

# SofTrack®

Enterprise Software Audit and Control Platform



## Administrator Supplement: SofTrack for Bentley® Control Guide

**INTEGRITY**  
*Software*

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## About this Guide

The purpose of this guide is to provide guidance in completing your installation of SofTrack for Bentley® license control.

This guide presumes you have successfully installed SofTrack and are actively using SofTrack.

This guide does not replace the complete product manual. The following are the additional product guide links:

*SofTrack for Windows servers, complete manual:*

[http://www.softwaremetering.com/outgoing/stnt\\_manual.pdf](http://www.softwaremetering.com/outgoing/stnt_manual.pdf)

If you are interested in a *minimal* setup process, you may choose to use the SofTrack Quick Start guide located here:

[http://www.softwaremetering.com/outgoing/Install\\_SofTrack\\_in\\_20\\_minutes.pdf](http://www.softwaremetering.com/outgoing/Install_SofTrack_in_20_minutes.pdf)

We have prepared the following document that details how you can determine which Bentley® license policy is being used by your organization.

[www.softwaremetering.com/outgoing/Bentley\\_License\\_Policy\\_Configuration\\_Recommendations\\_for\\_SofTrack.pdf](http://www.softwaremetering.com/outgoing/Bentley_License_Policy_Configuration_Recommendations_for_SofTrack.pdf)

## Contacting Technical Support

Free and unlimited technical support is available during your evaluation. If you have any trouble during your evaluation, please contact our Senior Support Engineers via email or telephone.

Email: [support@softwaremetering.com](mailto:support@softwaremetering.com)

Phone: (512) 372-8991 ext. 2

Technical Support is provided 4:00 through 18:00 (GMT-6) U.S. Central Time.

## Setup Recommendations

### **Where to use the SofTrack Console**

The SofTrack Console (`softrack_console.exe`) can be run from any workstation with a regular Windows connection. Please note, though it is possible, it is *not required* to run the SofTrack Console at the server hosting the SofTrack Server Agent.

### **When to use the SofTrack Console**

The SofTrack Console (`softrack_console.exe`) is used for configuration and reporting. It does not need to be running at all times, you can close it when it is not being used for configuration or reporting or other “interactive” usage. It does not need to be run except when you need it to be, there is no requirement for it to always be open.

### **Opening the SofTrack Console is SLOW**

The SofTrack Console (`softrack_console.exe`) is used for configuration and reporting. When it first opens it reads in all the values for the Agents tab which includes reading the computer inventory files for each agent found, if your network has 100s or 1000s of workstation agents it can take a long time to load the SofTrack Console. To speed loading using this command line:

```
softrack_console /skipAGENTSpreload
```

*(Capitalization above is only for readability, actual command line is not case sensitive.)*

Using this command line will result in the Agents tab being blank – no values at all, if you need the values, click the Refresh List button on the Agents tab at the lower left corner.

### **Current Versions of SofTrack Files**

The following link shows the current versions of each selected SofTrack file:

[http://209.59.135.5/count/VerChk\\_RefBuild.txt](http://209.59.135.5/count/VerChk_RefBuild.txt)

### **Where to install the SofTrack Local Workstation Agent**

The SofTrack Local Workstation Agent (LWA) is required at each workstation that has Bentley® applications installed and those that could potentially have Bentley® applications installed.

If any workstation where Bentley® could be used that does not have the SofTrack LWA installed can potentially be the source of a Bentley® overage.

To help eliminate Bentley® overages it is required the SofTrack LWA be installed on each applicable workstation.

To ensure the SofTrack LWA is installed on each such workstation you will need to determine the list of workstations that have recently been using Bentley® applications. Fortunately Bentley® provides the list of workstations. Follow these instructions to discover workstations where any Bentley® applications have been used:

Open the following link in a browser of your choosing:

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<http://selectserver.bentley.com/bss/admin/default.aspx>

On the top of the page, click:

Reports > Machine Based Reports > Application Usage by Hour

Run this report with a custom date range covering at least the past 6 months and then export it as a CSV file.

Now, open the CSV file in Excel or other spreadsheet application.

Review the data columns and identify the one that shows the workstation name (in many cases this is Column E, or the 5<sup>th</sup> column). Sort on the column and eliminate duplicates or show unique values only (these filter options are typically found on the Advanced menu of the selected spreadsheet application).

Please see the following sample image of an actual Bentley® application usage report that has been reduced to a list of unique workstations:

	A	B	C	D	E	F	G	H	I
1	Structural Enterprise	&nbsp;	1234567	Decision S	dell-121	jnr	23/09/2015 11:40 AM	20/10/2015	27.02:11:00
2	Structural Enterprise	&nbsp;	1234567	Decision S	dell-100	mv	13/10/2015 1:48 PM	13/10/2015	0:10:00
44	Structural Enterprise	&nbsp;	1234567	Decision S	dell-105	cc	13/10/2015 10:44 AM	13/10/2015	4:08:00
72	Structural Enterprise	&nbsp;	1234567	Decision S	dell-109	ae	13/10/2015 11:26 AM	13/10/2015	4:20:00
77	Structural Enterprise	&nbsp;	1234567	Decision S	dell-112	ok	8/10/2015 14:14	14/10/2015	5.23:20:00
78	Structural Enterprise	&nbsp;	1234567	Decision S	dell-113	sk	30/09/2015 12:16 PM	14/10/2015	14.05:20:00
84	Structural Enterprise	&nbsp;	1234567	Decision S	dell-117	jm	6/10/2015 17:32	13/10/2015	6.14:07:00
98	Structural Enterprise	&nbsp;	1234567	Decision S	dell-118	rvc	15/10/2015 10:06 AM	15/10/2015	0:16:00
113	Structural Enterprise	&nbsp;	1234567	Decision S	dell-121	nr	20/10/2015 1:57 PM	22/10/2015	2.02:10:00
115	Structural Enterprise	&nbsp;	1234567	Decision S	dell-122	jde	14/10/2015 4:16 PM	14/10/2015	5:00:00
118	Structural Enterprise	&nbsp;	1234567	Decision S	dell-124	oa	13/10/2015 7:52 AM	13/10/2015	2:04:00
161	Structural Enterprise	&nbsp;	1234567	Decision S	dell-125	nw	6/10/2015 12:01	15/10/2015	9.05:09:00
166	Structural Enterprise	&nbsp;	1234567	Decision S	dell-126	jzi	6/10/2015 14:27	19/10/2015	12.18:36:00
178	Structural Enterprise	&nbsp;	1234567	Decision S	dell-128	gp	7/10/2015 13:36	13/10/2015	5.20:01:00
187	Structural Enterprise	&nbsp;	1234567	Decision S	dell-135	jde	13/10/2015 7:55 AM	13/10/2015	2:12:00
210	Structural Enterprise	&nbsp;	1234567	Decision S	dell-136	ml	19/10/2015 9:59 AM	19/10/2015	0:43:00
223	Structural Enterprise	&nbsp;	1234567	Decision S	dell-139	en	13/10/2015 11:21 AM	14/10/2015	1.00:17:00
241	Structural Enterprise	&nbsp;	1234567	Decision S	dell-142	pa	13/10/2015 3:17 PM	13/10/2015	5:10:00
248	Structural Enterprise	&nbsp;	1234567	Decision S	dell-143	gb	13/10/2015 4:59 PM	13/10/2015	0:19:00
279	Structural Enterprise	&nbsp;	1234567	Decision S	dell-152	jcc	15/10/2015 10:05 AM	15/10/2015	0:10:00
301	Structural Enterprise	&nbsp;	1234567	Decision S	dell-154	rni	13/10/2015 8:27 AM	14/10/2015	1.06:55:00
324	Structural Enterprise	&nbsp;	1234567	Decision S	dell-156	kp	15/10/2015 2:46 PM	15/10/2015	0:13:00
329	Structural Enterprise	&nbsp;	1234567	Decision S	dell-158	ml	13/10/2015 9:16 AM	13/10/2015	1:00:00
339	Structural Enterprise	&nbsp;	1234567	Decision S	dell-164	ed	13/10/2015 8:01 AM	13/10/2015	4:33:00
354	Structural Enterprise	&nbsp;	1234567	Decision S	hp-001	jpr	14/10/2015 2:07 PM	14/10/2015	1:04:00

