

SofTrack

Enterprise Software Audit and Control Platform
for **Novell** NetWare



Administrator's Guide

INTEGRITY
Software

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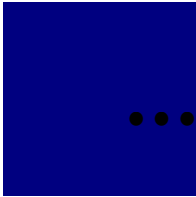
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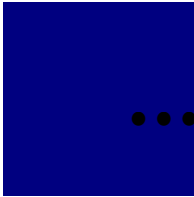
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Chapter 1 Welcome to SofTrack

Welcome to the most advanced enterprise software audit and control platform for NetWare networks. With SofTrack you can audit and control software usage on all your Windows desktops and thin clients. SofTrack also meters any server-based access from Macintosh workstations using any version of MacOS or OSX.

SofTrack employs two main components, the SofTrack Server Agent (SSA) and the SofTrack Local Workstation Agent (LWA). Together, these agents plus the SofTrack Inventory module give you control over how software is used in your environment.

If you are using the SofTrack Local Workstation Agent (see [Chapter 3](#)) on a Terminal Service Host, SofTrack *requires* that the terminal session (thin client) users be logged onto the same NDS Tree as the server hosting the SofTrack Server Agent. This requirement is further detailed in [Chapter 3](#).

Macintosh applications launched directly from the Mac user's local hard drive are *not metered* by SofTrack, only those launched from a NetWare server.

SofTrack Features

The most significant features of SofTrack for NetWare include:

- Identifying the number of workstations where software is installed and is not used
- Prohibiting unauthorized application installations by denying creation and/or modification of *.EXE and *.COM files
- Discovering every application launched
- Auditing every page requested by Internet Explorer
- Auditing every file opened

- Auditing every file created including the requesting process—includes detection of file copy operations
- Denying internet browsing via Internet Explorer while continuing to allow local access
- Providing Quick Software and Hardware Inventory for all Windows-based desktops (see [Chapter 8](#)) for more details)
- Software Metering, including:
 - Controlling concurrent access to any application, custom or commercial
 - Tracking use of any Windows-based application launched from any device, local or remote, including Linux hosts, SAN/NAS, floppy drives, memory sticks, CD-ROMs, and so on
 - Controlling use of software suites regardless of how many “individual” applications are contained within the suite
 - Assigning software licenses to various departments based upon group membership
 - Providing concurrent Access Control to any application—you stay legal by buying only those software licenses you actually need
 - Tracking use of any Windows-based application from any device, whether it be a remote device such as a SAN/NAS or Linux host or a local device from a memory stick to CD-ROM
 - Tracking use of any Terminal Services Client
 - Tracking use of any Remote Desktop Connection Client
 - Controlling use of application suites regardless of how many “individual” applications there are within the suite
 - Discovering all applications that are used at each desktop
 - Assigning software licenses to various departments based upon group membership
 - Sharing software licenses between other NetWare servers hosting the SSA
 - Excluding specific users, such as those performing backups, from metering
 - Allowing your users to view who is using software licenses with SofTrack’s STUSER Console

- Blocking use of any application—now you can STOP users from running `SETUP.EXE` and installing applications without your permission
- Warning users who are tying up licenses with Inactivity Idle Warnings—at your direction, SofTrack can optionally terminate the idle application
- Disallowing multiple launches of the same application per desktop—now you can control use of sensitive applications that cannot be used multiple times on the same desktop
- Receiving detailed reports that include the “who, where and when” of software license use
- Receiving Timekeeping records that include user-entered “client or other identification codes”—you can now bill back use “per application usage instance”
- Receiving alert notifications of when license use is reaching critical levels such as 90% or 100% of the defined maximum, as well as overflow.

System Requirements

SofTrack Server Agent (SSA) Requirements:

- The SofTrack Server Agent for NetWare requires an Intel-based processor and can be used on the following platforms:
 - NetWare 3.11 and later 3.x
 - SofTrack v5.00f is the last version to support NetWare 3.11 and 3.x
 - NetWare 4.1x and later 4.x
 - NetWare 5.x
 - NetWare 6.x
 - Clustered NetWare Servers (any version)
- Minimum of 1MB RAM plus approximately 20 bytes per license “seat” defined. For example, if a License Profile were define with 1,000 maximum users, an additional 20KB of RAM would be required (i.e., 20 bytes x 1,000 seats). The amount of RAM currently in use by the SSA is available by clicking on the **Version** toolbar button within `SOFTRACK.EXE`.
- SofTrack will track up to 8,000 workstations per SSA
- The SSA will operate on multiple CPU servers with no restrictions.

- The SSA in **clustered environments** does not require any special options or installation. The SSA operates beneath the server clustering. Many customers will define global licenses (see [page 67](#)) to be shared amongst the servers in the cluster, but other than that, there are no special concerns or requirements.
- If you are using SofTrack on a NetWare 3-based server, SofTrack uses the following NetWare Bindery types:
 - 0x0C29—SofTrack License Profiles
 - 0x0C2C—SofTrack Global License (used for SAP)
 - 0x0C31—SofTrack Saved Report Definitions
 - 0x9620—SofTrack Administration Definitions
- If you are using SofTrack on a NetWare 4, 5, or 6-based server, for each server you open, `SOFTTRACK.EXE` creates an Organizational Unit (OU) named **SofTrack on SERVER_NAME**. This OU is created in the same NDS Container where the server's NDS object exists. Additionally, `SOFTTRACK.EXE` creates the following NDS Schema Extensions: **SofTrack Administration**, **SofTrack License Profile**, and **SofTrack Saved Report Definition**.

SofTrack Administrator System Requirements

- Windows 95 or later
- Minimum of 2MB of RAM

SofTrack User System Requirements

SofTrack for NetWare can be used to control software use on any of the following operating systems:

- Windows Terminal Service Clients hosted by Windows NTv4 and Windows 2000, Windows 2003
- Windows XP
- Windows 2003 (all versions)
- Windows 2000 (all versions)
- Windows NTv4
- Windows 9x and Me
- Windows 3.11

- Any of the above on up to 32 processors (contact us if you require support on system with more than 32 processors)
- Macintosh OSX and System 6.0.3 through System 9 for applications hosted by a NetWare server

Contacting Integrity Software, Inc.

Help resources for SofTrack include:

- This manual
- Discussion Forum (link on [www.softwaremetering.com/ support.htm](http://www.softwaremetering.com/support.htm))
- E-mail (support@softwaremetering.com)
- Telephone (512) 372-8991 x611, available Monday - Friday between 7:30am and 5:30pm Central Time

Welcome to SofTrack



Chapter 2 Installing the SofTrack Server Agent for NetWare

IMPORTANT: If you are installing SofTrack on a NetWare 3-based server, please contact support@softwaremetering.com for current installation information. The remainder of this chapter is *only* for SofTrack installations on NetWare 4, 5, and 6-based systems.

Overview

SofTrack's Server Agent (SSA) is responsible for directing SofTrack's operations on your network. You control this direction via the `SOFTRACK.EXE` interface. You can install the SSA on as many different Windows servers as you require and that are licensed. Other than Global Licenses (see [page 67](#)), SSAs do not share data. Each SSA installed performs the following duties:

- Receives and is the repository for all data acquired¹
 - Audit
 - Metering
 - Inventory
- Manages all metering activity
 - Denies software use where appropriate
 - Tracks software use where defined
 - Acts as the repository for all metering definitions
- Interacts with and controls SofTrack Local Workstation Agents
- Responds to Administrator and user inquiries

1. The SSA does not need to be active to create reports from data it has acquired.

Installation Steps

The remainder of this chapter contains a step-by-step discussion of SofTrack's Server Agent installation, including:

- Installing or Upgrading a fully licensed version of SofTrack
- Discussion of SofTrack's use of NDS/eDirectory

See [Chapter 3](#) for installing SofTrack's Local Workstation Agent

Installing or Upgrading a Fully Licensed Version of SofTrack

This section fully describes the procedure for installing a fully licensed version of SofTrack. The procedure is the same, whether you are upgrading from a SofTrack Evaluation, even an expired evaluation, or from an earlier version of SofTrack for NetWare.

Obtaining the Current Version of SofTrack

The current version of SofTrack is always available from:

www.softwaremetering.com/outgoing/SofTrack_Full.zip

This download and the TOKEN file that you received upon purchase are all that is required to install a fully licensed version of SofTrack. This download is internally date stamped. Its **Build Date** is found in the BUILD.DAT file, which is located in the root of the download. This date is important because it must be *before* the last date of maintenance specified in your SofTrack TOKEN. If the date in BUILD.DAT is subsequent to the last date of maintenance allowed by your TOKEN, you will need to renew your SofTrack Maintenance before you can implement the latest download.

Determining Your Last Date of SofTrack Maintenance

Upon purchase, a SofTrack TOKEN file was delivered to you. This file contains several details regarding your purchase, including your Company Name, Contact Name, Phone Number, and the end of SofTrack maintenance date. The end of SofTrack maintenance date is usually one year from date of purchase. To determine the end-of-maintenance date, simply view the TOKEN file with a text viewer such

as `NOTEPAD.EXE`. The actual filename is eight characters plus a `.TKN` extension. If you have installed the `TOKEN`, you can view its end-of-maintenance date with `SOFTRACK.EXE`. Click on **Administration** and then **Token Maintenance**.

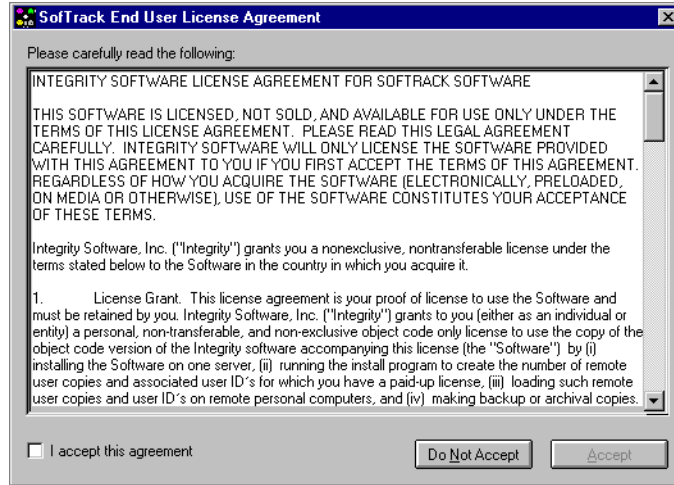
IMPORTANT: Unless you are using a SofTrack RENTAL TOKEN, your right to use SofTrack never expires—only your right to receive and use the latest maintenance. You can use SofTrack perpetually as long as the **Build Date** of SofTrack you are using is *before* the end-of-maintenance date specified in your `TOKEN`. The end-of-maintenance date signifies which releases of SofTrack you are entitled to install and use.

Installation: SofTrack TOKEN

The SofTrack `TOKEN` must be installed on *each* NetWare server that will be hosting the SofTrack Server Agent.

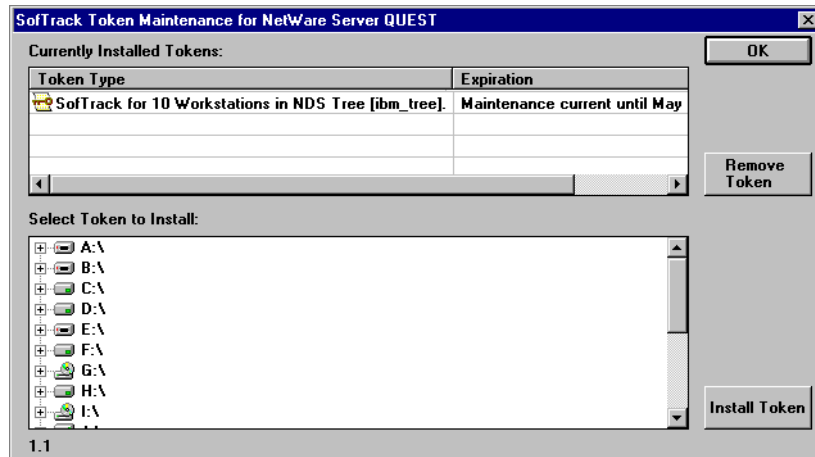
- 1 From any Windows-based workstation, login to NDS/eDirectory (or the selected NetWare server). The account used for login must have full access to the [Root] of your Tree. Full access to [Root] is required for:
 - Adding SofTrack's NDS/eDirectory Schema Extensions, which include the following object classes: **SofTrack Administration**, **SofTrack License Profile**, and **SofTrack Saved Report Definition**.
 - Adding the SofTrack `TOKEN`. The `TOKEN(s)` is stored as an attribute of the [Root] object.
- 2 Open `SOFTRACK.EXE`.
- 3 Click the **Server** toolbar button and select the server to install SofTrack upon.
- 4 Click on **Administration** and **Token Maintenance**.

Figure 2-1



- 5 You will be prompted to accept the SofTrack End User License Agreement (EULA). A full copy of the EULA is found in the front of this manual. You will only be prompted once to accept the EULA. You will be prompted to accept the EULA again if you engage in **Token Maintenance** on a different workstation and `SOFTRACK.EXE` is being run from a local drive on that workstation.

Figure 2-2

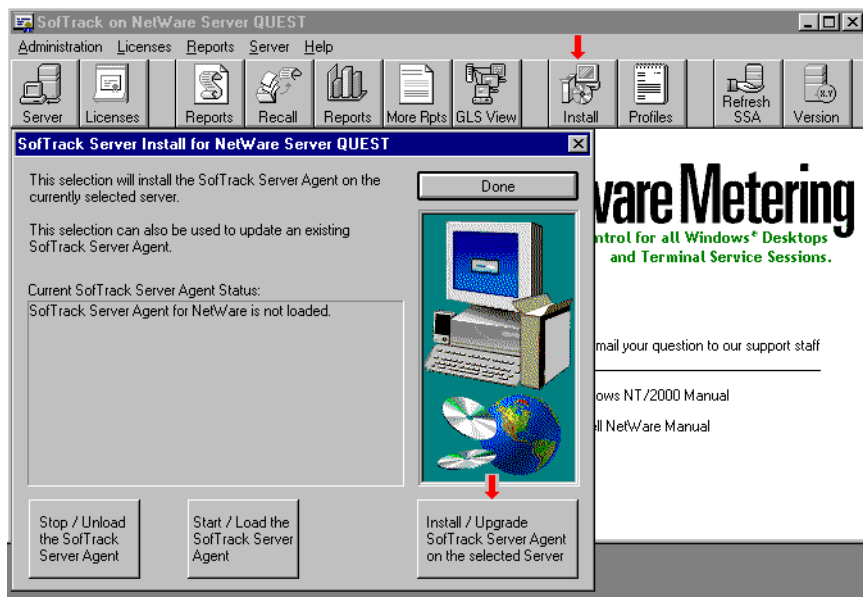


- 6 Once the EULA is accepted, select the directory and TOKEN file to install.
- 7 Click **Install Token**. The TOKEN will be installed.

Installation: SofTrack Server Agent

- 1 From any Windows-based workstation, login to NDS/eDirectory (or the selected NetWare server). The account used for login must have full access to the NetWare Server where you will install the SofTrack Server Agent (i.e., `SOFTTRACK.NLM`).
- 2 Open `SOFTTRACK.EXE`.
- 3 Click the **Server** toolbar button and select the server to install SofTrack upon.
- 4 Click the **Install** toolbar button.
- 5 Click the **Install / Upgrade** button.

Figure 2-3



- 6 The `SOFTTRACK.NLM` and `IS_SRVx0.NLM` support module will now be copied to `SYS:SYSTEM` on the selected server. The `IS_SRVx0.NLM` is either `IS_SRV40.NLM` for NetWare 4-based systems or `IS_SRV50.NLM` for NetWare 5 and 6-based systems. `SOFTTRACK.EXE` copies these files from the **NLM4** or **NLM5** subdirectories from the product download. The NLMs are the same for NetWare 5x and 6x. It is important that `SOFTTRACK.EXE` be opened from a directory that has these two subdirectories and files from the product download.
- 7 Answer the prompt that appears regarding modification of `AUTOEXEC.NCF`.

- 8 Click **OK** on the following prompt to immediately **LOAD** the `SOFTRACK.NLM`.

Installation: Manually Installing or Updating the SofTrack Server Agent

To manually install or update the SofTrack Server Agent:

- 1 At the NetWare Server console, accessed directly or via `RCONSOLE`, type **UNLOAD SOFTRACK** to unload any previous version. Next type **UNLOAD IS_SRV40.NLM** (for NetWare 4-based servers) or **IS_SRV50.NLM** (for NetWare 5 or 6-based servers).
- 2 Copy over the new `SOFTRACK.NLM` and `IS_SRVx0.NLM` support module from the **NLM4** or **NLM5** subdirectory from the product download. This step can be performed prior to step 1.
- 3 At the NetWare Server console, accessed directly or via `RCONSOLE`, type **LOAD SOFTRACK**. The appropriate `IS_SRVx0.NLM` support module is automatically loaded.
- 4 Add the command **LOAD SOFTRACK** to your `AUTOEXEC.NCF` to ensure that the SofTrack Server Agent is loaded each time the server restarts.

Once the SofTrack Server Agent is active, you will be ready to create metering activity profiles (see [Chapter 4](#)). You will also be ready to begin Quick Inventory data collection (see [Chapter 8](#)).

SofTrack Quick Update Tips

Updating your SofTrack installation is a simple task. When you receive a new version of SofTrack, the overall method to update is defined by the steps below:

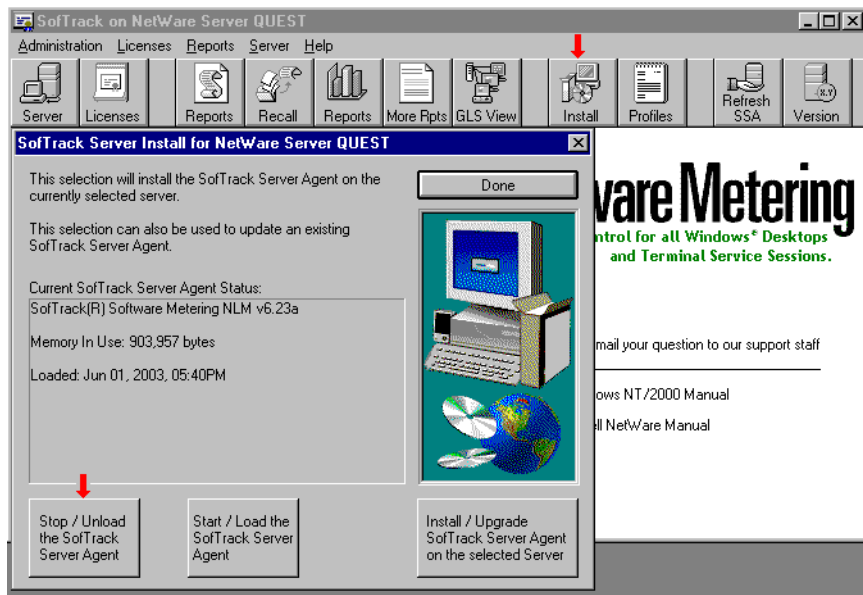
SofTrack Server Agent

Once in regular use, we recommend updating the SofTrack Server Agent when it is *not actively metering*. If the SofTrack Server Agent is updated while it is actively metering, then its metering accuracy will be compromised until the next time everyone who is being metered has logged off and logged back into the server that is hosting the SofTrack Server Agent.

When you are ready to the update the SofTrack Server Agent:

- 1 Unzip the download (usually `softrack_full.zip`) with directories included. Do this to a new directory so none of the old files are included.
- 2 Run `SOFTRACK.EXE` from within the “root” of the directory you selected for unzipping.
- 3 Select the Server to update, then:
 - a UNLOAD the SofTrack Server Agent with **SOFTRACK.EXE / Install**. Click **Stop / Unload** as shown below.

Figure 2-4



- b INSTALL the new files over the existing files by clicking the **Install / Upgrade** button.
- c LOAD the SofTrack Server Agent by clicking the **Start / Load** button.

SofTrack Local Workstation Agent

NOTE: See [Chapter 3](#) for full instructions.

Unzip the download (usually `softrack_full.zip`) with directories included. Do this to a new directory so none of the old files are included.

On a Windows NT/2000/2003/XP workstation or Terminal Services Host:

- 1 STOP the SofTrack Local Workstation Agent
- 2 COPY over the new files from the **lwa\nt-2k-xp** subdirectory. You will find this directory structure within the directory you unzipped `softrack_full.zip` into.

NOTE: Please note that the files are generally kept in the **SystemRoot\System32\Drivers** subdirectory. To find the exact location, use the `STLWA_NT -profile` command. Run this in a `CMD.EXE` session.

Additionally, since you are *only* updating the files, there is no need to run commands `STLWA_NT -remove` or `STLWA_NT -install`.

- 3 RESTART the SofTrack Local Workstation Agent.

NOTE: If the workstation is Windows XP-based, we recommend you reboot the workstation rather than restarting the LWA.

On a Windows 3x, 9x, or Me workstation:

CAUTION: Once started, the SofTrack Local Workstation Agent (LWA) for Windows 3x/9x/Me *cannot* be stopped or unloaded. If you try, the workstation will crash. This is a protection feature of the LWA for Windows 3x/9x/Me, so users cannot stop it.

- 1 Depending on how you have chosen to run the LWA, either:
 - a Edit the “Run” section of workstation’s local Registry to exclude starting `STLWA.EXE`
or
 - b Remove `STLWA.EXE` from the **Start** folder
or
 - c Edit your logon script so that it does not start `STLWA.EXE`
or
 - d Otherwise, stop loading `STLWA.EXE` via whatever means it is being started.
- 2 Reboot the workstation.
- 3 Copy over the new files from the **lwa\win9xme\nw-srvr** subdirectory. You will find this directory structure within the directory you unzipped `softrack_full.zip` into.

- 4 Re-edit the area you changed in step 1 so that `STLWA.EXE` is again loaded upon boot up.
- 5 Reboot the workstation.

SofTrack Administrator (SOFTRACK.EXE)

- 1 Unzip the download (usually `softrack_full.zip`) with directories included. Do this to a new directory so none of the old files are included.
- 2 The SofTrack Administrator's files are contained in the "root" of the directory you selected for unzipping.
- 3 You can copy these files anywhere you like as long as they are all kept in the same directory.

SofTrack and NDS/eDirectory

The following outlines SofTrack's integration with NDS/eDirectory.

Extending the Schema

SofTrack begins its use of NDS/eDirectory by creating three new Object Classes and several Attribute Definitions. These schema extensions are merely templates that are used to define what SofTrack objects will look like when stored in NDS/eDirectory. The schema extensions do not represent any actual SofTrack data, only the storage framework. The schema extensions are created by `SOFTRACK.EXE`, which is first used to open a NetWare server. The schema extension process takes place silently. There are no messages produced, even if there is an error. For the schema extension process to succeed, the NDS/eDirectory logon account used must have full Supervisory privileges to the [Root] object. For many NDS/eDirectory Trees, the user **admin** is the account to use for logon. Full Supervisory privileges are required by NDS/eDirectory to install schema extensions.

SofTrack was one of the very first NDS products in 1994 to extend the NDS schema.

SofTrack creates the following Object Classes:

SofTrack Administration
SofTrack License Profile
SofTrack Saved Report Definition

SofTrack creates the following Attribute Definitions:

ST BASE CONTEXT FOR UG	ST LOAD LOCAL NEW,
ST CUSTOM LS MSGS	ST LP MGRS
ST DEPTH OUT	ST METER PATH
ST EXCLUDE METER	ST METER TURNOVER
ST FN	ST MISC ITEMS
ST FN LWIN	ST NLM GRID
ST FN MAC	ST NOTIFY HOW
ST FN OS2 CMD	ST NOTIFY USERS
ST FN OS2 GUI	ST NOTIFY USERS NEW
ST FN TRACKED	ST OPTIONS
ST GL PASSWORD	ST PARAMS
ST GLOBAL METER	ST QUEUE4
ST GROUPS	ST SERIAL NUM
ST GROUPS I'M IN	ST Servers
ST IDENTIFICATION	ST TOKEN
ST IDENTIFICATION4	ST Tokens
ST LICENSES	ST USERS
ST LOAD LOCAL	ST Y2K

Creating the SofTrack Organizational Unit (OU)

Immediately after extending the schema, `SOFTTRACK.EXE` will attempt to create an Organizational Unit (OU) named:

SofTrack on *Server_Name*

and will place this OU in the same container as the NetWare server's NDS/eDirectory object (as represented by *Server_Name*).

After the SofTrack OU is created, the SofTrack Administration object, `SOFTTRACK_ADMIN`, is created within the OU.

Also, after the SofTrack OU is created, the NetWare server's NDS/eDirectory object is granted full *supervisory privileges* to the SofTrack OU. The NetWare server's object is granted these privileges because the `SOFTTRACK.NLM` will log into NDS/eDirectory as the NetWare server it is loaded upon, and it will use that server's object to manipulate the SofTrack objects within the SofTrack OU.

IMPORTANT: If the NetWare server is ever renamed, you *must manually rename* the SofTrack OU; otherwise, a new SofTrack OU will be created that does not contain any definitions you had created for that server.

Migrating SofTrack from NetWare 3-Based Systems

If your previous installation of SofTrack was on a NetWare 3-based system that has been upgraded to NetWare 4.1 or later and you wish to retain your SofTrack settings, you will need to migrate those settings:

Start by opening `SOFTTRACK.EXE`. Click **Administration** and then **Migrate SofTrack from Bindery Context to NDS**. This selection will move all SofTrack objects that you have defined to the **SofTrack OU** for the selected NetWare server. Once complete, you can use the **Administration** option **Delete SofTrack from Bindery Context** to remove the previous SofTrack bindery-based installation.

IMPORTANT: Once migrated, any data in the existing `METER.*` log files will no longer be usable, and no reports of prior metering activity will be available. To retain the ability to produce reports from these older bindery-based `METER.*` files, you must:

- Retain the Bindery Context version of SofTrack (DO NOT DELETE)
- Retain the older version of `SOFTTRACK.EXE` and its DLL files

SNAPINS: NWADMIN, ConsoleOne, iManager

SofTrack does not provide a SNAPIN DLL for use with NWADMIN, ConsoleOne, or iManager.



Chapter 3 Installing the SofTrack Local Workstation Agent

Overview

SofTrack's Local Workstation Agent (LWA) allows you to control all Windows-based applications used at each workstation regardless of the application's location, whether it is stored locally (i.e., C:\ drive) or on any device including remotely (i.e., Storage Area Network (SAN), Network Attached Storage (NAS), SAMBA server, memory stick, CD-ROM, etc.).

Features:

SofTrack's LWA performs the following:

- Audits File Create, File Open, and File Copy events. See [Chapter 9](#).
- Audits Creation or Modification attempts for *.EXE and *.COM files. See [Chapter 9](#).
- Audits Microsoft's Internet Explorer browser access attempts. See [Chapter 9](#).
- Denies File Rename and Copy requests for *.EXE and *.COM files. See [Chapter 9](#).
- Denies usage of executable files that do not have an *.EXE or *.COM extension. See [Chapter 9](#).
- Blocks browsing the internet via Microsoft's Internet Explorer while continuing to allow local access. See [Chapter 9](#).
- Meters the use of all 16- and 32-bit Windows-based applications on Windows 3x, Windows 95, Windows 98, Windows Me, Windows NTv4, Windows 2000, Windows 2003, and Windows XP workstations.

- Meters the use of all 16- and 32-bit Windows-based applications on thin client terminals hosted by Microsoft's Terminal Service and by third party add-ons such as Citrix WinFrame and MetaFrame (www.citrix.com) and Tarantella's New Moon Canaveral iQ (www.tarantella.com or www.newmoon.com). Metering of thin clients requires that each user session logs into the same NDS/eDirectory Tree as the NetWare server being reported to by the LWA.
- Detects and optionally records use of any application not specifically defined for metering. See [page 98](#).
- Ensures license compliance of applications used on workstations and terminal service sessions.
- Blocks the use of *any* application you define by name such as `SETUP . EXE` and `INSTALL . EXE`.
- Detects application idle activity and can optionally alert the user to an idle application as well as terminate the application's use after a defined time period of inactivity. See [page 55](#).
- Tracks optional timekeeping details. See [page 53](#).
- Provides for automatic Quick Inventory data collection. See [Chapter 8](#).
- Eliminates Windows error messages when access to an application is denied. See [page 49](#).

Theory of Operations

When installed, the LWA will automatically configure itself to the environment it exists within. There are *two different sets* of LWA files, one for Windows 95/98/Me workstations and one for Windows NT/2000/2003/XP workstations and servers. Installation of both is detailed later in this chapter. The LWA for Windows 95/98/Me will properly operate on any workstation without limitations. The LWA for Windows NT/2000/2003/XP will properly operate on computers with up to 32 processors. If the environment includes Terminal Services, the LWA, per computer, will automatically configure its internal processes to allow metering and tracking for up to 4,000 terminal service sessions.

The SofTrack LWA works by monitoring every 16- and 32-bit Windows application's usage. MS-DOS applications are not metered by the LWA. Each time an application is launched, the LWA will request a license from the SofTrack Server Agent (SSA). The LWA is merely a conduit in which the application is launched.

The LWA itself does not contain knowledge of the applications to be monitored; the SSA maintains that data. If the SSA indicates that the application launch is to be denied (i.e., because there are no more licenses, the license is blocked, a time restriction has occurred, etc.), the LWA will gracefully deny access and present the user with a message from the SSA indicating the nature of the denial. The traffic generated between the workstation and the server is very minimal. Fewer than 500 bytes are exchanged for each application launch. If the SSA is not active or if the network connection is broken, the LWA will gracefully *timeout* and allow the application to be used. The LWA will *not* later notify the SSA of the application that was allowed to be used; therefore, the use will not be accounted for. Once the SSA becomes active or the network connection resumes, the LWA will resume its normal interactions with the SSA.

The LWA does not poll the NetWare-based SSA for messages. All messages are sent from the SSA via Novell's popup message mechanism.

If an application is opened multiple times, the LWA will track each specific use as a *single use*. The exception to this is when using the timekeeping option, described below, which will track each individual application use. When all uses of the application have been closed, the LWA reports to the SSA that the application has been exited, so an appropriate entry in the `METER.LOG` file can be made. If, when the application is exited, the LWA is unable to communicate with the SSA, the actual time of metering activity completion will not be recorded. Instead, the metering activity will be recorded, but instead of being recorded as a normal use, it will be recorded as a purged use. The purged use will be recorded by the SSA when it eventually detects that the LWA has either been restarted or has been inactive for more than hour. The SSA will also record a purge event if the workstation crashes or is turned off before exiting the application. If the SSA itself is stopped or the host it is running on crashes, then any metering activity it was tracking, even non-LWA metering activity, will also be recorded as a *purged use*. The purge record will be recorded the next time the SSA is started.

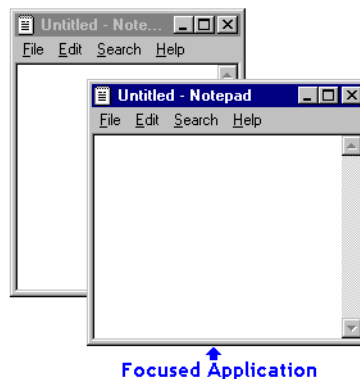
Features

Idle Detection and Termination

Once the application is in-use, the LWA will monitor the application's idle time, if that option has been selected. Upon the occurrence of an idle warning period timeout, the LWA will display a popup message at the user's desktop to indicate the idle activity. The message can be customized. The idle warning and idle termination messages received by the workstations can be customized to any text you wish, up to 117 characters. The message customization will affect all License Profiles. There is no customization available for a specific License Profile. See [page 81](#). After the defined number of idle warnings, the LWA will terminate the application. For each idle warning and idle termination the LWA processes, it will notify the SSA of the action and the event will be recorded in the `METER.LOG` file. To view the idle warning and termination events, select the **Details of License use Report** as shown on [page 107](#).

An application is considered idle if it is not the currently *focused* application. A focused application is the one that is topmost on the desktop and is active. The currently active window will be noted by its highlighted caption bar as shown:

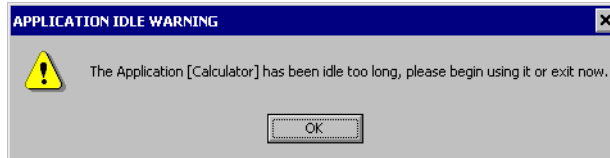
Figure 3-1



All other windows will have a diminished or grayed caption bar. The Idle Detection option does not take into account mouse and keyboard actions, because a user may be waiting for a function to complete such as a recalculation, or may be reading the

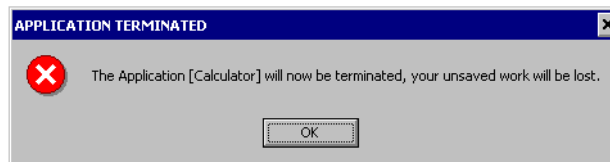
screen's contents. Once focus is taken off an application's window (i.e., it is minimized, another application is focused, etc.), the *idle timer* begins. Once the defined time period has elapsed, a warning will be displayed:

Figure 3-2



After an administrator-defined number of warnings, with the possibility of infinite, the user receives a termination notification, and the application is terminated. If the License Profile has been defined to warn only, then the user is continually warned of idle detection, and no application termination occurs.

Figure 3-3



In both examples above, the name shown within the square brackets, [], is the same as the caption bar of the actual application. In this example, **Calculator** was the application's name in its caption bar, also known as its title bar.

As an example: If you have defined one minute as the idle time period, each minute that goes by will incur a new warning. If the number of warnings before termination is set to 5, that means that one minute after the fifth warning, the user will receive a termination notification, and the application will be terminated.

WARNING: NO DATA WILL BE SAVED! When the application is terminated, it is a forceful termination, and any unsaved data WILL BE LOST.

Timekeeping

Uses of the timekeeping feature include:

- Customer Billing of Application Use on their behalf
 - CAD/CAM

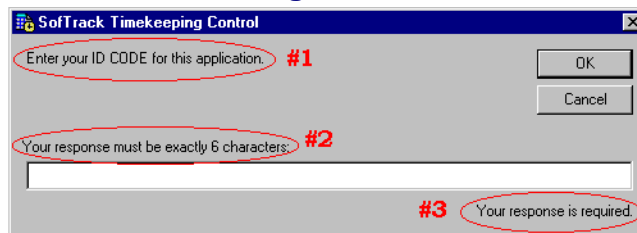
- Legal Applications
- any environment where the customer is billed for services
- Internal Departmental Billing of Application Use
 - Shares application costs between departments
 - Charge application upgrade and other costs based on departmental use
 - Find out how the application is actually being used, idle time and overall use

Timekeeping maintains a second log that is independent of the metering activity stored in the `METER.LOG` repository. The timekeeping report log is accessed via the **More Rpts** toolbar button within `SOFTRACK.EXE`. To access, click on **View Timekeeper Data Log**. This report type is further detailed on [page 146](#).

You can define the Timekeeping option to suit your needs. See [page 53](#).

When an application defined for timekeeping is launched, the LWA will receive timekeeping instructions from the SSA that must be performed before allowing the application to be used. Below is a sample timekeeping prompt:

Figure 3-4



There are three areas of this prompt that are affected by the choices you make when defining the timekeeping option:

- The **first** is the Timekeeping Prompt. The text you enter may be up to 110 characters in length.
- The **second** is the length of the response that you want the user to enter. In the License Profile, you may select a fixed length (as shown in [Figure 3-4](#)) or a minimum length. The maximum response allowed is 50 characters.
- The **third** is whether a response is required before allowing the application to launch. The user's response is *not a password* but, rather, a code to associate with the particular use of the selected application. In the figure above, a response *is required*, which means if the user clicks on **Cancel**, the application will be

dismissed and not allowed to be run. The prompt can be configured to *optionally require* a response. In this case, if the user clicks on **Cancel**, no timekeeping data will be recorded. In any case, the `METER.LOG` will contain a record of the application's use in addition to any timekeeping data logged. By clicking on **Cancel**, the user is not “turning off” metering, just timekeeping.

If, in the License Profile definition, you have selected the **Silent - No Prompt** option, the user will not receive a timekeeping prompt at all. In this case a timekeeping record will always be logged, and the user's response will be defined as: *****SILENT*****.

Disallow Multiple Launches per Desktop

This option will ensure per user Desktop that only *one* instance of any file defined by this License Profile will be in use at any time. For example, the License Profile defines 4 different executable files for metering. If any one of those files is in use, no others will be allowed to run, including a second instance of the application first used. We have found this option useful to ensure that certain applications such as inhouse database accessing applications are run only once. If that application is run more than once per Desktop, it could corrupt the database, hence the value of this option.

The message received by the workstation can be customized to any text you wish, up to 117 characters. The message customization will affect all License Profiles. There is no customization available for a specific License Profile. To customize the message, from the main menu of `SOFTTRACK.EXE`, select **Administration** and **Customize License Messages**. For further information regarding message customization, see [page 81](#).

