iSecurity Capture

User Guide
Version 6.01

www.razlee.com

Contents

About this Manual

This user guide is intended for system administrators and security administrators responsible for the implementation and management of security on IBM i systems. However, any user with basic knowledge of IBM i operations will be able to make full use of this product after reading this book.

Raz-Lee takes customer satisfaction seriously. Our products are designed for ease of use by personnel at all skill levels, especially those with minimal IBM i experience. The documentation package includes a variety of materials to get you familiar with this software quickly and effectively.

This user guide, together with the iSecurity Installation Guide, is the only printed documentation necessary for understanding this product. It is available in HTML form as well as in user-friendly PDF format, which may be displayed or printed using Adobe Acrobat Reader version 6.0 or higher. If you do not have Acrobat Reader, you can download it from the Adobe website: http://www.adobe.com/. You can also read and print pages from the manual using any modern web browser.

This manual contains concise explanations of the various product features as well as step-by-step instructions for using and configuring the product.

Raz-Lee's iSecurity is an integrated, state-of-the-art security solution for all System i servers, providing cutting-edge tools for managing all aspects of network access, data, and audit security. Its individual components work together transparently, providing comprehensive "out-of-the- box" security. To learn more about the iSecurity Suite, visit our website at http://www.razlee.com/.

Intended Audience

The CaptureUser Guide document was developed for users, system administrators and security administrators responsible for the implementation and management of security on IBM® AS/400 systems. However, any user with a basic knowledge of System i operations is able to make full use of this document following study of this User Guide.

NOTE: Deviations from IBM® standards are employed in certain circumstances in order to enhance clarity or when standard IBM® terminology conflicts with generally accepted industry conventions.

This document may also serve for new versions' upgrade approval by management.

Native IBM i (OS/400) User Interface

Capture is designed to be a user-friendly product for auditors, managers, security personnel and system administrators. The user interface follows standard IBM i CUA conventions. All product features are available via the menus, so you are never required to memorize arcane commands.

Many features are also accessible via the command line, for the convenience of experienced users.

Conventions Used in the Document

Menu options, field names, and function key names are written in **Courier New Bold**.

Links (internal or external) are emphasized with underline and blue color as follows: "About this Manual" on the previous page.

Commands and system messages of IBM i® (OS/400®), are written in ***Bold Italic***.

Key combinations are in Bold and separated by a dash, for example: **Enter**, **Shift-Tab**.

Emphasis is written in **Bold.**

A sequence of operations entered via the keyboard is marked as

COMMAND **> 81 > 32**

meaning: Syslog definitions activated by typing ***COMMAND*** and selecting option: **81** then option: **32**.

Menus

Product menus allow easy access to all features with a minimum of keystrokes. Menu option numbering and terminology is consistent throughout this product and with other Raz-Lee products. *To* select a menu option, simply type the option number and press **Enter**. The command line is

available from nearly all product menus. If the command line does not appear (and your user profile allows use of the command line), press **F10** to display it.

Data Entry Screens

Data entry screens include many convenient features such as:

- Pop-up selection windows
- Convenient option prompts
- Easy-to-read descriptions and explanatory text for all parameters and options
- Search and filtering with generic text support

The following describes the different data entry screens.

- To enter data in a field, type the desired text and then press Enter or Field Exit
- To move from one field to another without changing the contents press Tab
- To view options for a data field together with an explanation, press F4
- To accept the data displayed on the screen and continue, press Enter

The following function keys may appear on data entry screens.

- **F1**: **Help** Display context-sensitive help
- **F3**: **Exit** End the current task and return to the screen or menu from which the task was initiated
- **F4**: **Prompt** Display a list of valid options for the current field or command. For certain data items, a pop-up selection window appears
- **F6**: **Add New** Create a new record or data item
- **F8**: **Print** Print the current report or data item
- **F9**: **Retrieve** Retrieve the previously-entered command
- **F12**: **Cancel** Return to the previous screen or menu without updating

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Introducing Capture

Taking User Activity Tracking Seriously

In today's increasingly complex business environment, an effective audit trail is a key component of any organizational IT security program. In certain environments, such as banking and health care, regulations are now in effect that require organizations to maintain detailed transaction activity records and to retain these records for an extended period.

Simply creating a security policy and purchasing some security software tools is not enough. Management should ensure that security policies and procedures are properly implemented and enforced. In addition, managers must be able to evaluate and test the effectiveness of these policies on a continuing basis.

