modules.

AutoTracker Database Specification

Fundamental to running any of the *AutoTracker* modules is an *AutoTracker* database specification file.

For a server database, this database specification file contains information that allows the *AutoTracker* modules to connect to a the database. Creation of an *AutoTracker* database configuration file is done the a dialog accessed via **File > Create AutoTracker DB configuration file....** These files are saved in the *License Tracker* “conf” directory with a .dbconf file extension.

For a file database the database specification file contains the full path to the MS-Access database, also known as an .mdb file.

Using the AutoLoader Module

The *AutoLoader* module enables you to batch schedule the loading of usage logfiles and models into a *License Tracker* database. Each invocation of *AutoLoader* will add the contents of a specified directory into a specified database. A single script file can contain many lines, each loading the data from a different directory into a *License Tracker* database, or even into different databases.

Command Line Syntax

```
<preliminaries/context> <required items> [options]
```

where

<preliminaries/context>

are the basic commands required to run *AutoLoader*.

<required items>

is the minimum set of commands required for *AutoLoader* to load data.

[options]

are variables that allow the administrator to select and fine tune the data that will be loaded.

Preliminaries and Context for the Script

JVM invocation, Windows

```
c:\windows\system32\javaw.exe
```

JVM invocation, Solaris/Linux:

```
java
```

JVM options

```
-Xmx1024m
```

Classpath specification

```
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-connector-java-5.0.4  
-bin.jar;ojdbc14.jar
```

NOTE: The separator for Windows is “;” and for Solaris it is “:”

Main class

```
com.licensetracker.autoloader.AutoLoader
```

Required Items

Database specification

```
-db <dbspec>
```

the name of the `dbconf` file (without the extension) to connect to server database, or

full path to the file database.

Input directory

-i <input_directory>

The directory where **AutoLoader** will find input files. The input directory can be on the local machine or on a remote server. Typically this directory is populated by another periodic process that collects license usage logs from other servers.

NOTE: The input directory must exist before the script is run.

Default server name

-s <serverName>

the name of the license server to be associated with this import session; if a server name is found in the file it will override this value

Default vendor name

-v <serverName>

the Vendor name to be associated with any new features encountered in this session
import

Options

Restricting users and/or features to be imported

-[u | f | uf] <scope>

Whether to restrict users, features or both to those specified by the content scope named "scope".

NOTE: If the scope is not specified, the entire database will be the scope.

Time offsetting for time zone compensation

-t <nHours>

The number of hours that times read in are to be adjusted by to correspond to the time zone of the database.

Date range: startDate and endDate

-sd <date>

Only data after this date will be loaded.

The required date format is “MMM dd, yyyy HH:mm:ss”.

*NOTE: If the start date is not specified, everything **from** the beginning of the database will be used.*

-ed <date>

Only data before this date will be loaded.

The required date format is “MMM dd, yyyy HH:mm:ss”

*NOTE: If the end date is not specified, everything **to** the end of the database will be used.*

Date range: a specific number of previous days or previous months

-pd <count>

Only data from the previous number of days specified by “count” will be loaded.

-pm <count>

Only data from the previous number of months specified by “count” will be loaded.

Auto-deleting a previous file

-ad

Prior to loading the file, **AutoLoader** will delete session data associated with a previous file which has the same filename, start date, server, and vendor. This enables daily updating while still capturing long session information.

Notes

- 1) **AutoLoader** must be run from the 'bin' directory of your *License Tracker* installation.
- 2) Only use one date specification option; if none are used entire database period will be considered.
- 3) Use quotation marks if an option contains a space.

Examples

The following scripts are typical examples of how **AutoLoader** is used to automate the collection of license usage data.

Example: Load all the data in \input

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar;ojdbc14.jar
com.licensetracker.autoloader.AutoLoader MySQLlocal c:\AutoLoader\input
```

Example: Load all the data in "input" from the previous 7 days

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar ojdbc14.jar
com.licensetracker.autoloader.AutoLoader c:\temp\VendorXQ1.mdb c:\
AutoLoader\input -pd 7
```

Example: Load all the data in "input" between the dates specified

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar ojdbc14.jar
com.licensetracker.autoloader.AutoLoader MySQLlocal c:\
AutoLoader\input -sd "Jan 01, 2007 00:00:00" -ed "Mar 31, 2007 23:59:59"
```

Example: Load all the data in "input" from the last three months

```
java -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar ojdbc14.jar
com.licensetracker.autoloader.AutoLoader OracleAdmin /home/
AutoLoader/input -cs NAUnit -pm 3
```

Using the AutoReporter Module

The *AutoReporter* modules enables you to batch schedule the generation of *WebTracker* reports. Each invocation of *AutoReporter* will generate the reports specified in a report scope. A single script file can contain many lines, each generating a different set of reports.

Command Line Syntax