Installation on Windows 3x/9x/Me

Please follow these instructions when installing the Local Workstation Agent on Windows 3x, 9x, and Me workstations:

- 1 Copy the following files from the `LWA\Win9xMe\nw-srvr` directory of the product installation:
 - `STLWA.EXE`
 - `STLWA-WE.EXE`
 - `STLWA.VXD`

to the designated workstation's **C:\WINDOWS** directory or to a server-based directory that is available to any user logging onto the workstation. If using a server-based directory, it must be available immediately after login.

- 2 Use `NOTEPAD . EXE` to edit the `STLWA-LM . INI` file. Its default contents are:

```
[STLM]
NotLocalOnly=0
```

NotLocalOnly, is, by default, disabled. If you set it to `=1`, it will be enabled. This option is further explained in the **SofTrack Local Workstation Agent: Options** section later in this chapter. See [page 29](#).

- 3 Copy the modified `STLWA-LM . INI` file to the same directory where you copied the files in step 1.

- 4 Enter the command:

```
STLWA -install
```

This command will create an entry in the local workstation's registry key:

```
HKLM\Software\Microsoft\Windows\CurrentVersion\Run
```

The entry will ensure the LWA is loaded each time the workstation is restarted.

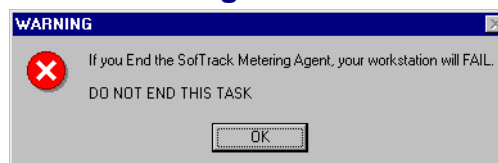
NOTE: If the workstation is Windows 3x-based, this option will not create a registry key. You will need to manually edit the `WIN . INI` file and include the following:

```
LOAD=STLWA . EXE
```

- 5 To start the SofTrack LWA, reboot the workstation.

NOTE: Once loaded, the LWA cannot be stopped. Trying to do so will produce the following warning message:

Figure 3-5



and, if terminated, will crash the workstation. This is a security feature to help prevent errant users from disabling the LWA.

IMPORTANT: If you attempt to install the LWA for Windows 3x/9x/Me on a Windows NT/2000/2003/XP workstation, you will receive the following error:

Figure 3-6



TIP: If your installation includes Novell's ZENworks, you can create an Application Object with the appropriate registry key(s) and then use the Force Run option to push it to all the others.

Updating on Windows 3x/9x/Me

To update the LWA on a Windows 3x/9x/Me workstation:

- 1 Using REGEDIT, edit the Registry (or WIN.INI file) and remove the entry for STLWA so it is no longer loaded.
- 2 Reboot the workstation.
- 3 Copy over the updated files.
- 4 Run `STLWA -install` or edit the Registry and add back the entry for STLWA.EXE (or edit WIN.INI and add back the `LOAD=STLWA.EXE` line).
- 5 Reboot the workstation. The update is complete.

TIP: If your installation includes Novell's ZENworks, you can create an Application Object with the appropriate registry key(s) and then use the Force Run option to push it to all the others.

Options for Use on Windows 3x/9x/Me

The following options are available for the LWA on Windows 3x/9x/Me workstations; the format for use is `STLWA <option>`.

`DoNotShowBuildError`

When loaded, the LWA confirms with the SSA that it, the LWA, is properly licensed. This confirmation can be denied for the following reasons:

- The SSA is not active.
- The SSA requires an updated license.
- The workstation the LWA is running upon is disconnected from the network and therefore cannot contact the SSA.

If confirmation is denied, the LWA will display an error message and then unload. As shown below, to prevent the error message from appearing, set the **DoNotShowBuildError** option to 1. You may want to prevent the error message from showing if your workstations are routinely disconnected from the network or if the SSA is not always active.

The default is to display the LWA licensing error to the user.

This option can only be specified via the `STLWA-LM.INI` file. A sample `STLWA-LM.INI` is provided in the product download.

```
[STLM]
DoNotShowBuildError=1
```

When set to 0 or if not defined, the LWA will display an error at startup indicating that licensing confirmation cannot be obtained. After this message is displayed, the LWA will automatically unload.

```
-install XYZ
```

or

```
/install XYZ
```

This option will update the local workstation's registry to delay loading `STLWA-LM.EXE` for *x* seconds after login. Because it is stored in the registry, you do not need to specify this option again. This option can be used to change the delay as well including changing it to 0.

The delay option is available to delay the loading of the LWA in the event there is another application that is also loading at login that needs to complete prior to the LWA's load. The only situation we are aware of where this option was necessary was in the case of a custom application. We know of no commercial applications that require the use of this option. You can use the `-install` option instead. The maximum delay is 180 seconds.

/sa

This option will display the name of the server to connect to in a popup window at the time the LWA loads.

/notlocalonly

Use this option to instruct the LWA to meter all applications that are run, regardless of where the application file is hosted. By default, only applications that exist on the workstation's local hardware will be metered (i.e., C:\ drive and any other local device). When this option is used, the LWA will meter *any* application used. You can use `SOFTTRACK.EXE` to determine if this option has been set. To do so, open `SOFTTRACK.EXE`, click on the **Version** toolbar button, click **OK**, and then click **OK** again. You will be presented with a list of active connections. Connections that are using this option will include an **[S]** notation.

This option can also be specified in the `STLWA-LM.INI` file:

```
[STLM]
NotLocalOnly=0
```

If set to =0, it will be off (default); if set to =1, it will be on.

Removal from Windows 3x/9x/Me

To *remove* the LWA on a Windows 3x/9x/Me workstation:

- 1 Using REGEDIT, edit the Registry (or `WIN.INI` file) and remove the entry for `STLWA` so it is no longer loaded.

The registry key to edit is:

```
HKLM\Software\Microsoft\Windows\CurrentVersion\Run
```

- 2 Reboot the workstation.
- 3 **DELETE** the following files:
 - `C:\WINDOWS\STLWA.EXE`
 - `C:\WINDOWS\STLWA-LM.INI`
 - `C:\WINDOWS\STLWA-WE.EXE`
 - `C:\WINDOWS\STLWA.VXD`
- 4 Removal is complete.

Installation on Windows NTv4/2000/2003/XP and Terminal Server Hosts

Special Note: Terminal Services Metering

When the LWA is installed on a Terminal Server Host, it will automatically detect this and will self-configure its operations. Terminal Server Hosts include:

- Windows NTv4 Terminal Server Edition
- Windows 2000 with Terminal Services Enabled
- Windows 2003 with Terminal Services Enabled
- any of the above with a third-party add-on, such as Citrix WinFrame or MetaFrame (www.citrix.com) or Tarantella Inc.'s New Moon Canaveral iQ (www.tarantella.com or www.newmoon.com).

In Terminal Service environments, the LWA, per computer, will automatically configure its internal processes to allow metering and tracking for up to 4,000 terminal service sessions.

IMPORTANT: Metering of terminal services sessions requires that each session logs into the same NDS/eDirectory Tree as the NetWare server being reported to by the LWA. If the user sessions do not at least authenticate to the same NDS/eDirectory Tree, no metering will occur.

Manual Method

Please follow these instructions when installing the LWA on Windows NTv4/2000/2003/XP computers, including Terminal Server Hosts:

- 1 Copy the following files from the **LWA\NT-2K-XP** directory of the product installation:

- STLWA-NT.EXE
- STLWMON.SYS

to the designated workstation's **SystemRoot\System32\Drivers** directory. There is no option to load these files from a remote device. The Windows operating system *requires* that all system-level kernel drivers be located in this specific directory.

On Windows NT and 2000 systems, the default SystemRoot directory is **C:\WINNT**.

On Windows XP and 2003 systems, the default SystemRoot directory is **C:\WINDOWS**.

If you are not certain what your SystemRoot directory is, perform the following:

- a** Click on **Start, Run**, and enter `CMD . EXE`.
 - b** In the resulting CMD window, type the command:
 - `SET <enter>`
 - c** Look through the alphabetical list of SET parameters for the value of SystemRoot.
- 2** Open a `CMD . EXE` window by clicking on **Start** and **Run** and enter `CMD . EXE`.
 - 3** Change the current directory to be **SystemRoot\System32\Drivers**.
 - 4** Enter the following command:

```
STLWA_NT -install
```

followed by the command:

```
STLWA_NT -server YOUR_SERVER_NAME
```

where `YOUR_SERVER_NAME` is the name of the server that will be or is hosting the SSA. Do not use slashes or web names (i.e., `\\server` or `www.server.com`).

The `-install` command will install the LWA as a service on the local machine. It will be defined to load automatically at boot time. To view its entry, open **Control Panel** and open within it the **Services** browser. There you will find the SofTrack Local Metering Agent Service.

The `-server` command will store the name of the server hosting the SSA in the local machine's registry.

- 5** To start the SofTrack LWA, reboot the workstation.

Batch File Method

- 1** Locate the `INST-BAT . TXT` file located in the **LWA\NT-2K-XP** directory of the product installation. The batch file copies, installs, and starts the SofTrack LWA *without* logging out or rebooting the workstation.

- 2 Modify the batch file for your environment. Ensure that the **STLWA_NT -server** line correctly specifies the server hosting the SSA.
- 3 Test your modified batch file on a workstation.
- 4 Distribute the modified batch file via a logon script or other method to your workstations.

TIP: If your installation includes Novell's ZENworks, you can create an Application Object with the appropriate registry key(s) and then use the Force Run option to push it to all users.

Updating on Windows NTv4/2000/2003/XP and Terminal Server Hosts

Manual Method

To update the LWA on a Windows NTv4/2000/2003/XP computer, including Terminal Server Hosts:

- 1 Open **Control Panel / Services** and **Stop** the **SofTrack Local Metering Agent Service**.
- 2 **Copy** the update files. Be sure to copy the new files over the existing files.
- 3 Click on **Start, Run**, and enter **CMD . EXE**.
- 4 Change the current directory to be **SystemRoot\System32\Drivers**.
- 5 Enter the following command:
STLWA_NT -profile
- 6 Confirm the files listed are the updated files.
- 7 In **Control Panel / Services**, **Start** the **SofTrack Local Metering Agent Service**.

IMPORTANT: DO NOT USE THE **-REMOVE** OPTION WHEN UPDATING THE LWA.

Batch File Method

You can use the same modified batch file used for installation to update the LWA.

TIP: If your installation includes Novell's ZENworks, you can create an Application Object with the appropriate registry key(s) and then use the Force Run option to push it to all users.

Options for Use on Windows NTv4/2000/2003/XP and Terminal Server Hosts

The following options are available for the LWA on Windows NTv4/2000/2003/XP computers, including Terminal Server Hosts; each is saved in the local registry; the usage format is **STLWA_NT -option**.

-HideBuildError

-ShowBuildError

When loaded, the LWA confirms with the SSA that it, the LWA, is properly licensed. This confirmation can be denied for the following reasons:

- The SSA is not active.
- The SSA requires an updated license.
- The workstation the LWA is running upon is disconnected from the network and therefore cannot contact the SSA.

If confirmation is denied, the LWA will display an error message and then unload. As shown below, to prevent the error message from appearing, use the **-HideBuildError** option. You may want to prevent the error message from showing if your workstations are routinely disconnected from the network or if the SSA is not always active.

The **-ShowBuildError** option will enable the error message if it has previously been disabled with **-HideBuildError**.

The default is to display the LWA licensing error to the user.

-notlocalonly

Use this option to instruct the LWA to meter all applications that are run, regardless of where the application file is hosted. By default, only applications that exist on the workstation's local hardware will be metered. When this option is used, the LWA will meter *any* application used. You can use **SOFTRACK.EXE** to determine if this option has been set. To do so, open **SOFTRACK.EXE**, click on

the **Version** toolbar button, click **OK**, and then click **OK** again, and you will be presented with a list of active connections. Connections that are using this option will include an **[S]** notation.

-localonly

Use this option to instruct the LWA to meter only those applications that exist on the local computer's hardware (i.e., C:\ drive and any other local device). This is the default LWA operation.

-loaddelay

This option is available to delay the loading of the LWA in the event there is another application that is also loading at login that needs to complete prior to the LWA's load. We know of no commercial applications that require the use of this option. It is provided as a debugging aid. The maximum delay is 180 seconds.

-profile

This option will display the LWA's current settings. To save these settings, perform the following:

- 1 Click on **Start, Run**, and enter `CMD . EXE`.
- 2 Change the current directory to be `SystemRoot\System32\Drivers`.
- 3 Enter the following command:

```
STLWA_NT -profile > output.txt
```
- 4 The resulting `output.txt` will contain the profile information.

Removal from Windows NTv4/2000/2003/XP and Terminal Server Hosts

To *remove* the LWA on a Windows NTv4/2000/2003/XP computer, including Terminal Server Hosts:

- 1 Open **Control Panel / Services** and **Stop** the **SofTrack Local Metering Agent Service**.
- 2 Click on **Start, Run**, and enter `CMD . EXE`.
- 3 Change the current directory to be `SystemRoot\System32\Drivers`.

- 4 Enter the following command:

```
STLWA_NT -remove
```

- 5 **DELETE** the following files:

```
SystemRoot\System32\Drivers\STLWA_NT.EXE
```

```
SystemRoot\System32\Drivers\STLWMON.SYS
```

- 6 Reboot the workstation. The removal is complete.

WARNING: Removal will not be complete until you **REBOOT** the workstation.



Chapter 4 Defining a Software Metering License Profile

Preparations for Defining a License Profile

NOTE: The SofTrack Evaluator's Guide includes a section similar to this one.

All recording of SofTrack activity tracking data is performed by the SofTrack Server Agent (SSA). You must define a server-based file system path to enable the SSA to record this data. This path is called the `METER.LOG` Path, and it defines where the SSA stores all activity tracking data. To enable `SOFTRACK.EXE` to create reports from this data requires that the `METER.LOG` Path be accessible via a server share.

To Set the `METER.LOG` Path

- 1 Open `SOFTRACK.EXE`.
- 2 Click **Set `METER.LOG` Path** from the **Administration** menu. Select the share and file system path to use.

What is Stored in `METER.LOG` and When Is It Recorded?

The SSA records activity tracking data to the `METER.LOG` upon the completion of a metering event. When a metered application is opened, the SSA begins to track it. Once the metered application is closed (exited), its metering event is then recorded to `METER.LOG` and is available for reporting. If the elapsed time between the application being opened and closed is less than 30 seconds, no record is written. The only exceptions to this are when the SSA blocks the application's usage due to no licenses being available. In this case, the entry written to `METER.LOG` indicates that the requesting user was either blocked or queued, depending on how the License Profile has been defined.

Other Files and Directories Found in the METER.LOG Path

Depending on how you configure the SSA, you will also find other files in the METER.LOG Path.

If you have enabled Archiving (see [page 84](#)), you will find files named METER.000, METER.001, etc. These files are archived copies of METER.LOG that contain historical activity tracking data. They can be used for reporting by SOFTRACK.EXE by selecting **Current log file** from the **Reports** menu within SOFTRACK.EXE.

If you are using the Timekeeping option (see [page 53](#)), you will find this data stored in the file TIMEKEEP.CSV.

If you are using the **Discover all applications that are not metered** option (see [page 147](#)), you will see the LOCALUNR.LOG file. You can configure this option by selecting **Include use of any applications not defined for metering** on the **SofTrack Server Options** link on the **Administration** menu within SOFTRACK.EXE. See [Figure 6-18](#).

If you are using Global Licensing (see [page 67](#)), you will find directories with hexadecimal names (i.e., names using numbers 0-9 and letters A-F). These are coded for the different SofTrack License Profiles that have been flagged as Global. You will also find different Global Licensing reporting files whenever you generate such reports.

If you use the Quick Inventory feature (see [page 153](#)), you will see a directory named **Computers**. Within will be files for each computer where a Quick Inventory has been performed.

If you use the Audit feature (see [page 167](#)), you will see a directory named **Audit**. Within will be files for each computer where Audit data has been gathered. These files can grow in excess of 1MB per day per workstation.

Excluding Accounts from Metering

System Backup applications can appear to be using a metered application when in fact they are only opening the file to back it up. When such “backup accounts” are metered, you receive incorrect metering. Also, if there are no licenses available when the backup accounts attempts to open a metered application, the request is denied and the backup software is unable to backup the file. The following details how to exclude such accounts from metering:

- 1 Open `SOFTRACK.EXE`.
- 2 Click **Users to Exclude from Metering** from the **Administration** menu.
- 3 Click **Insert** and choose the accounts you wish to exclude. Please note that only those accounts that have logged in while the SSA was active are available.
- 4 Click **OK** to insert the chosen users.
- 5 Click **OK** to save your changes.
- 6 Users will be excluding from metering beginning the next time they log in. If the users logged in when added to the exclude list, they will have to logout and login again to be properly recognized as being on the exclude list.

Defining a License Profile

SofTrack uses License Profiles to define what to meter and how to meter it. Creating a License Profile is simple:

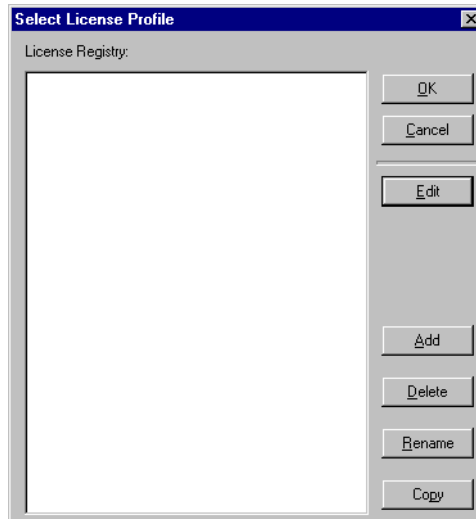
- 1 Open `SOFTRACK.EXE`.
- 2 Click on the **Licenses** toolbar button:

Figure 4-1



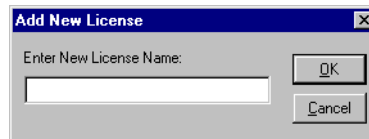
- 3 The License Profile screen appears:

Figure 4-2



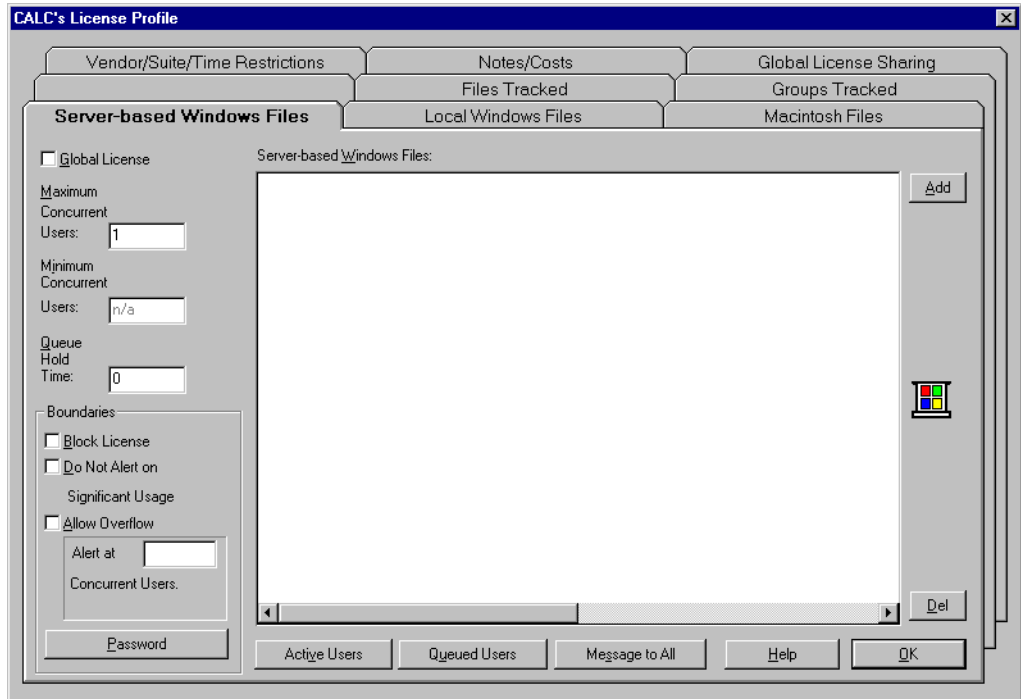
- 4 Click **Add**. The following screen appears:

Figure 4-3



- NOTE:** The License Profile name can be up to 20 characters and may include symbols and spaces. Spaces will be converted to underscores.
- 5 Enter the name **calc** and click **OK**. Once you do this, the following screen appears:

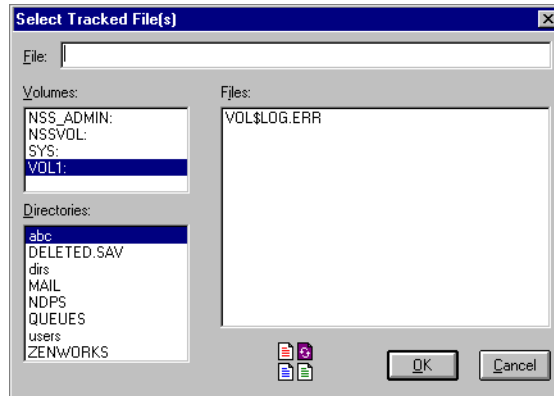
Figure 4-4



Each License Profile can include several options. For this short demonstration we will focus on just a few. You will notice the **Maximum Concurrent Users** has already been set to 1. This is the default.

- 6 Click the **Files Tracked** tab located in the middle of the tabs at the top of the screen. Files entered here are tracked whenever the file is opened. Files entered here must exist on a server-based file system path.
- 7 Click the **Add** button at the far right, just under the tabs. Once you click **Add**, the following screen appears:

Figure 4-5



- 8 For our first test, enter the name `CALC . EXE`. Notice that you browse your file systems to find the exact file you wish to meter. With SofTrack you can meter by the filename only (as we will do in this demonstration) or by the file's full path designation.

When choosing the application file to meter, always select the initial `. EXE` file that is used to run the application. If you are metering a data file, simply select that file.

- 9 Click **OK** to accept the filename.

The filename now appears in the **Files Tracked** list in the **CALC License Profile**.

- 10 Update the number of concurrent uses you want to allow for this License Profile in the **Maximum Concurrent Users** field. Once any particular workstation is using an application or other file from the License Profile, its user may invoke as many copies of the application/file as they require without using additional licenses. SofTrack does have the ability to limit launches to once only per desktop. To do so requires the use of the SofTrack Local Workstation Agent (LWA). See [Chapter 3](#).

- 11 Once you are done, click **OK** in the lower right corner.

NOTE: There is no **Cancel** button on the License Profile screen. Every change is made, verified, and implemented immediately.

- 12 After you click **OK**, you will receive a message indicating that the SofTrack License Server is refreshed.

Figure 4-6



Testing the CALC License Profile

Please note that it is recommended when testing that you use one machine to run `SOFTRACK.EXE` (or `STUSER.EXE`—see [page 175](#)) and another to launch the metered application.

In order to test the CALC License Profile, its file, `CALC.EXE`, must be launched from a server-based share on a server that is hosting the SSA. The SSA must be active for testing.

- 1 Open `SOFTRACK.EXE`.
- 2 Click **Licences** and double click **CALC** from the **Select License Profile** list.
- 3 Click **Active Users**.
- 4 From another Windows-based workstation, run `CALC` from the server-based share. If you use `CALC.EXE` from your local machine, you will not be metered as part of this test. The SofTrack LWA can be used to track applications that are stored on user workstations.
- 5 Click **Refresh List**. You will see your test workstation and user showing as an Active User.
- 6 Exit `CALC` and then click **Refresh List**. The username is no longer listed.



Chapter 5 License Profiles

Overview

In the previous chapter, you defined a sample License Profile and set some basic options. This chapter describes all License Profile options.

The material in the remainder of this guide assumes that you are familiar with the concepts covered in the last chapter, [Chapter 4, “Defining a Software Metering License Profile” on page 37](#). If you are new to SofTrack, take a few minutes to review the material in the previous chapter.

In general, the job of the License Profile is to specify any number of the following:

- The executable file or files that SofTrack will meter. SofTrack for NetWare meters server and/or workstation-based 16-bit and 32-bit .EXE files that are launched from Windows-based workstations.
- Any file of any type including non-executable files to be metered based on open and close activity. Such files include CD-ROM libraries and databases. SofTrack’s metering can be *passive*, that is, watching use without restricting use.
- To audit only *without* enforcing usage limitations. This ability to *audit* or *passively meter* allows you to simply watch what applications are used and how they are used.
- To specify how many copies of a license can be used concurrently. When the number you specify is exceeded, new usage is blocked until a previously used license is freed.
- To specify which NDS/eDirectory Groups to meter. Users outside the memberships of the groups specified are not tracked as part of the specified License Profile. This ability allows you to *divide* licenses between different groups of users.

- Whether or not the License Profile is to be Globally shared amongst other NetWare servers hosting SofTrack Server Agents (SSA). When a License Profile is marked Global, its license count is to be shared among as many servers as you require. Per License Profile, this option allows sharing of up to 65,000 licenses.
- How long to hold a license for a user who was queued (for future use) and had their usage blocked because of insufficient licenses being available. The **Queue Hold Time** specifies how long to exclusively hold a free license for a previously-queued user before returning it to the pool of available licenses.
- If you want to discover what applications are being used at each workstation without defining a License Profile for each, please see [page 98](#).
- Several more options are described in the following sections.

Accessing a License Profile

- 1 Open `SOFTRACK.EXE`.
- 2 Select **Licenses** from the menu, or click the **Licenses** toolbar button in the toolbar.
- 3 From the **Select License Profile**, select an existing License Profile. When the License Profile appears, it is ready for your edits.

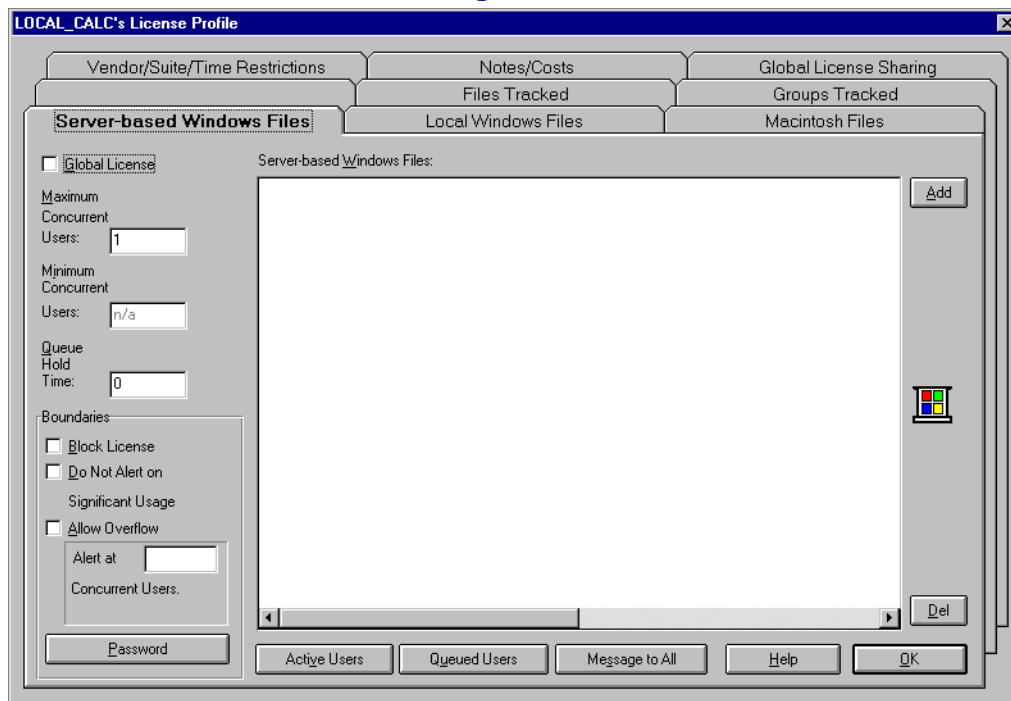
Selecting Files to Meter

SofTrack meters applications by tracking their executable files. For Windows 16-bit and 32-bit applications, SofTrack only meters files with `.EXE` extensions. The file to meter is *always the initial* `.EXE` file launched. To meter files of ANY extension, use the **Files Tracked** tab.

To select files to meter:

- 1 Click on the appropriate tab in the License Profile, i.e., **Server-based Windows Files**, **Macintosh Files**, **Local Windows Files**, or **Files Tracked**. (These are explained on [page 48](#), [page 49](#), and [page 51](#).)

Figure 5-1



- 2 Once the appropriate tab is selected, click the **Add** button at the upper right. In the file selection screen that appears, you can select as many files as you want—this enables you to add multiple files at once.

NOTE: For the **Server-based Windows Files** and **Files Tracked** tabs, if you specify a full file system path, SofTrack will only meter that instance of the selected application/file. To meter all instances, simply enter the filename only with no path.

NOTE: For the **Local Windows Files** tab, only the filename is allowed; no path is expected or available. The **Local Windows Files** tab provides the ability to meter applications used by the workstation regardless of where the file originated (i.e., local hard disk, SAN/NAS, Linux server running SAMBA, other users' workstations, even a Windows NT/2000/2003 server, etc.). Only those workstations using the SofTrack LWA will meter files specified in the **Local Windows Files** tab. The LWA is available for all Windows-based workstations including Terminal Services Client, Citrix

MetaFrame and WinFrame, Tarantella's New Moon Canaverl iQ, and XP's Remote Desktop Connection. The LWA is further detailed in [Chapter 3](#).

Understanding Files to Meter: Server-Based Windows Files Tab

This tab is for executable files (* .EXE) that exist on file system shares directly managed by the NetWare server hosting the SSA. Files entered here are metered directly by the SSA and require nothing on the user workstation launching the specified executables to be metered. The SSA provides the ability to meter without an agent on the user workstations by capturing and examining the network traffic flowing between the workstation and the server.

You may specify the exact file system path including the sharename, or you may specify the filename only. Partial paths will not be metered. Full or exact file system paths are often used to meter separate versions of the same file. If you specify the filename only, then any executable file by that name, regardless of the share or directory path it is run from, will be metered as if they were all the same file.

If you specify a full path including the sharename, please note that the SSA can only properly meter usage if the user workstation using the file has been restarted (i.e., rebooted) since the last time the SSA itself was started. Generally the SSA is started when the server boots up, so this is not an issue. However, if you are testing, and the SSA was started after the workstation has logged into the server, it will not properly meter the full path defined filename. The requirement of the SSA being started prior to the workstation's last restart is due to the method that Windows-based workstations uses to define its access to the server's shares. If the file is specified by only its name and not its full path, then metering will take place even when the SSA was started after the workstation logged into the server.

If you *experience difficulty* metering applications placed in the **Server-based Windows Files** tab, we suggest the following:

- Try metering with the filename only.
- Try moving the file to the **Files Tracked** tab (discussed in the next section).

When a user is denied access, the SSA prevents the file from being opened by the workstation. In response, the Windows operating system in use on the workstation issues one or more *error messages* indicating that the file cannot be opened or

cannot be found. Additionally, SofTrack's SSA also sends a message informing the user that either their usage is blocked or that they have been queued (if the Queue Hold Time has been defined—see [page 59](#)). For some environments, this will generate a lot of support calls to the company helpdesk.

To prevent the Windows-generated error messages upon access denial, SofTrack offers the SofTrack LWA (described in [Chapter 3](#)). Please note: the LWA only meters files defined in the **Local Windows Files** tab. The LWA prevents the Windows-generated error message by providing an agent that “lives” inside the user workstation, and it provides a level of control not available outside the workstation. When an access denial occurs with the LWA, only the SofTrack message is received by the user. The message SofTrack sends can be customized to suit the needs of your environment. See [page 81](#).

Understanding Files to Meter: Files Tracked Tab

This tab is useful for metering *any* file of *any* type, including executable files (* .EXE) that exist on file system shares directly managed by the NetWare server hosting the SSA. Files entered here are metered directly by the SSA and require nothing on the user workstation launching the specified executables to be metered. The SSA provides this ability to meter without an agent on the user workstations by watching for *file open* and *file close* requests flowing between the workstation and the server.

The **Files Tracked** tab is very useful for metering CD-ROM databases such as Lexis/Nexis, access to other databases, and watching who is accessing important files such as payroll spreadsheets. (Remember, SofTrack's metering can be passive, that is, it can watch use without restricting use.)

You may specify the exact file system path including the sharename, or you may specify the filename only. Partial paths will not be metered. Full or exact file system paths are often used to meter separate versions of the same file. If you specify the filename only, then any executable file by that name, regardless of the share or directory path it is run from, will be metered as if they were all the same file.

If you specify a full path including the sharename, please note that the SSA can only properly meter usage if the user workstation using the file has been restarted (i.e., rebooted) since the last time the SSA itself was started. Generally the SSA is started when the server boots up, so this is not an issue. However, if you are testing, and the SSA was started after the workstation has logged into the server, it will not

properly meter the full path-defined filename. The requirement of the SSA being started prior to the workstation's last restart is due to the method that Windows-based workstations use to define its access to the server's shares. If the file is specified by only its name and not its full path, then metering will take place even when the SSA was started after the workstation logged into the server.

When a user is denied access, the SSA will prevent the file from being opened by the workstation. If the file tracked is a data-associated file, that is, nonexecutable, then the application in use that is attempting to open that file will issue its own internal warning or error message regarding its inability to open the file. If the file tracked is an executable file, the Windows operating system in use on the workstation will issue one or more *error messages* indicating that the file cannot be opened or cannot be found. Additionally, regardless of the file's type whose access is being blocked, the SSA will also send a message informing the user that either their usage is blocked or that they have been queued (if the Queue Hold Time has been defined—see [page 59](#)). For some environments, this may generate support calls to the company helpdesk. An alternative when metering executable files that will suppress the error messages is to use the **Local Windows** tab defined in the next section. For tracking data files, SofTrack does not and will likely never offer a mechanism to suppress the warning or error messages generated by an application attempting to open a blocked data file.

Important Note: Specifying Executable Files in the Files Tracked Tab

Differences when specifying executable files in the **Files Tracked** tab versus the **Server-based Windows Files** tab are: (a) If the executable file's usage is less than 30 seconds, no metering will be recorded; (b) If the executable file is opened for non-execution use, such as gathering its icon for presentation on the desktop, *and* there are no licenses available at that moment (due to all licenses being in use or the license being flagged as Blocked), the user will receive a Windows-generated error message indicating the file cannot be found and a message from the SSA indicating the license is not available.

Versions of the SSA *previous* to November 2001 metered every usage of the files included in the **Files Tracked** tab, even uses less than 30 seconds. Because of this, it was not recommended to meter executable files with the **Files Tracked** tab.

Versions of the SSA *since* November 2001 meter in the new manner described above, and the result is accurate metering of executable files defined in the **Files Tracked** tab.

Understanding Files to Meter: Macintosh Files

This tab is useful for metering *any* Macintosh file of *any* type that exists on file system shares directly managed by the NetWare server hosting the SofTrack Server Agent (SSA). Files entered here are metered directly by the SofTrack Server Agent and require nothing on the user workstation launching the specified executables to be metered. Only files found in the Macintosh namespace are allowed. Metering of locally installed Macintosh applications is not currently supported.

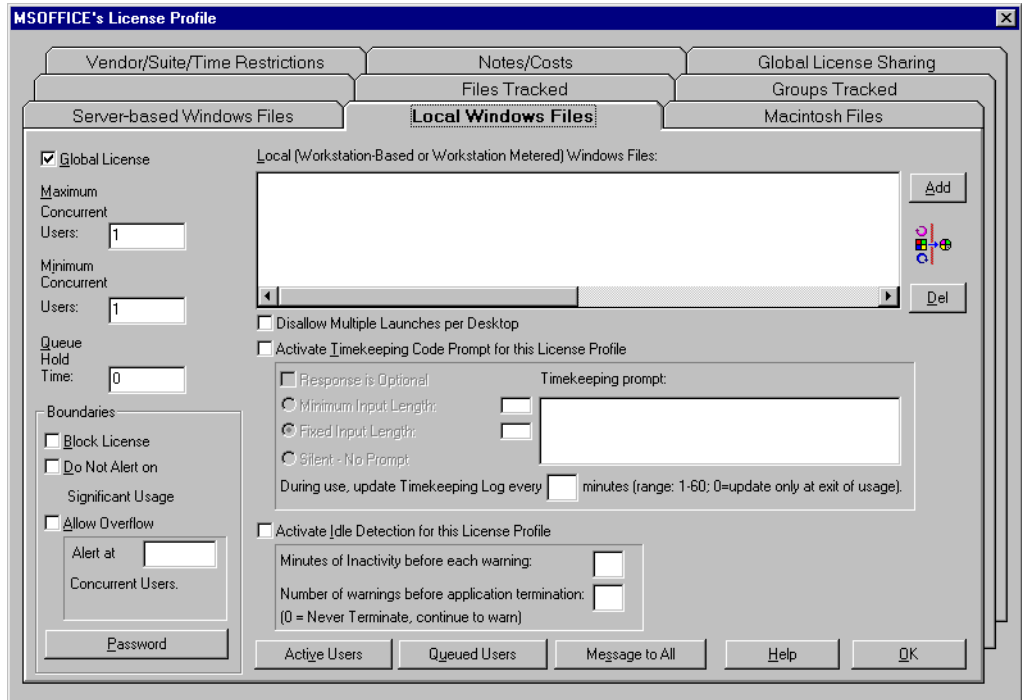
Understanding Files To Meter: Local Windows Files Tab

This tab is for metering Windows-based 16-bit and 32-bit executable files (* .EXE) that exist *anywhere on any device*. Metering MS-DOS (* .COM) files is not supported. Files entered here are metered by the SofTrack Local Workstation Metering Agent (LWA), which is software that must be installed on each workstation to be metered. *Only* executable files may be entered into the **Local Windows Files** tab. Additionally, only the filename is supported. Currently there is no support for metering by directory path plus filename or by drive letter (i.e., **A:**, **C:**, etc.). The filename to choose is always the same name as the file used to launch the application.