The list provided may be incomplete if any of the following occur:

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- A PC is replaced by a new one and given a new computer name
- A PC not in the list downloads a Bentley® application and uses it – even if no license is owned for the Bentley® application downloaded + installed
- A PC is added due to a new employee
- If the time period is used for the Bentley® report is too short, rarely used PCs may not appear

Contact [support@softwaremetering.com](mailto:support@softwaremetering.com) to receive a custom MSI to assist in installing/updating the SofTrack LWA at your workstations.

## Bentley® License Policy configuration

We have prepared the following document that details how you can determine which Bentley® license policy is being used by your organization.

[www.softwaremetering.com/outgoing/Bentley\\_License\\_Policy\\_Configuration\\_Recommendations\\_for\\_SofTrack.pdf](http://www.softwaremetering.com/outgoing/Bentley_License_Policy_Configuration_Recommendations_for_SofTrack.pdf)

The two most common Bentley® licensing policies are generally known as Calendar Hour and Calendar 10-minute. It is critical to properly determine which Bentley® license policy Bentley® is using to determine your organization’s Bentley® application usage and consequently overages (if any).

Please note that we have recently (Q1 2017) noticed that Bentley® sends interim *overage notifications* that are based on its Calendar Hour licensing policy – even when the actual customer (i.e. your organization) application usage is determined by the Calendar 10-minute licensing policy.

As a SofTrack customer, we are here to assist in review any Bentley® overage you may encounter, help you determine the cause and resolution.

## Bentley® Website Checkout Application License

Bentley®’s website allows users (i.e. your employees) to directly check out Bentley® licenses – even if the user never actually uses the application the checked out license will be counted toward determination if an overage occurred. SofTrack does not monitor or control when users directly checkout license(s) from Bentley®’s website.

We recommend you configure your Bentley® account to disallow users from being able to directly checkout licenses. If your users directly checkout licenses from Bentley®’s website it is very possible an overage will occur as SofTrack is not automatically aware of this type of license checkout.

## Offline Mode

We recommend that SofTrack’s Offline Mode be enabled.

The SofTrack LWA can be configured via the SofTrack Console to provide Offline Metering. While operating offline, the LWA will provide a reduced subset of features. Basic software

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metering will be provided, that is, when an application is used and by whom. Metering with optional Command Line Switches also functions as does Advanced Timekeeping. The ability to block starting of applications remains as well.

**Please note** if an application is started while the LWA is online and then the LWA goes offline the application is not automatically terminated and the SofTrack Server Agent will eventually detect the LWA is offline and free its licenses just as if the workstation had been shutdown while using a metered application.

These actions will be recorded and uploaded to the SSA when the LWA is next started and it is able to immediately connect to the SSA (while the LWA starts).

Additionally, the LWA, when operating offline, will attempt to connect to the SSA at the top of each hour (:00 minute) and if successful, will transmit its offline logs at that time – the LWA will continue in offline mode. The LWA makes the determination of whether to operate in offline mode or not each time it is started. Typically the LWA is restarted whenever the workstation is rebooted.

Other advanced metering options such as Classic Timekeeping, Idle Detection, Disallow Multiple Launches are not available. However, auditing and blocking options are completely available and audited actions will be recorded and uploaded to the SSA for later reporting.

Workstations can be individually configured to always operate in Offline mode. This can be useful for workstations (probably laptops) that are not typically connected to your network. While operating in “always offline mode”, the LWA on these workstations will attempt to upload metering and audit data every hour at the :00 minute and if contact with the SSA can be made, the data will be uploaded.

To operate in offline mode, the LWA must first connect to the SSA to download the offline metering and auditing instructions. These instructions are stored in the local registry of the workstation in the `SofTrackLocalAgentService` key. Each time the LWA first starts it will at that time, attempt to connect to the SSA and, if successful, will download the then current offline metering and auditing instructions and refresh the values it has stored in the local workstation’s registry. The only exception is the Advanced Timekeeping instructions, these are stored in a file named `STLWA_NT.TKA` and is stored in the same folder as the LWA file `STLWA_NT.EXE` (at each workstation).

Immediately after downloading these data the LWA will then upload any offline metering and auditing records it has collected. These data are stored in files. The files are stored in a folder named:

`LWA.OFF`

This folder is automatically created by the LWA. This folder is created directly under the folder where `STLWA_NT.EXE` is located. Once these data files are uploaded to the SSA they are automatically deleted.

Follow these instructions to configure Offline mode:

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- 1 Open SOFTRACK\_CONSOLE.EXE.
- 2 Select "Settings" tab, select the Offline Mode sub-tab and the following will appear:

Log File Path (Share)  [Path Assistance](#) [Save Settings](#)

Tokens/SSA Options **Offline Mode** User Messages License Mgrs Users to Notify Users Excluded Archiving Email

**Enable Local Windows Workstation Agents (LWAs) to operate in Offline Mode**  
 OFFLINE MODE indicates the LWA is unable to connect to the SofTrack Server Agent and the host server cannot be "pinged" from the affected Workstation.  
 If the Workstation is unable to connect to the SofTrack Server Agent but the host server is pingable the workstation will NOT operate in OFFLINE MODE, it will presume that the break in communication is temporary.  
 To ensure ONLINE connectivity, be certain TCP/IP Port 3884 (decimal number) is open all all switches and firewalls between Workstations and the SofTrack Server Agent Host.  
 If a workstation is operating in OFFLINE MODE it will remain in offline mode until the next time the LWA Service is started. If at that time it is able to connect to the SofTrack Server Agent it will upload its offline data.

When offline, LWA will continue to use defined Options (audit logons, browser, file and provide blocking)  
 When offline, LWA will always BLOCK use of all metered applications [Manage Computers allowed usage offline](#)  
 Workstations identified via selected Workstation Profile(s) will ALWAYS operate in offline mode  
 Workstations that continuously operate in OFFLINE MODE regardless of connectivity will attempt to upload offline usage data once an hour at the :00 minute and whenever the LWA Service is started. [+](#) [-](#)

Workstation Profiles containing Workstations to always be in OFFLINE MODE	Description

[+](#) [\[edit\]](#) [-](#)

Available Workstation Profiles on selected server	Description

- 3 Select the first checkbox "Enable Local Windows Workstation Agents (LWAs) to operate in Offline Mode.
- 4 Review the notes and remaining checkboxes and make your selections.

