

SENTINEX Inc
Software that serves



ScreenSafer/400

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SCREENSAFER/400

Work Station Security for the iSeries-AS/400

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Introduction

What is ScreenSafer/400?

ScreenSafer/400 is an iSeries/400 based workstation security software tool that takes control of the inactive workstation to protect sensitive information from intruding eyes. It prevents transaction input by potential embezzlers.

Why is ScreenSafer/400 Needed?

Many auditors are requiring that workstations be either “signed-off” or “disconnected” when they are idle for a period of time. The problem with the “sign-off” option is that files may be partially locked for update and therefore signing off could corrupt the database files.

Similarly, “disconnect” gives the appearance of “sign-off”. The workstation user may forget that they were in the middle of a transaction, leaving the workstation for an extended period of time. They may go home for the day and cause the same database locking as “sign-off”.

ScreenSafer/400 does not “sign-off”, “disconnect”, or hold the workstation job. Instead, *ScreenSafer/400* takes control of the workstation job and animates the contents of the screen making it obvious that the workstation is still active. The authorized user can reactivate the workstation session by pressing **Enter** and entering their iSeries/400 password. This action returns the workstation to the original function.

Once *ScreenSafer/400* has taken control of a workstation, a randomly selected quote, fact or humorous quip will automatically be displayed in the center of the screen.

ScreenSafer/400 integrates seamlessly with the OS/400 operating system. As each user signs on, *ScreenSafer/400* will be activated. An automatically activated background job monitors for workstation inactivity.

Getting Started

What You Should Know About ScreenSafer/400

System Values: *ScreenSafer/400* is dependent on certain System Values for correct operation. These System Values are:

- Inactive Job Time Out Interval (QINACTITV)
- Inactive Job Message-Queue (QINACTMSGQ)

In the case of the Inactivity Interval, the user can choose the time before *ScreenSafer/400* activates on inactive workstations. The time-out period is specified during installation but can be modified subsequently by taking Option 5 (*ScreenSafer/400* Configuration) off the main menu. The installation routine will default the time-out period to 5 minutes. This can be changed but the other System Values have required settings.

Active Sub-Systems: *ScreenSafer/400* operates across all workstations active within a particular sub-system. This is achieved by using a routing entry to initiate *ScreenSafer/400* before transferring control to the command processor QCMD. The set-up routine defaults to setting up *ScreenSafer/400* for sub-system QINTER. The reference to the sub-system QINTER can be changed. Other sub-systems can also be added during installation.

The *ScreenSafer/400* Enrollment Methods: *ScreenSafer/400* employs two enrollment methods:

- Automatic (*AUTO)
- Selective (*SELECT)

When Automatic enrollment is used, all users will be enrolled in *ScreenSafer/400* at their next sign-on. When Selective enrollment is used, only those users specified in *ScreenSafer/400* users database will have *ScreenSafer/400* enabled at sign-on. It is recommended that first time users of *ScreenSafer/400* use the Selective enrollment method for a few selected users until familiarity with the product has been gained. The general user population should be made aware of what to expect when *ScreenSafer/400* is universally applied before switching to the Automatic enrollment method.

Passwords: Users of *ScreenSafer/400* do not need to remember another password because *ScreenSafer/400* uses the same password that is used at user sign-on.

Quick Start Installation

The default configuration for an interactive sub-system such as QINTER will have the first routing entry as follows:

SEQ. NBR.	PROGRAM	LIBRARY	COMPARE VALUE	START POS.
10	QCMD	QSYS	QCMDI	1

Figure 1

If your QINTER subsystem matches the above, you will be able to use the Quick Start Installation *ScreenSafer/400*. Otherwise, you will have to configure *ScreenSafer/400* using the custom installation procedure detailed later.

ScreenSafer/400 is installed using the IBM provided **LODRUN** command. The LODRUN command prompts the user for the name of the media device that will be used at installation. The users should sign-on as the Security Officer (QSECOFR) and enter the command LODRUN on the command line and then press Function Key 4 to enter the media device name.

Working With *ScreenSafer/400* Set-Up Display

The installation routine will restore library SCRSFR400 to the iSeries/400 and execute the set up routine. The *ScreenSafer/400* set up display is shown below.