```
<preliminaries/context> <required items> [options]
```

where

<preliminaries/context>

are the basic commands required to run *AutoReporter*.

<required items>

is the minimum set of commands required for *AutoReporter* to analyze data.

[options]

are variables that allow the administrator to fine tune the output.

Preliminaries and Context for the Script

JVM invocation, Windows

```
c:\windows\system32\javaw.exe
```

JVM invocation, Solaris/Linux:

```
java
```

JVM options

```
-Xmx1024m
```

classpath specification

```
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-connector-java-5.0.4  
-bin.jar;ojdbc14.jar
```

NOTE: The separator for Windows is ; and for Solaris is :

main class

```
com.licensetracker.autoreporter.AutoReporter
```

Required Items

Database specification

```
-db<dbspec>
```

The name of the `dbconf` file (without the extension) to connect to the server database, or the full path to the file database.

output directory

The directory in which **AutoReporter** will put **Web Tracker** output. The output directory can be on the local machine or on a remote server.

NOTE: The output directory must exist before the script is run.

Options

Scopes

-cs <scope>

The content scope. This option limits the portion of the database that will be used. If the content scope is not specified the entire database will be used.

-rs <scope>

The report scope. This option specifies the reports and components to use. If the report scope is not specified, all reports with all components and long session threshold of 24 hours in the database will be used.

Date range: startDate and endDate

-sd <date>

Only data after this date will be loaded.

The required date format is “MMM dd, yyyy HH:mm:ss”.

*NOTE: If the start date is not specified, everything **from** the beginning of the database will be used.*

-ed <date>

Only data before this date will be loaded.

The required date format is “MMM dd, yyyy HH:mm:ss”

*NOTE: If the end date is not specified, everything **to** the end of the database will be used.*

Date range: specific number of previous days or previous months

-pd <count>

Only data from the previous number of days specified by “count” will be loaded.

-pm <count>

Only data from the previous number of months specified by “count” will be loaded.

Indices: multiple hierarchical report sets

-i1 <type>:< category[:label]>

The primary index.

type is User or Feature.

category is any user category or Vendor .

label is the word to use in the Web Tracker navigation header, if desired.

-i2 <type>:< category>[:label]

The secondary index, if desired.

NOTE: The primary index must be defined first.

Notes

- 1) **AutoReporter** must be run from the 'bin' directory of your *License Tracker* installation.
- 2) Only use one date specification option; if none are used entire database period will be considered.
- 3) Use quotation marks if an option contains a space.

Examples

The following scripts are typical examples of how **AutoLoader** is used to automate the collection of license usage data.

Web Tracker output

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath  
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c  
onnector-java-5.0.4-bin.jar  
com.licensetracker.autoreporter.AutoReporter MySQLlocal  
c:\WebTrackerOutput
```

Web Tracker output for previous seven days

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar
com.licensetracker.autoreporter.AutoReporter c:\temp\VendorXQ1.mdb
"c:\Web Tracker Output" -pd 7
```

Web Tracker output, date range

```
C:\WINDOWS\system32\javaw.exe -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar
com.licensetracker.autoreporter.AutoReporter MySQLlocal "c:\Web Tracker
Output" -sd "Jan 01, 2007 00:00:00" -ed "Mar 31, 2007 23:59:59"
```

Web Tracker output, specific content scope, hierarchical report set

```
java -Xmx1024m -classpath
ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-c
onnecter-java-5.0.4-bin.jar
com.licensetracker.autoreporter.AutoReporter OracleAdmin
/home/WebTrackerOutput -cs NAUnit -il Feature:Vendor:Vendor -i2
User:Division:Division -pm 3
```

Using the AutoAlerter Module

The **AutoAlerter** module allows an administrator to send alerts to designated users automatically when certain conditions occur in the license usage data.

Command Line Syntax