Note: If you select "When offline, LWA will always BLOCK use of all metered applications" you will find an option on each License Profile you can define that will allow you to exempt selected applications from the "always block use" configuration. Any applications that remain, will be blocked and the user will NOT be notified that SofTrack blocked the application, it is a "silent" fail.

Note: If you select “**When offline, LWA will always BLOCK use of all metered applications**” you can then click the **Manage Computers allowed usage offline button**. This allows you to create one or more Workstation Profiles containing workstations where metered applications can be used when offline. This is an additional method to define where offline usage of metered applications will be allowed.

- 5 Click the “Save Settings” button at upper right

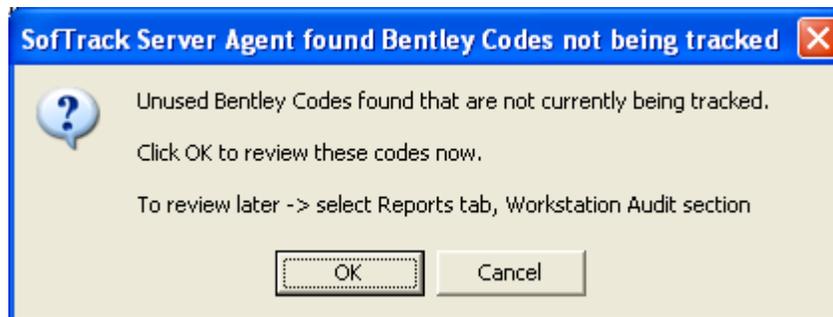
## Bentley® Codes Not Tracked – Automatic Report

When a Bentley® application license is activated on a workstation where the SofTrack Local Workstation Agent is active and in communication with the SofTrack Server Agent (SSA), the SSA will first determine if that Bentley® license is currently defined for tracking by a SofTrack License Profile.

If the Bentley® license being activated is not currently defined for tracking by a SofTrack License Profile the SSA will record the Bentley® Code, filename, and workstation. This record will be made *automatically*, there is no configuration required.

There is another reason the Bentley® Codes can appear in the list of codes not tracked. If the SofTrack Server Agent is currently in an unlicensed or error licensed state ([WX1](#) or [WX3](#)) then SofTrack is not metering and, as a result, all Bentley® codes will not be tracked (even if the codes are defined in SofTrack license profiles).

When the SofTrack Console is opened and connected to the SSA host server and there are *new* Bentley codes found that are not currently tracked by a SofTrack License Profile the console user will receive the following popup message:



This popup message is automatic and will alert the user that there are new Bentley® codes to review. If only [ignored codes](#) exist this popup will not occur. Click OK and the following screen will appear:

Bentley Code	Last Used	Filename	Workstation
##^#4B#1248#08.11.04.57#pipe=5000;acad=yes;mstn=yes#	Mar 24, 2015 19:12	watercad.exe	WSTN_151
##^#4B#1248#08.11.04.57#pipe=5000;acad=yes;mstn=yes#	Mar 24, 2015 18:41	WaterCAD.exe	CAY588
##^#0A#1101#08.11.91.40#^!	Mar 24, 2015 18:41	Vision.exe	WTT915
##^#4B#1000#08.21.03.52#none#	Mar 24, 2015 18:41	ustation.exe	STA44R
##^#0B#1000#08.11.09.36#none#	Mar 24, 2015 19:12	ustation.exe	P722
##^#0A#1151#08.11.07.536#^!	Mar 24, 2015 18:53	ustation.exe	GB91_A
##^#0B#1495#08.11.11.00#none#	Mar 24, 2015 18:40	ustation.exe	9M3
##^#XM#FEATURE='MicroStation' VERSION='8.5.2.70' VERSL...	Mar 24, 2015 18:48	ustation.exe	2004XP
##^#0C#1592#20.07.09.00#none#	Mar 24, 2015 18:56	Staadpro.exe	ADR-17
##^#0C#1587#20.07.09.00#none#	Mar 24, 2015 18:56	Staadpro.exe	ADR-17
##^#0C#1562#20.07.09.00#none#	Mar 24, 2015 18:55	Staadpro.exe	ADR-17
##^#0A#1495#08.11.11.00#^!	Mar 24, 2015 18:39	SpeedikonStart8.exe	9M3
##^#0C#2013#5.6.0.1#none#	Mar 24, 2015 19:00	SACSExecutive.exe	ODG-12
##^#0C#2009#5.6.0.1#none#	Mar 24, 2015 18:58	SACSExecutive.exe	ODG-12
##^#4C#1580#14.06.02.00#^!	Mar 24, 2015 18:38	RamManager.exe	JPG17
##^#0C#1487#13.0.3.45#none#	Mar 24, 2015 18:39	RAMElements.exe	GG33
##^#4C#1484#14.06.02.00#^!	Mar 24, 2015 18:46	RamContainer.exe	JPG17
##^#4B#1488#14.06.02.00#none#	Mar 24, 2015 18:38	RamContainer.exe	JPG17
##^#0C#1654#08.11.08.43#none#	Mar 24, 2015 18:46	Navigator.exe	SWRV9
##^#0B#1654#08.11.08.43#none#	Mar 24, 2015 18:46	Navigator.exe	MN_39
##^#4C#2216#5.6.0.1#^!	Mar 24, 2015 18:58	motions.exe	ODG-12
##^#4B#2143#18.0.2.22#none#	Mar 24, 2015 18:46	MaxsurfModelerAdvanced64.exe	PWA75
##^#4A#2143#18.0.2.22#none#	Mar 24, 2015 18:46	MaxsurfModelerAdvanced64.exe	PWA75
##^#0B#1884#08.30.03.77#none#	Mar 24, 2015 18:51	gint8.exe	SDJ31
##^#0A#1222#08.11.01.03#^!	Mar 24, 2015 18:41	FlowMaster.exe	CHGV001
##^#0A#1210#03.03.00.04#^!	Mar 24, 2015 18:41	cvmSYS.exe	CHGV001
##^#0C#1934#08.11.09.376#none#	Mar 24, 2015 18:54	consent.exe	AEC031
##^#0B#1477#05.01.00.00#	Mar 24, 2015 18:39	Concept.exe	LT998
##^#0A#1072#08.11.09.140#^!	Mar 24, 2015 18:40	BPCom32Domain.exe	AYU33
##^#0A#1069#08.11.09.140#^!	Mar 24, 2015 18:40	BPCom32Domain.exe	AYU33
##^#0B#1761#09.06.00.19#none#	Mar 24, 2015 18:52	autopipe.exe	V2-55
##^#0C#1054#09.03.02.05#none#	Mar 24, 2015 18:46	autopipe.exe	BB3A_91
##^#0C#1934#08.11.09.376#none#	Mar 24, 2015 18:46	AECOSimBuildingDesigner.exe	AEC031

Done

Select all

Ignore Code(s)

Show selected items in Notepad (for purposes of easing process of cut+paste codes into License Profiles)

Show Ignored Codes

Restore Tracking for Code

The actual entries shown will be unique to your environment. The example image above is provided to illustrate various types of codes you may encounter. The following is a discussion of these codes and functions shown in the image above.