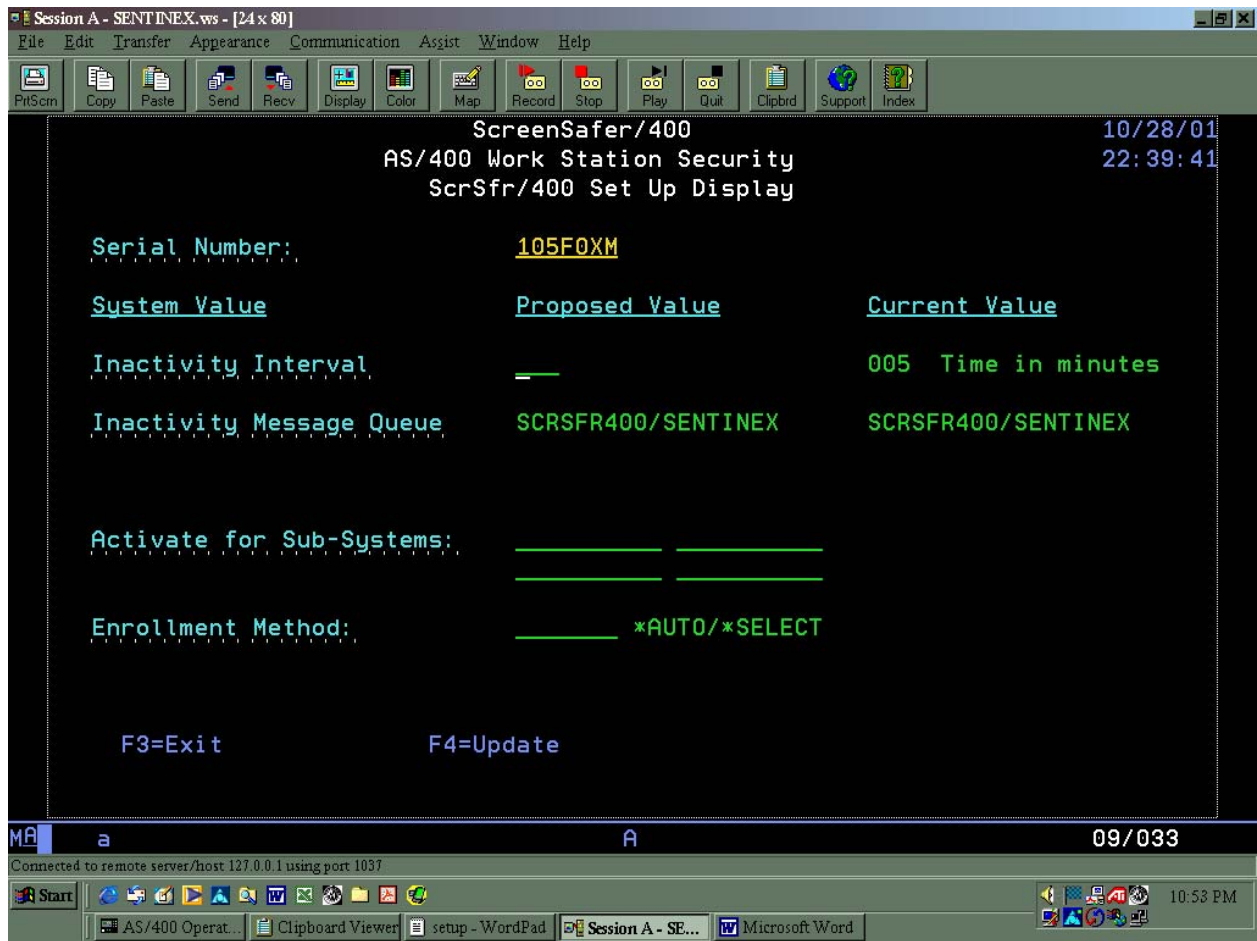


Figure 2

From this panel, you can modify the value of the Inactivity Interval and the Enrollment Method. If you have standard configuration for the subsystem QINTER you should press Function Key 4 to proceed with *ScreenSafer/400*.

Once this process has been completed and the set up routine has executed successfully, *ScreenSafer/400* will be operational. If you have a non-standard routing entry for QINTER, you should exit without updating using Function Key 3 and execute a custom configuration from the Configuration Menu.

ScreenSafer/400 Configuration

ScreenSafer/400 seamlessly integrates within the iSeries/400 operating system. The ScreenSafer/400 set-up routine:

- Changes the system value Inactive Job Message Queue (QINACTMSGQ) to Sentinex
- Changes the system value Inactive Job Time-out (QINACTITV) to a value of 5. The value represents minutes, i.e. 5 minutes.
- Changes the routing entry in the sub-system QINTER as shown in the tables below.

FROM:

Figure 3

SEQ. NBR.	PROGRAM	LIBRARY	COMPARE VALUE	START POS.
10	QCMD	QSYS	QCMDI	1

TO:

Figure 4

SEQ. NBR.	PROGRAM	LIBRARY	COMPARE VALUE	START POS.
10	STRSCRSFR	SCRSFR400	QCMDI	1

Note: The program ScreenSafer/400 INZDLX activates ScreenSafer/400 as each user signs on before transferring control to QSYS/QCMD. Additional interactive sub-systems can also be similarly changed to execute ScreenSafer/400.

- Initializes ScreenSafer/400 product security that allows unlimited user licenses for a 30-day trial period.
- Initializes a background process called SCRSFR400 in sub-system QSPL that monitors for workstation inactivity.

Customizing ScreenSafer/400 Installation

The Configuration Menu can be accessed by Selecting Option 5 from ScreenSafer/400 Main Menu.