```
<preliminaries/context> <required items> [options]
```

where

<preliminaries/context>

are the basic commands required to run AutoAlerter.

<required items>

is the minimum set of commands required for AutoAlerter to generate e-mail alerts.

[options]

is the variable that allow the administrator to run the AutoAlerter module in debug mode.

Preliminaries and Context for the Script

JVM invocation, Windows

c:\windows\system32\javaw.exe

JVM invocation, Solaris/Linux:

java

JVM options

-Xmx1024m

classpath specification

ChartDirector_s.jar;licensetracker.jar;activation.jar;mail.jar;mysql-connector-java-5.0.4
-bin.jar;ojdbc14.jar

NOTE: The separator for Windows is ; and for Solaris is :

main class

com.licensetracker.autoreporter.AutoReporter

Required Items

-db dbspec

-db<dbspec>

The name of the dbconf file (without the extension) to connect to the server database, or the full path to the file database.

-i inputDir

The directory in which **AutoAlerter** will find the required AlertModel and SubscriptionModel CSV files.

Note: The input directory, with **AlertModel** and **SubscriptionModel** CSV files, must exist before the script is run.

-eh emailHost

Name of the e-mail service. On Windows systems this can be found in

Outlook -> Tools -> EmailAccounts -> Outgoing Mail Server.

-ef emailFrom

Address e-mails will be addressed from.

-er emailReturn

Return address for e-mails.

Options

-debug LogFileName

An optional debug file. All output will be generated in the debug log file if the -debug option is specified.

Input Directory

The input directory must have two CSV files:

Alert Model

The **Alert Model** file must follow this naming convention: `xxxxxxxxAM.csv`, where `xxxxxxxx` can be any string valid in a filename.

Subscription Model

The **Subscription Model** file must follow this naming convention: `xxxxxxxxSM.csv`, where `xxxxxxxx` can be any string valid in a filename.

AlertModel CSV file

The **AlertModel** CSV file contains the definitions for the alerts.

There are currently two types of alerts, **Long Session Alerts** and **Denial Alerts**. Each row in the **Alert Model** file contains the parameters for one of these alerts. An alert will be evaluated only if someone is subscribed to the alert in the **Subscription Model** file.

Long Session Alerts Syntax

A row designating a **Long Session Alert** in the `xxxxxxxxAM.csv` file must follow the format in the table below. The `AM.csv` may have any number of **Long Session Alert** entries.

Table 3: Long Session Alert Entry in the AM.csv file

Column Number	Name	Description
1	LongSessionAlert	Type of alert. “LongSessionAlert” is case sensitive.
2	Name	Name of the alert. This will be used in the subscription model as well as the e-mails sent to the subscribers.
3	Feature	Feature to which this alert applies.
4	Duration	Duration of a session that is considered to be a long session (hours)
5	Previous hours	How many hours ago to look for long sessions (in hours). For example, a value of 6 means that any long session within the past 6 hours will generate an alert. A value of 1 means that any long session within the past hour will generate an alert. A value of 0 means that any long session that was active at the last time in the database will generate an alert.
6	MaximumConcurrentPercent	The percent of all available licenses that must be exceeded before an alert is generated. For example, a value of 80 means that 80% of all licenses must be in use when a long session is encountered before an alert is generated. If a long session is detected, but the number of concurrent sessions is only at 20%, then no alert is generated. If a long session is detected, and the number of concurrent sessions is over 80%, then an alert is generated. A value of zero will generate an alert for all long sessions. A value of 100 will suppress long session alerts.
7	emailUsersFlag	Automatically e-mail the users that generated a long session alert. This generates a “polite” e-mail reminding them that long sessions are not making good use of corporate resources. A value of “TRUE” means e-mail the users of long session alerts. A value of “FALSE” means do not e-mail the users.

Denial Alert

A row designating a denial alert in the xxxxxxxxAM.csv file must follow the format in the table below. The AM.csv may have any number of Denial Alert entries.

Table 4: Denial Alert Entry in the AM.csv file

Column Number	Name	Description
1	Denial Alert	Type of alert. "Denial Alert" is case sensitive.
2	Name	Name of the alert. This will be used in the subscription model as well as the e-mails sent to the subscribers.
3	Feature	Feature to which this alert applies.

Subscription Model

The **Subscription Model** CSV file defines which users have subscribed to which alert conditions.

NOTE: At least one person must be subscribed to the alert in order for the alert to be evaluated. If no-one is subscribed, then the alert will not be run.

A user can be subscribed to more than one alert. When **AutoTracker** is run and more than one alert condition is detected, and the user has subscribe to many alerts, then only a single e-mail is sent to the user outlining all of the alert conditions that were detected.

Many users can subscribe to each alert. When **AutoTracker** detects the alert condition, then an e-mail is sent to all subscribing users.

The subscription model file contains two columns:

- the mail address for the user who is subscribing to this alert
- the name of the alert. The alert name must correspond exactly to one listed in the second column in the **Alert Model** file.

Table 5: A Subscription Model File

Email Address	Alert Name
person@CompanyB.com	Lic22_Campers
person@CompanyB.com	Lic22_Denials

Email Address	Alert Name
person1@Dept_001.CompanyA.com	SoftwareFeatureX Long Sessions
person2@Dept_999.CompanyA.com	SoftwareFeatureX Long Sessions

NOTE: The first row in the subscription model is for titles and is ignored.

Support and Contact Information

Support is available directly from *License Tracker Inc.* We can be reached at:

On the Web

<http://www.licensetracker.ca>

General e-mail

sales@licensetracker.ca

Support e-mail

support@licensetracker.ca

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