The **Bentley Code** column is the *SofTrack formed* version of the Bentley code being activated. A full discussion is found in the following section titled [SofTrack's Definition for Bentley Codes Discussion](#).

The **Last Used** column is the most recent time the indicated code was detected being used on the named workstation. This report does not include a history of previous activations. This report also does not include the user, only the workstation. To receive a full history including user and all Bentley license activation activity please refer to the next section, [Bentley Codes via auditing of Application Launch Activity](#).

The **Filename** column indicates the filename of the process that requested the **Bentley Code** being activated. As shown in the image above it is very possible and even expected that the same process (Filename) can activate different Bentley Codes. For instance, review the entries for RamContainer.exe, it shows activating Bentley license code 1484 (RAM FRAME ANALYSIS) and 1488 (RAMBEAM). It is also possible for these same Bentley® product id (codes) to be activated by Microstation (ustation.exe is its filename). For instance, in the image above, ustation.exe is shown activating a

Bentley license code 1495 (speedikon Architectural). This same code (1495) is also shown as being activated by SpeedikonStart8.exe. And, not shown, SpeedikonStart8.exe can also activate other codes such as 1493, 1494 and 1496.

The **Workstation** column indicates the computer where the Bentley Code shown was activated. The user name is not shown as Bentley licenses are tracked (by Bentley Systems) on a *per workstation basis*, the actual user can vary and if it does it has no impact on Bentley’s licensing.

Together, the **Bentley Code**, **Filename**, and **Workstation** form a unique entry in the report.

Not all codes require tracking by a SofTrack License Profile, some are simply precursors to an actual Bentley license being activated. This is further discussed in Chapter 11 of the full SofTrack Administrator Guide:

[http://www.softwaremetering.com/outgoing/stnt\\_manual.pdf](http://www.softwaremetering.com/outgoing/stnt_manual.pdf)

## Ignoring Bentley Codes

For those codes you do not need to review further, select each and click the **Ignore Code(s)** button. These codes from the selected workstations will not appear again in the list. If you ever want to track use of ignored codes, click the **Show Ignored Codes** button and the click the **Restore Tracking for Code** button.

If any codes remain in the list that are not ignored the automatic popup will occur again because it is alerting the user that there are Bentley codes found that are not ignored. Once the Bentley codes are processed it is expected that each will be “ignored” and thus only will actual new Bentley codes occur will the user be alerted.

## Automatic blocking and alerting of Bentley codes not tracked

**Bentley Not Tracked**

- Block A codes not tracked and not set to ignore
- Block B codes not tracked and not set to ignore
- Block C codes not tracked and not set to ignore
  
- Send Alert when Bentley code not tracked is blocked
- Send Alert when Bentley code not tracked occurs but is not blocked
  
- If Bentley code not tracked Alert is generated, send to SofTrack Support (requires email to be configured)

SofTrack tracks Bentley® License usage by a combination of application name plus Bentley code(s) as each is engaged.

However, because it is possible for users to download and use Bentley® applications you do not have in your Bentley® Licensed Portfolio, you could receive an invoice from Bentley® for each such application.

SofTrack provides the ability to BLOCK usage of any Bentley® codes you have not defined to be monitored and controlled by SofTrack.

**WARNING:** If you engage automatic blocking before you have finished creating and configuring your Bentley® License Profiles you may block legitimate usage. We recommend you wait until you have fully defined your Bentley License Profiles before engaging these automatic blocking options.

SofTrack detects three different methods of Bentley license activation. In short they are “A”, “B”, and “C” codes. Typically you would check all 3 options (first three in the screenshot to the left).

The next 2 check boxes provide two different types of alerts. The first is when a Bentley Code to be blocked has occurred (and usage was blocked). The second is if you are not blocking but only want to be alerted when any untracked Bentley Code occurs.

If you check the last checkbox, the SofTrack Server Agent will automatically generate an email (if email is configured) and send to the SofTrack support team who will then contact you to follow up and provide any required assistance. When you configure email, please do not include the SofTrack support team email. When this checkbox is enabled, the SofTrack Server Agent will handle everything.

## Bentley Codes via auditing of Application Launch activity

(excerpted from the full SofTrack Administrator Guide)

The following steps presume you have previously installed the SofTrack Server Agent, SofTrack Token and SofTrack Local Workstation Agent and they are in a functional state. If you have not, please do this first. Once done, the following steps will outline the procedure to determine the Bentley Product ID and Version for each Bentley application used in your environment. This method records the history of Bentley license activation per workstation and user.

- 1 To begin, open `SOFTTRACK_CONSOLE.EXE`.
- 2 Select the “Settings” Tab and then the “Options” tab as shown in Figure 11-1:

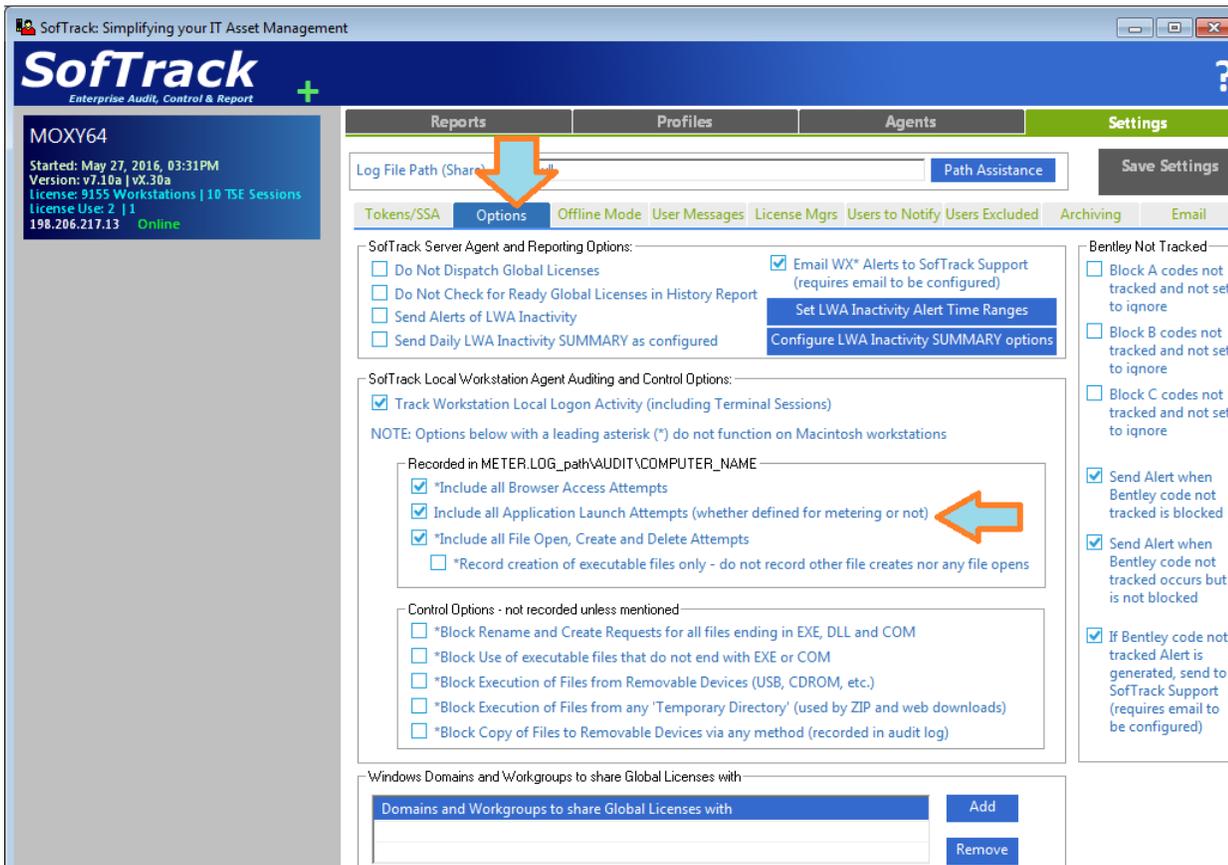


Figure 11-1

- 3 Select “Include all Application Launch Attempts..” checkbox as shown above. If it was previously checked, leave it checked.
- 4 Click the “Save Settings” button (it will turn green after you click the checkbox in step 3).
- 5 Go to a workstation where Bentley application(s) to review are installed, again, this presumes the SofTrack Local Workstation Agent (LWA) has previously been installed and is functioning.
- 6 Launch a Bentley Application.
- 7 Open (or continue using) the SofTrack Console, click the “Reports” tab, click the “Workstation Audit” icon and run the first report “Browser, File Open, Create, Delete and Application Launches (per workstation):

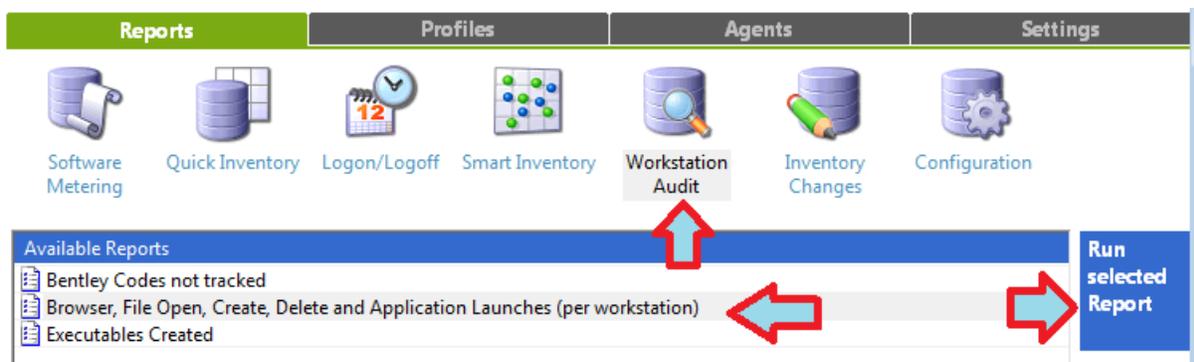


Figure 11-2

- 8 On the following screen, select the workstation (by name) and click the “View Application Launches for selected log files” button:

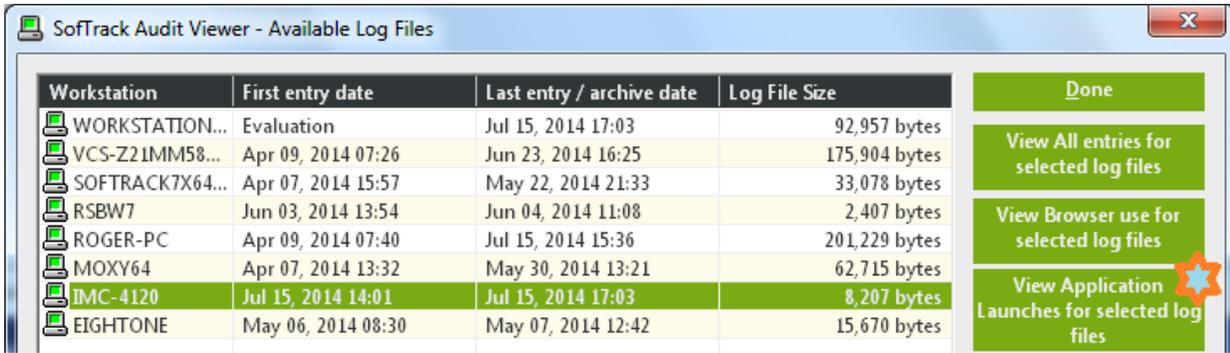


Figure 11-3

- 9 Review the log entries for the Bentley application launch (see next section):

### SofTrack’s Definition for Bentley Codes Discussion

(excerpted from the full SofTrack Administrator Guide)

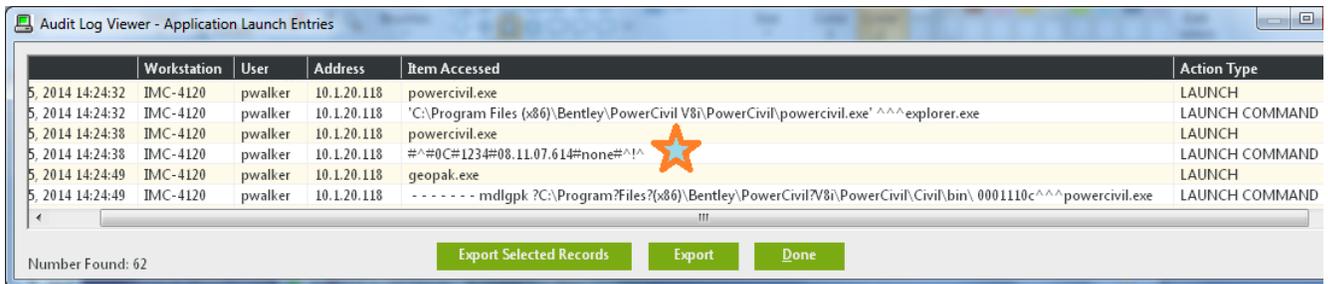


Figure 11-4

The following will explain each line shown in Figure 11-4.