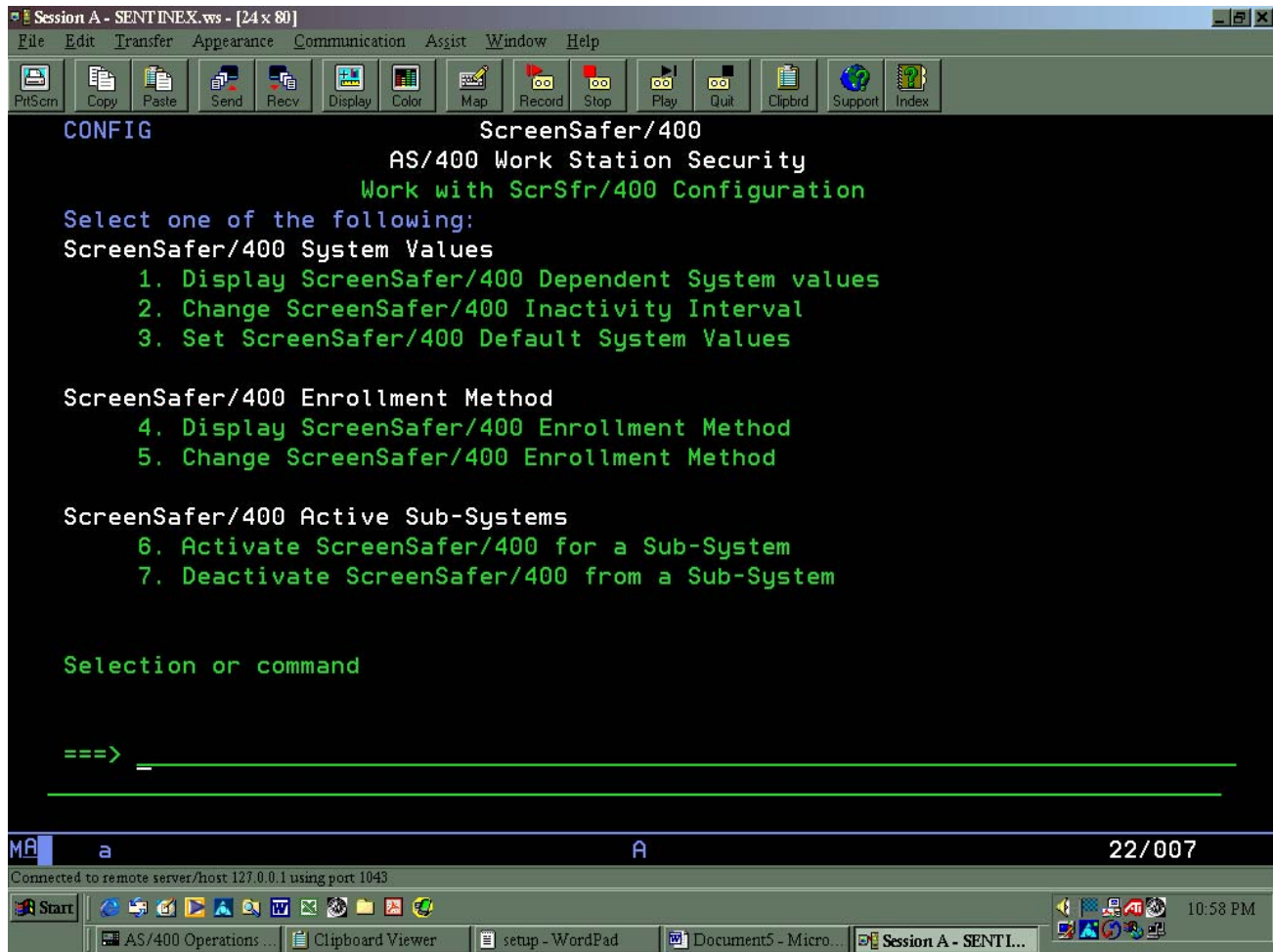


Figure 5

The current values of *ScreenSafer/400* dependent System Values can be displayed by using Option 1. The Inactivity Interval can be set individually from the other System Values by selecting Option 2. All of *ScreenSafer/400* dependent System Values can be set (or reset) using Option 3.

The current enrollment method can be displayed using Option 4 and changed using Option 5.

Routing Entry Requirements

The routing entry required to enable *ScreenSafer/400* for an interactive sub-system can be established selecting Option 7. This option will prompt the Change Routing Entry command with the required values to enable *ScreenSafer/400* for the specified sub-system. Option 7 can also be used when the values for sub-system QINTER are non-standard, i.e. sequence number not equal to 10.