Outside auditing firms, as well as internal audit departments, routinely perform extensive reviews of data systems. Such audit programs typically involve:

- Transaction testing, including accuracy review
- Verification that transactions are initiated and approved only by authorized personnel
- Ensuring prompt detection and correction of errors with appropriate traceability
- Ensuring adequacy of the audit trail
- Implementing and testing the adequacy of IT security policy

Additionally, IT departments and technical support personnel need to monitor user activity in order to troubleshoot error conditions, track performance bottlenecks, and ensure compliance with organizational policies. This often requires detailed knowledge of not only what users are doing, but also, how they are doing it. Computer logs and audit reports, more often than not, do not provide enough forensic evidence for these purposes.

Auditors, managers and even many system administrators are less likely to be familiar with the complex, arcane nature of the IBM i (OS/400) operating

system and its tools in today's IT environment. They need intuitive and user-friendly tools that provide solutions quickly and efficiently.

NOTE: This product works for Interactive jobs (INT).

Limitations of IBM i (OS/400) Auditing

The IBM i operating system, through its journaling facility, creates highly detailed logs of system activities. It is capable of tracking a wide variety of events and retains an extensive volume of data in its journal database. Unfortunately, IBM i provides only minimal, user hostile tools that allow operators to access and manage this data. Analysis and baseline tools are also sorely lacking.

The following is a list of several important limitations of IBM i auditing:

- IBM i journals alone do not provide a visual audit trail of activities that constitute a security breach or are contributing factors to errors. Likewise, the journals do not effectively track data entry errors or routine activities that violate organizational policies.
- The journals provide a primitive, unformatted data display of the journal log with minimal data filtering.
- IBM i lacks a query facility capable of easily extracting data buried in the journal database.
- IBM i provides no audit reports. You must manually export journal data to a file and then use Query, DFU or a third party query tool, such as FileScope, in order to create reports.
- Journal management is a difficult task. Unnecessary data in the security audit journal can adversely affect system performance and waste valuable disk space.

Limitations of IBM i (OS/400) Screen-Copy

As part of the native IBM i operating system which supports and runs the IBM AS/400 (also known as System i or System i) computers, IBM provides functionality for copying screen images of user sessions. This functionality includes capturing on-screen contents and saving the captured images as disk files.

The IBM i operating system includes a function called STRCPYSCN (Start Copy Screen) which enables copying Telnet session screen(s) onto a disk file. This function facilitates inspecting session activity at a later time.

The STRCPYSCN system function operates as follows:

- A monitor decides to start the STRCPYSCN function for a designated user session.
- The user session receives a message which “breaks into” its regular activity announcing that the screen is about to be copied and requesting confirmation from the user.
- When the user confirms this request, all session activity is recorded to a file.

The above described activities transpire without any further intervention to the session being monitored.

The Capture Solution

Capture is a unique solution that complements journals and reports with a visual audit trail of user activity. This powerful data security product shows exactly what users are doing and when they are doing it. Capture helps organizations comply with the strict security regulations that apply to many industries such as banking, insurance, health care, and defense. Capture also provides invaluable traceability capabilities to technical support departments bytracking user activities that result in application or system errors.

Principal Features

- Providing the possibility to display (that is, to replay) captured user session screens and to search contents or patterns in the captured screens. Such searching enables locating screen images in accordance with auditor’s or regulator’s requests.
- A monitor which decides to activate the STRCPYSCN system functionality for designated TELNET sessions. The decisions of this monitor are based on sets of rules which relate, for example, to the time of day, the user of the TELNET session, the IP address of the TELNET session, the device of the TELNET session, and so on.

- Nullifying the system requirement regarding confirmation by users whose screen images are to be recorded. The importance of this feature is in order to actually “capture” possibly illicit behavior without the user being aware that the incriminating session is being recorded.
- Before activating the system function, the user session attributes are modified so that the message will be issued will not “break” into the session but rather will be handled by an automatic feature of this method without the knowledge of the user.
- At the time the STRCPYSCN system function is activated, the message which is sent to the TELNET session as a result of this activation does not “break” into nor interfere with the on-going session activity. Rather the message is responded to automatically.
- A method which generates a warning when the user whose screen images are to be recorded actually initiates the session. It is at this point that Capture enables the possibility of copying screens.
- Managing all accumulated user session information to provide advanced capabilities for managing these saved session files.
- Facilitates retrieval of captured screens with an easy-to-use process and free text search capability.
- If, after inspection, the monitor realizes that the user session screens are not being copied to a disk file, the monitor will once again initiate the STRCPYSCN function.
- Preserves job logs and CL Command logs for subsequent review, changes the job attributes to *LOGCLPGM(*YES)* .
- Uses a simple rule definition process suitable for both IT professionals and non-technical users
- Archives captured screens offline to meet data retention requirements without consuming excessive disk resources

How Capture Works

Capture works silently and invisibly in the background without adversely affecting system performance. User may not even be aware that it is working.