The LWA can be used on any Windows-based workstation from Windows 3.11 through Windows XP and supports all Terminal Services Client servers and clients including Citrix and all other terminal service products. Additionally, the LWA supports the Remote Desktop Connection (RDC) introduced by Windows XP. The LWA provides this metering ability by directly interfacing with the Windows operating system. This gives the LWA the power to meter every application the workstation uses. Use the **Local Windows Files** tab to meter all files the workstation uses. This includes but is not limited to files run from Storage Area Networks (SANs), Network Attached Storage (NAS), any network server including Linux servers using SAMBA, memory cards, zip drives, CD-ROMs, DVDs, floppy drives, etc. Optionally, the LWA can be configured to meter only those files run from locally attached devices such as hard drives or CD-ROM drives.

Theory of Operations and Installation of the LWA is discussed on [page 20](#).

Figure 5-2



As shown in the figure above, the **Local Window Files** tab also offers several additional options not available when metering files via the **Server-based Windows Files** tab or the **Files Tracked** tab. Below are descriptions of each of these options:

Disallow Multiple Launches per Desktop

This option will ensure per user desktop that only *one* instance of any file defined by this License Profile will be in use at any time. For example, if the License Profile defines four different executable files for metering, if any one of those files is in use, no others will be allowed to run, including a second instance of the application first used. We have found this option useful to ensure that certain applications such as inhouse database accessing applications are run only once. If that application is run more than once per desktop, it could corrupt the database—hence the value of this option.

The message received by the workstation can be customized to any text you wish, up to 117 characters. The message customization will affect all License Profiles; there is no customization available for a specific License Profile. To customize the message, from the main menu of `SOFTTRACK.EXE`, select **Administration** and **Customize License Messages**. For further information on message customization, see [page 81](#).

Activate Timekeeping Code Prompt for This License Profile

The Timekeeping option is used to track the amount of active time an application is used. You can optionally require the user to enter a code that will be recorded that helps identify the application's usage with a particular activity such as billing application usage to a particular client or department.

In addition to normal metering usage being tracked, the Timekeeping option creates a separate log file for its specific entries. This log file is named `TIMEKEEP.CSV` and is stored in the directory you defined for the `METER.LOG` file. (See [page 83](#).) Timekeeping reports are accessed by clicking the **More Rpts** button in the toolbar on the front screen of `SOFTTRACK.EXE`. The report is in `.CSV` format for easy importing to your favorite spreadsheet or database.

Options for Timekeeping include:

- **Response is Optional**

This option signals to the LWA whether or not the user is forced to enter a response before allowing the application to be used. If not checked, and therefore optional, the user can click **Cancel** on the Timekeeping prompt and still use the application with no Timekeeping data being recorded. Please note that regular metering data will always be recorded.

- **Minimum Input Length**

This option signals to the LWA the minimum response length in characters the user must provide before allowing the application to be used. The maximum value that can be used is 50 (characters).

- **Fixed Input Length**

This option signals to the LWA the exact response length in characters the user must provide before allowing the application to be used. The maximum value that can be used is 50 (characters).

- **Silent - No Prompt**

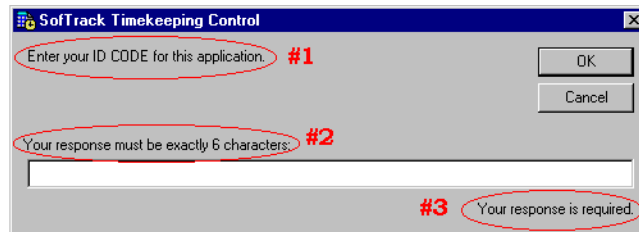
This option signals the LWA not to prompt the user at all but to simply provide timekeeping data.

- **Timekeeping Prompt**

Here you specify the prompt the user will receive when running an application tracked by Timekeeping. The prompt can be up to 110 characters in length.

The following figure shows an example Timekeeping prompt seen during use:

Figure 5-3



There are three areas of this prompt that are affected by the choices you make when defining the timekeeping option:

- The **first** is the Timekeeping Prompt. The text you enter may be up to 110 characters in length.
- The **second** is the length of the response that you want the user to enter. In the License Profile, you may select a fixed length (as shown in [Figure 5-3](#)) or a minimum length. The maximum response allowed is 50 characters.
- The **third** is whether a response is required before allowing the application to launch. The user's response is *not a password* but, rather, a code to associate with the particular use of the selected application. In [Figure 5-3](#), a response *is required*, which means if the user clicks **Cancel**, the application will be dismissed and not allowed to be run. The prompt can be configured to *optionally require* a response. In this case, if the user clicks **Cancel**, no timekeeping data will be recorded. In any case the `METER.LOG` will contain a record of the application's use in addition to any timekeeping data logged. By clicking **Cancel**, the user is not "turning off" metering, just timekeeping.

If, in the License Profile definition, you have selected the **Silent - No Prompt** option, the user will not receive a timekeeping prompt at all. In this case a timekeeping record will always be logged, and the user's response will be defined as: *****SILENT*****.

- **During use, update Timekeeping Log every [] minutes (range: 1-60; 0=update only at exit of usage).**

This option indicates how often to record the then current Timekeeping data. Reasons you would not set this value to zero include:

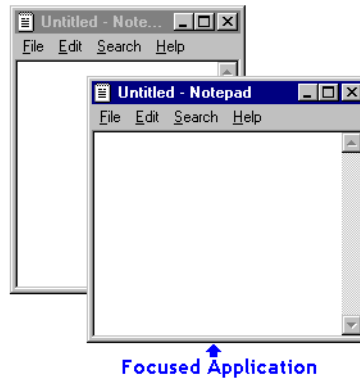
- Users who do not want Timekeeping data to be recorded might reboot their workstation or otherwise log off before properly exiting the application's use.
 - If a user's workstation locks up or crashes, no Timekeeping data will be recorded if this option is set to zero.
 - If you require a very accurate detailing of how the application was used, do not set the option to zero.
- **Reporting for the Timekeeper option**

You can access the Timekeeping report from the **More Rpts** toolbar button on `SOFTTRACK.EXE`'s main screen. Additional reporting information is discussed in [page 146](#).

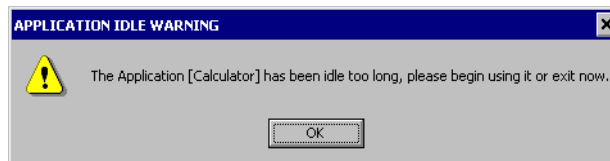
Activate Idle Detection for This License Profile

Once the application is in-use, the SofTrack LWA will monitor the application's idle time if that option has been selected. Upon the occurrence of an idle warning period timeout, the LWA displays a popup message at the user's desktop to indicate the idle activity. The message can be customized. The idle warning and idle termination messages received by the workstations can be customized to any text you wish, up to 117 characters. The message customization affects all License Profiles. There is no customization available for a specific License Profile. See [page 81](#). After the defined number of idle warnings, the LWA terminates the application. For each idle warning and idle termination the LWA processes, it will notify the SSA of the action, and the event will be recorded in the `METER.LOG` file. To view the idle warning and termination events, select the **Details of License use Report** as shown in [page 107](#).

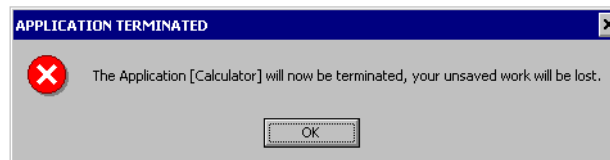
An application is considered idle if it is not the currently *focused* application. A focused application is the one that is topmost on the desktop and is active. The currently active window will be noted by its highlighted title bar as shown below:

Figure 5-4

All other windows will have diminished or grayed caption bars. The Idle Detection option does not take into account mouse and keyboard actions, because a user may be waiting for a function such as a recalculation to complete or may be reading the screen's contents. Once focus is taken off an application's window (i.e., the window is minimized, another application is focused, etc.), the *idle timer* begins. Once the defined time period has elapsed, a warning is displayed:

Figure 5-5

After the administrator defines the number of warnings, with the possibility of infinite, the user receives a termination notification, and the application is terminated. If the License Profile has been defined to warn only, then the user is continually warned of idle detection, and no application termination occurs.

Figure 5-6

In both examples above, the name shown within the square brackets [], is the same as the caption bar of the actual application. In this example, **Calculator** was the application's name in its title bar.

As an example: If you have defined one minute as the idle time period, each minute that goes by will incur a new warning. If the number of warnings before termination is set to 5, that means that one minute after the fifth warning, the user will receive a termination notification, and the application will be terminated.

WARNING: NO DATA WILL BE SAVED! When the application is terminated, it is a forceful termination, and any unsaved data **WILL BE LOST**.

The idle warning and idle termination messages received by the workstations can be customized to any text you wish, up to 117 characters. The message customization will affect all License Profiles; there is no customization available for a specific License Profile. To customize the messages, from the main menu of SOFTRACK.EXE, select **Administration** and **Customize License Messages**. For further information regarding message customization, see [page 81](#).

Deleting a File from the Metering List

To delete a file from the list of files to meter, highlight the file and click **Del**. Prior to removal, your request will be confirmed.

What SofTrack Does and Does Not Meter

SofTrack for NetWare *does not* meter MS-DOS applications (.COM files).

Unless you are using the SofTrack LWA, SofTrack for Windows NT/2000/2003 *does not* meter files accessed via Microsoft's NetWare File and Print Services (FPNW option).

SofTrack for Windows NetWare *does* meter the following:

- Windows 16-bit and 32-bit applications that are hosted by a NetWare server running the SSA.
- Any file of any type that resides on a server-based share that is accessed remotely (i.e., must be opened over a network, if such files are opened from a local console on the server or terminal services session are not tracked).

- Windows 16-bit and 32-bit applications launched from local workstations or any other device (requires the use of the SofTrack LWA). If you are using the SofTrack LWA on a Terminal Services host, SofTrack *requires* that the terminal session (thin client) users be logged onto the same NDS Tree as the server hosting the SSA. This requirement is further detailed on [page 30](#).
- Windows 16-bit and 32-bit applications launched by the Terminal Services, Citrix, or XP's Remote Desktop Connection client (requires the use of the SofTrack Local Workstation Agent).

Integrity Software's SofTrack Metering Preference

The SofTrack Local Workstation Agent provides a very valuable set of services. We *recommend* that you use the SofTrack Local Workstation Agent. For further information, please read [Chapter 3, "Installing the SofTrack Local Workstation Agent" on page 19](#).

Basic SofTrack License Profile Options

The SofTrack License Profile includes a number of flexible ways to define applications for active and passive metering. Active metering is when the number of licenses allowed is actively enforced with additional usages being blocked. Passive metering is when all usage is tracked and no usage is blocked. Both active and passive metering allow you to define activity levels for administrator alerts, which are discussed below.

Global License

This option is discussed in ["Global Licensing: Overview" on page 67](#).

Maximum Concurrent Users

Each License Profile includes a **Maximum Concurrent Users** count. If you wish to allow an unlimited number of users but be notified when a particular threshold is reached, use the **Allow Overflow** option described below.

The number you specify should be one of the following:

- The number of licenses of the product that you are legally entitled to use concurrently

or

- If using Global License sharing, the number of licenses you wish to share on this particular server

Ordinarily the **Maximum Concurrent Users** count is limited to 1,000. To share up to 65,000 licenses, use the Global License sharing option—even when using the Global License option, the **Maximum Concurrent Users** monitored per License Profile per Server is 1,000.

Minimum Concurrent Users

This option is used exclusively with Global Licensing and is discussed in [“Setting Minimum Concurrent Users Count for Global Licenses” on page 70](#).

Queue Hold Time

SofTrack contains a number of features that help you ensure that there are always enough licenses available for users who need them. However, there will be times when no license is available. For those times there is the **Queue Hold Time**. By defining a **Queue Hold Time** (value: 1 through 30 minutes), you enable queuing for the selected License Profile. The **Queue Hold Time** sets the amount of time that SofTrack will exclusively hold the newly available license for the queued user. A license becomes available as other users relinquish their use. Once a license becomes available, the queued user is sent a “popup” notification message signalling that the license is now ready for their use. You can change the message they receive under the **Customize License Messages** option under the **Administration** menu within `SOFTRACK.EXE`. See [page 81](#).

Setting the **Queue Hold Time** is optional. The default of 0 indicates that queuing is disabled, and when a user is denied access due to no licenses being available, their use will be rejected or blocked. Setting the **Queue Hold Time** to a value between 1 and 30 minutes enables queuing and will ensure that queued users will be given sufficient time to begin using the requested License Profile before another queued user is notified or before another user is given access to the License Profile controlled application.

NOTE: Only eight users can be queued at any one time for any one particular License Profile. The ninth user receives a message that the license is not available, and they will not be queued.

Here is an example of what the user will experience:

- 1 User Joseph attempts to open a metered application for which there is no license available.
- 2 The user Joseph will receive a “Request for License <name of License Profile> has been queued.” message.
- 3 At this point, Joseph will not have access to the guarded application.
- 4 Later, when a license becomes available and if the user Joseph is still logged in, he will receive a message stating “License <name of License Profile> is being held until <time where time is the current time plus the number of minutes you specified in the **Queue Hold Time**>”.

NOTE: The messages the user receives in Steps 2 and 4 can be customized. See [page 81](#).

Block License

When you click on and set **Block License**, you are instructing SofTrack to completely block use of any files defined within the License Profile. Usage that is Blocked due to this option is recorded as a “rejected” use.

You will also notice that when the **Block License** option is checked, the **Global License**, **Maximum Concurrent Users**, **Minimum Concurrent Users**, and **Queue Hold Time** fields become disabled.

Do Not Alert on Significant Usage

When you click on and set **Do Not Alert on Significant Usage**, you are instructing SofTrack to not send any usage alerts that have been defined. The usage alerts are defined under [“Users to Notify of Significant License Usage” on page 82](#).

Allow Overflow

When you click on and set **Allow Overflow**, you are instructing SofTrack to allow an unlimited number of users to use the License Profile’s file(s). The limit is actually 1,000 users per server. When **Allow Overflow** is set, the **Maximum Concurrent Users** count is ignored for license usage enforcement, but it is still referred to when generating usage alerts as defined under [“Users to Notify of Significant License Usage” on page 82](#).

Password

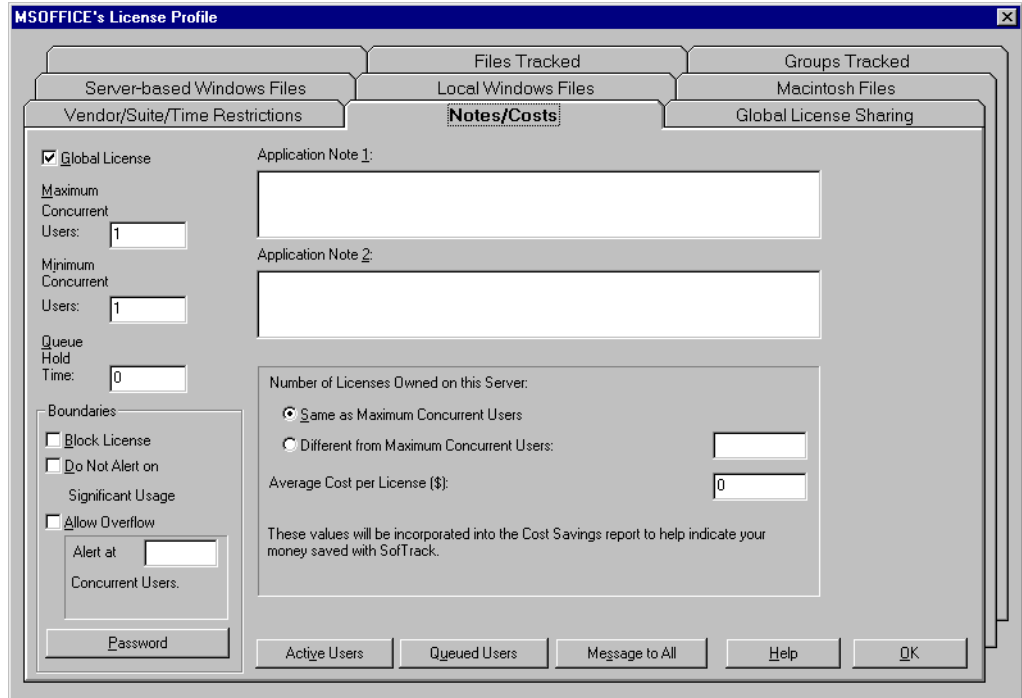
The **Password** option allows you to add a layer of extra security to the details of your License Profiles. Normally any user with Administrative privileges on the server can modify the License Profile details. When you set a Password, the user must be an Administrator and know the password. The Password will be prompted for when you first try to edit a License Profile.

Notes/Costs

Each License Profile includes a tab entitled **Notes/Costs**. The **Application Note 1** and **Application Note 2** fields are free form, giving you the ability to enter up to 120 characters of data you define. The notes you define will appear in the License Profiles Definition Report. See [page 151](#).

Below the **Application Note 2** field is the **Costs** section where you can optionally enter data to be used when generating the Cost Savings Report. See [page 123](#). The default screen shows the **Number of Licenses Owned** as being equal to the number of **Maximum Concurrent Users**. If these numbers differ, click the **Different from Maximum Concurrent Users** radio button and enter the appropriate number in the adjacent field. Next, enter the application's cost per license.

Figure 5-7



Vendor Contact Information

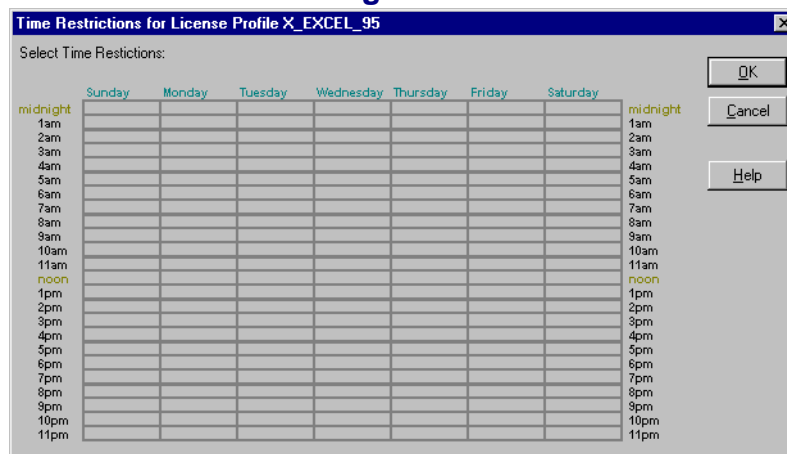
In addition to containing a Notes/Costs section, each License Profile includes a Vendor Contact section. This section is found within the **Vendor/Suite/Time Restrictions** tab. This section has two fields, one for the vendor name and one for the vendor phone number. These fields are free form, and you can enter any text you require. The vendor information you define will appear in the License Profiles Report. See [page 151](#).

Advanced SofTrack License Profile Options

Time Restrictions

With SofTrack you have the power to restrict when someone can *begin* to use an application. Within the License Profile, click the **Vendor/Suite/Time Restrictions** tab, and you will see a button labeled **Time Restrictions**. Click this button and you will be presented with the following screen:

Figure 5-8



You will notice that the each hour of the week is represented within the grid. Initially the grid is empty; that is, there are no restrictions. Click the appropriate grid box for each hour in which you want to block usage for any file defined in the License Profile. Grid entries displayed in **red** represent restricted hours. If users attempt to use any files defined in the License Profile during a restricted time, their request will be blocked. Queuing, if enabled, will not occur for those usages blocked by a time restriction.

The server's local time and not the local workstation's is used to determine when to restrict usage.

Metering Multiple Files per Application or File Pooling

With SofTrack you can group several applications together within a single License Profile. This ability allows you to correctly meter licenses for groups of files contained within a single product. When a license agreement for a product group specifies that the applications included may be run on only one workstation at a time, you can combine the applications in one License Profile to ensure that they are used legally.

To define a License Profile for a suite of applications, be sure to specify the files to meter for each individual application within the product.

When you combine multiple applications in the same License Profile, your users can still open more than one application at a time. This is because SofTrack counts all uses of applications defined within a single License Profile as one use. This also

allows an individual user to open more than one copy of an application without tying up an additional license. This is consistent with the ordinary ability to allow more than one copy of an application to be in use at once on a single system. Please note that the phrase *single system* indicates a particular logon session or desktop. This is particularly important to remember when using SofTrack in a Terminal Services Client or Remote Desktop Connection environment.

Suite Metering

With SofTrack you can also meter product suites. This **Suite** option can be used for any suite of applications or for standalone licenses.

For example, if you have 10 copies of a word processing application and 30 copies of an office suite, and you want to define two (2) License Profiles: one standalone for the word processing application and one for the office suite (which includes the word processing application), the **Suite** option allocates the **StandAlone** licenses before the **Suite** licenses. Thus, if a user were to begin use of the standalone word processing application, and then while still using the word processing application begins using the spreadsheet application from the office suite, the use of the **StandAlone** license would be relinquished as the user is automatically transferred to the **Suite** license.

Once a user has been automatically switched from a **StandAlone** license to the **Suite** license, he or she will not be downgraded to a **StandAlone** license at any time. Only upon releasing the **Suite** license will the user be eligible to use the **StandAlone** license again.

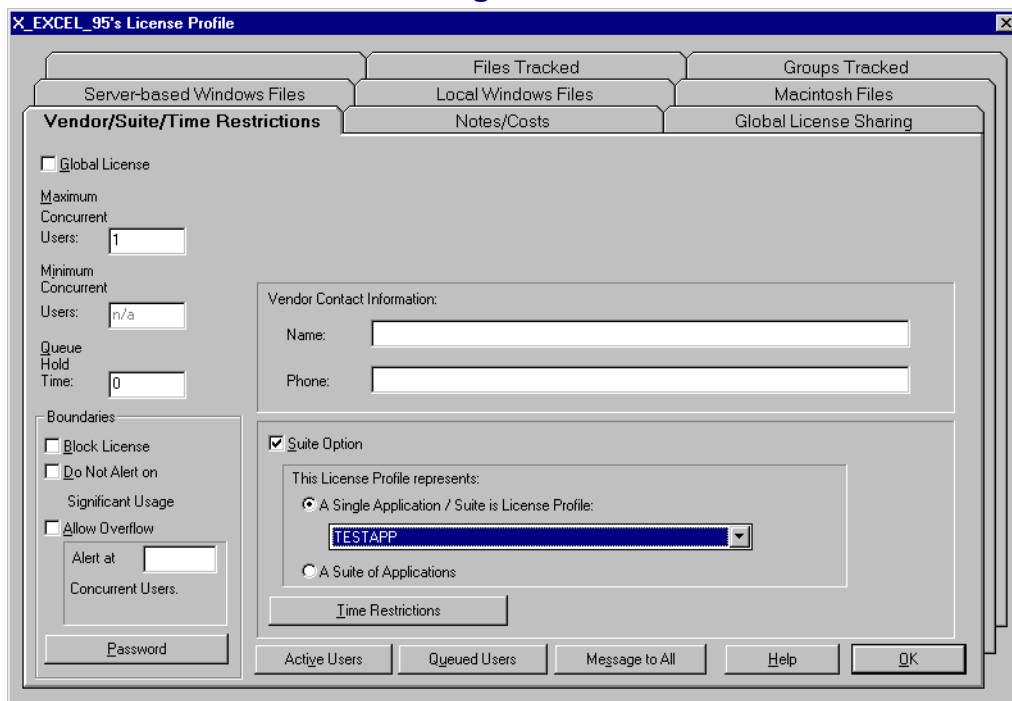
Defining Suite Metering

You will be defining at least two License Profiles—one for the suite of applications and one for each standalone application.

- 1 Create a new License Profile.
- 2 Select the **Vendor/Suite/Time Restrictions** tab.
- 3 Click on the **Suite Option** checkbox.
- 4 Select what sort of suite you are defining:

- a If defining a single application, (i.e., a **StandAlone** License), select the first option and in the dropdown list, choose the License Profile that provides the matching suite. If you have not yet defined a License Profile that represents the **Suite**, you can select this later.
- b If defining the **Suite** of applications, i.e., the License Profile that contains all the suite's application files, select the second option.

Figure 5-9



- 5 Click the **Server-based Windows Files** tab and enter the appropriate file(s). In the StandAlone License Profile you will likely have a single executable. In the Suite License Profile, you will have at a bare minimum the *exact* same file(s) defined in the StandAlone License Profile(s).

Group Tracking: Overview

With SofTrack you can meter and track license use by NDS/eDirectory Group membership. When you use SofTrack's Group Tracking option, you can:

- Track and report license usage by NDS/eDirectory Group membership.

- Divide a single application's licenses between different NDS/eDirectory Groups to ensure availability.
- Scope metering by NDS/eDirectory Group, which can be used to represent different departments or organizations.

Group Tracking: How It Works

Select a License Profile for editing and click the **Groups Tracked** tab. By default, the **Groups Tracked** list is empty. This indicates that SofTrack will meter any user who attempts to use the applications defined. Only group members' usage will be metered when you specify one or more NDS/eDirectory Groups in the License Profile's **Groups Tracked** list. For accurate metering results of any one specific application, do not use the same group in more than one License Profile that is defined for that application.

Users who are not members of the group(s) specified will not be metered unless there is another License Profile for the same application(s) that either has no groups to be tracked or specifies a group to track that includes the user as a member.

SofTrack's Group Tracking does not displace Windows file and directory security.

NOTE: If all License Profiles defined for a specific application include groups to track, it is possible that a user who is not a member of any group that is tracked will be able to use the application without being metered.

Example: Only Allow Group Members Access to an Application

The example here will show you how to use Group Tracking to allow only group members access to an application and to deny access to all non-group members:

- 1** Create an NDS/eDirectory Group that includes only those users you want to allow application access.
- 2** Create two License Profiles. The first profile will include the NDS/eDirectory you established earlier. The second profile will be for all other users, i.e., non-members. Both profiles should define the same filename(s) to meter.
- 3** In the first profile, enter the number of licenses you own in the **Maximum Concurrent Users** field. (See [page 58](#).) Next, click the **Groups Tracked** tab. Click **Add** and select the NDS/eDirectory Group(s) to track.
- 4** In the second profile, after you add the appropriate filename(s), click **Block License**. (See [page 60](#).)

- 5 That is all you need to do. Now all group members will have access, and non-members will be denied access.

Global Licensing: Overview

Figure 5-10



With SofTrack you have the ability to share licenses between Windows-based servers hosting the SSA. You can share up to 65,000 licenses between an unlimited number of servers. Global licensing operates with all file types including **Server-based Windows Files**, **Macintosh Files**, **Files Tracked**, and **Local Windows Files**.

The SSA for NetWare utilizes Novell's NetWare Core Protocol (NCP) for sharing of global licenses. The SSAs will only share global licenses with NetWare servers in the same NDS/eDirectory Tree. The SSA locates other SSAs by reading NDS/eDirectory to see which other servers have a SofTrack token installed.

IMPORTANT: If the **Allow Overflow** option is used within a Globally defined License Profile, the sharing of licenses will not take place on that server because there will be an infinite pool of licenses available; therefore, the particular server will never be out of licenses. Even if the **Allow Overflow** option is used, Global License Reporting will still work correctly. See [page 60](#).

Global Licensing: How It Works

SofTrack's Global Licensing allows you to share licenses between servers. What follows is a short theory of operation:

- A user attempts to use an application tracked by a License Profile that has been marked as a **Global License**, and all licenses are currently in use. In other words, the **Maximum Concurrent Users** count has been reached.
- The SSA begins the process of seeking an available license. The user's usage is blocked (because there are no licenses); however, if queuing is enabled, the user will be queued. It is highly recommended that you define a **Queue Hold Time** for every License Profile marked as a **Global License**.

- The SSA will contact the other servers hosting the same named Global License Profile to seek an available license. If one is found, it will be *moved* from the other server to the current server. This movement results in the **Maximum Concurrent Users** count being *reduced* by one at the server with a free license and *increased* at the recipient server. Once this transfer is completed, the user will, if queued, be notified that the license is available for his or her immediate use. This entire process can take from 15 seconds to 5 minutes, depending on the size and configuration of the network.
- The **Minimum Concurrent Users** count field, available only to Global License Profiles, is used to ensure the specified amount of licenses *remain* on the selected server. Please note that in the step above, when a license is acquired from another server, it is actually *moved* to the destination server. Thus, if Server A had 10 licenses and Server B had 5, and Server B requested a license from Server A that was granted, you would find that Server A now has 9 licenses and Server B has 6 licenses. The **Minimum Concurrent Users** count field is used to set a floor that will ensure the specified number of licenses is always located on the selected server.
- If no license is immediately available, the user remains queued until a license becomes available. A license becomes free when another user on the same server relinquishes their use of the license. The SSA will *not* continue to seek a license from other servers unless the **Early Global License Request** License Profile option is selected. This option is found under the **Global Licensing Sharing** tab within the License Profile.

NOTE: The user is not required to be connected to the other server where the license is moved from. The exchange is automatically handled between the SSAs at each server and requires no user intervention.

Global Licensing: Defining a Global License Profile

- 1 Ensure the SSA is started on each server where you will define a Global License Profile.
- 2 Define a License Profile at each server using the exact same name for each License Profile at each server. Only the License Profile name must be exactly the same (unless using the **Global Password**); the other details such as files, user counts, etc., do not have to match.

The optional **Global Password** is available in case you want to make sure your Global License Profiles are shared only on the servers you wish. For instance, if another department is using SofTrack, there is nothing that prevents them from using the same names for their Global License Profiles, so to prevent inadvertent license sharing between your department and theirs, use the **Global Password** option. When you use the **Global Password** option, you define a password that must be the same on all the servers for the same named Global License Profile. The password is encrypted and verified between servers hosting the Global License Profile before sharing licenses. At no time will a user be requested to verify this **Global Password**; it is strictly used between SofTrack's SSAs for purposes of verifying the validity of the license exchange.

TIP: You can use the **Replicate License Profiles** option found under the **Administration** menu within `SOFTTRACK.EXE` to assist in creating the same named License Profile on multiple servers.

- 3** Click the **Global License** checkbox in the License Profile to enable it for global licensing.
- 4** Set the **Minimum Concurrent Users** count. It can be 0.
- 5** Set the **Queue Hold Time** to ensure that, if blocked, the user will be made aware when a license has become available for them.

Global Licensing: Options

Setting Maximum Concurrent Users Count for Global Licenses

SofTrack's Global License option balances license usage between servers based on the number of licenses you specify in the **Maximum** and **Minimum Concurrent Users** fields. Initially you might evenly divide your total number of licenses owned across your servers. For example, if you have 500 licenses to share among five servers, you could define 100 in the **Maximum Concurrent Users** field of the License Profile for each server. You could also define all 500 on one server and the rest with zero. The numbers you initially define at each server are your choice. When SofTrack balances license usage between servers, it is actually *moving* the licenses between the servers.

If any server goes down or becomes otherwise unavailable, the remaining servers will be able to continue enforcing their **Maximum Concurrent Users** counts, since those counts have been *balanced* and as such represent the *typical* licensing needs of those specific servers. However, when the missing server rejoins the network, full license movement (balancing) will automatically resume.

It is possible for the **Maximum Concurrent Users** value to be zero.

Over time, as licenses are shared amongst your servers, SofTrack actually moves licenses to balance them between servers, and the number of licenses at each server changes. Thus, assuming you specified a **Maximum Concurrent Users** count of 100 at each server as suggested above, in a month's time you may find that the servers have the following number of licenses: 50, 201, 167, 35, and 47. In total there are still 500 licenses, but SofTrack has balanced them to better fit the needs of each server. Remember, it is entirely possible for a server to have 0 (zero) licenses as its **Maximum Concurrent Users** count.

NOTE: Excessive license movements will indicate that there are too few licenses to service the network's users efficiently. Also of note, the actual movement of licenses between servers is not recorded. For any specific Global License, you can use the **Global License - Online View** option available within `SOFTTRACK.EXE` under **Reports** to view the current **Maximum Concurrent Users** count at each server.

Setting Minimum Concurrent Users Count for Global Licenses

SofTrack's Global Licensing option gives you the ability to reserve licenses on a specific server. To ensure that a set number of licenses always remain on a selected server, use the **Minimum Concurrent Users** field. If you specify a value of zero, the **Maximum Concurrent Users** count can become zero as well. This possibility is described in the preceding section. If you specify a value greater than zero for the **Minimum Concurrent Users** field, that number of licenses will always remain on the selected server, i.e., they will never be transferred to another server. Keep in mind that users on servers without an available license will be subject to a slight delay while SofTrack searches for an available license on another server.

Setting Early Global License Request for Global Licenses

SofTrack's Global Licensing allows you to predictively move licenses between servers to anticipate your users' needs. Ordinarily SofTrack will wait until all licenses on a server are exhausted before requesting a license from another server.

The **Early Global License Request** option lets you select at what point a license should be requested from another server. A license will be requested when the number of free (i.e., available) licenses on a server is reduced to the number specified in the **Request new License before current Maximum** field.

TIP: To avoid excessive licensing movement, we recommend that you set this value to 1.

To access this option, click the **Global License Sharing** tab when editing the License Profile.

Setting Queue Hold Time for Global Licenses

We highly recommend the use of the **Queued Hold Time** option for Global Licenses. By choosing this option you ensure that any user who has their access denied due to insufficient licenses will be notified when a license becomes available. Further, the license will be exclusively held for the number of minutes you indicate in the **Queue Hold Time**. If, after notification of the license being available, the user does not begin use of the license (i.e., being use of the application guarded by the license) within the **Queue Hold Time**, the next user in the queue will be notified. When there are no further users to notify, the license will become available to the next user who requests its use. Please note that the queue holds up to 8 users. If a ninth user is denied access, they will not be queued. They will simply have to try again later.

Here is an example of what the user will experience:

- 1** User Joseph attempts to open a metered application for which there is no license available.
- 2** The user Joseph will receive a message, Request for License <name of License Profile> has been queued.



At this point Joseph will not have access to the guarded application.

- 3** Later, when a license becomes available and if Joseph is still logged in, he will receive a message stating License <name of License Profile> is being held until <time where time is the current time plus the number of minutes you specified in the Queue Hold Time>.

NOTE: The messages the user receives can be customized. See [page 81](#).

Implementing License Profile Definitions

When you are finished defining the License Profile, click **OK** in the lower right corner of the License Profile screen. Notice there is no **Cancel** button; each update you make is implemented immediately. After you click **OK**, you will be returned to the list of License Profiles window where you will notice that each profile defined has one of two symbols:

-  indicates the License Profile is globally enabled (see [page 68](#))
-  indicates the License Profile is not globally enabled

Normally when you click **OK**, you will also receive a popup message indicating whether the SSA has been refreshed or not. The term *refreshed* indicates the SSA has been directed to rescan and update its internal processes with the modified License Profile definitions. If you do not see the Refreshed message, or you just want to make sure, you can always click the **Refresh SSA** button in the toolbar of SOFTRACK.EXE.

NOTE: Because SofTrack's License Profile definitions are stored in NDS/eDirectory, it is possible that the replica hosting the SofTrack OU may take more than a few minutes to become fully updated with your changes. If you added a new License Profile, check the SofTrack Status screen at the NetWare server. In its upper right corner, you will see a notation of how many Profiles it recognizes (see figure below). If this count does not match, chances are NDS/eDirectory has not yet finished updating. Our suggested is to retry the **Refresh SSA** button in 5 minutes. If this condition persists, we suggest using DSREPAIR to check that status of the replica hosting the SofTrack OU on that NetWare server.