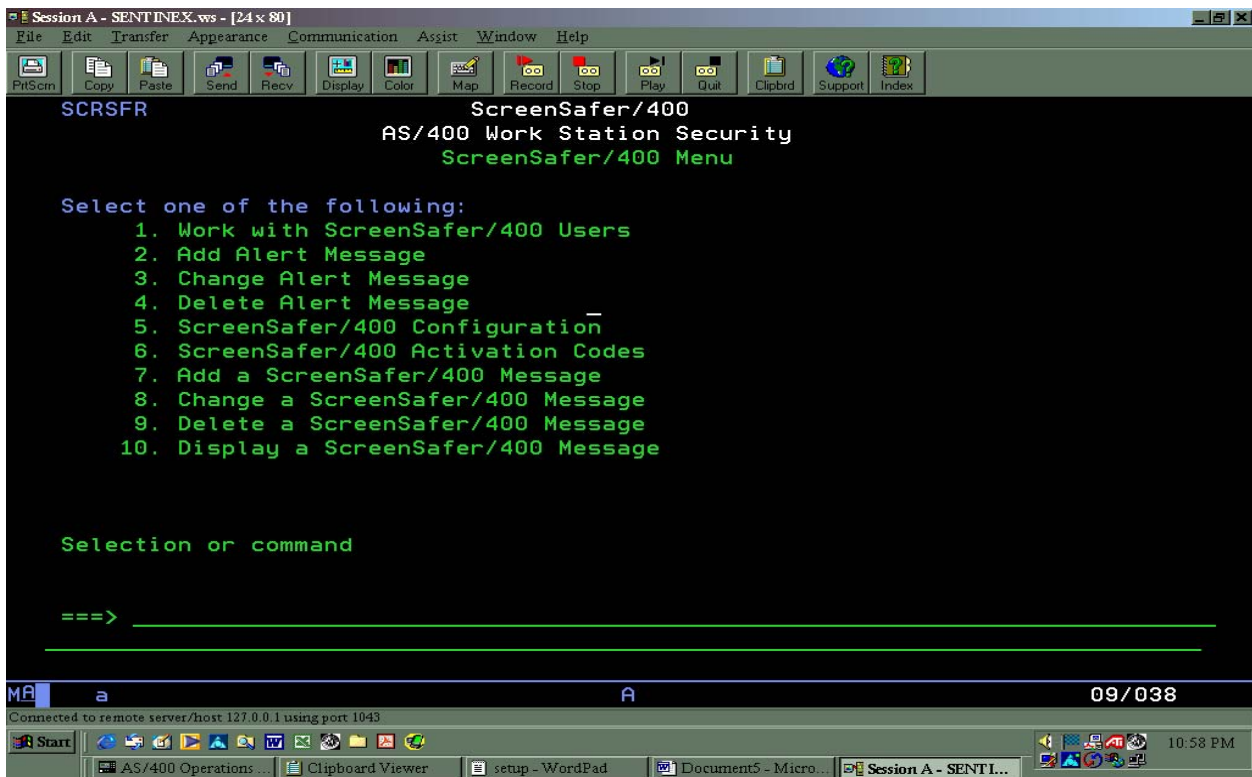
The possibility exists that no interactive sub-system's routing entries conform to the standard routing data of QCMDI, program QCMD and library QSYS. In this case, it may be necessary to activate *ScreenSafer/400* from within the program that is initiated by routing entry. This can be achieved by inserting into the routing entry program, as the first executable statement: **SCRSFR400/STRSCRSFR**

Password Protection

ScreenSafer/400 activates after a period of workstation inactivity. All the user needs to do to reactivate their job is press **Enter**. By default, this will cause a password entry window to appear requiring the user to re-enter their iSeries/400/400 user password. If your system is configured for password level 2 or higher, a long password window will be displayed.

The *ScreenSafer/400* Main Menu

All of the *ScreenSafer/400* management functions can be executed from the *ScreenSafer/400* Main Menu.



The screenshot shows a terminal window titled "Session A - SENTINEX.ws - [24 x 80]". The window displays the "SCRSFR" command and the "ScreenSafer/400 AS/400 Work Station Security ScreenSafer/400 Menu". The menu lists 10 options for management functions. The terminal prompt "====>" is visible at the bottom of the menu.

```
Session A - SENTINEX.ws - [24 x 80]
File Edit Transfer Appearance Communication Assist Window Help
[Icons: PrintScreen, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipbrd, Support, Index]

SCRSFR                                     ScreenSafer/400
AS/400 Work Station Security
ScreenSafer/400 Menu

Select one of the following:
  1. Work with ScreenSafer/400 Users
  2. Add Alert Message
  3. Change Alert Message
  4. Delete Alert Message
  5. ScreenSafer/400 Configuration
  6. ScreenSafer/400 Activation Codes
  7. Add a ScreenSafer/400 Message
  8. Change a ScreenSafer/400 Message
  9. Delete a ScreenSafer/400 Message
 10. Display a ScreenSafer/400 Message

Selection or command

====> _____
```

MA a A 09/038
Connected to remote server/host 127.0.0.1 using port 1043
[Taskbar: Start, AS/400 Operations..., Clipboard Viewer, setup - WordPad, Document5 - Micro..., Session A - SENTI..., 10:58 PM]

Figure 6

Note: Select Option1 from the ScreenSafer/400 Main Menu to override a password requirement. You may also execute the WRKSFRUSR command to override the password requirement.