Screen Captures

Screen captures occur only when needed. It is not practical to track all users all the time, especially in a large organization, as this would affect system performance and it would be impossible to review such a large volume of data effectively.

Capture automatically triggers screen capturing according to predefined rules covering a variety of circumstances using variable criteria such as:

- Incoming IP address including subnet mask
- Day and time
- Job (Session or Terminal ID)
- User profile
- Subsystem

You can also manually initiate a screen capture session at any time, for example to track a suspicious user or error condition. Action can also trigger a manual capture session based on its rules.

Backup

Once a day, the previous day's recorded user screen sessions are transferred to a library named SMCPyymmdd. This library contains the log file and the data file for all the sessions which were "captured" during that day; these user screen sessions can be displayed using option **42. Display Restored Log** or printed/displayed using option **46. Display RestoredData** .

Information that is older than the specified retention definition (as defined using option **81.System Configuration** then option **2. Capture Retention**) can be backed up. If a backup program was defined on this screen, the backup program will run automatically before the captured data is deleted.

When the information is copied to a separate backup library, the library's name is updated in the online log; this online log is kept for an unlimited amount of time.

When an auditor or system administrator wishes to access a library, Capture first looks for the requested information in the product library, **SMZCDTA** (**SMZ4DTA** in previous releases). If the information is not found in this library,

Capture will look for it in the backup library pointed to by the entry in the log.

When historical (backed up) information is requested, a message will be sent to the system operator, requesting to load the backup library where the old information is stored.

Options **`42. Display Restored Log`** and **`46. Display Restored Data`** may be useful in this situation.

Retrieving Captured Screens

You can retrieve captured screens by means of an intuitive process and easy-to-use tools for locating the captured data screens and logs. Screens are arranged according to individual capture 'sessions'. Within each session, you can scroll through the screens sequentially or you can use the moveable Capture Menu to move directly to a particular screen or search for screens containing a specific text string.

The Capture Menu also provides commands for displaying the job log and the Audit log entries related to that particular screen and capture session. You can even access the *DSPJOB* command and print the screen directly from the Capture Menu .

Integration with iSecurity

Capture is an integral part of the iSecurity suite and, as such, is designed to work together with other components in order to provide a comprehensive security auditing solution.

Effective security auditing requires several tools to provide a high level of traceability. The **Audit** tools add powerful query and reporting functionality to the IBM i operating system. These logs and reports, together with the visual audit trail provided by **Capture** together provide complete documentation of what is going on in your System i environment.

The visual audit trail also compliments the active security components, Firewall and Screen by showing specifically what a user did to trigger a given event. For example, if a particular user program repeatedly executes SQL commands that are rejected by Firewall , the captured screens can show when and how the user ran that program. This, in turn, helps to determine if indeed a security problem exists or perhaps that the Firewall rule needs to be modified.

Most importantly, Action rules can automatically trigger a capture session whenever a suspicious event occurs. This means that, even if a session is not being recorded, an event such as an attempt to access confidential data or an unusual error condition will turn on the Capture camera without the user's knowledge.

NOTE: While Capture is active, transfer to a secondary job (System Request 1) is not available.

You cannot start a copy to a job that has an active secondary job.

Getting Started

Overview

This chapter guides you through the steps necessary to begin using Capture for the first time. Also covered in this chapter are the basic procedures for configuring the product for day-to-day use.