Figure 5-11

```

SofTrack Status Screen, v6.23a
Last License Table Refresh: Thu Jun 5 11:20:53 2003      TOKEN » OK
Refresh Requested by User: admin.isw                    Licenses: 10
From Connection Number : 45                             Profiles: 16
Network Address of User : 00ABBCDE:00805FE26220

Track NonMetered Local Use: Disabled, no logging.

Path to use for METER.LOG : SYS:\AUDIT\METER.LOG
METER.LOG to be archived : Has Not Been Set
Allowed to Dispatch      : Yes, can Dispatch Global Licenses<Default>
Current memory usage     : 874,678 bytes
(c)1993:2003 Integrity Software, Inc.                    www.softwaremetering.com

```

When License Profile Changes Take Effect

The options you set in a License Profile, whether in a new License Profile or as changes to an existing profile, take effect as soon as the SSA is refreshed (see above). Metering of the application(s) defined by the License Profile will take place for all usages that *begin after* the SSA has been refreshed. As a result, if a user is *already* using the metered application at the time its filename is added to the License Profile, he or she will *not be metered* until the *next time* he or she opens the application.

If you manually decrease the **Maximum Concurrent Users** count, any currently active users may not have their activity properly recorded. This is not a concern when the **Maximum Concurrent Users** count is automatically reduced by Global License activity. See [page 68](#).

If you STOP and RESTART the SSA while users are actively using metered applications, you will probably notice that metering becomes inaccurate until the next time the users login to the server hosting the SSA.

TIP: Our recommendation is that you edit License Profiles that have active users at a time when the number of active users is low.

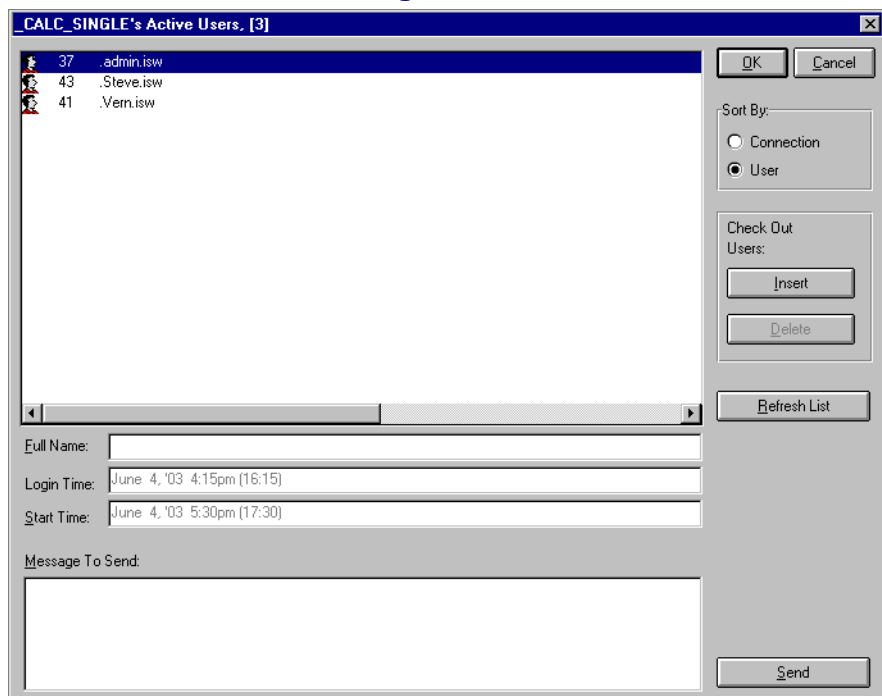
When License Usage Data is Updated

For each use of a metered application, SofTrack creates a single entry in the `METER.LOG` file. For more information, see [Chapter 7](#). This entry is created when the use of the metered application *has been completed*. Thus, if you try to generate a metering report at 10am, you will not see any activity for the current day unless users have already exited the metered application(s). To view current metering activity, use one of the methods defined in the following section.

Monitoring Active License Use

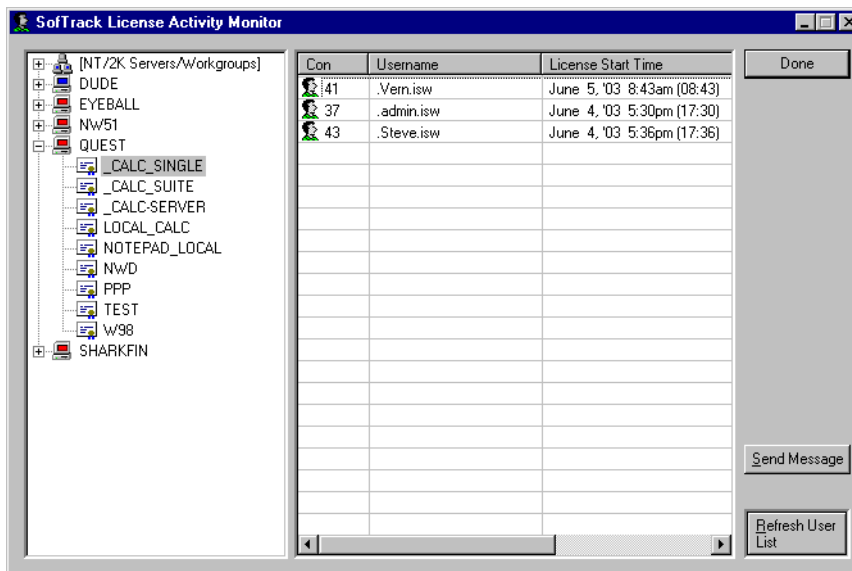
SofTrack provides two applications for monitoring active license use. The first is `SOFTRACK.EXE`. After opening it, select **Licenses**, select the desired License Profile, and click **Active Users**. The **Active Users** window opens.

Figure 5-12



The second application you can use to monitor active license use is `STUSER.EXE`. `STUSER` is fully detailed in [Chapter 10](#).

Figure 5-13



SOFTTRACK.EXE provides two additional administrative monitoring features that STUSER does not. The first is found by clicking the **Queued Users** button in the **License Profile** window. This option will display the list of users who have been temporarily denied access to the metered application and are waiting to be notified that a license is available. The list of Queued Users is auto-refreshed every 10 seconds. The second is the **Message to All** button in the **License Profile** window. This option will prompt you for a message to deliver to the current License Profile's active users.

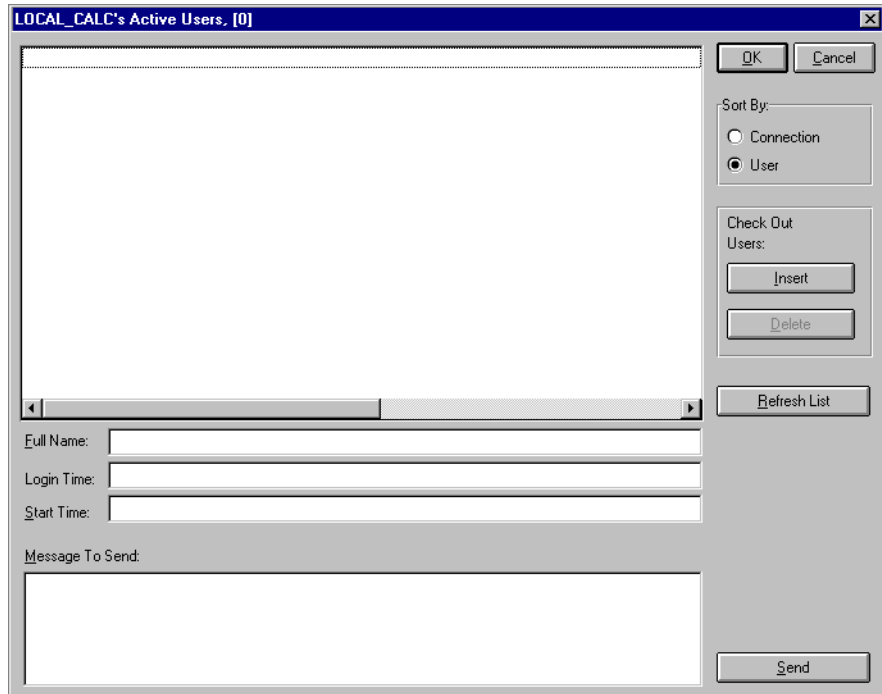
Checking Licenses In and Out for Offline Use: Overview

This feature allows administrators to check licenses out to users using local copies of applications when disconnected from the network. By checking out the license for the offline use, your license use remains in compliance. This feature is mostly used by users with laptops who will be using metered applications while they are away from the office. If the user will be using a locally installed application and will remain connected to the network, we suggest using the SofTrack LWA instead (see [Chapter 3](#)). Please refer to each application's license agreement for specific details on how applications stored on local hard drives are to be metered/licensed.

Checking Licenses Out for Offline Use: How It Works

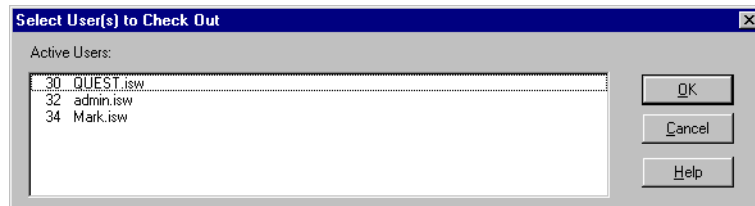
As an administrator, open `SOFTTRACK.EXE` and select the desired License Profile. Next, click the **Active Users** button. The following screen appears:

Figure 5-14



Click **Insert**. The following screen appears:

Figure 5-15



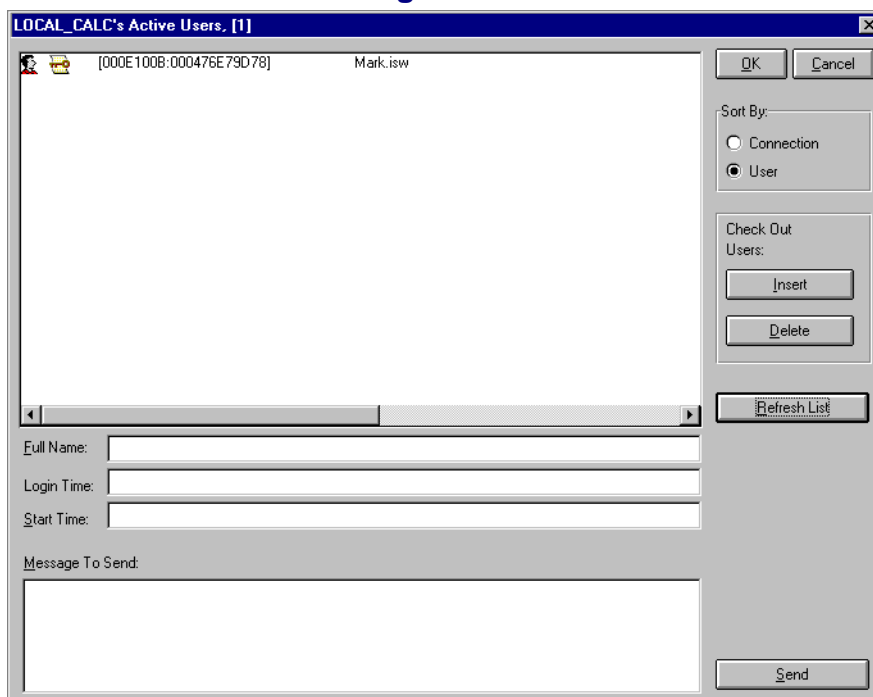
Select the desired users to check out. Please note that the SSA must be active *and* the desired user *must* be currently logged in to that server in order to appear in the list for selection.

NOTE: Whenever a user checkout occurs, the actual **Maximum Concurrent Users** count for the License Profile is reduced by one (1), except when the License Profile is set to **Allow Overflow**. If the License Profile is set to **Block License**, then no checkout can occur. Finally, **Time Restrictions** are ignored for checked out usage.

Checking Licenses In from Offline Use: How It Works

As an administrator, open `SOFTTRACK.EXE` and select the desired License Profile. Next, click the **Active Users** button. The following screen appears:

Figure 5-16



Select the desired user to check in and click **Delete**. The user's license will be checked back in.

Please note that the SSA must be active for the list of checkout users to appear.

NOTE: Whenever a user checkin occurs, the actual **Maximum Concurrent Users** count for the License Profile is incremented by one (1) except when the License Profile is set to **Allow Overflow**.

Chapter 6 Administrative Options

Starting SOFTRACK.EXE

The SOFTRACK.EXE Administrator tool is the central tool to configure and report SofTrack usage. SOFTRACK.EXE can be run from any Windows desktop that has network access to the server(s) to manage.

When starting SOFTRACK.EXE, you can select from the following methods:

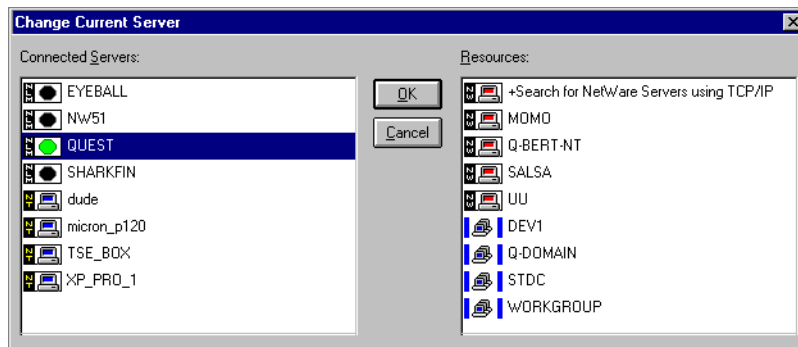
1 SOFTRACK /NW "servername"

The /NW command line option will direct SOFTRACK.EXE to attempt to connect to the selected server.

2 SOFTRACK

This option specifies no command line option. The default NetWare Server will be the current server. To select another server, click the **Server** toolbar button:

Figure 6-1



Backing Up SofTrack License Profile Definitions and Activity Data

To backup/archive SofTrack's License Profile Definitions:

- 1 Open `SOFTRACK.EXE`.
- 2 Change to the NetWare Server to backup.
- 3 Click on the **Profiles** toolbar button.
- 4 Save to a file of your choice.

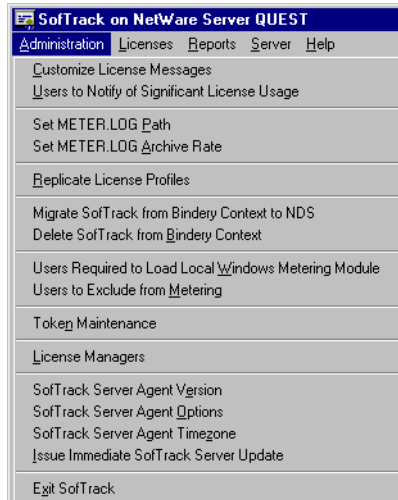
To backup/archive SofTrack's Metering Activity Data:

- Backup with WinZip or other archiving utility the contents, including all subdirectories, of the directory selected to be the `METER.LOG` path.

Administrative Options

The balance of this chapter will discuss the options that appear under the **Administration** menu of `SOFTRACK.EXE`:

Figure 6-2



Customize License Messages

Customizing License Messages: Overview

SofTrack includes several default messages that are sent to users to inform them of various actions that SofTrack is performing. For instance, a user who is being denied access to a license will receive a message to that effect. There are several reasons for customizing SofTrack's messages, including providing text for non-English speaking users.

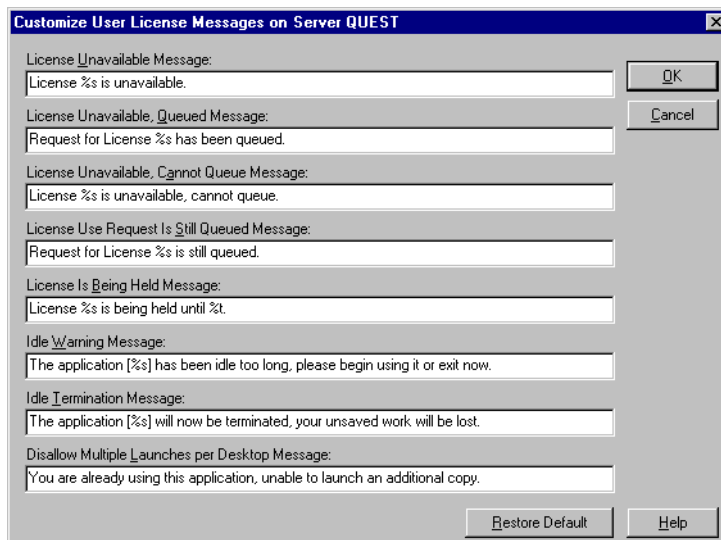
SofTrack message customization is per SofTrack Server Agent and not per License Profile; that is, if you customize the "you have been denied access" message, that is the message users will receive regardless of which License Profile's files are being denied access. SofTrack does not provide a mechanism for customizing messages on a License Profile level.

SofTrack's messages are sent to the user desktops via Novell's Client32 as popup messages.

Customizing License Messages: How

- 1 Start by opening `SOFTRACK.EXE` and selecting **Administration** and **Customize License Messages**. The following window will appear:

Figure 6-3



- 2 Edit the messages as required and click **OK**. The changes you make are only implemented on the current server. To edit messages on other servers, use the **Server** menu option to change to another server and edit the messages on that server.
- 3 The **Restore Default** button will replace the selected text with the default SofTrack message.

Users to Notify of Significant License Usage

Users to Notify of Significant License Usage: Overview

SofTrack provides usage alerts that assist in proactive management of your License Profiles. SofTrack can be configured to notify selected users. Specifically, SofTrack includes three alert levels for license usage: 90% of maximum, 100% usage, and overflow (i.e., maximum + 1).

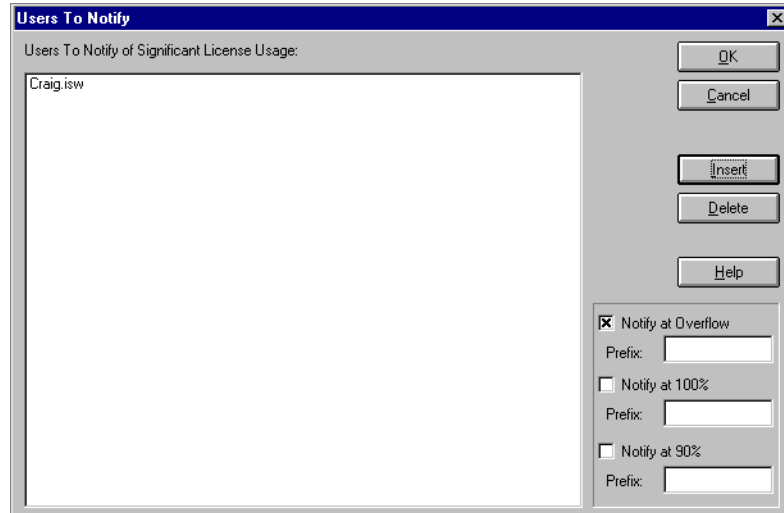
SofTrack alerts are per SofTrack Server Agent and not per License Profile.

SofTrack's alert messages are sent to the administrator desktops via Novell's Client32 as popup messages.

Users to Notify of Significant License Usage: How

- 1 Start by opening `SOFTRACK.EXE` and selecting **Administration** and **Users to Notify of Significant License Usage**. The following window will appear:

Figure 6-4



- 2 Click **Insert** and add the names of individuals to be notified. You can include as many users as you require.
- 3 Click on the Notification Level(s) to include.
- 4 You can add a text prefix of up to ten characters to the alerts. This option was originally intended for automated software or devices that would be receiving alerts instead of actual users, and the prefix was used to trigger specific actions in the automated software or device.

Set METER.LOG Path

Set METER.LOG Path: Overview

Be sure to review [“Preparations for Defining a License Profile” on page 37](#).

The METER.LOG file is the repository of SofTrack’s metering activity for that server. SofTrack’s Reporting options rely on the data stored in the METER.* files (METER.001, METER.002, etc.) to generate metering activity reports. The default path is SYS:SYSTEM on the NetWare server hosting the SOFTRACK.NLM.

Entries are added to METER.LOG by the SofTrack Server Agent upon the *completion* of a metering event, that is, once the user has entirely exited the metered application. *Metering events of less than 30 seconds are not recorded.* Therefore,

launching and exiting an application in less than 30 seconds will not result in a metering event being recorded. However, if the application is defined to have its usage **blocked**, its usage will be blocked immediately, not after 30 seconds. The 30-second window exists to prevent undesirable metering events, such as virus scans or other nonproductive application use, from being tracked. On average, each metering event record is approximately 60 bytes in length.

Set METER.LOG Path: How

Open `SOFTTRACK.EXE` and select **Administration** and **Set METER.LOG Path**.

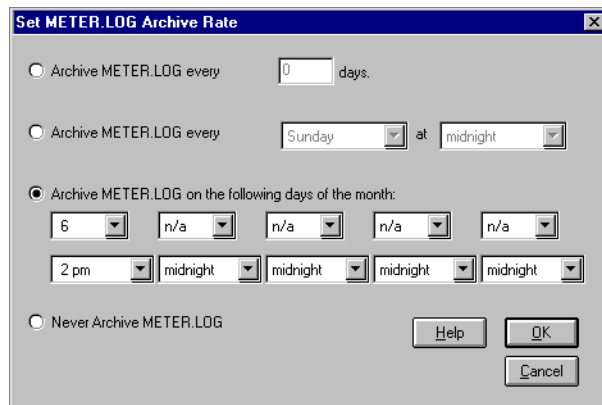
- The default path is `SYS : SYSTEM`.
- If the path is erased, no metering event data will be recorded.
- Do not specify a drive letter in the path (i.e., `C:\`).

Set METER.LOG Archive Rate

Set METER.LOG Archive Rate: Overview

Unchecked, the `METER.LOG` file will grow without limitation. The larger the `METER.LOG` becomes, the longer it can take to provide reports. The SofTrack Server Agent can be configured to automatically archive the `METER.LOG` file at a defined interval:

Figure 6-5



Archiving of METER.LOG is accomplished by renaming it to METER.001, METER.002, etc. After it is renamed, a new one will be created automatically the next time a metering event occurs.

The Archive option is only for the METER.LOG file. No other data files used by the SofTrack Server Agent will be archived. Other files include the LOCALUNR.LOG (see [page 147](#)) and TIMEKEEP.CSV (see [page 146](#)).

The SofTrack reporting utilities, SOFTRACK.EXE and SOFTDRPT.EXE, can be set to read only one METER.LOG file (i.e., METER.001, METER.002, etc.) or to read all METER.* files. For SOFTRACK.EXE, this ability is found under the **Reports** menu item. Select **Current Log File:** to set. For SOFTDRPT.EXE, this ability is via its command line interface, which is further described in [page 145](#).

Set METER.LOG Archive Rate: How

Open SOFTRACK.EXE and select **Administration** and **Set METER.LOG Archive Rate**.

The Archive Rate can be set to one of the following options:

- 1 Archive METER.LOG every [abc] days.
- 2 Archive METER.LOG every [day of week] at [specific hour].
- 3 Archive METER.LOG on the following days and specific hour of the month.
- 4 Never Archive METER.LOG.

Replicate License Profiles

Replicate License Profiles: Overview

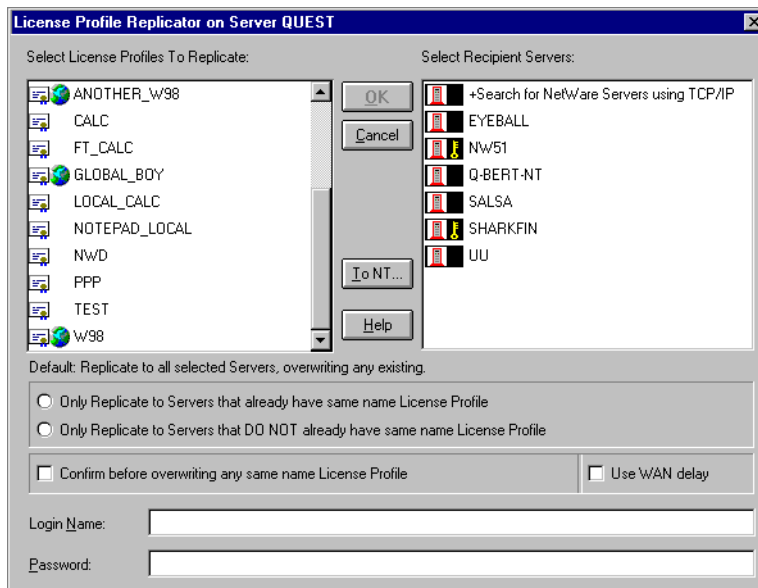
In multiple server environments, often one server's License Profile definitions are similar to or exactly the same as those on other servers. When the SSA is used in a multiple server environment, you can use the **Replicate License Profiles** option to copy selected License Profile definitions from one server to others. The replication of License Profiles takes place only at your direction.

Replicate License Profiles: How

Open SOFTRACK.EXE and select **Administration** and **Replicate License Profiles**.

The list of current License Profiles is found on the left and the domains and servers you can copy to on the right. When you click on a domain, it will automatically be searched and replaced with the list of servers in that domain. Servers you are currently authenticated to will appear with a “key” in the icon, as seen below.

Figure 6-6



You may select specific License Profiles to be copied and as many destination servers as required.

If you click on the **To NT...** button, you will be presented with a list of Windows NT/2000/2000 domains and servers to select from for replication.

The **Use WAN delay** option adds extra error checking to help the replication in environments that utilize slow WAN links.

Migrate SofTrack from Bindery Context to NDS

This option will copy all SofTrack objects from the Bindery Context of a NetWare 4, 5, or 6-based server to the SofTrack Organizational Unit for the current server. SofTrack objects in the Bindery Context are there from a NetWare 3-based installation of SofTrack that was upgraded to NDS/eDirectory.

The migration occurs without confirmation.

Delete SofTrack from Bindery Context

Upon confirmation, this option will DELETE ALL SofTrack Objects from the Bindery Context of a NetWare 4, 5, or 6-based server. This option is NOT available for NetWare 3-based servers.

Users Required to Load Local Windows Metering Module

Users Required to Load Local Windows Metering Module: Overview

This option¹ is used to establish which users must have the SofTrack Local Workstation Metering Agent (LWA) (see [Chapter 3](#)) installed. Initially no users are required to load the LWA. Users you define will not be checked for violation until their *next logon* to the server. This means if the user is logged in at the time you place them in the list of users required to load the LWA, they will not be checked for a violation until their next logon.

Because the LWA can only be defined to report to a single server, be sure to define the list of users required to load the LWA on the server that is designated by LWA. Therefore, you would not define the same user on two different servers, since the LWA will only report to one server, and the other will not know the LWA is loaded since the LWA never reports to that server.

The users you select must have the LWA loaded by the time the **Grace Period** elapses. The **Grace Period** begins the moment the user logs into the NetWare server hosting the SSA.

The **Grace Period** defaults to 10 minutes after login. It is recommended that this value remain larger than 5 minutes to provide time for initial workstation setup. See [Figure 6-9](#).

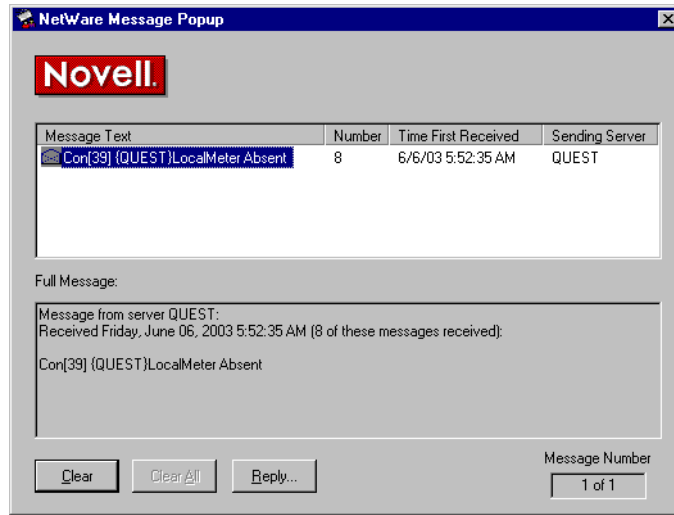
If the LWA is not loaded, a violation is created upon the expiration of the **Grace Period**.

1. Local Windows Metering Module was the previous name for the Local Workstation Agent.

There are three options that can be exercised upon a violation.

- 1 Users to Notify (see [page 82](#)) will receive a NetWare popup message stating:

Figure 6-7

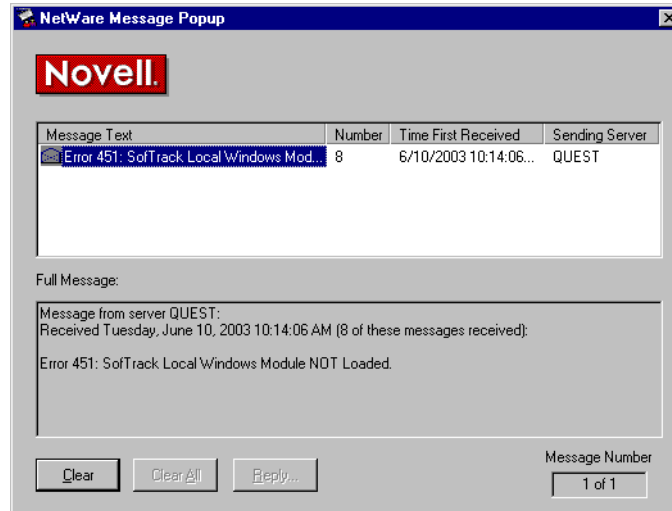


The format indicates:

Connection Number X on Server Y does not have the Local Workstation Metering agent loaded.

- 2 The user in violation will be warned with:

Figure 6-8



The error code 451 is an indicator for you and your helpdesk staff. If a user calls in with an “error 451”, that can be used to help identify the problem.

- 3 The user in violation will have their connection to the NetWare server terminated. However, due to the operation of Novell’s Client32, the connection will likely be immediately reestablished. This option was created circa 1993 when the client did not automatically reconnect a terminated session and the user was left disconnected.

Users Required to Load Local Windows Metering Module: How

Open `SOFTTRACK.EXE` and select **Administration** and **Users Required to Load Local Windows Metering Module**¹.

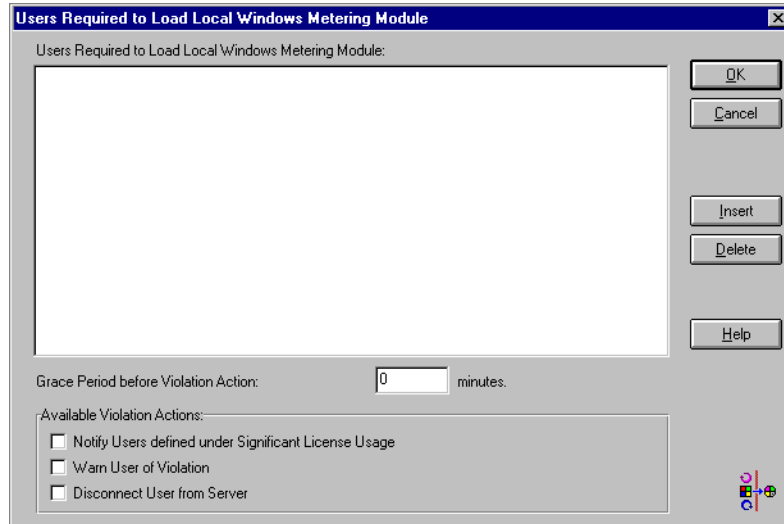
To add new users, click **Insert**. In the selection list you may select multiple users for insertion. Once selected, users must logout and login again before they will be required to load the LWA.

To remove users, select the users to remove and click **Delete**.

Enter the **Grace Period** value and select the checkbox options you require.

1. This was the previous name for the Local Workstation Agent and may still exist elsewhere in the user interface.

Figure 6-9



Users to Exclude from Metering

Users to Exclude from Metering: Overview

This option allows you to designate selected users to exclude from metering. Some network entities such as tape backup utilities can skew SofTrack's metering activity reports. Such utilities login to the server but are not actual application users, and as such, reporting of their usage can be useless and even problematic. For instance, if the tape backup utility is denied access to an application or file being metering by the SofTrack Server Agent, no backup will occur.

Users to Exclude from Metering: How

To prevent these non-users from being metered:

- 1 Open `SOFTTRACK.EXE` and select **Administration** and **Users to Exclude from Metering**.
- 2 Select the user names to exclude from metering. You may also select Organizational Units (OUs) to exclude. Any OUs you exclude will include the exclusion from metering of any object defined within the selected OU.

- 3 Once selected, users must logout and login again before the exclusion will become effective.

Token Maintenance

Token Maintenance: Overview

SofTrack's usage rights are governed by the token you purchase. For SofTrack to recognize your token, you must install it on the server(s) it was purchased for where the SofTrack Server Agent is or will be in use. The SofTrack Server Agent does not need to be active to install or remove the token(s). If you have previously installed an Evaluation Token it will automatically be removed once it expires.

The SofTrack Token only determines how the SofTrack Server Agent will perform. Maintenance of the SofTrack Token does not affect or in any way modify the activity data SofTrack has recorded. Likewise, maintenance of the SofTrack Token will not affect your License Profiles or any other definitions you have established.

The SofTrack Token is installed in the [Root] object of your NDS/eDirectory Tree. Therefore, when installing the SofTrack Token you must be logged in with an account that has sufficient privileges to [Root].

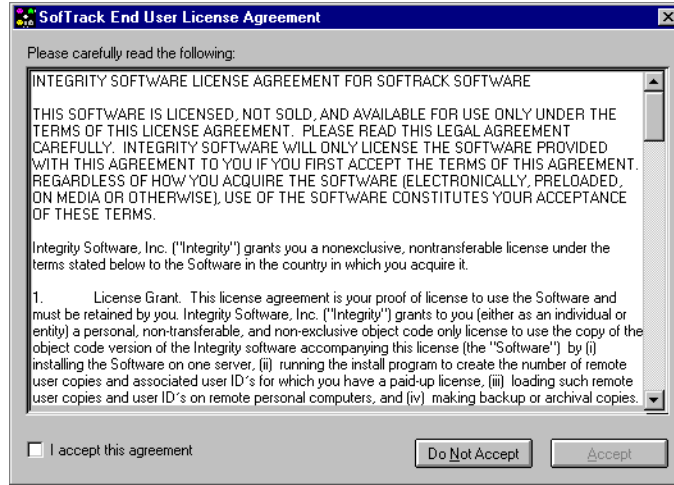
TIP: You can copy the Token file (* .TKN) to `SYS:SYSTEM` of the NetWare server, and it will be automatically recognized by the SofTrack Server Agent (v6.20d and later). But, if you do this, be sure to install the Token via this interface. Installation via `SOFTTRACK.EXE` is important for Global Licensing (see [“Global Licensing: Overview” on page 67](#)). The SofTrack Server Agent determines which NetWare servers are to be included in Global License sharing by identifying the NetWare servers where a SofTrack Token has been installed via `SOFTTRACK.EXE`.

Token Maintenance: How

Open `SOFTTRACK.EXE` and select **Administration** and **Token Maintenance**.

If this is the very first time you are installing the SofTrack Token, you will see a screen similar to the following:

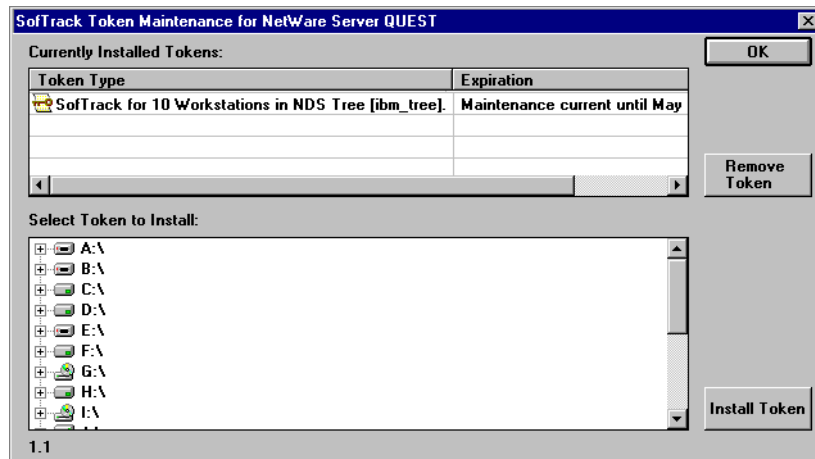
Figure 6-10



This screen must be accepted to install a SofTrack Token. The full contents of the SofTrack End User License Agreement (EULA) are found in the [“End User License Agreement” on page iii](#) of this manual. You will only be prompted once to accept the EULA. You will be prompted to accept the EULA again if you engage in Token Maintenance on a different workstation and SOFTRACK.EXE is being run from a local drive on that workstation.

Once accepted, the following screen will appear:

Figure 6-11



The screen shown here indicates that a token is already installed. The installed tokens listed will be all the tokens that have been installed for the current server. Remember, the SofTrack Server Agent does not need to be active to perform token maintenance.

To install your token, simply open the appropriate directory path and click **Install Token**.

Normally you would only remove a token if it is expired.