At 14:24:32	The Bentley application "powercivil.exe" was launched
At 14:24:32	The Launch Command Line indicates the full path plus a special designation of ^^^explorer.exe - this was not part of the actual command line but was appended for purposes of SofTrack's use and it identifies the name of the "parent" application/process that was used to launch "powercivil.exe" - in this case, it was explorer.exe
At 14:24:38	The Bentley application “powercivil.exe” was apparently launched, but, look at the next line.
At 14:24:38	The Launch Command Line indicates a Bentley “pre-licensing event” has occurred where the named (powercivil.exe) Bentley Application is about to be licensed but is not yet using a Bentley license.  The codes shown in the image above are: <b>#^#0C#1234#08.11.07.614#none#^!^</b>

	<p>The “<b>prefix</b>” is <b>#^#</b> and this specific set of characters at the beginning of the command line signals that this specific launch is actually a Bentley “pre-licensing event” notification.</p> <p>The “<b>code</b>” <b>0C</b> or <b>4A</b> indicates the type of event, specifically it indicates a licensing event is taking place. Typically, the actual license event occurs when a code <b>0B</b>, <b>0A</b>, <b>4B</b>, or <b>4A</b> event occurs. The most common license event is the <b>0B</b> “code”. Depending on the Bentley application there may be an <b>0C</b> code followed almost immediately by an <b>0B</b> or <b>0A</b> code. If you find either of these combinations always choose the last one that occurs. If your environment includes 2004/XM versions of Bentley products you will instead receive a single code <b>#XM#</b>. The “<b>product id</b>” is defined by <b>#1234</b> and is the actual Bentley product id for the Bentley license that is about to be consumed.</p> <p>The “<b>version</b>” is defined by <b>#08.11.07.614</b> and indicates the actual version of the Bentley product that is about to be licensed. This may be useful to know if you have different licenses for different versions of the same “product id”.</p> <p>The “<b>feature string</b>” is defined by <b>#none#</b> and this value indicates there was no feature string. As an example, the Bentley application WaterGEMS could have a “feature string” of <b>#acad=yes agis=yes mstn=yes pipe=5000#</b></p> <p>The last part is a special signal <b>^!^</b> it normally indicates there was no parent process and in this case it only indicates this is the end of command line.</p>
At 14:24:38	The Bentley application “geopak.exe” was launched.
At 14:24:38	The Launch Command Line indicates the full path plus a special designation of <b>^^^powercivil.exe</b> - this was not part of the actual command line but was appended for purposes of SofTrack's use and it identifies the name of the "parent" application/process that was used to launch "geopak.exe" - in this case, it was powercivil.exe
<b>Missing...</b>	Notice, this is the end of the items shown in Figure 11-4, what is important to notice is no “ <i>pre-licensing event</i> ” occurred for GEOPAK.EXE, this means that this particular launch of GEOPAK.EXE is NOT USING a Bentley license.

**10** The examination explanation in step 9 (above) is intended to be used with any Bentley application you need to control with SofTrack.

When you define the SofTrack License Profile you will use the “Launch Command Line” or portions thereof to accurately control and monitor use of any Bentley application.

## Daily LWA Inactivity SUMMARY

Because proper operation of the SofTrack Local Workstation Agent is critical to controlling use of Bentley® licenses we recommend you configure the Daily LWA Inactivity Summary.

This option provides a low volume of alert messages and emails while providing essential information regarding the usage of LWAs in your environment.

To begin, open the SofTrack Console, select the Settings tab, and then the Options sub-tab. As shown in the following image, the <default> for this option is to be cleared (unchecked).

The screenshot shows the 'Options' sub-tab in the SofTrack Console. Under the heading 'SofTrack Server Agent and Reporting Options:', there are several checkboxes and buttons. The 'Send Alerts of LWA Inactivity' checkbox is checked. The 'Send Daily LWA Inactivity SUMMARY as configured' checkbox is unchecked. To the right, there are two buttons: 'Set LWA Inactivity Alert Time Ranges' and 'Configure LWA Inactivity SUMMARY options'.

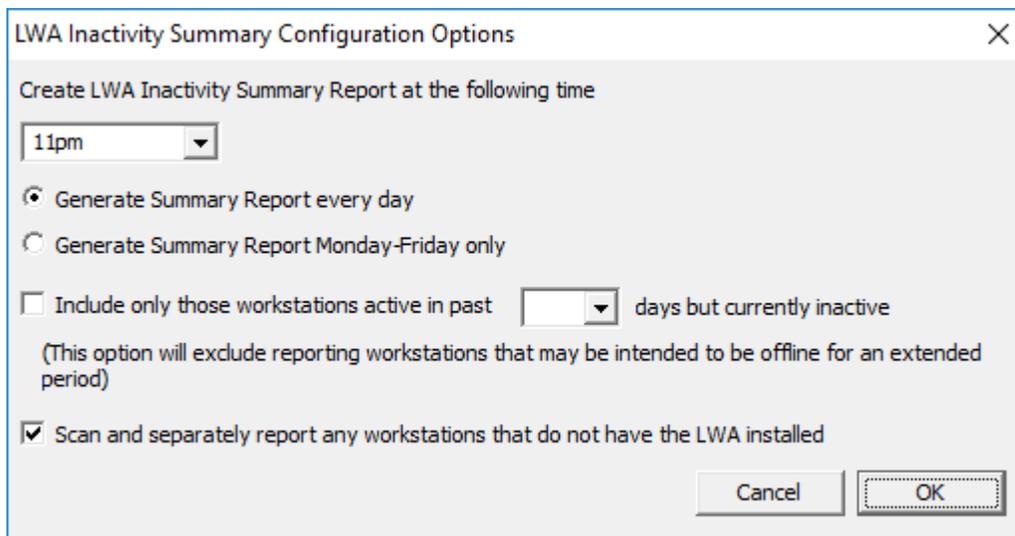
When selected, the SofTrack Server Agent will send alerts to STALERT console and, if configured, selected email addresses. This method of LWA Inactivity alerting was created to reduce the frequency of the LWA Inactivity Alerts that are generated on demand by the *Send Alerts of LWA Inactivity* option (select checkbox as shown below).

This screenshot is similar to the previous one, but the 'Send Daily LWA Inactivity SUMMARY as configured' checkbox is now checked, indicating that the option is selected.

Click the **Configure LWA Inactivity SUMMARY options** button to define the following options:

- Time of day to generate the summary
- Days of week to generate the summary
- Optionally alert only for LWAs with recent (1-31 days) activity but current is inactive
- Scan and report any workstations that are found that do not have the LWA installed

The following will be presented:



In the image above, the first setting defines the time of day (at the top of the hour, for instance, 10:00am), select the hour for your report to be generated.

The two “radio buttons” define the days to generate the summary. The first is every day, the second is only Monday through Friday.

The checkbox “Include only those workstations active in past” must be selected (checked) for this option to be engaged. The drop down value (shown as ‘2’ above) provides for 1-31 days. This option was provided for times when you need to be alerted of LWA inactivity but there are LWAs that are inactive over long periods of time and you do not want to be alerted each day. For instance, by setting this value to 3, only those workstations (LWAs) with a “Last Communication” date+time (as shown on Agents tab) within the past 3 days (but are currently inactive) would be included in the report summary.

For each LWA found matching the summary configuration you will receive a separate alert (in SofTrack’s desktop alert console), and, if defined, a separate Email for each inactive LWA found. The alert message will include the text *Local Agent currently INACTIVE*.

If there are no matching LWAs (none are currently inactive or were last active prior to the time period defined) no alerts (alert console or email) will be generated

### **Scan for Workstations that do not have the LWA installed**

*(Refer to the image above)*

If the checkbox “Scan and separately report any workstations that do not have the LWA installed” is enabled (checked) then a scan of all PCs found by the SofTrack Server Agent (using Windows Browser results or, if not available, workstations found in Active Directory – which may include PCs from other domains) will be reported and if email alerting is configured, a single attachment (text file) containing the list of all “new” workstations found will be sent.

A “new” workstation is defined as one that has not previously had the SofTrack LWA installed.

If Active Directory was scanned you will find the file ADPCLIST (a text file) in the STLOG path. This file will contain a list of all workstations found in Active Directory regardless of whether the SofTrack LWA has been installed.