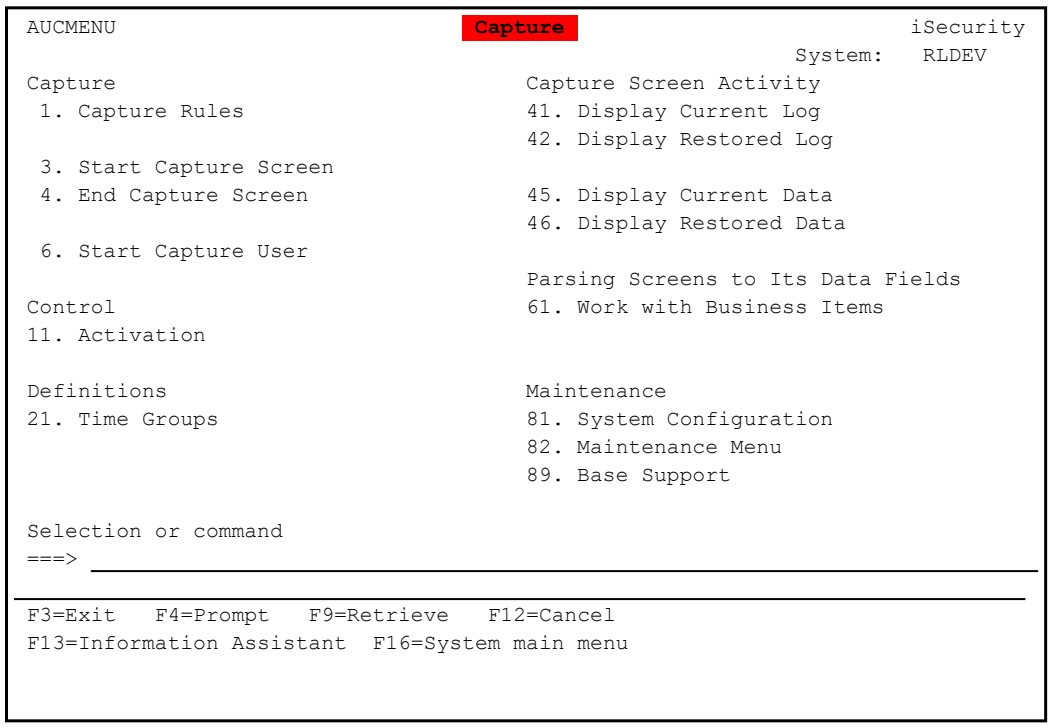
The following is an overview of the initial Capture process.

- Starting Capture for the First Time
- Configuring Capture
- Defining General Definitions
- Defining Capture Retention
- Using Capture for the First Time
- Practical Tutorials for Working with Capture

Starting Capture for the First Time

In order to use this product, the user must have ***SECOFR*** special authority. An additional product password may also be required to access certain functions. The default password is ***QSECOFR*** . We recommend that you change this password as soon as possible, using the procedure described below.

1. To start Capture , type the ***STRCPT*** command at any command line. The main menu appears.



2. Continue to the following procedures.

Configuring Capture

Capture is ready-to-run right out of the box. You should, however, review the default configuration parameters that control important features before using the product for the first time.

There is no “typical” or “optimal” configuration for a security product such as Capture . Each installation or application has different operational criteria and security needs. The auditing requirements for a large manufacturing environment are quite different from those for a bank, a software developer or a service organization.

To work with product configuration, select **81. System Configuration** from the main menu.

The **System Configuration** menu appears.

```
CAPARMR             iSecurity/Capture System Configuration    7/05/20 15:22:13

Select one of the following:

Capture                                  Business Items support
 1. General Definitions                  11. Definitions
 2. Capture Retention
 3. Auto-Split/Compression               Parses captured screen data to
                                         original Display File fields,
 9. Set "Found" Color                    to enable programmatic analysis.


                                         General
                                         91. Language Support
                                         99. Copyright Notice

Selection ===>  __

Release ID . . . . . . . . . . . . . .  05.01 19-08-27    44DE466  520 7459   1
Authorization code . . . . . . . . . .  ############  123          1   S520


F3=Exit    F22=Enter Authorization Code
```

NOTE: After you modify any of the parameters accessible from this menu, the message“**Modify data, or press Enter**”appears upon return to the menu.

You must press **Enter** again in order to save your changes and leave this menu. If you press **F3** , you will lose any changes that you have made.

Defining General Definitions

You can choose to warn users that Capture is monitoring user activity on their workstation by selecting the **Display Warning Message** option. Warning messages appear each time a user signs on for a session. You can define the time to wait at sign on, so as to enable Capture to start before interactive jobs start and also how often to check Capture rules.