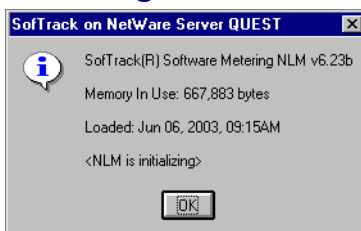
To verify the SofTrack Server Agent recognizes the token(s) you have installed, use the **Versio**n toolbar button on the main screen of SOFTRACK.EXE. Please note that this button is only useful when the SofTrack Server Agent is active.

Figure 6-12



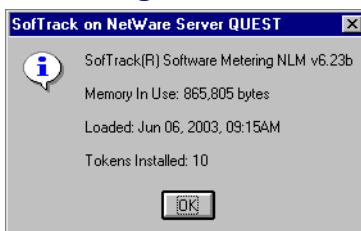
If the SofTrack Server Agent was just loaded, you may see the following:

Figure 6-13



Otherwise, the following will appear:

Figure 6-14



NOTE: If the `SOFTRACK.NLM` in use is prior v6.23a, the **Tokens Installed** line will not appear.

License Managers

License Managers: Overview

Use of SofTrack's Administrator interface, `SOFTRACK.EXE`, requires supervisory NDS/eDirectory privileges to the SofTrack OU ([page 16](#)). When the user of `SOFTRACK.EXE` does not have such privileges, the management options of `SOFTRACK.EXE` will be **grayed/disabled**.

There are two ways to allow such users the ability to manage with `SOFTRACK.EXE`. The first is to use NWADMIN, ConsoleOne, iManage, or other utility to assign the user sufficient privileges to the SofTrack OU. The second is to establish the user as a SofTrack **License Manager**.

SofTrack License Managers can modify *all* SofTrack definitions on the NetWare server they have been assigned to manage. The only exception is that the License Manager cannot establish other License Managers. The users you assign to be License Managers must have READ access to the SofTrack OU. The License Manager assignment does not convey any file system rights. Therefore, if the License Manager user will need to create reports, you will need to assign appropriate file system rights to their NDS/eDirectory login account via another means. At a minimum you will need to assign READ and WRITE file system privileges to the `METER.LOG` path.

The License Manager function is *only* available when the SofTrack Server Agent (SSA) is active. The License Manager function routes all SofTrack management requests to the SSA, and the SSA will perform the request on behalf of the user. Remember, the user account that is being used as License Manager must have ordinary READ access to the SofTrack OU.

License Managers: How

To designate users to be License Managers:

- 1 Open `SOFTRACK.EXE` and select **Administration** and **License Managers**
- 2 From the License Managers window, click **Insert**.

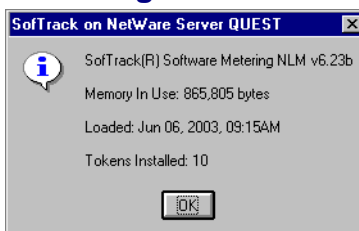
- 3 Click on the names of users to designate as License Managers. You can select multiple users.
- 4 When finished, click **OK**.

SofTrack Server Agent Version

SofTrack Server Agent Version: How

Open `SOFTRACK.EXE` and select **Administration** and **SofTrack Server Agent Version**. You may also access the Version information via the **Version** toolbar button on the main `SOFTRACK.EXE` screen.

Figure 6-15



The Version information shown includes the current amount of memory being used as well as the date and time the Agent was started.

If your Agent's version is 6.23a or later, you will also see the **Tokens Installed** line. This line indicates how many SofTrack Tokens the Agent currently recognizes. If the SSA is in Evaluation Mode, it will be noted.

Once you click **OK** you will be presented with the following option:

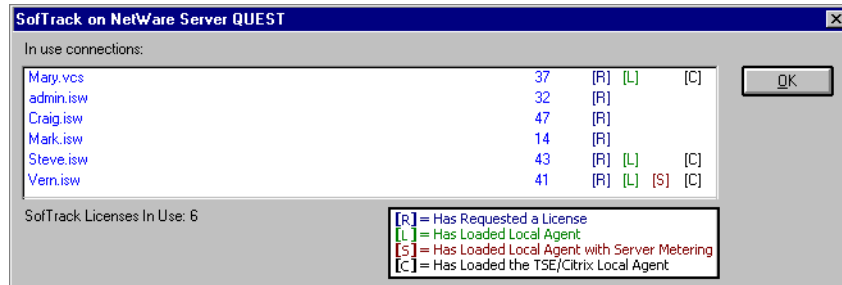
Figure 6-16



SofTrack Server Agent Version: In-Use Connections

Click **OK** (on the screen shown above), and a screen similar to the following will appear:

Figure 6-17



This list shown here *only includes* those connections that have (a) used a server-based file that is metered or (b) have loaded the SofTrack Local Workstation Agent.

The first column of data shows the connection's NDS/eDirectory logon name.

The second column shows the connection number assigned by the NetWare Server.

The third column area shows the options associated with the particular connection.

[R] indicates the connection has requested the user of a metered application

[L] indicates the connection has loaded the SofTrack Local Workstation Agent

[S] indicates the connection has loaded the SofTrack Local Workstation Agent including the *notlocalonly* option

[C] indicates the connection is a terminal server and has loaded the SofTrack Local Workstation Agent

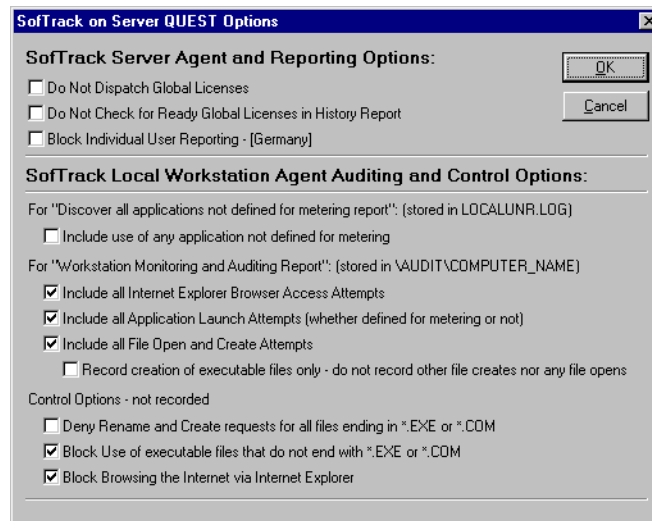
Immediately below and to the left is an indicator, **SofTrack Licenses in Use**. This number indicates how many workstations are utilizing a License for the use of SofTrack—in other words a SofTrack Token. The number here must be less than or equal to the number of workstations your SofTrack Token purchase was for. The size of your purchase is indicated on the prior screen on the **Tokens Installed** line. A connection is utilizing a SofTrack License if it is showing, in the display, any combination of the 4 indicator options (R, L, S, or C).

SofTrack Server Agent Options

SofTrack Server Agent Options: Overview

The SofTrack Server Agent includes several additional configuration options. These options include configuration of SofTrack's Audit and Control functionality that is accomplished via the SofTrack Local Workstation Agent.

Figure 6-18



- **Do Not Dispatch Global Licenses**

The <default> for this option is to be unchecked. If checked, then the current server will not dispatch or broker Global Licenses between servers. The current server will participate in Global License sharing and reporting; it just will not act as a host for the dispatching of global licenses. You might select this option on servers that are on the “slow side” of a WAN link so that other servers needing to find a global license (so that a license can be dispatched to them) will never seek it as a dispatcher.

NOTE: You must have at least one server that can act as a Global License dispatcher; otherwise, no global licensing will occur.

- **Do Not Check for Ready Global Licenses in History Report**

The <default> for this option is to be unchecked. If checked, `SOFTTRACK.EXE`, when using the **Global License - Report Summaries and Graph** reporting option discussed in [page 138](#), will not check to see if the Global Licenses are actually ready for printing/graphing. Instead, each globally defined License Profile will be listed. Normally (that is, if this option is unchecked) `SOFTTRACK.EXE` will first make sure each License Profile is ready for printing/graphing before displaying it as being available in the list. The significance here is the amount of time it can take to build the list of License Profiles ready for reporting. Before using this option on your system, we recommend that you first test the default. If it is quick enough for your purposes, we recommend not using this option.

- **Block Individual User Reporting - [Germany]**

When checked, this option will record all application use anonymously; that is, no usernames will be included. This option was created in 1993 to comply with the then-current German labor laws regarding employee monitoring. It has been included in the current product so that the option can be properly unset when required.

- **Include use of any application not defined for metering**

When checked, this option will record all applications used at each workstation that is actively using the SofTrack Local Workstation Agent. All applications used will be tracked by filename and workstation where used. This option will not record uses of applications that are defined for metering, i.e., in the **Local Windows Files** tab of any License Profile. See [page 51](#). Reporting for this option is available under the **Reports** menu option by selecting **Discover all applications used that are not defined for metering by workstations using the Local Workstation Agent**.

- **Include all Internet Explorer Browser Access Attempts**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to audit every page access attempted via Microsoft's Internet Explorer browser. The access attempts are recorded in a file named after the submitting workstation, also known as the `COMPUTER_NAME`. This file is located in the **Audit** subdirectory under the `METER.LOG` path. The file format is `CSV`. See [Chapter 9](#) for further details.

NOTE: Recording of all Internet Explorer Browser Access attempts can produce log files that can approach 1MB of data per day per workstation tracked.

- **Include all Application Launch Attempts (whether defined for metering or not)**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to audit every application launched via any means. The application filename is tracked. Tracking here does not include how long the application was in use.

This option will only audit those applications the LWA is defined to track. Specifically, the LWA can be configured to monitor only those applications launched from local drives or from any device (also known as `notlocalonly` mode). See [Chapter 3](#) for further details.

This option differs from the “**Record use of any application...**” option in that this option records all application launches whether or not the application is specifically defined for metering.

The application launches are recorded in a file named after the submitting workstation, also known as the `COMPUTER_NAME`. This file is located in the **Audit** subdirectory under the `METER.LOG` path. The file format is `CSV`. See [Chapter 9](#) for further details.

- **Include all File Open and Create Attempts**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to audit every file opened and every file created via any means. This includes files opened with modification permission that can indicate modification of existing files. The filename being opened or created is tracked. If file is being created or opened with modification privileges, the process name requesting the create operation is included. And, if the file is being copied, this is also included.

The file open and create actions are recorded in a file named after the submitting workstation, also known as the `COMPUTER_NAME`. This file is located in the **Audit** subdirectory under the `METER.LOG` path. The file format is `CSV`. See [Chapter 9](#) for further details.

NOTE: Recording of all file open and file create attempts can produce log files that exceed 1MB of data per day per workstation tracked.

- **Record creation of executable files only—do not record other file creates nor any file opens**

This sub-option is only available if **Include all File Open and Create Attempts** is checked. When checked, this sub-option will record only those file creation and modification events that are attempted for executable files, *.EXE and *.COM. If this sub-option is left unchecked, those events will still be recorded, and additionally, all other file open and file create events will also be recorded. Because recording of all file open and create events can generate over 1MB of data per day per workstation and because of the significance of knowing when executable files are created or modified, we created this sub-option.

- **Deny Rename and Create requests for all files ending in *.EXE or *.COM**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to deny file rename and file create requests for all files ending in *.EXE and *.COM. This denial is extended to opening of existing files for modification.

Denials are not recorded, and the user or process requesting such actions that are being denied receives standard Windows error messages that indicate the file is inaccessible, which has the benefit of not alerting users to the presence of SofTrack. Therefore, users are not aware that their actions are being specifically denied rather than some other fault.

- **Block Use of executable files that do not end with *.EXE or *.COM**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to deny execution of any file that does not end in the suffix .EXE or .COM. Generally this is only possible on Windows NT, 2000, XP, and 2003 workstations/servers.

Denials are not recorded, and the user or process requesting such actions that are being denied receives no error at all. The application simply will not start. This has the benefit of not alerting users to the presence of SofTrack. Therefore, they are not aware that their actions are being specifically denied rather than some other fault.

- **Block Browsing the Internet via Internet Explorer**

When checked, this option will direct the Local Workstation Agent (see [Chapter 3](#)) to deny any internet access made via Microsoft's Internet Explorer. Only accesses to local files on the local machine (127.0.0.1) or to non-routable TCP/IP addresses are allowed. Non-routable TCP/IP addresses include:

http://10.0.0.0 through 10.255.255.255

https://10.0.0.0 through 10.255.255.255

http://172.16.0.0 through 172.31.255.255

https://172.16.0.0 through 172.31.255.255

http://192.168.0.0 through 192.168.255.255

https://192.168.0.0 through 192.168.255.255

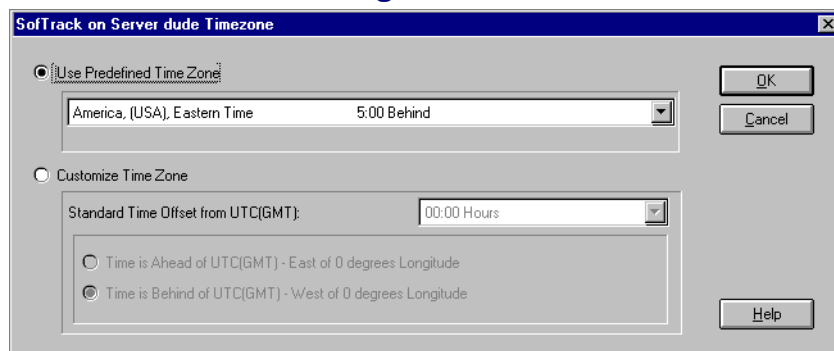
Denials are not recorded, and the user or process requesting such actions that are being denied receives no error at all. The browser will simply present a blank page. This has the benefit of not alerting users to the presence of SofTrack. Therefore, they are not aware that their actions are being specifically denied rather than some other fault.

SofTrack Server Agent Timezone

SofTrack Server Agent Timezone: Overview

Use this option to define the host server's timezone for purposes of defining the time basis for Global Licensing Reports.

Figure 6-19

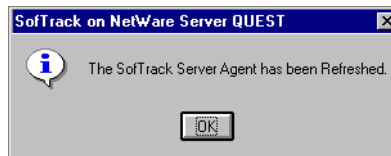


Issue Immediate SofTrack Server Update

Issue Immediate SofTrack Server Update: Overview

When you use this option or click the **Refresh SSA** button in the toolbar, the SofTrack Server Agent will, if currently active, re-read all SofTrack definitions you have created. This action ensures that the SofTrack Server Agent is aware of any changes you have made to any SofTrack definition. Once refreshed the following popup message will appear:

Figure 6-20





Chapter 7 Reporting

SofTrack's reporting provides a variety of printed/text-based reports including those for metering activity, non-metered application use (see [page 98](#)), timekeeping activity (see [page 53](#)), and Quick Inventory (see [Chapter 8](#)). SofTrack's reporting also includes graphical reporting of metering activity. SofTrack also includes a batch-mode, command-line tool to produce text-based metering activity reports.

Interactive Reporting of Metering Activity: Overview

SofTrack's Metering Activity Reports are based upon data stored within `METER.LOG` and the `METER.*` files. The Archive option (see [page 84](#)) can be used to save off older datasets, i.e., `METER.001`, `METER.002`, etc. Metering Activity is recorded to `METER.LOG` upon the completion of the metering activity. For instance, if you are metering the use of an application and while you were still using the application try to generate a report showing its activity, you would see nothing regarding the current use. To view active use of applications, use the **Active Users** button in the selected License Profile or use the `STUSER` utility, which is further described in [Chapter 10](#).

SofTrack provides the following types of interactive Metering Activity reports:

- Server-based License Profiles Printed/Text-based
- Server-based License Profiles Graphical
- Server-based License Profiles Active Users
- Global Licenses Printed/Text-based
- Global Licenses Graphical
- Global Licenses Active View

The term *interactive* indicates that the report is produced from the `SOFTTRACK.EXE` interface.

SofTrack provides the following types of batch-mode Metering Activity reports:

- Server-based License Profile Printed/Text-based
- Server-based License Profile Printed/Text-based: Web-based

The term Batch-Mode indicates that the report is produced from the command line tool `SOFTDRPT.EXE`, which is described later in this chapter. (See [page 145](#).)

Interactive Reporting of Metering Activity: How

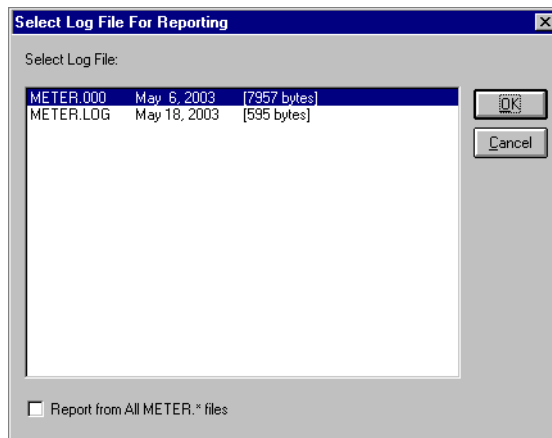
Setting the METER.LOG for Report Generation

All metering activity reports created by `SOFTTRACK.EXE` rely upon the data stored in the `METER.*` files. Because of its use in several different areas, setting which `METER.LOG` file to use is defined in one place. To set:

Open `SOFTTRACK.EXE`, select the **Reports** menu option (not the toolbar button), and select the first option, **Current log file**. Please note that the current selection is noted following the text *Current log file*.

When selected, the following window will appear:

Figure 7-1



The currently highlighted file *does not* represent the current selection. The current selection is found when you first click on the **Reports** menu option. To report from the contents of a single `METER.*` file, select it. Otherwise, to report from all

METER.* files, select the **Report from All METER.* files** checkbox at the lower left of the window. Therefore, only two options exist, to report from *all* METER.* files or from a *specific* METER.* file.

Once you make your selection, it will be remembered until you exit SOFTRACK.EXE, except if your selection is to **Report from All METER.* files**, it will be remembered each time you run SOFTRACK.EXE without the need to reselect it each time you run SOFTRACK.EXE.

Special Note: Reporting of Metering Activity for the Current Day

When you create a printed or graphical report of metering activity for the *current day*, you may notice some discrepancies. Below is an explanation of what is occurring:

The **Printed Reports** will select only *completed* metering events, that is, where the user has actually exited the metered application. Because of this, the maximum concurrent use values shown may not match the report data. This is explained shortly.

The **Graphical Reports** may seemingly provide different data for *intraday* (i.e., current day) reporting than the printed reports.

What follows explains these discrepancies:

The **Maximum Concurrent In-Use** value (MAX) shown in the reports is actually recorded in *every* metering activity event written to the METER.LOG file and represents the *current in-use* value. This value indicates:

when this particular user stopped using the metered application the current in-use value was X (i.e., number of users using the metered application—including the user who is now exiting the metered application)

Even though the METER.LOG records are not yet complete—that is, the metering activity shown in the **Printed Reports** are only for completed uses of the application—anyone still using the application (i.e., an active user as shown in the active user listing for the License Profile) will not be *in the printed report yet*, but the fact that they are still an active user of the metered application is reflected in the MAX value shown in the report. For instance, the **Printed Report** shows 10 uses, but the **Graphical Report** shows a MAX of 33. This discrepancy indicates that a large number of users are *still active* in the metered application, and as such, their record of use has not yet been written to the METER.LOG file.

Therefore, it is entirely possible to have a MAX value greater than the number of executions shown in the report, for the reason that there are several *active executions* not yet accounted for in the METER.LOG file.

Step by step, here is what occurs:

- Each time a metered application's use is initiated, the user becomes an active user of the application.
- At this point there is no record of their use in the METER.LOG file; therefore, their specific use will not yet appear in the **Printed Report**.
- Each time a user exits the usage of a metered application, an entry is written to the METER.LOG file.
- Included in that record is a MAX value (explained above).
- Users actively using the metered application have not yet been accounted for in the METER.LOG file. Use STUSER (see [Chapter 10](#)) or SOFTRACK.EXE (see [page 135](#)) to view the metered application's currently active users.

Our suggestion to avoid this discrepancy is to wait until a time when everyone is out of the metered application.

Server-based License Profile Reports: Printed/Text-Based

Open SOFTRACK.EXE and click the **Reports** toolbar button:

Figure 7-2



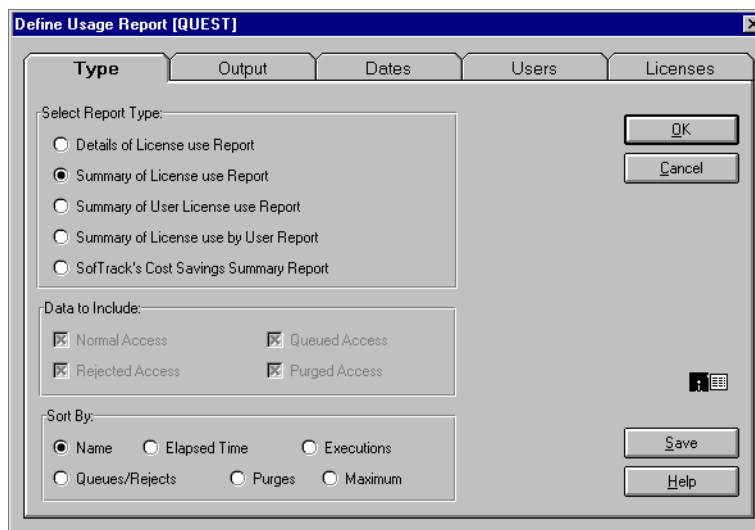
After one or two initialization messages windows, the report dialog will be presented.

REPORT: TYPE Tab

Begin by selecting the Report Type:

Details of License use Report: Overview

Figure 7-3



This report type includes one line of detail for each application used, grouped by License Profile. For each line of detail, the following is displayed:

- User name
- Time into application
- Time out of application
- Usage Type:
 - Normal
 - Queued
 - Rejected
 - Purged
 - Idle Warning
 - Idle Termination
- Network address of user's workstation or name of Terminal Server

And, for the *first* License Profile in the report, a detail line will be included each time the SofTrack Service (SofTrack Server Agent or SSA) was started.

Included after the last record for each License Profile is an **In Use Time** summary and **Maximum In Use** value detail line.

Details of License use Report: Data to Include

You may select only those record types you wish to view (Normal, Queued, Rejected, and Purged). (See [Figure 7-3](#).) Normal access includes the record types Idle Warning and Idle Termination.

The SofTrack Service Started record type is always included.

Notice that Sort options are not allowed for this type of report.

Details of License use Report: Example Report and Discussion

The following is an example of a **Details of License use Report**:

Figure 7-4

```

SofTrack Print Preview
File
Type of Report: Details of License use Report

File Server:   dude
Requested by:  Administrator
Print Date:    May 22, 2003

Report Dates:  All Dates

User          Time In          Time Out          Network  Node
-----
License: [ _CALC_55 ]
ADMINISTRATOR 3/20/03 at 1:10pm  QUEUED           IP Addr: 198.206.217.122
ADMINISTRATOR 3/20/03 at 6:43pm  REJECTED         [ E1000][ 40F435F187]
admin         3/22/03 at 9:04pm  Idle Warning     [ ABBCDE][ 805FE26220]
admin         3/22/03 at 9:05pm  Idle Terminate   [ ABBCDE][ 805FE26220]

admin         5/ 7/03 at 9:27am  5/ 7/03 at 9:27am [ E1000][ 40F435F187]
admin         5/ 7/03 at 9:43am  5/ 7/03 at 9:44am [ E1000][ C04F0458E9]
ADMINISTRATOR 5/ 8/03 at 3:27pm  Idle Warning     [ E1000][ 045A594C66]
ADMINISTRATOR 5/ 8/03 at 3:27pm  Idle Terminate   [ E1000][ 045A594C66]
ADMINISTRATOR 5/ 8/03 at 3:30pm  5/12/03 at 4:52pm [PURGED-no address ]

: <Additional Records>
In Use Time: 137 days 6:21, Maximum In Use For License _CALC_55 [5]

```

NOTE: For every 5 lines of detail in the figure above, a blank line is inserted for readability.

The following is a discussion of each of the detail points this report includes:

- **License Profile name**

The License Profile Name is included once, and the records that follow are for that License Profile. In this example the License name is `_CALC_55`.

- **User name**

The User name is included for each detail line of metering activity. Occasionally, you may see the names UNIDENTIFIED or Not Found. These represent entries for users that most likely have been deleted from NDS/eDirectory.

- **Time into application**

This value represents when use of the License Profile began. Use of the License Profile indicates that the user began using some application or file defined within the License Profile.

- **Time out of application**

This value, if shown, indicates the time the user stopped using the License Profile. Stopping usage of a License Profile indicates the user has exited or closed all applications and/or data files being tracked by the License Profile.

If the value is shown and if the field following the **Time Out** field includes **[PURGED-no address]**, this indicates the record is a **PURGE** record. A *PURGE record* means the user's actual exit time (for use of the License Profile) is not known. The Time value recorded is when the SSA recognized that the user's connection to the server was no longer valid. Sometimes this occurs when the server hosting the SSA crashes or is otherwise stopped unexpectedly. Other times this occurs when the user's workstation crashes or unexpectedly stops communicating with the server hosting the SSA.

If the value is instead a phrase, it indicates that type of event occurred. Events here include:

- **QUEUED**

Indicates the user was not allowed to use an application or file defined by the License Profile; however, the user was queued for future access once a license becomes free. Notification to the user is via a popup message. When a license becomes available, the user is again notified by a popup message—there is no record of this event in the report, only the initial queuing event.

- **REJECTED**

Indicates the user was denied access to the application or file tracked by the License Profile. This occurs when queuing is not defined, or there are already eight users queued.

- **Idle Warning**

Indicates the user was notified that an application being tracked by the License Profile has been left idle for too long and to begin using it again.

- **Idle Termination**

Indicates the user's use of an application being tracked by the License Profile has been terminated.

Finally, if the **Time Out** is a value and the next field indicates a workstation address or name, this indicates a **NORMAL** use record.

- **Network / Node Address**

Indicates the Network and Node Address of the user's workstation.

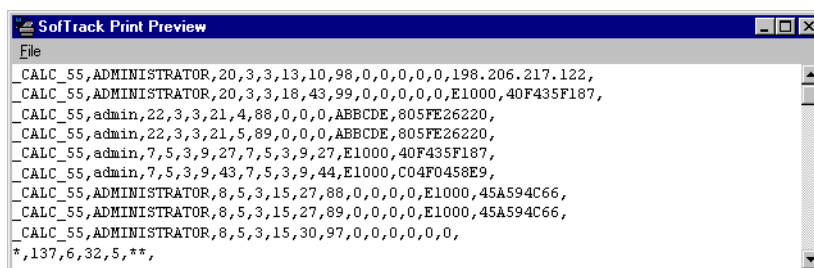
- **In Use Time and Maximum In Use**

At the end of the detail lines for each License Profile, a one-line summary of the overall time in use is displayed in Days, Hours, Minutes format, and the Maximum Concurrent uses during the reporting period is noted. Maximum Concurrent uses indicates how many different workstations and/or terminal server sessions were using the applications/files defined by the License Profile at the same time.

Details of License use Report: Comma Delimited Report Option

Under the **Output** tab, you can select the output to be in Comma Delimited format. The following is the same report as shown in [Figure 7-4](#) except in Comma Delimited or CSV format:

Figure 7-5



```

SofTrack Print Preview
File
CALC_55,ADMINISTRATOR,20,3,3,13,10,98,0,0,0,0,198.206.217.122,
CALC_55,ADMINISTRATOR,20,3,3,18,43,99,0,0,0,0,E1000,40F435F187,
CALC_55,admin,22,3,3,21,4,88,0,0,0,0,ABCDE,805FE26220,
CALC_55,admin,22,3,3,21,5,89,0,0,0,0,ABCDE,805FE26220,
CALC_55,admin,7,5,3,9,27,7,5,3,9,27,E1000,40F435F187,
CALC_55,admin,7,5,3,9,43,7,5,3,9,44,E1000,C04F0458E9,
CALC_55,ADMINISTRATOR,8,5,3,15,27,88,0,0,0,0,E1000,45A594C66,
CALC_55,ADMINISTRATOR,8,5,3,15,27,89,0,0,0,0,E1000,45A594C66,
CALC_55,ADMINISTRATOR,8,5,3,15,30,97,0,0,0,0,0,0,
*,137,6,32,5,**,

```

The following is the format, repeated for each detail line:

License Name,
 User Name,
 Day In,
 Month In,
 Year In,
 Hour In,
 Minute In,
Day Out,
 Month Out,
 Year Out,
 Hour Out,
 Minute Out,
 Net Address,
 Node Address,

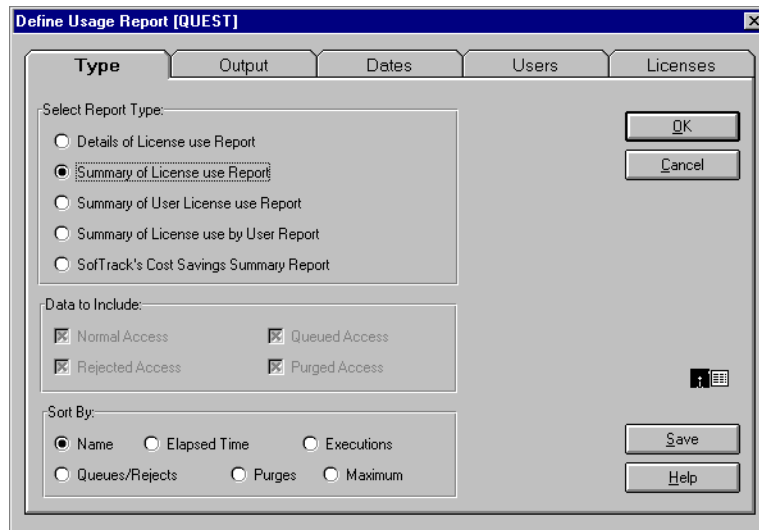
A single * signifies the end of that License Profile's data and the beginning of that License's summary data. The summary data is Elapsed Days, Elapsed Hours, Elapsed Minutes, and Maximum Concurrent In-use. A ** signifies the end of the summary data. The end of the report is signified by ***.

If the **Day Out** code is greater than 31, please refer to this table:

Day Out Code	Meaning
99	Rejected Access
98	Queued Access
97	Purged Access
96	Unknown Event
89	Idle Termination Event
88	Idle Warning Event

Summary of License use Report: Overview

Figure 7-6



This report type includes a one-line usage summary for each License Profile. For each line of detail, the following is displayed:

- License Name
- Elapsed Time in use
- Number of Executions [#Execd]
- Number of Queuing Events [#Queued]
- Number of Purges [#Purged]
- Number of Rejects [#Rejected]
- The maximum concurrent in-use [#Max]

The term *Executions* means application use or a file being tracked was opened. Number of Executions also includes Purges, since they were executions that were not properly recorded. Remember, SofTrack can track the use of data files hosted by the server. Technically, these are not executions but simply uses.

Summary of License use Report: Sort By

As indicated in [Figure 7-6](#), you may sort on one of the following: License Name, Elapsed Time in use, Number of Executions, the combination of the number of Queuing and Reject events, Number of Purges, or the Maximum Concurrent use.

The sort order is one direction, alphabetically or from highest to lowest value.

Notice the Data to Include options are not allowed for this type of report.

Summary of License use Report: Example Report and Discussion

The following is an example of a **Summary of License use Report**:

Figure 7-7

The screenshot shows a window titled "SofTrack Print Preview" with a menu bar containing "File". The main content area displays the following information:

Type of Report: Summary of License use Report

File Server: dude
 Requested by: Administrator
 Print Date: May 22, 2003

Report Dates: All Dates

License Name	Elapsed Time	#Execd	#Queued	#Purged	#Rejected	#Max
CALC_55	137 days 6:21	46	13	7	0	5
EXPLORER	0 days 1:02	4	0	1	0	2
LONG_PATH_CALC	0 days 0:08	4	0	4	114	1
_OUTLOOK	0 days 1:20	5	0	2	0	4

The following is a discussion of each of the detail points this report includes.

License Name

Indicates the License Profile being reported.

Elapsed Time

Indicates the overall time “in use”. This is the aggregate sum of all uses including Normal and Purged use for the reporting period.

#Execd

Indicates the number of execution/use events that occurred. Use the **Details of License use Report** to view each individual execution/use event. Number of Executions also includes Purges, since they were executions that were not properly recorded.

#Queued

Indicates the number of times users were denied access and were queued for future use. Use the **Details of License use Report** to view each individual queuing event.

#Purged

Indicates the number of purge events that occurred. Use the **Details of License use Report** to view each individual purge event.

#Rejected

Indicates the number of times users were denied access and were *not* queued for future use. Use the **Details of License use Report** to view each individual reject event.

#Max

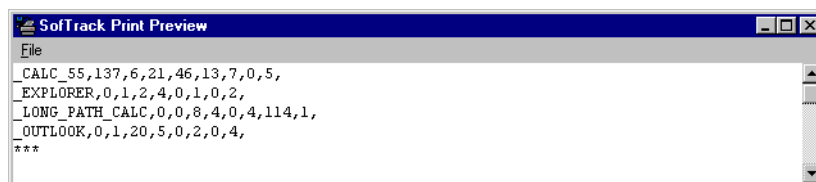
Indicates the highest value for the concurrent in-use value for the reporting period. The exact dates and times of when the maximum was reached are not indicated on this report or any other printed report but are indicated on the Graph report detailed later in this chapter. See [“Server-Based License Profile Reports: Graphical” on page 131](#).

NOTE: Because each line is its own summary, there is no overall summary.

Summary of License use Report: Comma Delimited Report Option

Under the **Output** tab, you can select the output to be in Comma Delimited format. The following is the same report as shown in [Figure 7-7](#) except in Comma Delimited or CSV format:

Figure 7-8



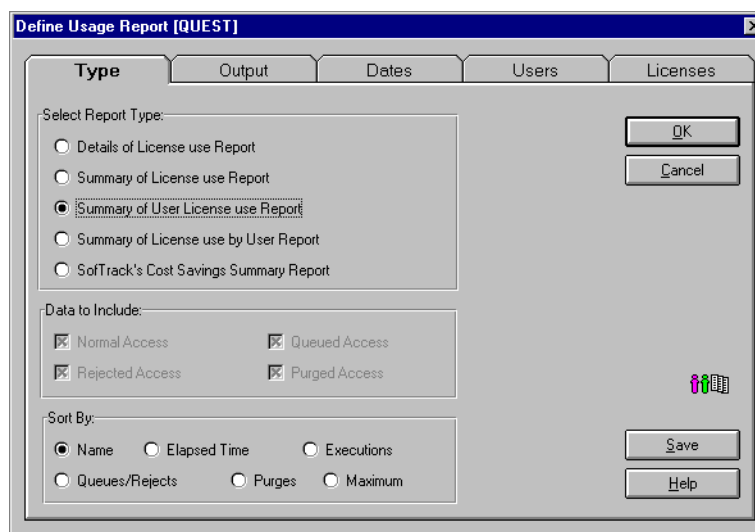
The following is the format, repeated for each license:

License Name,
 Elapsed Days,
 Elapsed Hours,
 Elapsed Minutes,
 Number of Executions,
 Number of Queue Events,
 Number of Purge Events,
 Number of Reject Events,
 Maximum Concurrent in-use,

The end of the report is signalled by ***

Summary of User License use Report: Overview

Figure 7-9



This report type includes a License Profile usage summary grouped by user. For each line of detail the following is displayed:

- License Name
- Elapsed Time in use
- Number of Executions [#Execd]
- Number of Queuing Events [#Queued]
- Number of Purges [#Purged]
- Number of Rejects [#Rejected]
- The maximum concurrent use [#Max]

The term *Executions* means application use or a file being tracked was opened. Remember, SofTrack can track the use of data files hosted by the server. Technically, these are not executions but simply uses.

Summary of User License use Report: Sort By

As indicated in [Figure 7-9](#), you may sort on one of the following: License Name, Elapsed Time in use, Number of Executions, the combination of the number of Queuing and Reject events, Number of Purges, or the Maximum Concurrent in-use. The User names are *always* listed in alphabetical order. The sort options are for the License Profile detail summary lines listed for each user.

The sort order is one direction, alphabetically or from highest to lowest value.

Notice the Data to Include options are not allowed for this type of report.

Summary of User License use Report: Example Report and Discussion

The following is an example of a **Summary of User License use Report**:

Figure 7-10

File Server: dude
Requested by: Administrator
Print Date: May 23, 2003
Report Dates: All Dates

License Name	Elapsed Time	#Execd	#Queued	#Purged	#Rejected	#Max
ADMINISTRATOR						
_CALC_55	89 days 9:20	34	13	3	0	(1)
_EXPLORER	0 days 1:02	4	0	1	0	(1)
_LONG_PATH_CALC	0 days 0:08	4	0	4	56	(1)
_OUTLOOK	0 days 1:16	3	0	2	0	(1)
Admin						
_CALC_55	47 days 15:48	2	0	0	0	(1)
JOHN						
_CALC_55	0 days 5:22	6	1	0	0	(1)
_OUTLOOK	0 days 0:03	1	0	0	0	(1)
SAM						
_CALC_55	0 days 0:01	1	0	0	0	(1)

The following is a discussion of each of the detail points this report includes:

User Name

Each new user is listed in the License Name column with the name being at the left margin.