Access to the *ScreenSafer/400* Main Menu by adding the library list entry SCRSFR400 to the job's library list. Execute the GO SCRSFR command. All additional support functions in *ScreenSafer/400* are available from this menu.

Working With The Users

Select Option 1 from *ScreenSafer/400* Main Menu to access the work with *ScreenSafer/400* Users panel. You can also execute the WRKSFRUSR command to gain access if the library SCRSFR400 is in the active job's library list.

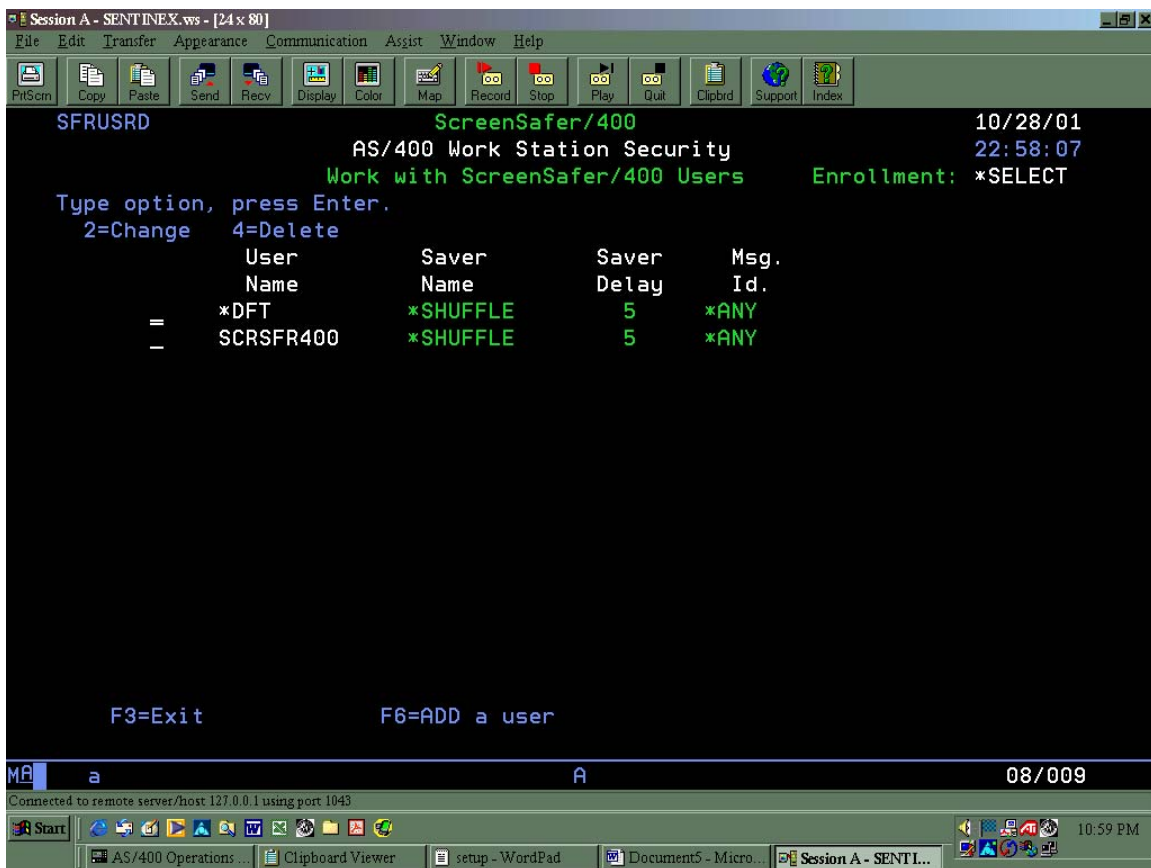


Figure 7

Maintaining the SCREENSAFER/400 SCREEN

You can make additions, deletions and changes to a user's *ScreenSafer/400* screen saver from this panel. Delay time between iterations of the screen saver and the type of screen messages to be displayed is also dealt with here.

Note: if you select the standard install options ScreenSafer/400 will automatically enroll new users with default values when they sign on to the system.

Alert Message

The Alert feature that has been built into *ScreenSafer/400* will flash announcements to the user community in the top left corner of the screen.

Note: The following example shows the position of the Alert Message. It will be displayed as a constant during ScreenSafer/400 execution