1. Select **1. General Definitions** from the **System Configuration** menu (*STRCPT > 81*). The **Capture General Definitions** screen appears.

```
                        Capture General Definitions         23/04/25 09:58:53

Type options, press Enter.

Display Sign On warning message . .  2     0=No message
                                           1=Yes:"Session might be recorded"
                                           2=Yes:"Session will be recorded"
Capture can be configured to warn users that their session activity
may be recorded. The message is displayed at signon, for several seconds.
To modify these messages, compile *DSPF SMZC/CASOURCE AUCSGNFM into SMZCDTA.
"Session might be recorded" appears always.
"Session will be recorded" appears only if recording is starting by the rules.

Maximum seconds to wait at sign on.   __0  0=*NOWAIT
A batch job has to start to enable capture. This parameter ensures that all
frames will be captured, including the first ones.

Minutes between checks  . . . . . .  ___1  999=Check once only
                                           998=Never check (If Capture for AOD)
Rules are checked for each job when it starts, and periodically.

F3=Exit   F12=Cancel
```

The body of the screen contains these fields:

Display Sign On warning message

Capture can be configured to warn users that their session activity may be recorded. The message is displayed at signon, for several seconds. To modify these messages, compile ***DSPF SMZC/CASOURCE AUCSGNFM** into SMZCDTA. Possible Values include:

- **0**: No message
- **1** =Yes: "Session **might** be recorded"

- **2** =Yes: "Session **will** be recorded"

Maximum seconds to wait at sign on

The number of seconds that the batch that starts capture has to wait when starting. This parameter ensures that all interactive screens will be captured, including the first ones. Enter a value from **1-999**, or **0** for ***NOWAIT**.

Minutes between checks

All rules are checked when they start. This parameter controls how frequently, in minutes, they are checked afterward. Possible values are:

- The time in minutes
- **999**: Check once only
- **998**: Never check

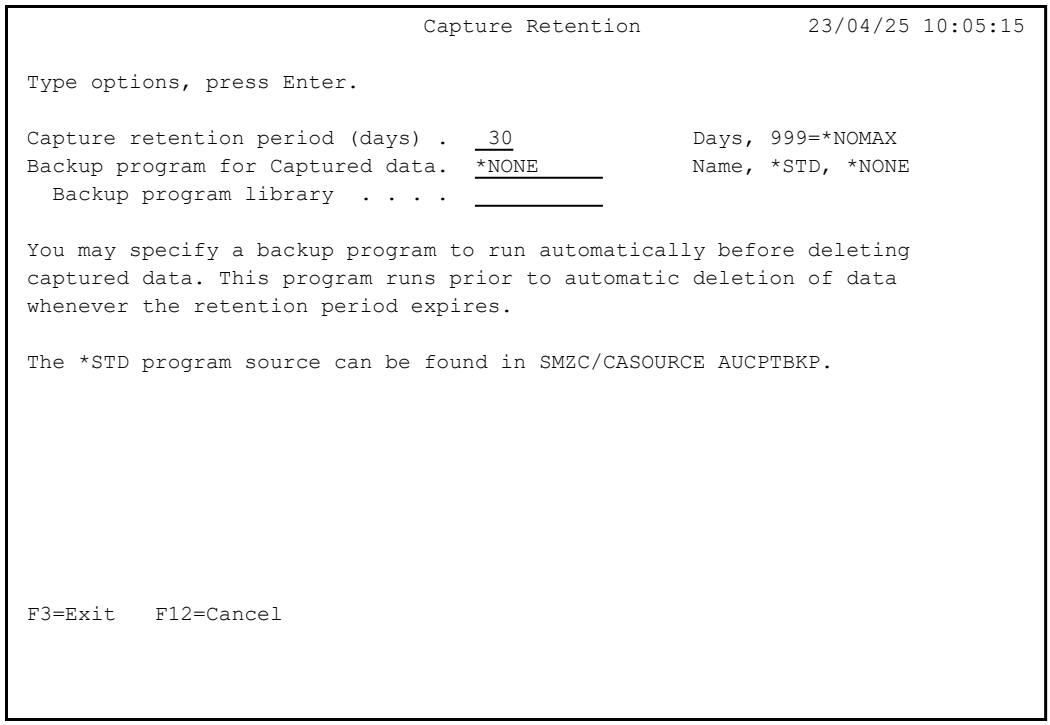
2. Enter your required parameters and press **Enter** to continue.

Defining Capture Retention

You can define the length of time that captured screens are retained on-line and also specify a backup routine to store archived captures off-line automatically after the designated retention period has expired. In order to ensure compliance with data retention requirements in certain industries, it is highly recommended that you store archived captures on external media, such as tape or optical media.