License Name

Indicates the profile being reported and is indented by 2 spaces from the left margin to visually separate it from the User names, which are presented against the left margin.

Elapsed Time

Indicates the overall time “in use”. This is the aggregate sum of all uses including Normal and Purged use for the reporting period.

#Execd

Indicates the number of execution/use events that occurred. Use the **Details of License use Report** to view each individual execution/use event. Number of Executions also includes Purges, since they were executions that were not properly recorded.

#Queued

Indicates the number of times users were denied access and were queued for future use. Use the **Details of License use Report** to view each individual queuing event.

#Purged

Indicates the number of purge events occurred. Use the **Details of License use Report** to view each individual purge event.

#Rejected

Indicates the number of times users were denied access and were *not* queued for future use. Use the **Details of License use Report** to view each individual reject event.

#Max

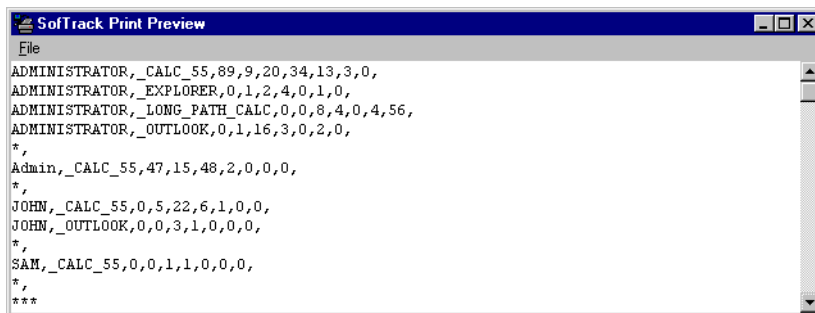
Always indicates the value of (1), since there is no breakdown of how many times the same user was simultaneously using the selected License Profile from different workstation/terminal server sessions. In many networks, the user name is used uniquely and is not used for multiple concurrent logons.

NOTE: There is no overall summary.

Summary of User License use Report: Comma Delimited Report Option

Under the **Output** tab, you can select the output to be in Comma Delimited format. The following is the same report as shown in [Figure 7-10](#), except in Comma Delimited or CSV format:

Figure 7-11



The following is the format, repeated for each detail line:

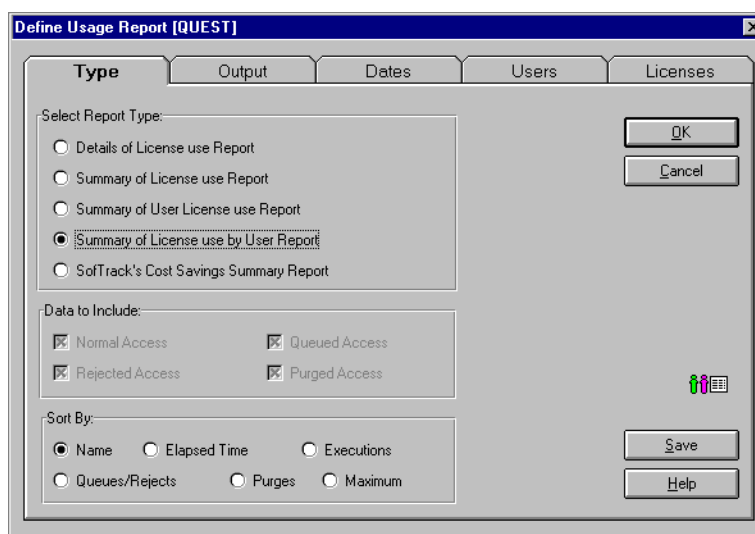
User Name,
 License Name,
 Elapsed Days,
 Elapsed Hours,
 Elapsed Minutes,
 Number of Executions,
 Number of Queue Events,
 Number of Purge Events,
 Number of Reject Events,

A * on a line by itself indicates the end of the current user's data.

A *** on a line by itself indicates the end of the report.

Summary of License use by User Report: Overview

Figure 7-12



This report type includes a User usage summary grouped by License Profile. For each line of detail, the following is displayed:

- User Name
- Elapsed Time in use
- Number of Executions [#Execd]
- Number of Queuing Events [#Queued]

- Number of Purges [#Purged]
- Number of Rejects [#Rejected]
- The maximum concurrent in-use [#Max]

The term *Executions* means application use or a file being tracked was opened. Remember, SofTrack can track the use of data files hosted by the server. Technically, these are not executions but simply uses.

Summary of License use by User Report: Sort By

As indicated in , you may sort on one of the following: License Name, Elapsed Time in use, Number of Executions, the combination of the number of Queuing and Reject events, Number of Purges, or the Maximum Concurrent use. The License Profiles are *always* listed in alphabetical order. The sort options are for the User detail summary lines listed for each user.

The sort order is one direction, alphabetically or from highest to lowest value.

Notice the Data to Include options are not allowed for this type of report.

Summary of License use by User Report: Example Report and Discussion

The following is an example of a **Summary of License use by User Report**:

Figure 7-13

The screenshot shows a window titled "SofTrack Print Preview" with a menu bar containing "File". The report content is as follows:

```

Type of Report: Summary of License use by User Report

File Server:   dude
Requested by:  Administrator
Print Date:    May 23, 2003

Report Dates:  All Dates

License Name      Elapsed Time  #Execd  #Queued  #Purged  #Rejected  #Max
-----
CALC_55
ADMINISTRATOR    89 days 9:20  34      13       3         0      (1)
Admin            47 days 15:48  2        0       0         0      (1)
JOHN             0 days 5:22   6        1       0         0      (1)
SAM              0 days 0:01   1        0       0         0      (1)
EXPLORER
ADMINISTRATOR    0 days 1:02   4        0       1         0      (1)
LONG_PATH_CALC
ADMINISTRATOR    0 days 0:08   4        0       4        56     (1)
NAL
-No User Activity Found-
OUTLOOK
ADMINISTRATOR    0 days 1:16   3        0       2         0      (1)
JOHN             0 days 0:03   1        0       0         0      (1)

```

The following is a discussion of each of the detail points this report includes:

License Name

Each new License Profile is listed in the User Name column with the name being at the left margin.

User Name

Indicates the user being reported and is indented by 2 spaces from the left margin to visually separate it from the License Profile names, which are presented against the left margin.

Elapsed Time

Indicates the overall time “in use”. This is the aggregate sum of all uses, including Normal and Purged use, for the reporting period.

#Execd

Indicates the number of execution/use events that occurred. Use the **Details of License use Report** to view each individual execution/use event. Number of Executions also includes Purges, since they were executions that were not properly recorded.

#Queued

Indicates the number of times users were denied access and were queued for future use. Use the **Details of License use Report** to view each individual queuing event.

#Purged

Indicates the number of purge events occurred. Use the **Details of License use Report** to view each individual purge event.

#Rejected

Indicates the number of times users were denied access and were *not* queued for future use. Use the **Details of License use Report** to view each individual reject event.

#Max

Always indicates the value of (1), since there is no breakdown of how many times the same user was simultaneously using the selected License Profile from different workstation/terminal server sessions. In many networks, the user name is used uniquely and is not used for multiple concurrent logons.

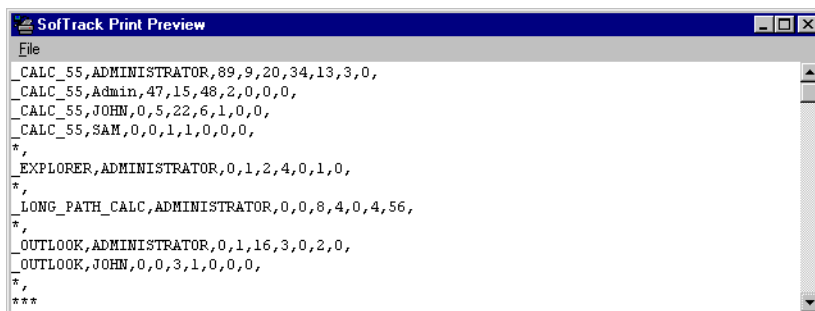
NOTE: There is no overall summary.

NOTE: Comparatively speaking, amongst the 5 report types here, this one requires the longest time to complete, up to 5 times that of any other report.

Summary of License use by User Report: Comma Delimited Report Option

Under the **Output** tab, you can select the output to be in Comma Delimited format. The following is the same report as shown [Figure 7-13](#), except in Comma Delimited or CSV format:

Figure 7-14



The following is the format, repeated for each detail line:

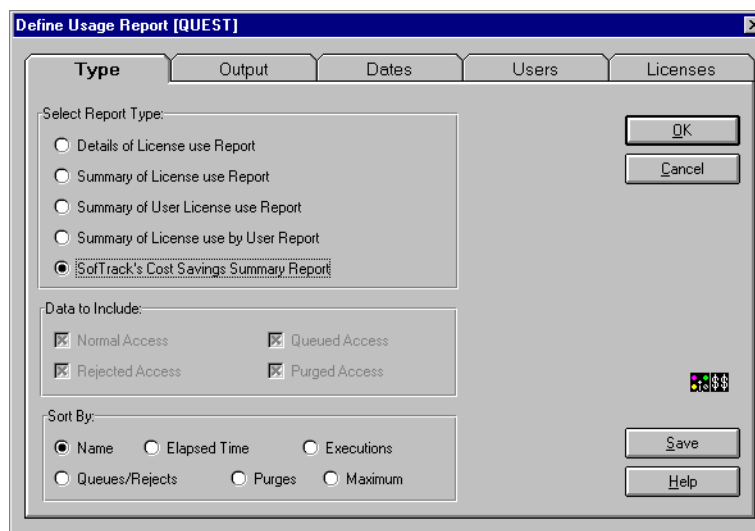
License Name,
User Name,
Elapsed Days,
Elapsed Hours,
Elapsed Minutes,
Number of Executions,
Number of Queue Events,
Number of Purge Events,
Number of Reject Events,

A * on a line by itself indicates the end of the current License's data.

A *** on a line by itself indicates the end of the report.

SofTrack's Cost Savings Summary Report: Overview

Figure 7-15



This report type displays your software costs based upon your purchases versus your actual usage. The report consists of a single detail line per License Profile. The number owned and dollar cost figures are based upon your input to the **Notes/Costs** tab of the selected License Profile (see [page 61](#)). For each line of detail, the following is displayed:

- License Name
- Number of licenses owned/purchased
- Your dollar cost per license
- Calculated Total Cost
- The Maximum Concurrent in-use
- Calculated unused licenses
- Calculated Savings

SofTrack's Cost Savings Summary Report: Sort By

As indicated in [Figure 7-15](#), you may sort on one of the following: License Name, Elapsed Time in use, Number of Executions, the combination of the number of Queuing and Reject events, Number of Purges, or the Maximum Concurrent in-use. Even though the report does not specifically reveal the values of the Elapsed Time, number of Executions, number of Queuing and Reject events, or number of purges, you can still sort on these fields as they are maintained internally.

The sort order is one direction, alphabetically or from highest to lowest value.

Notice the Data to Include options are not allowed for this type of report.

SofTrack's Cost Savings Summary Report: Example Report and Discussion

The following is an example of a **Cost Savings Summary Report**:

Figure 7-16

License Name	Owned	Cost/Lic	Total Cost	Max InUse	Unused	Savings
CALC_55	1	\$ 95	\$ 95	5	-4	\$ -380
EXPLORER	5	\$ 19	\$ 95	2	3	\$ 57
LONG_PATH_CALC	1	\$ 0	\$ 0	1	0	\$ ZERO
OUTLOOK	19	\$ 195	\$ 3,705	4	15	\$ 2,925
Total Savings with SofTrack:						\$ 2,602

The following is a discussion of each of the detail points this report includes:

License Name

Indicates the License Profile being detailed.

Owned

Indicates the number of licenses you have purchased. You define this number in the selected License's Profile under the **Notes/Costs** tab.

Cost/Lic

Indicates the dollar cost per license purchased. You define this number in the selected License's Profile under the **Notes/Costs** tab.

Total Cost

Indicates the calculated total cost to acquire the licenses you own. The calculation is based upon the values of the **Owned** and **Cost/Lic** fields.

Max InUse

Indicates the highest value for the concurrent in-use value for the reporting period. The exact dates and times of when the maximum was reached are not indicated on this report or any other printed report but are indicated on the **Graph** report detailed later in this chapter. See [“Server-Based License Profile Reports: Graphical” on page 131](#).

Unused

Indicates the number of licenses that were not used. This value is based upon the number of licenses you own that you entered in the License's Profile under the **Notes/Costs** tab, less the **Max InUse** value. If the **Max InUse** value is greater than the number of licenses you own, the value shown will be negative, indicating more licenses must be purchased to be properly licensed.

Savings

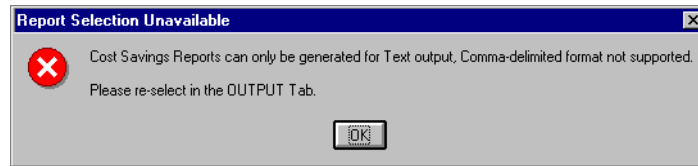
Indicates the calculated cost savings of using SofTrack to meter your concurrent use licenses. If this value is negative, it indicates you have not purchased sufficient licenses to be properly licensed for concurrent use licensing.

NOTE: An overall savings calculation appears at the end of the report that indicates the sum of the **Savings** fields for each License in the report.

SofTrack's Cost Savings Summary Report: Comma Delimited Report Option

This Report Type cannot be saved to the Comma Delimited format. If tried, the following error message will be shown:

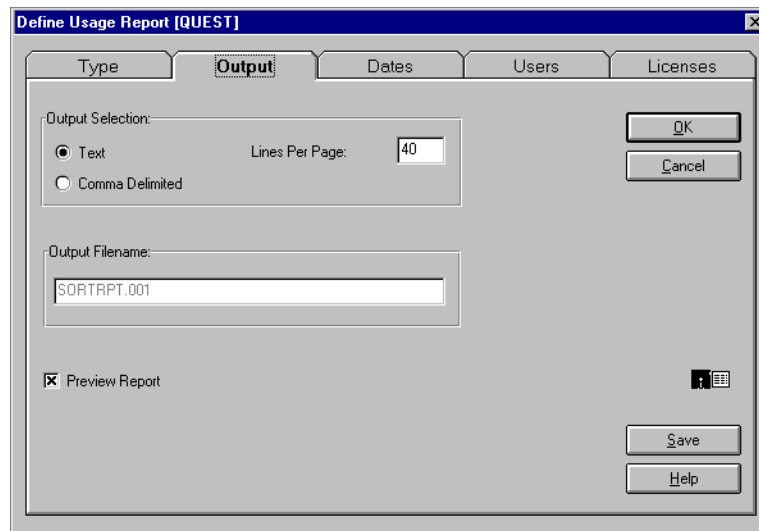
Figure 7-17



REPORT: OUTPUT Tab

Once you have selected the Type of report, you desire you will want to select its **Output** options. The window shown below represents the default settings.

Figure 7-18



The **Output Selection** options:

- **Text**—The report will be generated with full headers and page numbering.
- **Lines Per Page**—Applicable only for the Text Output. Specifies number of detail lines per page.
- **Comma Delimited**—The report will be generated in CSV (comma separated value) format.

The **Output Filename** indicates the name the report will be written to unless **Preview Report** is selected. If no path is specified, the output file will be written to the same directory designated for the `METER.LOG` file.

If **Preview Report** is selected, the report will be shown in a window with the option of saving it to a file or being printed. The **Preview** report is written to a temporary file in the `METER.LOG` directory. The file name is `PREVIEW.???`, where `???` is a random hexadecimal number. Occasionally these preview files are not deleted after use. You can safely delete them if they are no longer being used.

REPORT: DATES Tab

Once you have selected the **Output** type for the report, you will want to select the date range for the report. The window shown below represents the default settings:

Figure 7-19

The **Date Selection** options:

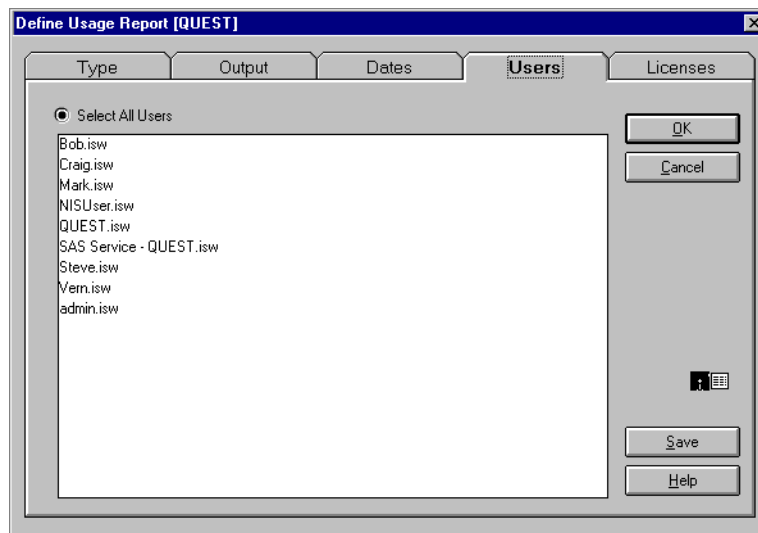
- **Date Format**—Select the desired format. The format selected is only for Text-based output. Comma delimited output will always be in the same format as previously detailed.

- **Date Range**—Select the date range style you desire. The start date/end dates must be entered in the same style selected in the Date Format. If the start date and end date are left blank, reporting will be for all entries recorded.

REPORT: USERS Tab

Once you have selected the **Output** type for the report, you can select specific users for reporting or allow the default to include all users in any report you create. The window shown below represents the default settings:

Figure 7-20



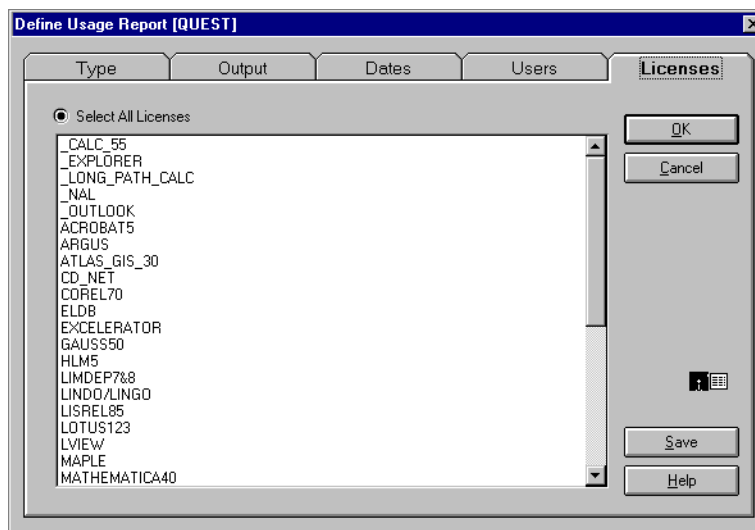
The **Users** options:

- **Select All Users**—The default is for all users to be selected, which means usage will be reported for all users.
- If you select specific users, only those users will be included in any report you create.

REPORT: LICENSES Tab

Once you have selected the **Output** type for the report, you can select specific License Profiles for reporting or allow the default to include all Licenses in any report you create. The window shown below represents the default settings:

Figure 7-21



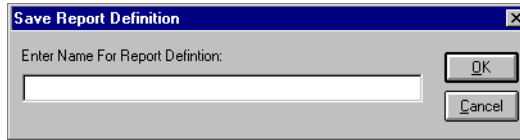
The **Licenses** options:

- **Select All Licenses**—The default is for all Licenses to be selected, which means usage will be reported for all Licenses.
- If you select specific Licenses, only those Licenses will be included in any report you create.

REPORT: SAVE Button

When you click on the **Save** button, the following will appear:

Figure 7-22



Enter any name you choose and click **OK**.

This will save the current report definition, which is represented by the selections you have made on the **Type**, **Output**, **Dates**, **Users**, and **Licenses** tabs. Note that the actual report data will not be saved using this option.

The saved report definition can be recalled by clicking on the **Recall** toolbar button, or under the **Reports** main menu item, choosing **Recall Saved Report Definition**.

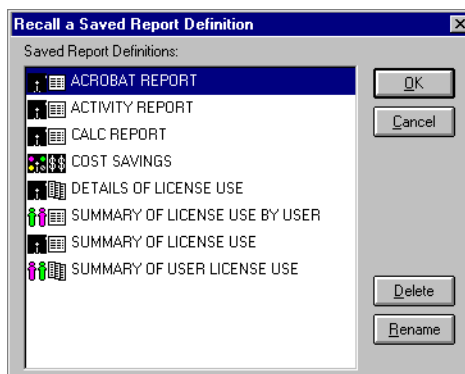
Recalling a Report Definition

Figure 7-23



When you select the **Recall** toolbar button, you will be presented with a list of saved report definitions. Notice that the icon shown next to the report name visually indicates the type of report saved.

Figure 7-24



When you save a report definition, you are saving the following:

- Type
- Output format
- Date Format
- Date Range
- Users to Include
- Licenses to Include

After you Recall the report definition, simply click **OK** to begin the report generation.

Server-Based License Profile Reports: Graphical

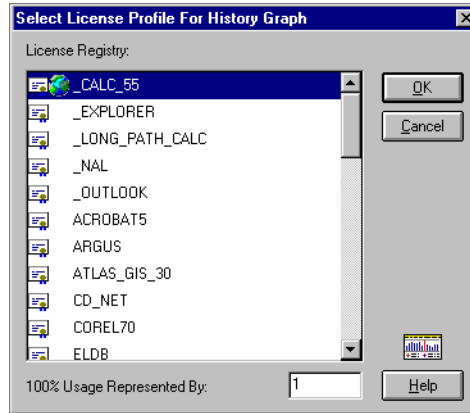
Open `SOFTRACK.EXE` and click on the **Reports** toolbar button:

Figure 7-25



The following report dialog will be presented:

Figure 7-26



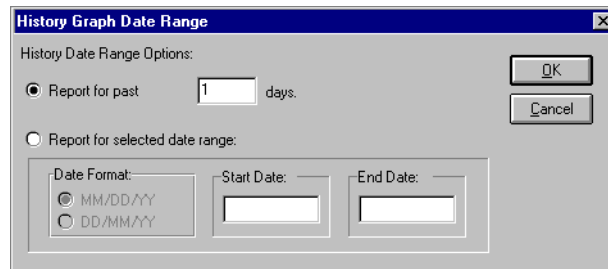
Select the License Profile for the History Graph.

NOTE: The History Graph created here reflects usage of the selected License Profile on the current server *only*. For Global License Profile History Graphs, see [“Graphical Global License Report” on page 141](#).

The **100% Usage Represented By:** prompt gives the ability to select the graphing height before the graph is created. It will default to the maximum concurrent users value defined for the selected License Profile. You can easily change the graph height while viewing the graph. The Graphing Height is used to indicate the Maximum Concurrent in-use for each day of the graph.

Click **OK** to continue, and the following dialog will be presented:

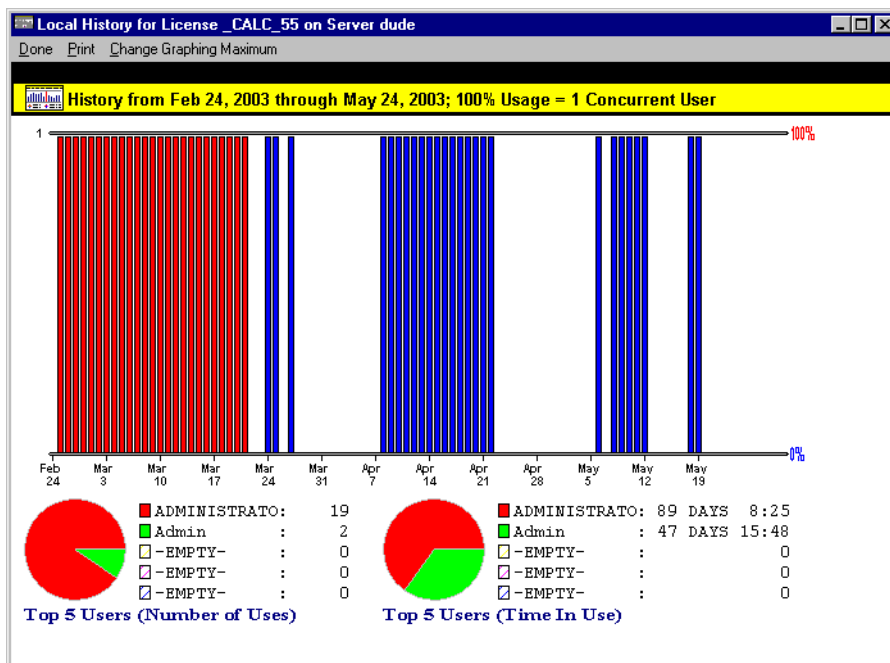
Figure 7-27



Select your preferred date range method and click **OK**. If you select **Report for past xyz days**, the value you enter for the number of days will be remembered each time you run `SOFTTRACK.EXE`. In either case, the *maximum* graphing range is 114 days.

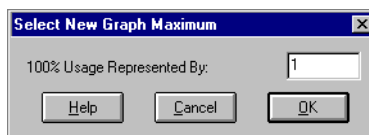
Once you click **OK**, the report will be generated, and when ready, a screen similar to the following will appear:

Figure 7-28



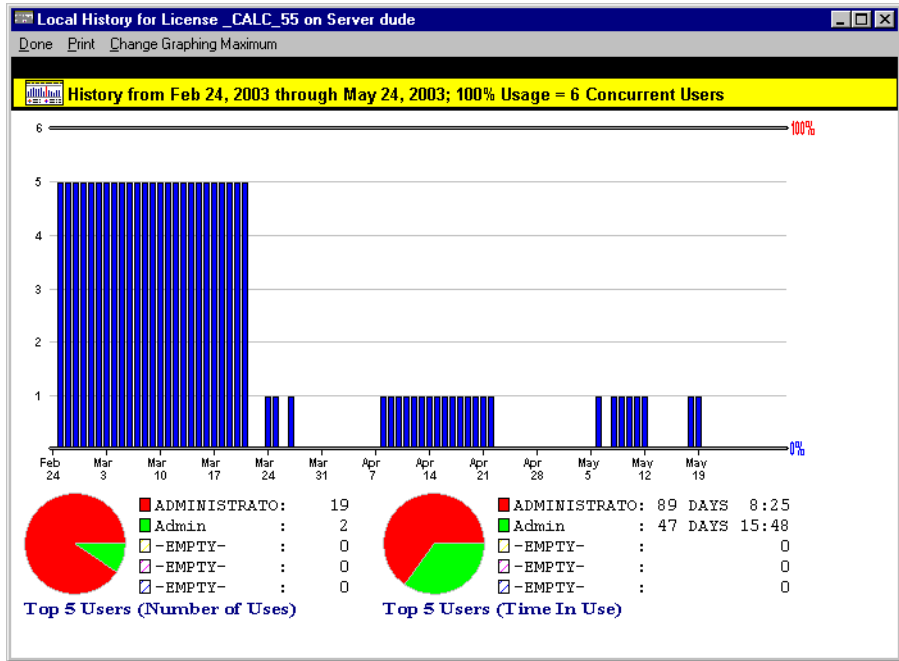
Notice the Graph Height (100%) used is 1. The bars in red indicate those days' maximum in-use values are greater than one. To change the Graphing Height, click on the **Change Graphing Maximum** menu item:

Figure 7-29



Here we entered the value 6 and clicked **OK**. The graph was redrawn:

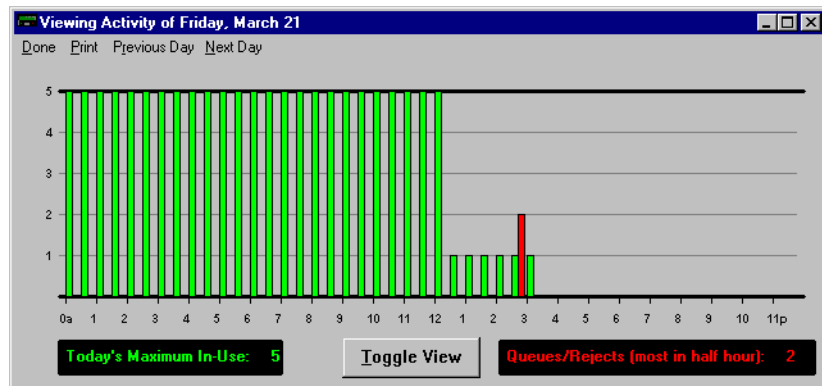
Figure 7-30



Notice that the bars that were previously red are now blue and their maximum height is 5.

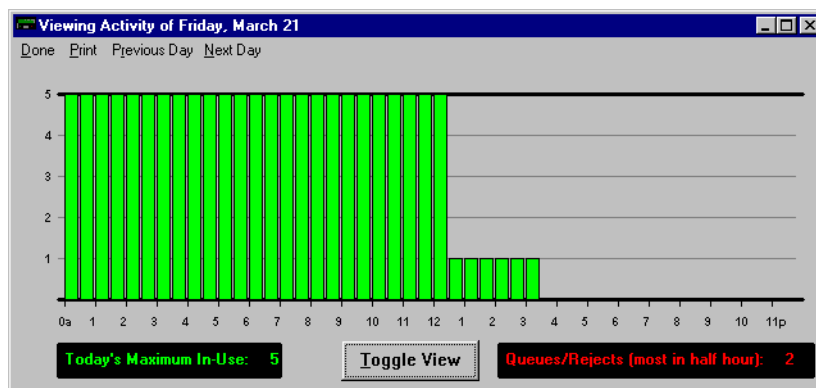
If you click on any of the blue bars (or red bars), you will be presented with an intraday graph showing Maximum Concurrent in-use values for each 30-minute period during that entire day:

Figure 7-31



Notice the **Previous Day** and **Next Day** menu items. These allow you to conveniently move between days of the graph. The **Toggle View** button will toggle the view between showing the screen above and a screen that only shows the in-use bars:

Figure 7-32



The Pie Charts shown on the main graph indicate the top 5 users by number of executions or uses and the top 5 users by the elapsed time in use.

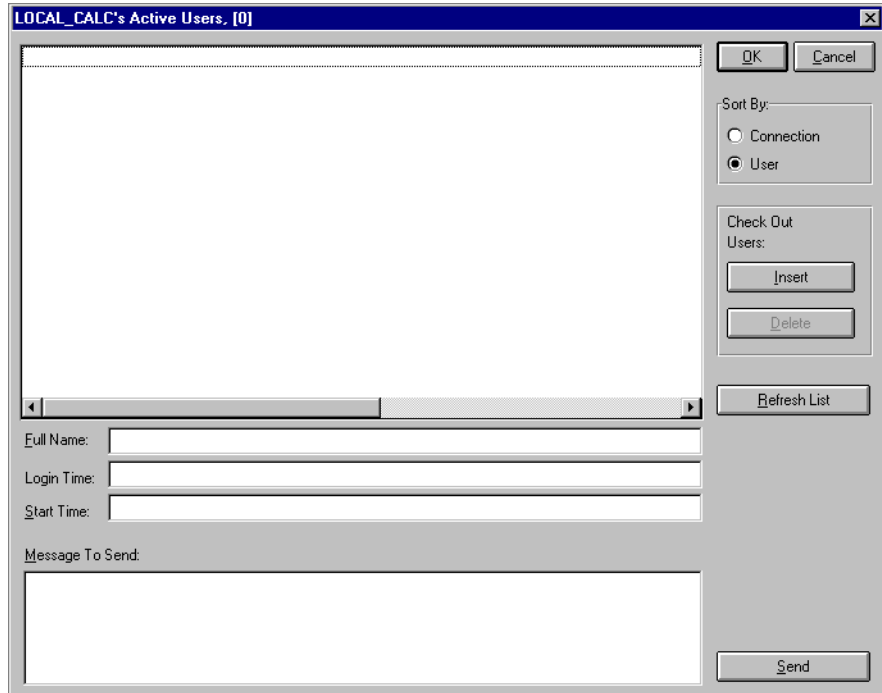
Server-Based License Profile Reports: Active Users

The **Active Users** Report is used to view the current usage of a License Profile. You can use `SOFTRACK.EXE` or `STUSER.EXE`, detailed in [Chapter 10](#), to view the Active Users.

To use `SOFTRACK.EXE`, start by opening `SOFTRACK.EXE`. Click on the **Licenses** toolbar button and select the License Profile for active user viewing.

Click on the **Active Users** button and a screen similar to the following will appear:

Figure 7-33



This screen is further detailed in Chapter 4. See [“Monitoring Active License Use” on page 74](#).

Interactive Reporting of Metering Activity: Global Reporting

Global Licenses: Printed/Text-Based/Graphical: Overview

With SofTrack you can define License Profiles as being Global (see [“Global Licensing: Overview” on page 67](#)), which means licenses are shared amongst various servers in your environment. Building reports that summarize metering activity across these servers is provided for in `SOFTTRACK.EXE` under the **Reports** menu option (or the **More Rpts** toolbar button) by selecting **Global License - Report Summaries and Graph**.

Creating a **Global License Summary** involves two discrete steps:

- 1 Gathering of metering activity data from servers hosting the Global License(s).
- 2 Printing or graphing the data that was gathered/collected.

The first step can take a few minutes or several hours, depending on many factors including:

- speed of the network connections between servers
- amount of data to be mined at each server
- the time period selected for the gather

The process of gathering is a disconnected process. When you select the **Gather** button and after clicking **OK** on the time period options, all *.GLB (Global License Broker) files in the METER.LOG path and its subdirectories of the *current server* will be erased to make room for the new gather. Next, all servers currently participating in sharing the licenses of *each* Global License Profile on the current server will be instructed to begin building the global license summary data files for each Global License Profile hosted on those servers (whether or not those same Global License Profiles are also hosted on the current server). The SSA must be active on each server in order to receive a report from that server. If the SSA is not active, there will be no notation of this, other than the report you print or graph will not include that server.

You may use the **Status** button to determine which servers are currently gathering.

Once you begin the gathering process, you can safely exit SOFTRACK.EXE, and you may even log out of the network. The SSAs will be doing the work of gathering the global licensing data.

The report summaries from each server are saved to *.GLT (Global License Temporary) files at each server in the METER.LOG path. Once these files are built, they are compressed to *.GLQ (Global License Quick) files for transmission to the server that was your *current server when you began the gather process*. Once received by the destination server, the files are stored as *.GLB files. After transmission, the *.GLT and *.GLQ files are automatically deleted.

The values that are gathered are:

- Total Number of Executions (includes Purge events)
- Total Elapsed Time In Use
- Total Reject/Queue Events
- Overall Maximum Concurrent In-Use

Once the first step is complete, the second step usually takes no more than a minute to complete.

Global Licenses: Printed/Text-Based/Graphical: How

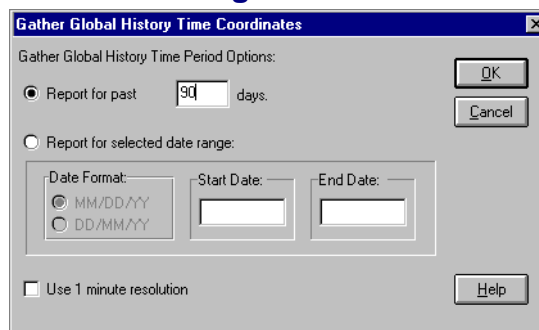
When you select **Reports, Global License - Report Summaries and Graph**, SofTrack will check the status of each previously gathered global license summary and determine its readiness. A message window will appear that displays the activity taking place. Once complete, you will be presented with a screen similar to:

Figure 7-34



Initially, the list will be empty. To begin the Gather process, click on the **Gather** button. The following will appear:

Figure 7-35

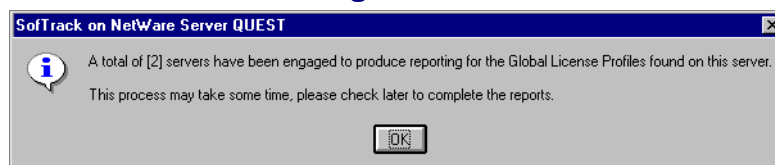


Select the reporting time period option you require.

The **Use 1 minute resolution** checkbox if the time on your servers is not 100% synchronized. As part of the gather process, the overall maximum concurrent in-use value is determined per Global License Profile. This maximum value is calculated to the hour. If time is not synchronized across servers (for instance, one server has the time as being 8:00am and another server has the time as being 7:55am), it is possible for the overall maximum to be *wrong* because the overlap (in this example: 5 minutes) allows for the overall maximum from 7:00-8:00 on one server to be overlaid (added to) the overall maximum from 8:00-9:00. To remedy this situation, use the **Use 1 minute resolution** checkbox. This will provide for a resolution of one minute rather than one hour for purposes of calculating the overall maximum concurrent in-use value, thereby minimizing the impact of the lack of time synchronization between servers.