Please note, there is no “TCP/IP scan” to search for workstations.

If a Windows Browser host cannot be located and if Active Directory is available to the SofTrack Server Agent host, a scan of all workstations found in Active Directory will be performed.

The results file PCnoLWA.txt is stored in the STLOG path. If there are no new workstations found, this file will be zero bytes. SofTrack automatically remembers workstations it has previously reported as being new and will only send an alert for new workstations found. The results file PCnoLWA.txt will always contain the current list of newly found workstations. To view the entire list of workstations that have been found where the SofTrack LWA is *not* installed, at the SSA host server, open REGEDIT and browse to this key and view the results:

[HKEY\\_LOCAL\\_MACHINE\SOFTWARE\Integrity Software, Inc.\SofTrack\Administration\LWA\\_BASELINE](#)

This registry key is maintained after each scan, if the LWA is (later) installed on a workstation shown in the LWA\_BASELINE key it will automatically be removed, keeping this list current and only showing those workstations where the LWA has not been installed.

## Migrating SofTrack Server Agent to a new server

To migrate your SofTrack installation to a new server requires the following:

[a] Obtain a new SofTrack Token (license) for the new server – your SofTrack license is for a specific server known by its “computername”. Begin this process by sending an email to [support@softwaremetering.com](mailto:support@softwaremetering.com).

Once the new SofTrack Token is created and delivered, the following will be required to migrate your SofTrack installation.

[b] Transfer all files located in the STLOG or other Share you defined at the server hosting the SofTrack Server Agent as the Log File Path (Share) as shown on the Settings tab when you run the SOFTRACK\_CONSOLE application.

[c] Run REGEDIT at the server hosting the SofTrack Server Agent and export the following key:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Integrity Software, Inc.

Then, run REGEDIT at the new server and import this key.

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[d] Update the SofTrack LWA at each workstation to connect with the new server.

Our support team will help you complete this process.

## Bentley® Overage Review Instructions

As a SofTrack customer, we are here to assist in review any Bentley® overage you may encounter, help you determine the cause and resolution. There is no additional cost for this service.

Please note that we have recently (Q1 2017) noticed that Bentley® sends interim *overage notifications* that are based on its Calendar Hour licensing policy – even when the actual customer (i.e. your organization) application usage is determined by the Calendar 10-minute licensing policy.

If your overage is related to one of these interim reports versus an actual invoice from Bentley®, please know the interim overage report may not be accurate as Bentley® appears to use the Calendar Hour license policy to determine interim overages (i.e. unbilled overages).

To provide our Bentley® overage review assistance, we require the following items to help determine what is causing the issue you are having:

[a] The "Application Usage Per Hour" report in CSV format from the Bentley Select Server (this report shows applications in use by workstation per hour). Please make certain this is for the time range(s) for when Bentley report shows more usage than SofTrack.

The CSV can be obtained at this usage site:

<http://selectserver.bentley.com/bss/admin/default.aspx>

On the top of the page, click Reports > Machine Based Reports > Application Usage by Hour

Run this report with a custom date range covering your issue, and then export it as a CSV file. Please note the file must be saved in CSV format. We use internally developed tools that we use to specifically interpret the Application Usage by Hour CSV file format.

[b] Indicate the Bentley® application(s) which have incurred an overage, and the day(s) this occurred.

[c] The Integrity Software, Inc. registry key from the SofTrack Server Host, to obtain:

(1) Run REGEDIT.EXE on the server and navigate to this registry key:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Integrity Software, Inc

(2) Export that key (to a \*.reg file)

[d] The entire "STLOG" folder path (all files, all folders) from SofTrack - must be zipped and uploaded to our FTP site (it will likely be too large to email)

To locate the STLOG folder path:

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- (1) Open the SofTrack Console
- (2) Click the Settings tab
- (3) Note the "Log File Path (Share)" defined
- (4) Using Windows Explorer open that path on the server
- (5) ZIP all files and folders in that path into a single ZIP file

Please ZIP all of the items above and FTP per these instructions:

- (1) Open a CMD.EXE window
- (2) Type

FTP 209.59.135.5

User name: guest@visualclick.com

Password: ftpfiles23

3. Type this command (very important)

bin

4. Type

put yourfilename.zip NNYYYYMM.zip

(where "yourfilename.zip" is the name of the zip file on your machine)

NNYYYYMM.zip = NN (the first 2 initials of your organization)

YYYY (the current year, ex: 2017)

MM (the current month, ex: 03)

Once the FTP upload is complete, please send an email to [support@softwaremetering.com](mailto:support@softwaremetering.com) letting us know your upload is ready – please indicate the filename you used for the upload and we will begin our review and provide you details of what we discover and our recommendations.

## Error Conditions – a review

The following section provides a review of common error conditions you may encounter and the resolution for each.

### **Network Considerations**

SofTrack uses TCP/IP to communicate between the workstation agents and server agent. There are various situations that may previously exist that can interfere with these communications.

#### **Firewalls**

SofTrack uses TCP/IP port 3884 (decimal number). This port number has been universally assigned by the Internet Assigned Numbers Authority, see this link:

<http://www.iana.org/assignments/port-numbers>

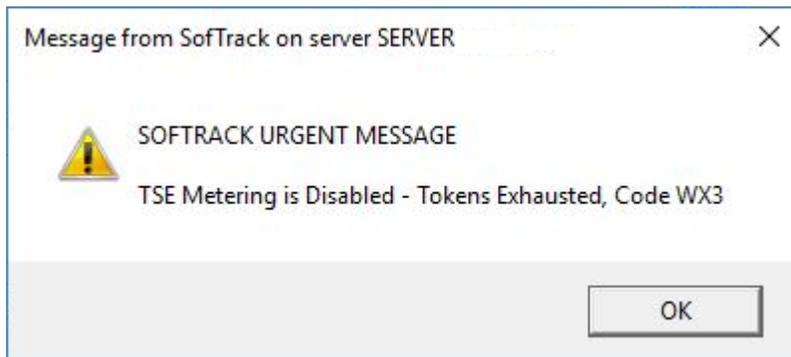
If your network includes any firewalls, based on hardware and/or software (Windows built-in, Anti-virus products, Endpoint Protection products and so on) each must be configured to allow all inbound and outbound port 3884 traffic without restriction.

#### **WAN Accelerators**

SofTrack traffic is not cacheable. If your network includes any WAN Accelerators (for instance those by Riverbed) *pass-through* rules must be created at each such device that allows all inbound and outbound port 3884 traffic to pass through and never be cached.

### **SofTrack Licensing Errors**

#### **WX1, WX2, WX3 Errors**



If you receive a popup message on your workstation desktop similar to the above WX3 error please know that this is SofTrack attempting to alert you of a critical error. If you have email alerting defined the message will also be sent via an email.

There are 3 possible codes in this series: WX1, WX2 and WX3.

### Upon receiving a WX1 error

The WX1 error indicates the number of workstations using the SofTrack LWA at the current time exceeds your installed SofTrack License size. When the WX1 error is occurring, SofTrack will deactivate and no software metering will be provided.