Captured Data Retention Period

1. Select **2. Capture Retention** from the **System Configuration** menu (*STRCPT > 81*). The **Capture Retention** screen appears.



The screen contains the following fields:

Capture retention period (days)

The number of days that captured information is retained. Set it to **0** for ***NOMAX**.

Backup program for Captured data

The program that backs up the captured data. Possible values are:

- A program that your organization provides
- ***STD**: The default backup program provided with Capture, SMZC/CASOURCE AUCPTBKP
- ***NONE**

Backup program library

The name of the library that contains the backup program.

2. Enter your required parameters and press **Enter** to continue.

Setting Auto-Split and Compression

Select **`3. Auto-Split/Compression`** from the iSecurity/Capture System Configuration screen (*STRCPT > 81*). The Capture Auto-Split/Compression screen appears.

```
                        Capture Auto-Split/Compression       23/04/25 10:23:12

Type options, press Enter.

Split/Compression runs every  . . .   1  Days.     9999-*NOMAX
Recommended value is 1.

Split/Compression moves captured data to libraries named SMCPyymmdd.
making it convenient to backup/restore old data, as needed.
Data in these libraries is kept compressed. Capture works transparently
with these libraries.

Capture disk space consumption is modest. Screens are stored in character
mode, and are stored compressed, saving up to 85% of the original size.
As a rule of thumb, consider 1300 screens as consuming about 1MB.

The Capture retention period is specified in days, and is used to check which
of these libraries should be deleted.



F3=Exit   F12=Cancel
```

Define the **`Split/Compression runs every`** field and press Entry.

The recommended value is **1**. Each time the process runs, screen data is moved to a separate library named SMCPyymmdd, where yymmdd corresponds to the date. The data is compressed automatically.

This feature allows:

- Efficient disk usage — up to 85% space savings.
- Seamless integration — Capture accesses current and archived data transparently.
- Easy maintenance — archived libraries can be backed up or restored individually.

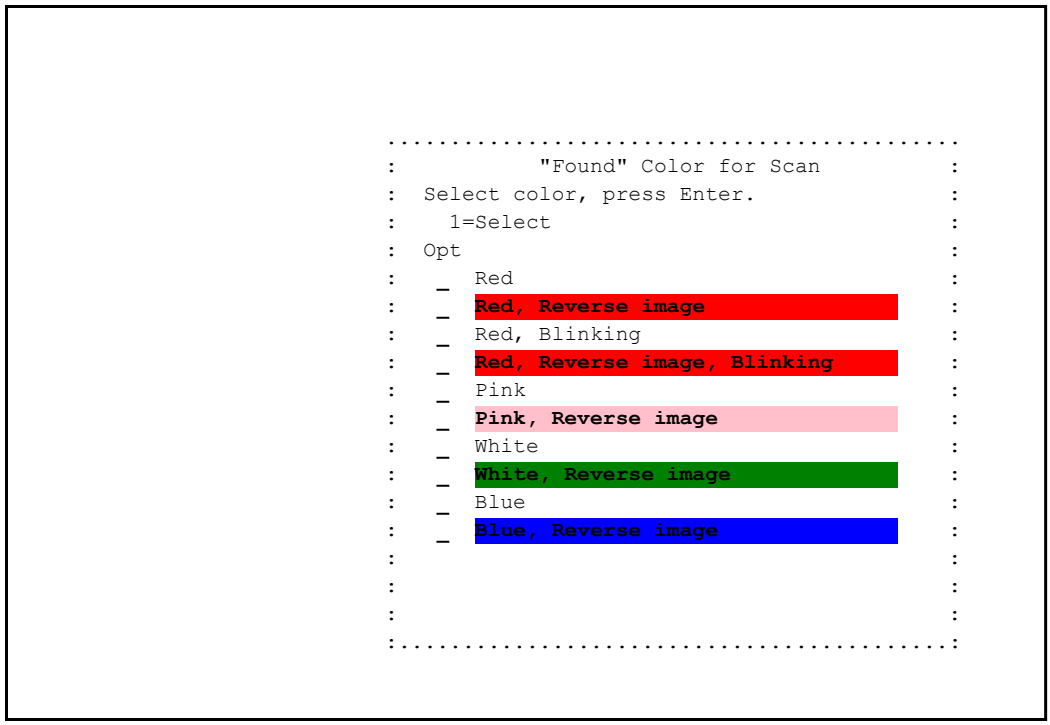
As a guideline, approximately 1300 screens occupy around 1 MB of space when compressed.