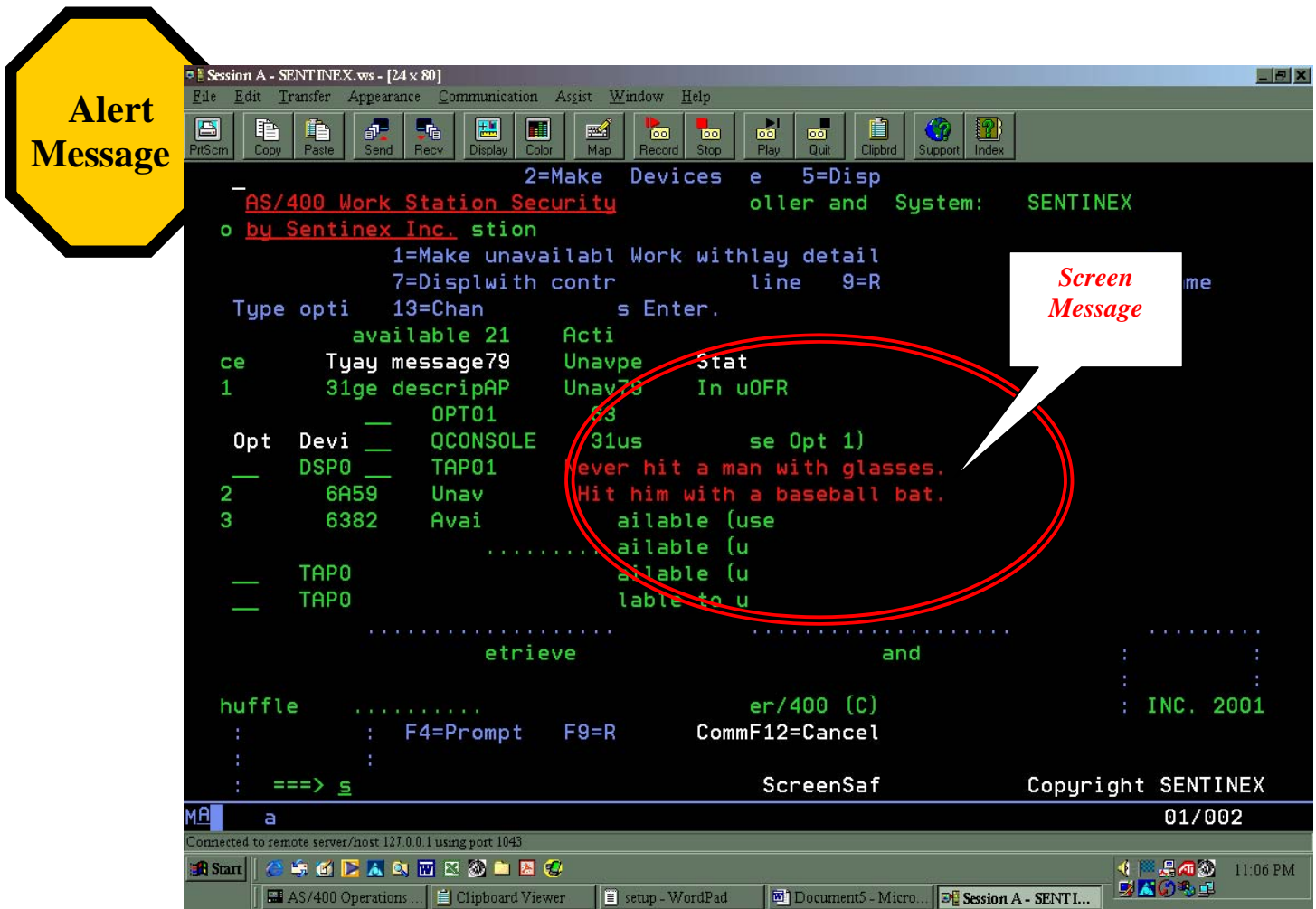


Figure 8

Security Code Identifiers

Three one-character security codes are used in *ScreenSafer/400*. Security codes are entered in the Entry Type field as follows:

- Type “O” identifies the Original security code that is established at installation. This enables the use of *ScreenSafer/400* for 30 days with unlimited user licenses.
- Type “P” identifies a Permanent security code that locks *ScreenSafer/400* to a particular machine’s serial number for a limited number of concurrent user licenses.
- Type “T” identifies a Temporary security code that will be issued immediately to a customer requesting additional licenses. This code will enable the immediate use of *ScreenSafer/400* for the additional requested licenses for 30 days.

Note: A temporary code will be issued immediately pending final processing of the order. A permanent code will be issued when a specified number of licenses are requested by the customer

ScreenSafer/400 in Operation

A background process of *ScreenSafer/400* monitors the workstation for inactivity. When a station has been inactive for a specified period, the background processes interrupts the workstation job and animates the content of the screen.