There are three possible solutions:

[a] If you have recently updated the SofTrack Server Agent, the currently installed SofTrack licenses may be too old to support the new version. If you have previously renewed your SofTrack license you may be able to resolve the WX1 error by installing your new token.

[b] Shutdown the SofTrack LWA on unneeded workstations until the number of active LWAs is equal to or less than your number of installed SofTrack licenses. When shutting down the SofTrack LWA, go to each selected workstation, open the services control panel (Click Windows Start, Run and enter services.msc), find the SofTrack Local Agent service and Stop it and then set its start up type to Manual.

[c] Purchase and install additional SofTrack workstation licenses.

### Upon receiving a WX2 error

The WX2 error indicates there are too many workstations being reported in either the Logon folder and/or the Audit folder. Specifically it means there are too many files.

While the WX2 error is occurring, no further logon or audit activity will be recorded (regardless of which one has caused the WX2 error). To solve the WX2 error you will need to either purchase additional licenses or delete workstation records (i.e. delete the files) **and** stop the SofTrack Local Agent service from those same workstations whose files you deleted to prevent new files from being submitted by those same workstations.

When shutting down the SofTrack LWA, go to each selected workstation, open the services control panel (Click Windows Start, Run and enter services.msc), find the SofTrack Local Agent service and Stop it and then set its start up type to Manual.

*Please note that WX2 error indication does not stop software metering activity.*

Solutions:

To determine the number of workstations being reported in the Logon folder, open the SofTrack Console, click the Reports tab and select Logon/Logoff icon and click the "original version" report option. This action will open a screen that lists all workstations that have reported logon activity. At the lower right corner find the indicator "Number Found". If this number is greater than your total number of licenses installed this is the cause of the WX2 error.

To determine the number of workstations being reported in the Audit folder, open the SofTrack Console, click the Reports tab and select Workstation Audit icon and click the second report option (Browser, File Open, Create...). This action will open a screen that lists all workstations that have reported audit activity. At the lower right corner find the indicator "Number Found". If this number is greater than your total number of licenses installed this is the cause of the WX2 error.

It is possible for both the Logon and Audit folders to have too many workstation files listed.

Both the Logon/Logoff and Workstation Audit report views have an "Erase selected log files" button, you can use it to remove unwanted files.

So, in other words, please delete those files from the workstations from the "workstation audit" and "logon/logoff" activity reporting screens, each has an "Erase selected log files" button.

And, at the next license check (i.e. every 15 minutes) the WX2 error will "self reset". There is no need to stop and restart the SofTrack Server Agent.

### **Upon receiving a WX3 error:**

The WX3 error indicates there are insufficient SofTrack Terminal Server Licenses installed for the number of terminal server hosts currently interacting with the SofTrack Server Agent. When the WX3 error is occurring, SofTrack will deactivate and no software metering will be provided.

To identify what is causing the WX3 error to occur, open the SofTrack Console, click the Agents tab, sort on the "TS?" column. Any workstations reporting "YES" for this value are currently acting as a Windows Terminal Server. The "TSELIC#" column on the Agents tab indicates how many terminal server licenses the workstation (or server) is currently using.

To restore SofTrack's operations:

[a] If your SofTrack license includes only workstations and no session licenses are installed, the SofTrack LWA needs to be stopped on each PC and set to "manual" startup type

Please know that it is possible for a regular Windows workstation to masquerade as a Windows Terminal Server host. If a Windows workstation is shown as using a SofTrack terminal server license, on that workstation, open REGEDIT.EXE and check if the value **TSAdvertise** is set to the value of 1 in the following key:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal
Server
```

[b] If your SofTrack license includes session licenses, you will need to identify the correct number of session licenses required and request additional licenses to ensure all sessions are licensable.

## SofTrack not working?

If it appears SofTrack is not working check the following:

- Open the SofTrack Console, review the blue tile at upper left, does the License appear as expected?
- Is the License Usage less or equal to what has been licensed?



- Select the Settings tab, are any errors appearing in the orange section (Server Alert Log Entries) that have a recent time?

The screenshot shows the SofTrack Settings page. The 'Settings' tab is selected. The 'Log File Path (Share)' is set to 'STLOG'. Below this are several sub-tabs: 'Tokens/SSA', 'Options', 'Offline Mode', 'User Messages', 'License Mgrs', 'Users to Notify', 'Users Excluded', 'Archiving', and 'Email'. The 'Tokens/SSA' sub-tab is active, showing a table of installed tokens. Below the table is the 'Server Alert Log Entries' section, which is highlighted in orange. A yellow arrow points to the entry: '000044:Feb 1, 2017 (10:53:12): Audit and Logon Logging is Disabled - Tokens Exhausted, Code WX2'.

Installed Tokens	Expiration Date
SofTrack for 10 Terminal Server Clients on Windows Server (MOXY64).	Maintenance current until December 31, 2017
SofTrack for 100 Workstations on Windows Server (MOXY64).	Maintenance current until December 31, 2017

Server Alert Log Entries
000042:Feb 1, 2017 (10:53:17): Metering is Disabled - No Tokens Found
000043:Feb 1, 2017 (10:53:16): Audit and Logon Logging is Disabled - Tokens Exhausted, Code WX2
000044:Feb 1, 2017 (10:53:12): Audit and Logon Logging is Disabled - Tokens Exhausted, Code WX2
000045:Jan 27, 2017 (13:42:39): TSE Metering is Disabled - Tokens Exhausted, Code WX3
000046:Dec 10, 2016 (13:07:52): Audit and Logon Logging is Disabled - Tokens Exhausted, Code WX2
000047:Dec 10, 2016 (13:07:47): Audit and Logon Logging is Disabled - Tokens Exhausted, Code WX2
000048:Nov 21, 2016 (23:31:26): STAD0:Failed bind [80005000][LDAP://CN=saft,OU=poles / fish,OU=REE,DC=greenland,DC

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- Select the Agents tab, sort on the Last Communication column, are your workstations in regular communication? For each workstation currently online and where the SofTrack LWA is active, the value of the Last Communication column is updated once per minute.

Reports		Profiles		Agents			Settings		
Workstation	Agent Version	IP Ad	Last Communication	Last Reboot	TS?	TSELIC#	WLIC#	Last Agent	
 ROGER-PC	7.09b,3.25n,3,2...		Sun Mar 19 17:43:27 2017	Fri Feb 10 23:3...		0	0		
 MOXY64	7.12f,3.94a,-,2...		Sun Mar 19 14:39:24 2017	Fri Feb 10 19:0...	YES	0	0	Sun Mar 19	
 MXL1281	7.17m,4.02c,-,...		Sun Feb 19 13:55:50 2017	Sun Feb 19 13:...		0	0	Sun Feb 19	
 ISW_WIN81	7.17q,4.02d,-,2...		Sun Feb 19 13:40:54 2017	Sat Jan 21 08:3...		0	0	Fri Feb 17 1	
 VCS-Z21MM58S035	7.16b,6.56k,-,2...		Fri Feb 17 16:53:27 2017	Fri Feb 10 18:3...		0	0	Fri Feb 17 1	

If you find any of the above to be in an unexpected condition this could be the reason why SofTrack is not functioning. Please email any details to [support@softwaremetering.com](mailto:support@softwaremetering.com) for further assistance.