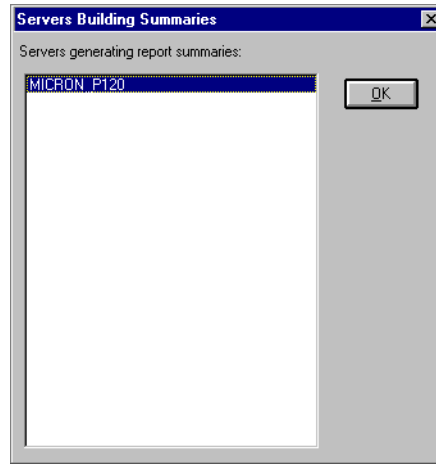
When ready, click **OK** to continue. A transaction window will appear that details the actions that are occurring. Once complete, a screen similar the following will appear:

Figure 7-36



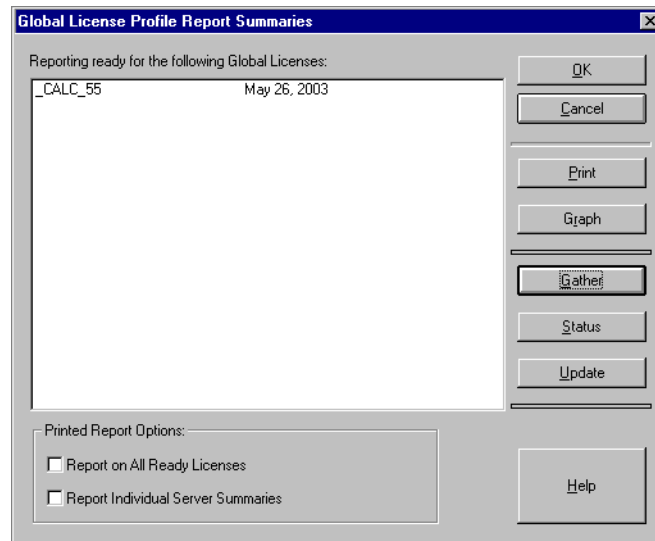
At this point you can click on the **Status** button to see if any servers are still gathering the requested data.

Figure 7-37



If no more servers are gathering, click the **Update** button to see the reports that are ready.

Figure 7-38



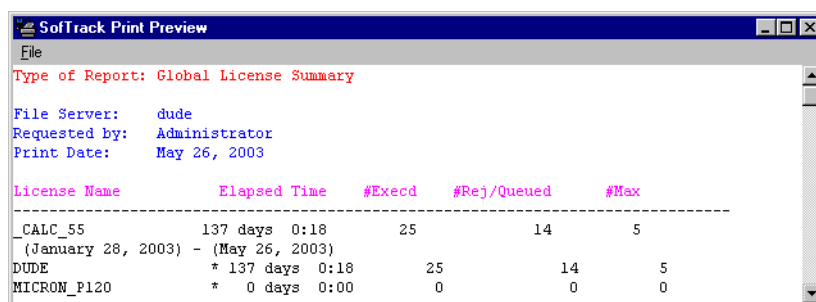
Click on each Global License you would like to include in the report. In the **Printed Report Options** box (located below the list of ready Global Licenses), you will find the **Report on All Ready Licenses** and **Report Individual Server Summaries**

checkboxes. If you click on the former, all ready licenses will be selected (i.e., highlighted). If you click on the latter, the report summaries for each server will be included—this option is only for the printed report option.

Printed/Text-Based Global License Report

To create a printed/text-based global license report, simply click on the **Print** button. A print preview screen will appear:

Figure 7-39



The screenshot shows a window titled "SofTrack Print Preview" with a menu bar containing "File". The main content area displays the following information:

```
Type of Report: Global License Summary
File Server:   dude
Requested by:  Administrator
Print Date:    May 26, 2003
```

Below this is a table with the following columns: License Name, Elapsed Time, #Execd, #Rej/Queued, and #Max. The data rows are as follows:

License Name	Elapsed Time	#Execd	#Rej/Queued	#Max
---CALC_55	137 days 0:18	25	14	5
(January 28, 2003) - (May 26, 2003)				
DUDE	* 137 days 0:18	25	14	5
MICROM_P120	* 0 days 0:00	0	0	0

This type of report is available only in text form. There is not a comma-delimited or CSV output format option. The #Execd column represents the Number of Executions, which includes Purge entries. The #Rej/Queued column indicates the combined number of Reject and Queue Events that occurred. The #Max column identifies the Maximum Concurrent in-use value.

Graphical Global License Report

To create a graphical global license report, simply click on the **Graph** button. If you have selected multiple licenses for reporting, you will be presented with an additional dialog to select one report for graphing.

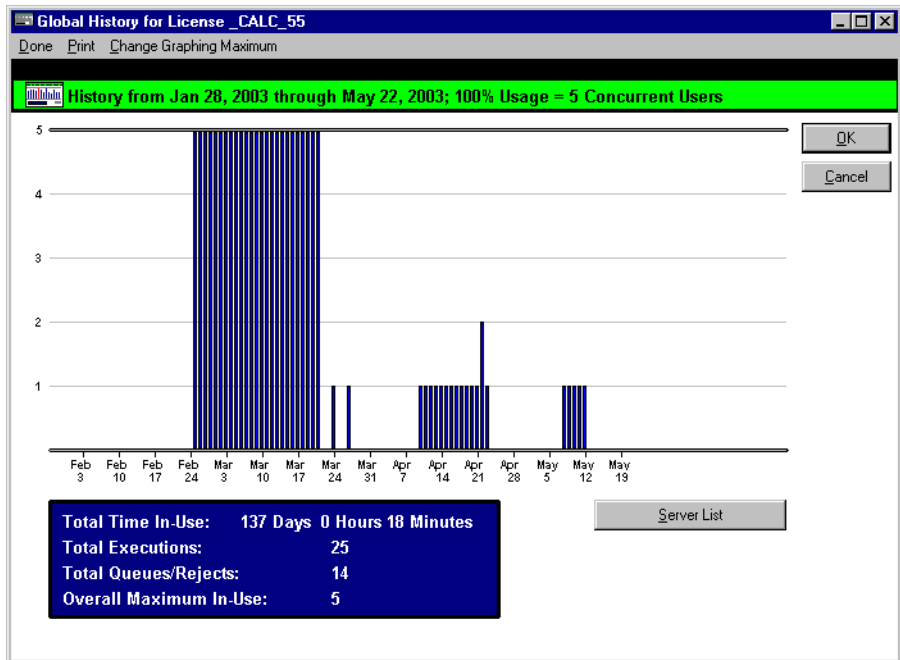
If the reporting period you selected for the Gather exceeds 115 days, the following notice will be presented:

Figure 7-40



Next, the graph will be presented:

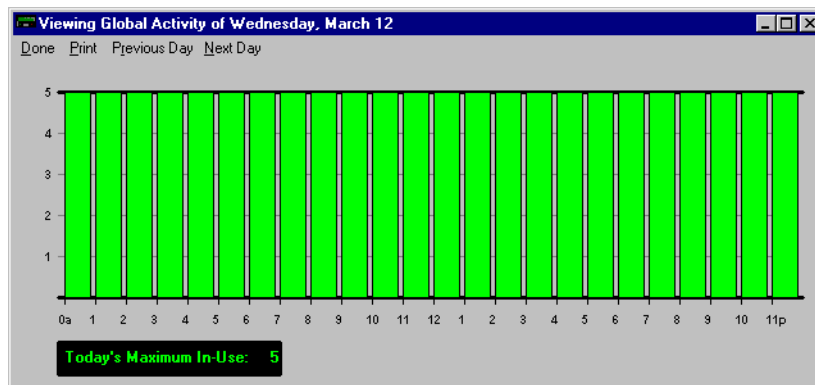
Figure 7-41



In this example, notice that the date range is from January 28, 2003, through May 22, 2003, while the printed report shown in [Figure 7-39](#) shows a date range through May 26, 2003. The difference here is the graph shows a maximum of 115 days in the graph beginning from the start date of the report, and May 22 is 115 days from January 28. Notice the graph height is automatically adjusted to fit the data. In this case, 5 is used as the maximum value. You can change the graph height by clicking on the **Change Graphing Maximum** menu item. Red bars indicate the maximum for those days is greater than the current maximum graphing height, i.e., you changed the graphing maximum to be less than the default value.

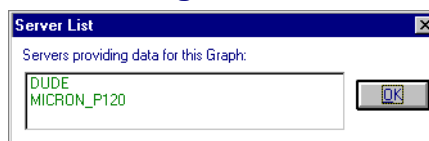
As with the server-based history graph ([Figure 7-30](#)), if you click on any of the blue bars (or red bars), you will be presented with an intraday graph showing maximum concurrent in-use values for each 30-minute period during that entire day:

Figure 7-42



The **Server List** button will present a list of servers whose global licensing data were used to construct the graph:

Figure 7-43



Global Licenses: Active View

Viewing the current Global License Activity is found by clicking on the **GLS View** toolbar button:

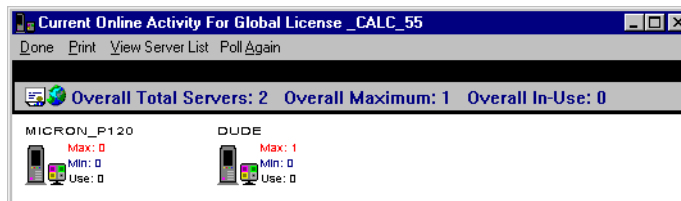
Figure 7-44



Next, you will be presented with a list of Global Licenses available for viewing. To continue, select one and click **OK**.

The following screen will be presented:

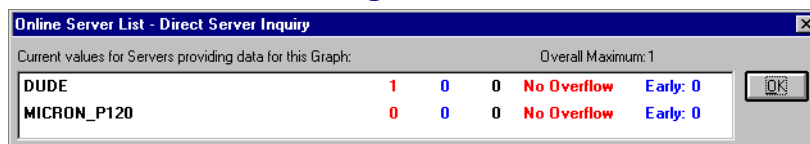
Figure 7-45



The servers shown are those that are actively sharing licenses for the selected Global License. The list is produced by querying the current dispatcher for the selected Global License Profile (the value of which is not shown). The dispatcher's values shown are updated every few minutes.

If there are more than 33 servers actively sharing the selected Global License, *or* you wish to see what the individual server's actual values are right now, click on the **View Server List** menu item to view the entire list:

Figure 7-46



The values are color-coded and are the results of directly querying each server in realtime.

The first value, which is in red, is the **Maximum Concurrent Users Value** defined for the Global License Profile on the indicated server. See [page 58](#) for additional details.

The second value, which is in blue, is the **Minimum Concurrent Users Value** defined for the Global License Profile on the indicated server. See [page 59](#) for additional details.

The third value, which is in black, is the current in-use value on the indicated server. This represents how many active users there are for the selected Global License Profile on the indicated server.

The **No Overflow** value indicates that the **Allow Overflow** (see [page 60](#)) option has not been selected for the Global License Profile on the indicated server.

The **Early: 0** value indicates the value of the **Early Global License Request** that has been defined for the Global License Profile on the indicated server. See [page 70](#) for additional details.

At the top, right you will find the value of the **Overall Maximum**, which is the additive total of the Maximum Concurrent Users Value defined at each server shown in the current list. This may or may not match your actual overall Maximum, depending on whether or not all servers are currently active in the sharing the selected Global License.

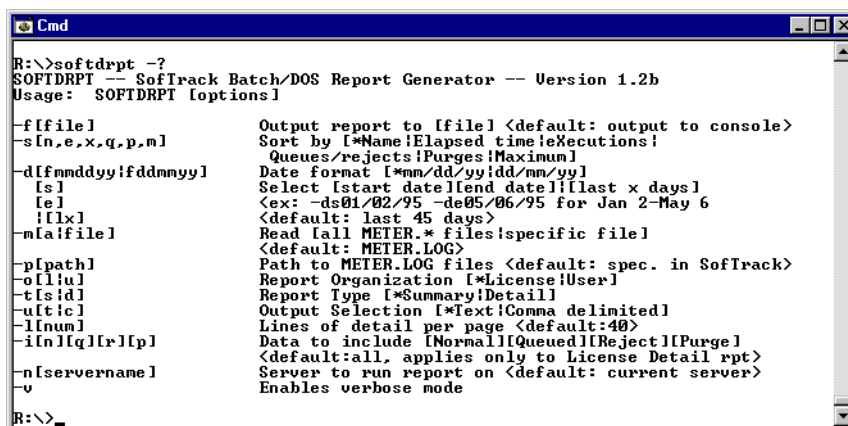
Batch-Mode Reporting of Metering Activity

SofTrack for NetWare includes the `SOFTDRPT.EXE` batch-mode reporting tool for server-based metering. It is found in the `TOOLS\NW` subdirectory of the product installation. This tool allows you to quickly produce the server-based metering activity reports you need from a batch-mode environment, which allows you to produce the reports via a batch file or other scripting tool. At present, this tool does not provide for reporting of Global License Activity, only activity on a server-by-server basis.

To use, open an MS-DOS window. On Windows 95/98/Me, use **Start** and the **Run** command to open the MS-DOS window. On Windows NT/2000/2003/XP, use **Start** and **Run** and enter `cmd.exe` to open the MS-DOS window.

To begin, type `SOFTDRPT -?` <enter>:

Figure 7-47



```
R:\>softdrpt -?
SOFTDRPT -- SofTrack Batch/DOS Report Generator -- Version 1.2b
Usage: SOFTDRPT [options]
-f[file] Output report to [file] <default: output to console>
-s[in,e,x,q,p,m] Sort by [*Name|Elapsed time|Executions|
Queues|rejects|Purges|Maximum]
-d[fmddyy|fddmyy] Date format [*mm/dd/yy|dd/mm/yy]
[s] Select [start date|end date][last x days]
[e] <ex: -ds01/02/95 -de05/06/95 for Jan 2-May 6
<default: last 45 days>
[l|x] Read [all METER.* files|specific file]
<default: METER.LOG>
-m[a|file] Path to METER.LOG files <default: spec. in SofTrack>
-p[path] Report Organization [*License|User]
-o[liul] Report Type [*Summary|Detail]
-t[is|d] Output Selection [*Text|Comma delimited]
-u[ic] Lines of detail per page <default:40>
-l[unum] Data to include [Normal|Queued|Reject|Purge]
<default:all, applies only to License Detail rpt>
-i[n|q|r|p] Server to run report on <default: current server>
-n[servername] Enables verbose mode
-v
```

The screen will display all the currently available options.

To view a quick License Summary report, simply type `SOFTDRPT -nSERVER` <enter>, where `SERVER` is the NetWare server you wish to report. If you are running `SOFTDRPT.EXE` on the desired server, you can simply type `SOFTDRPT` <enter>, and it will default to the current server.

The following example is for the server **dude**:

Figure 7-48

```

Z:\NLS>softdrpt
SOFTDRPT -- SofTrack Batch/DOS Report Generator -- Version 1.2b
(c)1995:2003 Integrity Software, Inc.
All Rights Reserved.

Type of Report: Summary of License use Report
File Server:    dude
Requested by:   Administrator
Print date:     May 26, 2003
Report Dates:   All Dates

License Name      Elapsed Time  #Execd  #Queued  #Purged  #Rejected  #Max
-----
CALC_55          4 days 1:57   14      1        1         0         1
EXPLORER         0 days 0:01    1       0        0         0         1
Z:>

```

To redirect the output to a file, simply use the greater than symbol (>), as in:

```
SOFTDRPT -ndude >output.txt
```

Batch-Mode Reporting of Metering Activity: Web-Based Reporting

In the product installation directory under the `TOOLS\WEB_RPT` subdirectory, you will find a `README.TXT` that details how to use readily available utilities to create web-based reporting from reports generated by `SOFTDRPT.EXE`.

Interactive Reporting of Timekeeping Activity

For License Profiles that include use of the Timekeeping option (see [page 53](#)), there is the Timekeeping Activity Report. To begin, open `SOFTTRACK.EXE` and click on the **More Rpts** toolbar button. Select **View Timekeeper Data Log**. The following will appear:

Figure 7-49

License	User	Response	Started	Recorded	Overall seconds	Seconds in use...	Workstati
CALC	Administrator	test only	5/15/2003...	5/15/2003 9:39	2	2	XP_PRO_
CALC	Administrator	10811	5/15/2003...	5/15/2003 9:35	1503	1311	XP_PRO_
CALC	George.Paul	10822	5/18/2003...	5/18/2003 18:45	452	305	JTM

The screenshot shows a window titled "SofTrack Timekeeper Log View" with a table of log entries. The table has columns for License, User, Response, Started, Recorded, Overall seconds, Seconds in use..., and Workstati. There are three rows of data. Below the table are buttons for "Save Log", "Purge Log", and "OK".

The columns include:

- License Profile Name
- User Name
- Response given to the Timekeeping Prompt
- Start Time
- Stop Time
- Overall seconds in use
- Active seconds in use (i.e., amount of time application was the active window and not a background window)
- Workstation Name
- Workstation Network Address

The **Save Log** button will copy the Timekeeping Log file (which is a comma-delimited file, also known as a CSV file) to a location of your choice.

The **Purge Log** button will erase the Timekeeping Log file, and all its contents *will be lost*. The Timekeeping log file is `TIMEKEEP.CSV` and is stored in the `METER.LOG` directory.

Discovering All Application Use

SofTrack, when using the LWA (see [Chapter 3](#)), has the ability to discover the use of all applications used at each workstation using the LWA.

To enable this feature, open `SOFTTRACK.EXE`, click on **Administration** and select **SofTrack Server Agent Options**, and then click on:

Record use of any application not defined for metering by workstations using the SofTrack Local Workstation Agent

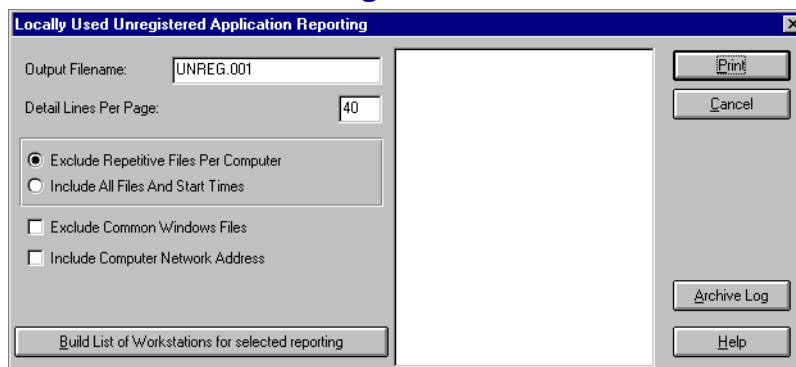
and close the dialog and then click on the **Refresh SSA** toolbar button.

Now all workstations using the SofTrack LWA will be so tracked.

Here is how it works: All applications used that are not defined for metering by a License Profile will be recorded in the LOCALUNR.LOG file, which is stored in the METER.LOG directory. The LOCALUNR.LOG is a private format file that is accessed via the SOFTRACK.EXE interface.

To create the report, open SOFTRACK.EXE and click on the **More Rpts** toolbar button and select **Discover all applications that are not metered**. You may also click on the **Reports** menu item and select **Discover all applications used that are not defined for metering by workstation using the Local Workstation Agent** and the following will appear:

Figure 7-50



The **Output Filename** will default to the path used for METER.LOG. This type of report provides text-based output only; there is no comma-delimited option. The **Detail Lines Per Page** indicate the lines of detail to be shown per output page. Each page is fully formatted with a header and page number footer.

Use the **Build List of Workstations for selected reporting** button to produce the list of workstations to choose from. This allows you to report specific workstations.

The **Print** button first sends the output to a print preview window for your review.

The **Archive Log** button will rename the LOCALUNR.LOG to .000, .001, .002, etc., and then immediately return to the main SOFTRACK.EXE window. Once archived, the LOG file will need to manually be renamed to LOCALUNR.LOG for reporting. Reports are only built from the contents of the current LOCALUNR.LOG file.

The **Exclude Repetitive Files Per Computer** option will show only the Computer Name and alphabetical listing of applications used.

The **Include All Files And Start Times** option will show the Computer Name and every application used, including its starting time. The list's order is by application start time.

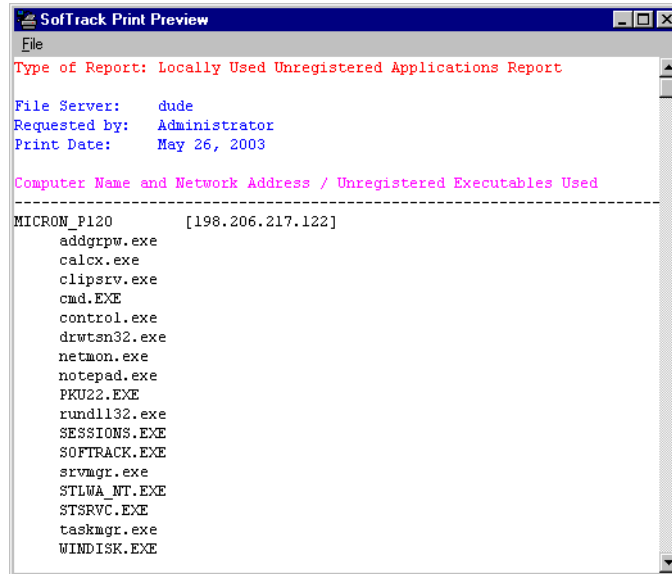
The **Exclude Common Windows Files** will exclude the following files from the report:

```
GDI . EXE
MKCOMPAT . EXE
REDIR32 . EXE
USER . EXE
CONAGENT . EXE
KRNL386 . EXE
READ16 . EXE
SPOOL32 . EXE
RPCSS . EXE
VVEXE32 . EXE
RUNDLL . EXE
RUNDLL32 . EXE
NTVDM . EXE
KRNL386 . EXE
WOWEXEC . EXE
```

The **Include Computer Network Address** will reveal the reporting workstation's TCP/IP and Ethernet or other MAC address, depending on the network protocols in use in your environment.

The following is a sample report:

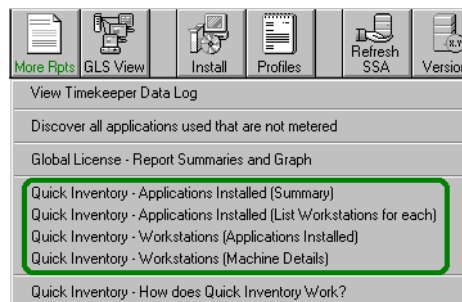
Figure 7-51



Interactive Reporting of Quick Inventory Data

SofTrack provides a Quick Inventory feature that is fully described in [Chapter 8](#). Reporting for the Quick Inventory feature is very simple. To start, open SOFTRACK.EXE and click on the **More Rpts** toolbar button:

Figure 7-52



The Quick Inventory Reports are highlighted. Each is a simple to use report. Each report include several columns of data, each of which can be sorted upon by repeatedly clicking on the column you wish to sort by.

Please refer to the next chapter for more information on the Quick Inventory feature.

License Profiles Definition Report

The License Profiles Definition report generates a text-based report that details the definitions of each License Profile on the current server. The report is in a text format with headers and page number footer that is intended to be a permanent record of your definitions that you can 3-hole punch and save.

Occasionally, the SofTrack Support Team may request a copy of your License Profiles report to help them assist you.

To begin, click on the **Profiles** toolbar button:

Figure 7-53



You will be presented with a dialog requesting the name of the Output Filename and Detail Lines Per Page. The defaults are `LICDEF.001` and 40. The **default path** for the output file is the directory you selected for the `METER.LOG` file. To continue, click **OK**. The report will be generated and control returned to `SOFTTRACK.EXE`'s main screen.

To print the report, we recommend opening the output file with your favorite word processing application such as Word or WordPerfect.



Chapter 8 Inventory

Inventory: Overview

SofTrack's Quick Inventory and Smart Inventory features help you determine which applications and hardware are installed and in use within your enterprise. Collection of the inventory is performed by a simple and lightweight data gathering agent that can be run in your logon scripts, by the SofTrack Local Workstation Agent (see [Chapter 3](#)), or by any automated means. The Smart Inventory feature includes ongoing auditing of application launches to further determine where applications are installed and are in-use or are never used. The following sections detail the specifics of SofTrack's Quick Inventory and Smart Inventory features.

Quick Inventory: Overview

SofTrack's Quick Inventory feature helps you determine what applications and hardware are in use on in your networked environment. The inventory collection is done by a simple and lightweight data gathering agent that can be run in your logon scripts or any automated means. The data gathering agent can even be automatically run by the SofTrack Local Workstation Agent (LWA) on desktops where the agent is installed and active.

The Quick Inventory feature maintains, per workstation, data regarding the last collection only. There is no archive of history stored. The inventory data is stored in the **Computers** subdirectory, which is located in the directory you selected for the `METER.LOG` path (see [page 83](#)). Within the **Computers** subdirectory you will find a listing of all the workstations, by name, that have been inventoried. The files are in a binary format that is extracted by `SOFTRACK.EXE` for reporting. The reports are found under the **More Rpts** toolbar button.

The Inventory data that is collected is gathered from the Add/Remove programs section of the workstation's registry. The hardware details are collected from other parts of the workstation's registry.

The inventory data gathered allows `SOFTTRACK.EXE` to produce six *very useful* reports:

- Applications Installed Summary
- Applications Installed, listing Workstations for each
- Applications with Identified Executable File Associations
- Executable Files with Identified Applications Associations
- Workstations, applications installed on each
- Workstations, installation details including RAM, RAM type, O/S version, service pack level, manufacturer, serial number, and more

Reports are first sent to a preview screen where you can then select to save them in printer-ready format with headers and page number footers, or in Comma Delimited Format (CSV) ready for importation into your favorite spreadsheet or SQL database for further review.

Quick Inventory: How

In the product installation directory under the **TOOLS\INVENTORY** directory, you will find `INVENTORY.EXE`, `_SMBIOS_.EXE`, and `STNW32.DLL`. All files must be located in the same directory.

Steps to directly perform the Quick Inventory Data Collection:

- 1 The SofTrack Server Agent (SSA) must be active at the server that will host the inventory records. The records will be stored in individual files named after the submitting workstation within the **Computers** subdirectory located in the directory selected for the `METER.LOG` path.
- 2 Run **INVENTORY SERVER_NAME** at each workstation you want to inventory. The `SERVER_NAME` is the same name that is used when mapping a share path via the `NET USE` command. It is *not* an internet name such as `server.acme` or `www.servername.org`, which your server may also be *known as*.

- 3 (Optional) Append a blank space and then an * after the SERVER_NAME (INVENTORY SERVER_NAME *) to receive a verbose listing of the inventory data that will be sent to the server. This output can be redirected to a text file:

```
INVENTORY SERVER_NAME * >output.txt
```

Step 3 is ***not required*** for SOFTRACK.EXE to produce Quick Inventory Reports.

Steps to perform the Quick Inventory Data Collection automatically via the SofTrack LWA:

- 1 The SSA must be active at the server that will host the inventory records. The records will be stored in individual files named after the submitting workstation within the **Computers** subdirectory located in the directory selected for the METER.LOG path.
- 2 Copy both INVENTORY.EXE and _SMBIOS_.EXE to the *same directory* where STLWA_NT.EXE (Windows NT/2000/2003/XP workstations) or STLWA-LM.EXE (Windows 95/98/Me workstations) is located. When the SofTrack LWA initially loads, it will *automatically run* **INVENTORY SERVER_NAME**, where SERVER_NAME is the same server the LWA has been configured to report to.

IMPORTANT: If INVENTORY.EXE and _SMBIOS_.EXE are not located in the same directory as STLWA_NT.EXE or STLWA-LM.EXE, the inventory will not be run, even if the files are on a search path.

Quick Inventory: Reports

SofTrack's Quick Inventory Report generation does not require the SSA to be active. Each Report described below is accessed by opening SOFTRACK.EXE and clicking on the **More Rpts** toolbar button. Each report can be saved in printer-ready format (we recommend using Word or WordPerfect to print this style report) or in comma-delimited format. And, for reports that feature columns of data, each column can be used to sort the report. To sort, simply click on the column header.

The following Quick Inventory reports can be generated:

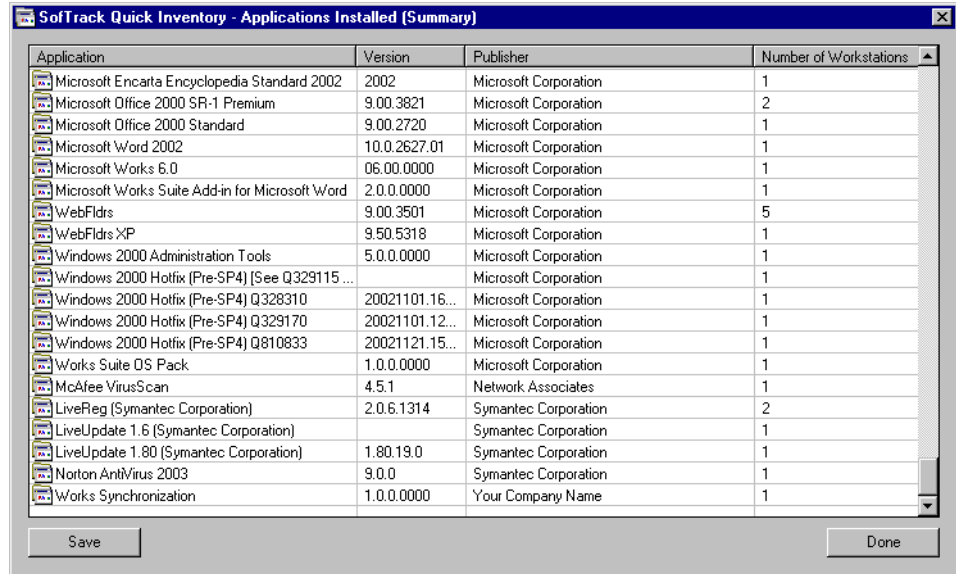
Applications: Summary

The following is collected:

- Application Name

- Version
- Publisher
- Number of Workstations where found

Figure 8-1



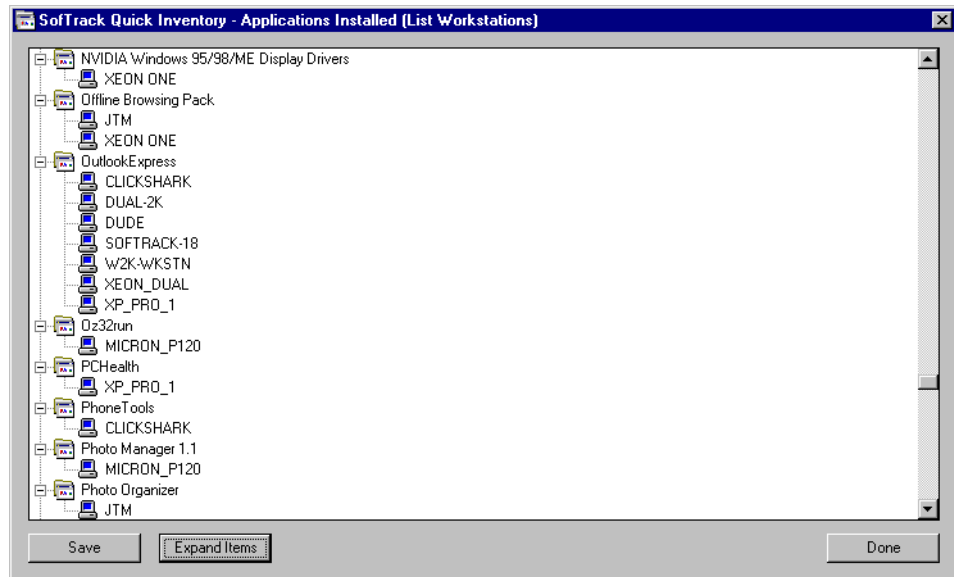
Application	Version	Publisher	Number of Workstations
Microsoft Encarta Encyclopedia Standard 2002	2002	Microsoft Corporation	1
Microsoft Office 2000 SR-1 Premium	9.00.3821	Microsoft Corporation	2
Microsoft Office 2000 Standard	9.00.2720	Microsoft Corporation	1
Microsoft Word 2002	10.0.2627.01	Microsoft Corporation	1
Microsoft Works 6.0	06.00.0000	Microsoft Corporation	1
Microsoft Works Suite Add-in for Microsoft Word	2.0.0.0000	Microsoft Corporation	1
WebFldrs	9.00.3501	Microsoft Corporation	5
WebFldrs XP	9.50.5318	Microsoft Corporation	1
Windows 2000 Administration Tools	5.0.0.0000	Microsoft Corporation	1
Windows 2000 Hotfix (Pre-SP4) [See Q329115 ...		Microsoft Corporation	1
Windows 2000 Hotfix (Pre-SP4) Q328310	20021101.16...	Microsoft Corporation	1
Windows 2000 Hotfix (Pre-SP4) Q329170	20021101.12...	Microsoft Corporation	1
Windows 2000 Hotfix (Pre-SP4) Q810833	20021121.15...	Microsoft Corporation	1
Works Suite OS Pack	1.0.0.0000	Microsoft Corporation	1
McAfee VirusScan	4.5.1	Network Associates	1
LiveReg (Symantec Corporation)	2.0.6.1314	Symantec Corporation	2
LiveUpdate 1.6 (Symantec Corporation)		Symantec Corporation	1
LiveUpdate 1.80 (Symantec Corporation)	1.80.19.0	Symantec Corporation	1
Norton AntiVirus 2003	9.0.0	Symantec Corporation	1
Works Synchronization	1.0.0.0000	Your Company Name	1

Applications: Workstations

The following is collected:

- Application Name
- List of Workstations where installed

Figure 8-2

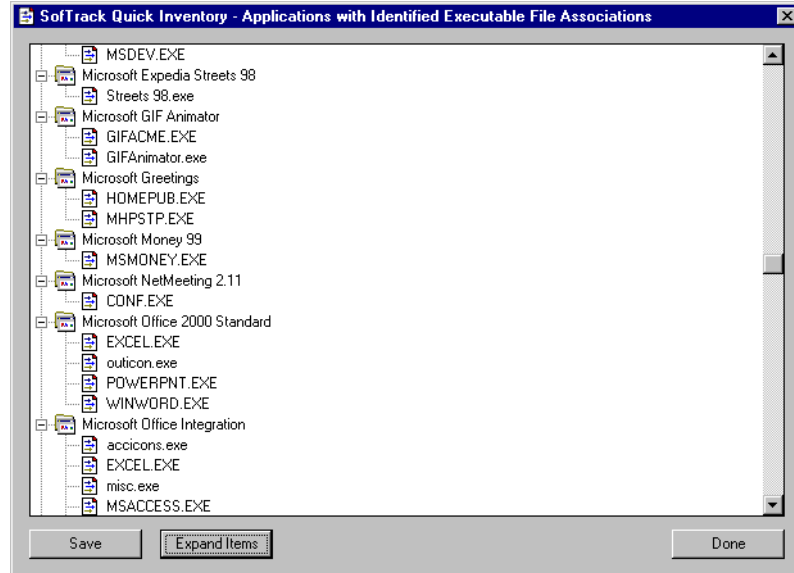


Applications: Executable Files

The following is collected:

- Application Name
- List of executable files found via our patent-pending processes to be associated with use of the identified application

Figure 8-3

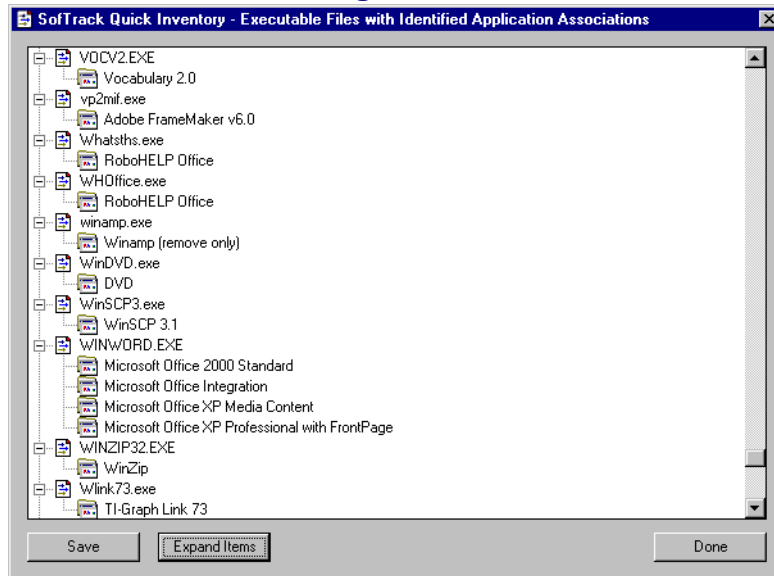


Executable Files: Applications

The following is collected:

- Executable filename
- List of applications found via our patent-pending processes to be associated with the identified executable file

Figure 8-4

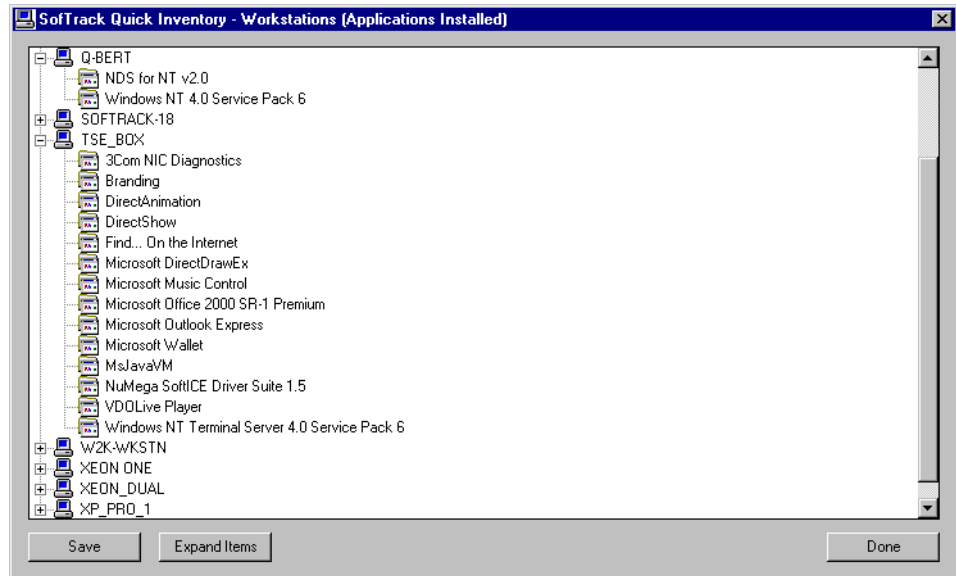


Workstations: Applications

The following is collected:

- Workstation Name
- List of Applications installed on selected workstation

Figure 8-5



Workstations: Installation Details

The following is collected:

- Workstation Name
- TCP/IP Address
- Windows Version
- Service Pack Level
- C: Drive Size
- C: Drive Free Space
- Physical RAM installed
- Type of RAM installed in Bank 1
- Type of RAM installed in Bank 2
- Type of RAM installed in Bank 3
- Type of RAM installed in Bank 4
- Machine Type (from Registry)
- BIOS Date (from Registry)

- Manufacturer
- Model Name
- Serial Number (assigned by Manufacturer)
- Internet Explorer version
- CPU 0 Vendor
- CPU 0 Type
- CPU 0 Speed in MHz
- CPU 1 Vendor
- CPU 1 Type
- CPU 1 Speed in MHz

Figure 8-6

Workstation	IP Address	Windows Version	Service Pack	C: Size	C: Free	RAM	Bank 1
ATC-109-MASTER	188.206.217.12	Microsoft Windows 2000	Service Pack 4	7 GB	2 GB	239 MB	128MB (DIN)
JTM	188.206.217.127	Microsoft Windows 98	4.10.1998	16 GB	10 GB	124 MB	128MB (DIN)
MICRON_P120	188.206.217.122	Windows NT v4	Service Pack 6	401 MB	46 MB	128 MB	128MB (DIN)
XEON ONE	188.254.105.250	Microsoft Windows 98	4.10.1998	38 GB	22 GB	511 MB	256MB (RD)
SOFTTRACK_NT4	188.166.200.22	Windows NT v4	Service Pack 6	133 MB	3 MB	254 MB	128MB (SD)
INTEGRITY-XP	188.166.200.118	Microsoft Windows XP	Service Pack 1	28 GB	19 GB	1028 MB	512MB (SD)
SALESXP	188.166.200.111	Microsoft Windows XP	Service Pack 1	29 GB	7 GB	770 MB	256MB (DIN)
VCSALESXP	188.166.200.121	Microsoft Windows XP	Service Pack 1	19 GB	8 GB	385 MB	128MB (DIN)
WXPTTEST	188.166.200.109	Microsoft Windows XP	Service Pack 1	9 GB	5 GB	513 MB	256MB (SD)
3B3WM01	188.166.200.169	Microsoft Windows 2000	Service Pack 3	19 GB	8 GB	513 MB	256MB (SD)
INTEGRITY-2K	188.166.200.119	Microsoft Windows 2000	Service Pack 3	19 GB	8 GB	254 MB	256MB (SD)
INTEGRITY-SUP3	188.166.200.107	Microsoft Windows 2000	Service Pack 4	38 GB	35 GB	512 MB	256MB (SD)
W2KSRV	188.166.200.175	Microsoft Windows 2000	Service Pack 4	8 GB	3 GB	1020 MB	512MB (DIN)
W2003SRV	188.166.200.189	Microsoft Windows .NET	No Service Pack	8 GB	5 GB	120 MB	128MB (DIN)

Save Number Found: 14 Done

NOTE: For Windows 9x/Me workstations, the following is not collected:

- Machine Type (from Registry)
- BIOS Date
- CPU 0 Speed in MHz
- any data regarding CPU 1

Smart Inventory: Overview

SofTrack's Smart Inventory feature helps you determine how software is used in your enterprise. Smart Inventory is the result of combining the data gathered by Quick Inventory with auditing of actual software use via the SofTrack Local Workstation Agent (LWA) (see [Chapter 3](#)).