Figure 10

```

Session A - SENTINEX.ws - [24 x 80]
File Edit Transfer Appearance Communication Assist Window Help
PrintScreen Copy Paste Send Recv Display Color Map Record Stop Play Quit Clipbrd Support Index

Active Jobs SENTINEX
AS/400 Work Station Security 10/28/01 23:23:54
by Sentinex Inc. m 4=End :00 Acth 6=Rel 77 sage
ork with A
Type opti
CPU %: 2=Chang 5=Work wie: 00:00ease 7=Dtive jobs: isplay mes
with spool QSYS ed files nect ...
ons, press QSECOFR
ystem/Job e 3=Hold QPGMR User PU % Function Status
8=Work ___ QBASE 13=Discon .0 CMD-WRKACTJOB RUN
___ +DSP01 .0
Opt Subs ___ QSYSSCD For every credibility gap, NEP EVTW
VER QSYS QSYS there is a gullibility fill. DEQW
WFSERVSD QUSER QSYS -- R. Clopton SELW
ERVER QPGMR QSYS BCH .0 EVTW
___ QSER ___ QSPL SBS SBS .0 DEQW
___ QP ___ QSYS SBS BCH .0 DEQW
___ QS ___ CR BCH ASJ .0 CMD-CRTPFRDTA DEQW
s or commaWRK data F7 F10=Resta More...
file TPFRTA F23=More eys
Parameter F3=Exit F5=Refres =Find rt statistics
==> shuf 2=Cancel options F24=More k
ScreenSaf Copyright SENTINEX
MA a 01/002
Connected to remote server/host 127.0.0.1 using port 1043
AS/400 Operations ... Clipboard Viewer setup - WordPad Screenshots for WS... Session A - SENTI...

```

The above screen is an example of a workstation that has been placed in suspended animation by *ScreenSafer/400*.

ScreenSafer Shortcut Key Strokes

As of Release 2, *ScreenSafer/400* allows a terminal operator to intentionally lock their session from a set of short hand keystrokes. With this feature, a user can ensure their session is secured before leaving their work area, bypassing the timeout time period.

- Hit [SysRequest]
- Type 5 lock screen, as shown in Figure 11

↵Enter

This will activate *ScreenSafer/400* provided the user is enrolled in *ScreenSafer/400*.

Figure 11

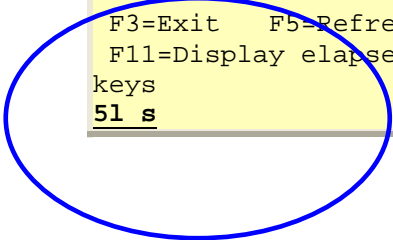
```
Work with Active Jobs
SENTINEX
                                09/02/02
18:03:55
CPU %:      .0      Elapsed time:  00:00:00      Active jobs:  120

Type options, press Enter.
  2=Change   3=Hold   4=End   5=Work with   6=Release   7=Display message
  8=Work with spooled files  13=Disconnect ...

Opt  Subsystem/Job  User      Type  CPU %  Function      Status
QBATCH  QSYS      QSYS      SBS   .0     DEQW          DEQW
QCMN    QSYS      QSYS      SBS   .0     DEQW          DEQW
QCTL    QSYS      QSYS      SBS   .0     DEQW          DEQW
  QSYSSCD  QPGMR    BCH       .0     PGM-QEZSCNEP  EVTW
QHTTSPVR  QSYS      QSYS      SBS   .0     DEQW          DEQW
  DEFAULT  QTMHHTTP  BCH       .0     PGM-QZHBHTTP  CNDW
  DEFAULT  QTMHHTTP  BCI       .0     TIMW          TIMW
  DEFAULT  QTMHHTTP  BCI       .0     TIMW          TIMW
  DEFAULT  QTMHHTTP  BCI       .0     TIMW          TIMW

More...
Parameters or command
-->
F3=Exit   F5=Refresh   F7=Find   F10=Restart statistics
F11=Display elapsed data  F12=Cancel  F23=More options  F24=More keys
5lock screen
```

Similarly,

- Hit [SysRequest]
- Type **51 s**, as shown in Figure 12,


This will activate ScreenSafer/400 (note that the example uses a lower case 'L' and 'S')

Figure 12

```
Parameters or command
===>
F3=Exit    F5=Refresh    F7=Find    F10=Restart statistics
F11=Display elapsed data    F12=Cancel    F23=More options    F24=More
keys
51 s
```

Secondary Timeout Feature

This feature allows for a secondary timeout that will result in an inactive job being cancelled after a preset period of time has elapsed in the ScreenSafer/400 inactive state.

A primary timeout that occurs when the system value QINACTITV is reached and there has been no activity on the terminal session. This value is maintained from option #2 on the configuration menu. When this timeout occurs, ScreenSafer/400 takes over the session display and locks it. It can then only be unlocked by pressing ENTER and supplying the password of the user logged on to the session.

The secondary value is controlled by the system value QDSCJOBITV (Time interval before disconnected jobs end). You can maintain this setting using the following instruction from the OS/400 command line:

```
WRKSYSVAL QDSCJOBITV
```

The system is generally shipped from IBM with this value set to a default value of 240 minutes.

With ScreenSafer/400 activated, when this secondary time value has elapsed and a locked terminal session has not been activated, then ScreenSafer/400 will cancel the session job, terminating all processing for that session.

If you want to deactivate the Secondary Timeout feature, you can do so by running the following command from the OS/400 command line:

```
CHGDTAARA DTAARA(SCRSFR400/CONTROL (1 1)) VALUE('X')
```

To reactivate the feature, run the following command:

```
CHGDTAARA DTAARA(SCRSFR400/CONTROL (1 1)) VALUE(' ')
```

Manual Deactivation for Backup

When ScreenSafer/400 is active, it maintains several object locks on objects in its application library. This can create a conflict for some installations when the user libraries are saved to tape. To avoid this conflict, you can manually stop the background task that is active in the QSPL subsystem by running the following command:

```
ENDSCRSFR
```

This will remove the object locks and allow your backup to run without conflict. Remember, however, that any signon attempt by a user who is enrolled in ScreenSafer/400 will cause the job to start up again. Since users are normally not allowed access to the system during a backup operation, this should not cause a problem. If you use the ENDSCRSFR command for any other reason, this could be a concern.

Deactivating ScreenSafer/400

The work station can be returned to an active status by pressing **Enter**

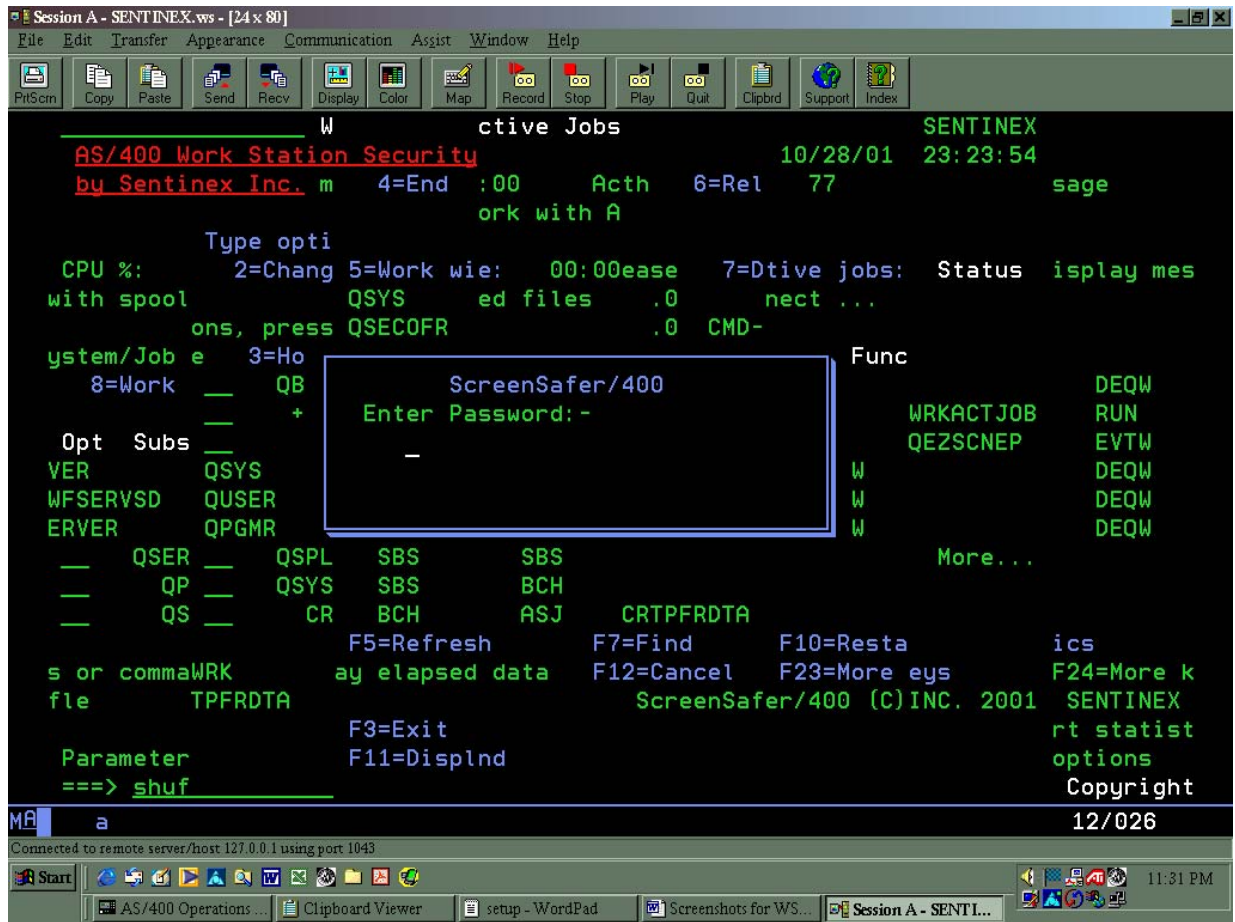


Figure 13

A pop-up window will appear as shown in the above example. At this time, you should re-enter your iSeries/400 password. If your system is configured for password level 2 or higher (system value QPWDLV), then a different password window will be displayed to accept the longer password required for your system.

APPENDIX

How To Deinstall *ScreenSafer/400*

- From the ScreenSafer /400 Configuration menu, deactivate ScreenSafer/400 from each sub-system using option 7.
- Terminate the background job ScrSfr400 (usually running i sub-system QSPL).
- Change the system value QINACTMSGQ to *ENDJOB or *DSCJOB
- Delete the library ScrSfr400.