Use of the SofTrack LWA automatically tracks every application launch. If the Quick Inventory data has been gathered, the SofTrack Server Agent (SSA) will automatically begin to track each distinct application launched as reported by the LWA. The SSA, per workstation, will record the number of times each application, by its filename, has been used and the most recent use.

The combined Quick Inventory and Use data results in the following three Smart Inventory reports:

- Application Usage Summary—Number of workstations where installed and whether or not used
- NOT USED List—Workstations where Applications are installed but not used
- Workstation Usage Summary—Applications installed, how many times used, and most recent use

These powerful reports provide reporting of overall application usage that detail where applications are installed and where they are used, allowing you to determine where you can safely uninstall unused applications.

The reports are first displayed in a preview screen where you can then select to save them in printer-ready format with headers and page number footers, or in Comma Separated Value (CSV) format ready for importation into your favorite spreadsheet or database for further review.

Smart Inventory: How

SofTrack's Smart Inventory is the result of installing and using the Quick Inventory module ([page 154](#)) and the SofTrack Local Workstation Agent (see [Chapter 3](#))—there are no other configuration requirements.

The Quick Inventory module, per workstation, gathers the filenames identified for each installed application, while the LWA captures each application use. At the core of this process is the SofTrack Server Agent (SSA), which automatically detects that a specific workstation's Quick Inventory has been gathered and will then

automatically begin recording each application launched on that workstation as reported by the LWA. This process involves the creation of `.WRK` and `.APP` files in the **Computers** subdirectory located in the directory select for the `METER.LOG` path. For each workstation a `.WRK` file will be used as a “scratch” file to quickly record the launched applications as reported by the LWA. Once every 15 minutes a background process awakens and converts the entries within the `.WRK` files into permanent entries within the `.APP` file. The file format of both files is private and subject to change. At the present time, the `.APP` file contains a single entry for each filename launched. The `.APP` file is a “mini database” that is critical to the creation of the Smart Inventory reports.

Smart Inventory: Reports

SofTrack’s Smart Inventory report generation does not require the SSA to be active. Each report described below is accessed by opening `SOFTTRACK.EXE` and clicking on the **More Rpts** toolbar button. Each report can be saved in a printer-ready format (we recommend using Word or WordPerfect to print this style report) or in comma-delimited format. And for reports that feature columns of data, each column can be used to sort the report. To sort, simply click on the column header.

The following Smart Inventory reports are available.

Applications Usage Summary

Number of workstations where installed and whether or not used.

The following is collected:

- Application Name
- Version
- Publisher
- Number of Workstations where the application is installed
- Number of Workstations where the application has been used¹

1. Indicates where application has been used since tracking of application use began. This date is indicated in the “Workstation Usage Summary Report” (see page 165).

Figure 8-7

Application	Version	Publisher	# Wstn Installed	# Wstn Used
Adobe Reader 6.0	6.0	Adobe Systems Incor...	121	31
Adobe Acrobat 5.0	5.0	Adobe Systems, Inc.	53	10
Compuware SoftICE Driver Suite 2.7	2.7	Compuware Corporati...	1	0
Copernic Agent Basic		Copernic	49	42
WordPerfect Office 2002	10	Corel	82	20
Dell Solution Center	1.00.0000	Dell	152	93
Dell Support	2.00.0000	Dell	152	56
Help and Support Customization	1.00.0000	Dell	152	67
eFax Messenger Plus	2.12	eFax.com	1	1
InstallShield Professional 6.3	InstallShield ...	InstallShield Software ...	2	0
Dell Picture Studio - Dell Image Expert	3.4.1	Jasc Software Inc	2	1
Jasc Paint Shop Pro 8	8.00.0000	Jasc Software Inc	1	0
Microsoft Windows Journal Viewer	1.5.2315.0	Microsoft	38	20
Advanced Networking Pack for Windows XP		Microsoft Corporation	134	134
Microsoft Office 2000 Premium	9.00.2720	Microsoft Corporation	134	104
Microsoft Office 2000 SR-1 Premium	9.00.9327	Microsoft Corporation	134	72
Microsoft Office XP Standard	10.0.4330.0	Microsoft Corporation	58	51
Microsoft Publisher 2002	10.0.4330.0	Microsoft Corporation	8	7
Windows 2000 Support Tools	5.0.2072.1	Microsoft Corporation	11	9
WinPcap 3.0		Politecnico di Torino	3	0
UltraMon	2.1.16.0	RealView Soft	1	0

NOT USED List

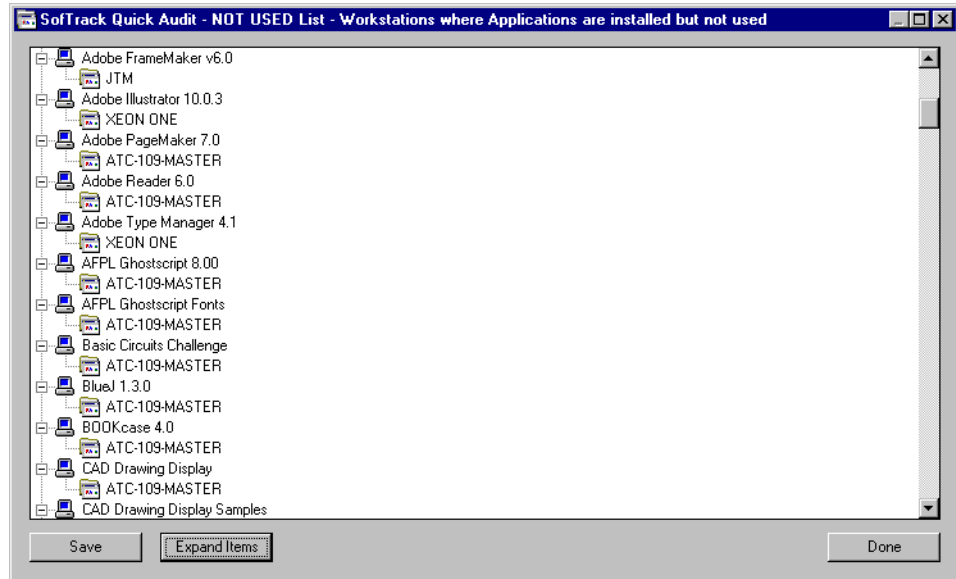
Workstations where Applications are installed but not used.

The following is collected:

- Applications
- Workstations where the indicated Application is installed but has not been used¹

1. Indicates those workstations where the indicated Application is installed but has not been used since tracking of use began. This date is indicated in the “Workstation Usage Summary Report” (see page 165).

Figure 8-8



Workstation Usage Summary

Applications installed, how many times used, and most recent use.

The following is collected:

- Workstation
- Application
- Version
- Publisher
- Date Tracking began
- Number of times used
- Date most recently used

Figure 8-9

Workstation	Application	Version	Publisher	Date tracking...	# Times Used	Most recent use
SALESXP	Norton AntiVirus 2003...	9.0.0	Symantec Corporation	Sep 5, 2003	206	Wed Oct 01 16
W2KSRV	LiveUpdate 1.80 (Sy...	1.80.19.0	Symantec Corporation	Sep 5, 2003	150	Tue Sep 30 10
INTEGRITYXP	LiveUpdate 1.80 (Sy...	1.80.19.0	Symantec Corporation	Sep 5, 2003	132	Tue Sep 30 17
INTEGRITYXP	Belkin Bulldog Plus			Sep 5, 2003	58	Tue Sep 30 15
SALESXP	eFax Messenger Plus	2.12	eFax.com	Sep 5, 2003	39	Wed Oct 01 10
SALESXP	Adobe Acrobat 5.0	5.0	Adobe Systems, Inc.	Sep 5, 2003	35	Wed Oct 01 13
SALESXP	Microsoft Office XP St...	10.0.4330.0	Microsoft Corporation	Sep 5, 2003	34	Wed Oct 01 15
INTEGRITYXP	Graphics Filters	1.0.0.0	Visio Corporation	Sep 5, 2003	19	Tue Sep 30 17
INTEGRITYXP	ACT!			Sep 5, 2003	19	Mon Sep 29 17
INTEGRITYXP	Mozilla Firebird	0.6.1		Sep 5, 2003	16	Thu Sep 25 14
INTEGRITYXP	Microsoft Office Integr...	1.0.0.0	Visio Corporation	Sep 5, 2003	13	Tue Sep 30 17
INTEGRITYXP	Microsoft Office 2000 ...	9.00.9327	Microsoft Corporation	Sep 5, 2003	13	Tue Sep 30 17
INTEGRITYXP	GSview 4.4			Sep 5, 2003	11	Mon Sep 29 15
INTEGRITYXP	AFPL Ghostscript Fonts			Sep 5, 2003	11	Mon Sep 29 15
SALESXP	ACT!			Sep 5, 2003	11	Wed Oct 01 15
INTEGRITY-SUP3	Belkin Bulldog Plus			Sep 5, 2003	8	Mon Sep 29 08
SALESXP	ADL Instant Messenger			Sep 5, 2003	8	Wed Oct 01 15
INTEGRITY-SUP3	WinZip	8.1 (4331)	WinZip Computing, Inc.	Sep 5, 2003	7	Thu Sep 18 15
W2KSRV	Windows 2000 Supp...	5.0.2072.1	Microsoft Corporation	Sep 5, 2003	7	Tue Sep 30 11
INTEGRITYXP	WinZip	8.1 (4331)	WinZip Computing, Inc.	Sep 5, 2003	4	Wed Sep 24 08

Save Done



Chapter 9 Audit and Control

Audit and Control: Overview

SofTrack's Audit and Control functions require use of the SofTrack Local Workstation Agent (LWA) (see [Chapter 3](#)) at each workstation to be audited. First released in October 2003, SofTrack's Audit and Control functions include:

Auditing:

- All Browser Access attempts via Microsoft's Internet Explorer
- All Application Launch attempts
- All File Open attempts
- All File Create/Modification attempts
- All File Copy attempts
- All Executable Files created or modified

Control:

- Deny File Rename requests for all *.EXE and *.COM files
- Deny File Create requests for all *.EXE and *.COM files
- Deny Browsing the internet via Microsoft's Internet Explorer

These options are also detailed on [page 97](#).

All Audit data is stored in the **Audit** subdirectory under the `METER.LOG` path. Data is stored in CSV files named after the workstation providing the audit data. Because these files are stored in CSV format, you can directly process these files by other applications, including spreadsheets and databases.

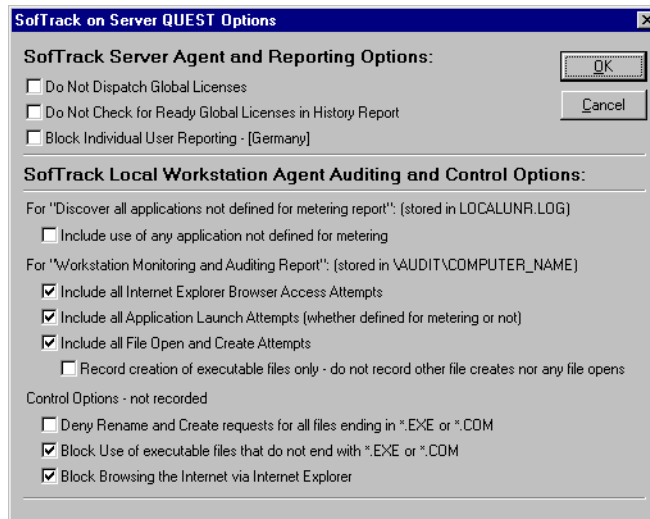
Audit and Control: How

SofTrack's Audit and Control functions are defined via `SOFTRACK.EXE`. Implementation of Audit and Control functions requires the use of the SofTrack Local Workstation Agent (see [Chapter 3](#)) at each workstation where auditing and control are required.

Control Options selected are implemented by specifically denying the operations from completing. Denial of File Rename/Create operations for `*.EXE` and `*.COM` files is presented to the user as a Windows error. The user will not be aware that SofTrack is specifically blocking their request because Windows is reporting the error. Denial of internet browsing via Internet Explorer results in a blank page being served rather than the requested page. No record of the enforcement of Control Options is maintained.

Define any desired Audit and Control functions by opening `SOFTRACK.EXE` and selecting **Administration, SofTrack Server Agent Options**:

Figure 9-1



NOTE: The **Include all File Open and Create Attempts** option includes tracking of File Copy operations. File Copy operations *are not* tracked on Windows 9x/Me workstations.

- **View Internet Explorer use for selected logs**
- **View Application Launches for selected logs**
- **File Opens and Creates for selected logs**
- **Search selected logs**

When selected, these buttons will present the user with a new window that contains the requested data for the selected workstations. Each report includes:

- Time event occurred
- Workstation
- User (will also indicate process name for creates and indicates if file copy)
- TCP/IP address
- Item accessed (file or web page)

Figure 9-3

The screenshot shows a window titled "Audit Log Viewer - All Entries". It contains a table with the following columns: Time, Workstation, User, Address, and Item Accessed. The table lists various events from September 3, 2003, including file accesses, web page visits, and application launches. At the bottom of the window, it displays "Number Found: 9,635" and three buttons: "Save Selected Records", "Save", and "Done".

Time	Workstation	User	Address	Item Accessed
Sep 03 19:06:00 2003	SALESXP	Sales	188.166.200.111	C:\Documents and Settings\Sales\Local Settings\Te
Sep 03 19:05:57 2003	SALESXP	Sales	188.166.200.111	http://mail01.mail.com/scripts/mail/mailbox.mail?ob-
Sep 03 19:05:57 2003	SALESXP	Sales	188.166.200.111	C:\Documents and Settings\Sales\Local Settings\Te
Sep 03 19:04:44 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 19:04:44 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 19:02:30 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 19:02:30 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 19:00:26 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 19:00:26 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 18:58:22 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 18:58:21 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 18:58:18 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\ACT\ActInfo.dat
Sep 03 18:58:18 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\ACT\Info.dll
Sep 03 18:58:18 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\ACT\dal.lst
Sep 03 18:58:18 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\ACT\cb.dal
Sep 03 18:56:08 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 18:56:08 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 18:54:21 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Common Files\Adobe\Web\Adobe
Sep 03 18:54:21 2003	SALESXP	Sales	188.166.200.111	Adobe Online Processes
Sep 03 18:54:04 2003	SALESXP	Sales	188.166.200.111	C:\Program Files\Messenger\msmsgs.exe
Sep 03 18:54:04 2003	SALESXP	Sales	188.166.200.111	c:\WINDOWS\System32\stdole32.tlb
Sep 03 18:53:30 2003	SALESXP	Sales via WINWORD.EXE	188.166.200.111	C:\Documents and Settings\Sales\Application Data\
Sep 03 18:53:30 2003	SALESXP	Sales	188.166.200.111	C:\Documents and Settings\Sales\My Documents\S

Figure 9-4

Time	Workstation	User	Address	Item Accessed
Aug 21 09:13:44 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/en/mstoolbar.asp?
Aug 21 09:13:44 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/en/toc.asp?corpor
Aug 21 09:13:44 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/en/splash.asp?pa
Aug 21 09:13:44 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/en/footer.asp
Aug 21 09:13:43 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/en/default.asp
Aug 21 09:13:42 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://windowsupdate.microsoft.com/
Aug 21 09:13:42 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://v4.windowsupdate.microsoft.com/default.asp
Aug 21 09:13:40 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://www.microsoft.com/isapi/redir.dll?prd=ie&clcid=0x04
Aug 21 09:13:25 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://www.softwaremetering.com/
Aug 20 09:24:47 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93131759/532565297/aol?SNM
Aug 20 09:24:46 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://sportsillustrated.cnn.com/2003/football/ncaa/specia
Aug 20 09:24:46 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93169814/532565297/aol?SNM
Aug 20 09:24:31 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93175947/532549094/aol?SNM
Aug 20 09:24:31 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93175950/532549094/aol?SNM
Aug 20 09:24:31 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93175946/532549094/aol?SNM
Aug 20 09:24:31 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://ar.atwola.com/html/93175944/532549094/aol?SNM
Aug 20 09:24:30 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://sportsillustrated.cnn.com/front/index.html?cnn=eyes
Aug 20 09:24:30 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://sportsillustrated.cnn.com/
Aug 20 09:24:29 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://www.cnn.com/si/front/
Aug 20 09:24:29 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	http://www.cnn.com/si/front/index.html?cnn=eyes

Number Found: 227

Save Selected Records Save Done

Figure 9-5

Time	Workstation	User	Address	Item Accessed
Sep 03 07:39:04 2003	INTEGRITY-SUP4	admin	188.166.200.113	DSLog.exe
Sep 03 07:34:00 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	AUUpdate.exe
Sep 03 07:33:58 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	NDETECT.EXE
Sep 03 03:34:01 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	AUUpdate.exe
Sep 03 03:33:59 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	NDETECT.EXE
Sep 02 23:34:01 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	AUUpdate.exe
Sep 02 23:33:59 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	NDETECT.EXE
Sep 02 19:34:01 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	AUUpdate.exe
Sep 02 19:33:59 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	NDETECT.EXE
Sep 02 16:16:19 2003	INTEGRITY-SUP4	admin	188.166.200.113	IEXPLORE.EXE
Sep 02 16:11:35 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	navw32.exe
Sep 02 15:49:56 2003	INTEGRITY-SUP4	admin	188.166.200.113	SOFTACK.EXE
Sep 02 15:42:10 2003	INTEGRITY-SUP4	admin	188.166.200.113	IEXPLORE.EXE
Sep 02 15:36:34 2003	INTEGRITY-SUP4	admin	188.166.200.113	navw32.exe
Sep 02 15:34:30 2003	INTEGRITY-SUP4	admin	188.166.200.113	navw32.exe
Sep 02 15:34:28 2003	INTEGRITY-SUP4	admin	188.166.200.113	EXCEL.EXE
Sep 02 15:34:01 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	AUUpdate.exe
Sep 02 15:33:59 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	NDETECT.EXE
Sep 02 14:56:54 2003	INTEGRITY-SUP4	SYSTEM	188.166.200.113	navw32.exe
Sep 02 14:17:36 2003	INTEGRITY-SUP4	admin	188.166.200.113	UTILDRK.FXF

Number Found: 828

Save Selected Records Save Done

Figure 9-6

Time	Workstation	User	Address	Item Accessed
Sep 05 12:11:23 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\SALES\XP
Sep 05 12:11:17 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\NINTEGRITY\XP
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via explorer.exe	188.166.200.107	C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\wz54.tmj
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via WINZIP32.EXE	188.166.200.107	C:\Documents and Settings\Administrator\Local Settings\
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via WINZIP32.EXE	188.166.200.107	C:\Documents and Settings\Administrator\Local Settings\
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\wz54.tmj
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via WINZIP32.EXE	188.166.200.107	C:\Documents and Settings\Administrator\Local Settings\
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via WINZIP32.EXE	188.166.200.107	C:\Documents and Settings\Administrator\Local Settings\
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\Audit.zip
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator via WINZIP32.EXE	188.166.200.107	C:\Documents and Settings\Administrator\Local Settings\
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\VCSALES\XP
Sep 05 12:11:16 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\NINTEGRITY-SUP4
Sep 05 12:11:13 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	U:\Audit\VCSALES\XP
Sep 05 12:11:09 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\WINNT\System32\webvfw.dll
Sep 05 12:11:09 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\WINNT\System32\stdole2.tlb
Sep 05 12:11:07 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\PROGRA~1\WINZIP\winzip32.exe
Sep 05 12:10:57 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\Program Files\WinZip\WINZIP.HLP
Sep 05 12:10:57 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\Documents and Settings\Administrator\Application Dat
Sep 05 12:10:57 2003	INTEGRITY-SUP3	Administrator via winhlp32.exe	188.166.200.107	C:\Program Files\WinZip\WINZIP.TMP
Sep 05 12:10:57 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\Program Files\WinZip\WINZIP.TMP
Sep 05 12:10:57 2003	INTEGRITY-SUP3	Administrator	188.166.200.107	C:\Program Files\WinZip\WINZIP.CNT

On the previous screens, you will notice that each has a button, **Save Selected Records**. This button allows you to selectively save just those records you have highlighted.

The following indicates what each icon used symbolizes:

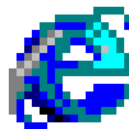
Figure 9-7



File Open



File Create



Browser Access

When selected, the **Search selected logs** button (see [Figure 9-2](#)) will present the following window:

Figure 9-8

Search selected log files

Step 1:

Search all records

Search records created in the past days.

Search records created between: and

Step 2:

Include Internet Explorer records

Include File Create records

Include Application Launch records

Suppress duplicate workstation entries

Include File Open Tracking records

Step 3:

Return results based ONLY upon Date Range and Record Types selected above

"Network Addresses" to match partially or exact:

"Items accessed" to match partially or exact:

Note: Wildcards (*, ?, etc.) are not supported.

Search results must include at least one matching Network Address

Search results must include at least one matching Item accessed

OK
Cancel

This window is separated into three steps:

- Step 1: Select what records to search, either all or by selected time period.
- Step 2: Select the specific event types to include.
- Step 3: Select to either return results based upon Steps 1 and 2, or to further refine the search as indicated.

NOTE: The **OK** button will not become enabled until you have selected an item from each Step selection.

When you select a second option to generate an Audit Report (see [page 169](#)), **Quick Audit—Quick View—Executables Created**, a window similar to the following will appear:

Figure 9-9

Time	Workstation	User	Address	Item Accessed
Aug 21 22:56:57 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\RESOURCE\WDOCREG.EXE
Aug 21 22:56:51 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\nssched.exe
Aug 21 22:56:49 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\ksreg.exe
Aug 21 22:56:45 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\Launch.exe
Aug 21 22:56:42 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\javakey.exe
Aug 21 22:56:42 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\jre.exe
Aug 21 22:56:42 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\rmregistry.exe
Aug 21 22:56:39 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\client\iftwcli.exe
Aug 21 22:39:24 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\RESOURCE\WDOCREG.EXE
Aug 21 22:39:18 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\nssched.exe
Aug 21 22:39:17 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\ksreg.exe
Aug 21 22:39:13 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\Launch.exe
Aug 21 22:39:11 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\rmregistry.exe
Aug 21 22:39:10 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\javakey.exe
Aug 21 22:39:10 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\jre.exe
Aug 21 22:39:10 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\re\bin\jre.exe
Aug 21 22:39:06 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\client\iftwcli.exe
Aug 21 14:50:23 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\RESOURCE\WDOCREG.EXE
Aug 21 14:50:13 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\nssched.exe
Aug 21 14:50:12 2003	ATC-116-PJA	Peter	10.10.33.65	C:\NovNdk\SEP01\NSearch\ksreg.exe

Number Found: 53

Purge Executables Created Log File Save Selected Records Save Done

This report relies upon data stored in the CSV file ALERTEXE. ALERTEXE is directly stored in the directory specified for METER . LOG. It is updated by the SofTrack Server Agent in response to notification by the SofTrack Local Workstation Agent that an * . EXE or * . COM file has been created or opened with modification privileges.



Chapter 10 STUSER

Overview

SofTrack's STUSER utility is a tool available to you, the administrator and all your users. No special privileges are required to use STUSER.EXE.

STUSER provides a method to view the current users of selected License Profiles on selected servers. Because of this, STUSER will only render data when the SofTrack Server Agent (SSA) is active.

You will find the STUSER.EXE and STUSER.DLL files in the product installation directory under the **TOOLS\STUSER** subdirectory. To install, simply copy these files to any destination directory you require.

On each workstation you run STUSER.EXE on, it will create the following registry key:

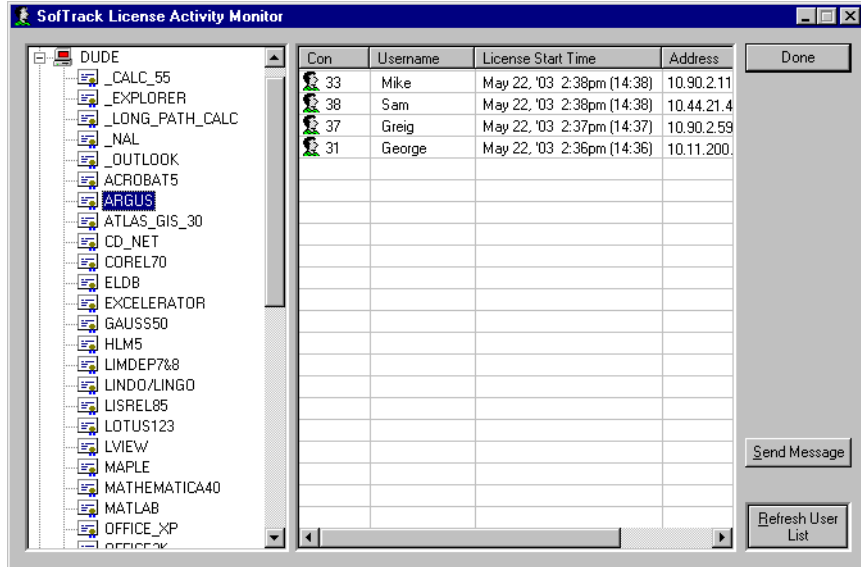
```
HKEY_CURRENT_USER\Software\SofTrackUser
```

Within this key, it will maintain a list of all Windows NT/2000/2003 servers that have been identified by the workstation. This registry key is maintained to accelerate the connection to the Windows NT/2000/2003 servers for active user viewing. If the local user's security disallows creation or maintenance of this registry key, it will not be created, and no error will be produced. The key is meant to provide a convenience when browsing Windows NT/2000/2003 servers while using STUSER and is not required.

No NetWare servers are maintained in the list stored within the Registry. The list of NetWare servers presented are those that the user's workstation is currently attached to.

The following is a sample screen from STUSER:

Figure 10-1





Glossary

Active Metering

Active enforcement of the number of licenses allowed to be in usage at any given time. Additional usages are blocked. If configured, a user will be queued.

Allow Overflow

A setting that allows an unlimited number of users to use a License Profile's applications.

Audit

To gather information about an application for tracking, trend analysis, and usage enforcement.

Batch-Mode Reports

Reports produced from the command-line tool `SOFTDRPT.EXE`.

Block License

A setting that blocks use of any files defined within a License Profile.

Early Global License Request

A setting that allows you to move globally-enabled licenses between servers in anticipation of users' needs. Avoids having to wait until all licenses on a server are exhausted before requesting a license from another server.

Executions

A term used in reports that refers to an application use or a file tracked being opened. Does not include use of data files hosted by the server.

File Pooling

Grouping several applications together within a single License Profile. Allows correct metering for a product containing a group of files.

Global License Profile

A type of License Profile that allows license sharing between servers.

Global Licensing

The ability to share licenses between servers. SofTrack allows you to share up to 65,000 licenses between an unlimited number of servers hosting the SofTrack Server Agent.

Group Tracking

Tracking license use by NDS/eDirectory Group membership. You can divide a single application's licenses between groups to ensure availability.

Idle Detection

An option that monitors an application's idle time. Can be used with customized messages to users that an application has been idle for an amount of time that you set and that the application will be terminated if it remains idle. Requires use of the LWA.

Interactive Reports

Reports produced from the SOFTRACK.EXE interface.

License Checkout

Allows administrators to check licenses out to users using local copies of applications when disconnected from the network, i.e., offline.

License Profile

A set of rules created by an administrator that defines what to meter and how to meter it. Includes the number of concurrent instances allowed, which users are allowed to use an application, and so forth.

Local Workstation Agent

Loaded at each user's workstation. Allows you to control all Windows-based applications used at the workstation, regardless of whether the application is stored on the hard drive or a remote device. One of two major components of SofTrack. See also SofTrack Server Agent.

LOCALUNR.LOG

A file created by SofTrack to store a list of all programs seen by the LWA but not matching a license profile.

LWA

See Local Workstation Agent.

Maximum Concurrent Users

Determines the maximum number of users allowed to use a License Profile at one time.

METER.LOG

A file maintained by the SofTrack Service that stores all metering activity data, which are used to create reports.

Metered Application

An application that SofTrack is monitoring (i.e., `CALC.EXE`) via a License Profile.

Metering

The process of monitoring and controlling software use. See Active Metering and Passive Metering.

Minimum Concurrent Users

Ensures a minimum number of licenses always remain on a server. A setting available only to Global License Profiles.

NAS

See Network Attached Storage.

Network Attached Storage

Provides shared storage for multiple servers and protocols. Similar to SAN but with a different topology.

Offline Use

Administrators can check out licenses of applications for specific users to use when disconnected from the network for offline use, for example when using metered applications while traveling with a laptop.

Organizational Unit

A type of container object for an organization within an NDS Tree. May represent groups or divisions within a business unit, such as Accounting or Human Resources.

OU

See Organizational Unit.

Passive Metering

Occurs when all usage is tracked, but no usage is blocked.

Password, Global

Ensures that Global License Profiles are shared only on the servers you wish. Prevents inadvertent license sharing between different departments. The password is encrypted and verified between servers hosting the Global License Profile before sharing licenses.

Password, License Profile

Requires a user to be an Administrator and know the password before modifying the details of a License Profile.

Purge Record

Recorded when a user's actual exit time for use of a License Profile is unknown. The SSA records the time when it recognizes that the user's connection to the server was no longer valid. Can occur when the server hosting the SSA or the user's workstation crashes.

Queue Hold Time

A setting that determines how long to hold a free license exclusively for a previously-queued user before returning it to the pool of available licenses.

Refreshed

Indicates that the SSA has been directed to rescan and update its internal processes with modified License Profile definitions.

SAN

See Storage Area Network.

SAP

See Service Advertising Protocol.

Service Advertising Protocol

A protocol that provides a way for servers to advertise their services on a NetWare internetwork.

SOFTRACK.EXE

The administrator interface for SofTrack. Can be used to create reports from the activity tracking data stored in the `METER.LOG` file.

SofTrack Server Agent

Runs on file servers to monitor, log, and enforce rules defined in the License Profiles. Records all activity tracking data from which reports are created. Also referred to as the SofTrack Service. One of two major components of SofTrack. See also Local Workstation Agent.

SSA

See SofTrack Server Agent.

Standalone License

A License Profile for a single application, in contrast to a suite of applications. Used in suite metering.

Storage Area Network

Provides shared storage for multiple servers and protocols. Similar to NAS but with a different topology.

STUSER

A utility that provides a method for viewing the current users of selected License Profiles on selected servers. Only renders data when the SSA is active.

STUSER.EXE

The file that launches the STUSER utility. When run on a workstation, creates a registry key that maintains a list of all servers identified by the workstation, thus accelerating connection to servers for active user viewing.

Suite Metering

Allows you to meter a suite of applications, such as Microsoft Office, under one License Profile.

Terminal Services Client

See Thin Client.

Terminal Services Metering

When the LWA is installed on a Terminal Services host, it self-configures its internal processes to allow metering and tracking for up to 4,000 terminal service sessions.

Thin Client

A low-cost, centrally-managed computer running only essential applications and devoid of CD-ROM players, diskette drives, and expansion slots, hence “thin”. Most thin clients today are powered by back-end centralized servers that are capable of serving either fat or thin clients.

Time Restrictions

Allows you to block usage of any file defined in a License Profile for a period of time. Any usage of the application, including queuing, cannot occur during the time usage is blocked.

TIMEKEEP.CSV

Stores Timekeeping data.

Timekeeping

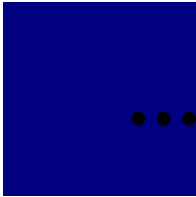
Tracks the amount of active time an application is used. You can require a user to enter a code that identifies an application's usage with a particular activity, such as billing a client for usage of AutoCAD on the client's project.

Token

An activation file for the SofTrack program. A time-limited evaluation token is supplied with the evaluation version of SofTrack. It may be replaced at any time with a purchased token. Without a token, SofTrack will not function.

VIP Tracking

Allows you to reserve a particular number of licenses for specific users.



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