The retention period setting (defined in days) is used to determine which SMCPyymmdd libraries are automatically deleted.

Setting Highlight Color

You can specify a specific color to highlight key words specified in a free-text search of captured screens. All instances of the key words will appear in this color on the captured screen.

Select **`9. Set "Found" Color`** from the **`System Configuration`** menu (*STRCPT > 81*). The **`"Found" Color for Scan`** screen appears.



Select the color and press **Enter**.

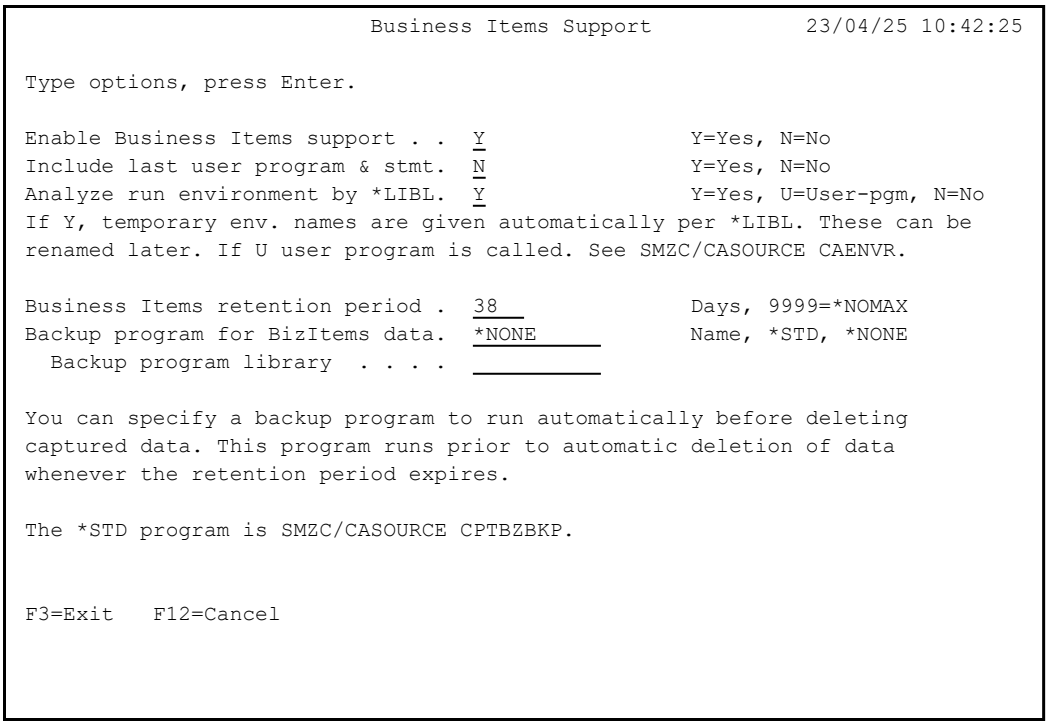
Auto-Save Definition

You can define a period of time in days after which all Capture files will automatically be saved.

Defining Business Item Support

You can define the Business Item Support parameters, such as if Business Items Support is enabled, for how long to retain Business Items, automatic backups of Business Items, and so on.

1. Select **11. Definitions**from the **System Configuration** menu (*STRCPT > 81*). The **Business Items Support** screen appears.



The body of the screen contains these fields:

Enable Business Items support

Y=Yes

N=No

Include last user program & stmt

Y=Yes

N=No

Analyze run environment by *LIBL

Y=Yes. Temporary environment names are allocated automatically for the *LIBL and can be renamed later.

U=User-pgm. User-written program, such as SMZC/CASOURCE CPTBZBKP.**U**: User-written program, such as SMZC/CASOURCE CPTBZBKP.

N=No

Business Items retention period

The number of days that captured information is retained. Set it to **9999** for ***NOMAX**.

Backup program for BizItems data

The program that backs up the Bizitems data. Possible values are:

- A program that your organization provides
- ***STD**: The default backup program provided with Capture, SMZC/CASOURCE AUCPTBKP
- ***NONE**

Backup program library

The name of the library that contains the backup program.

2. Enter your required parameters and press Enter to continue.

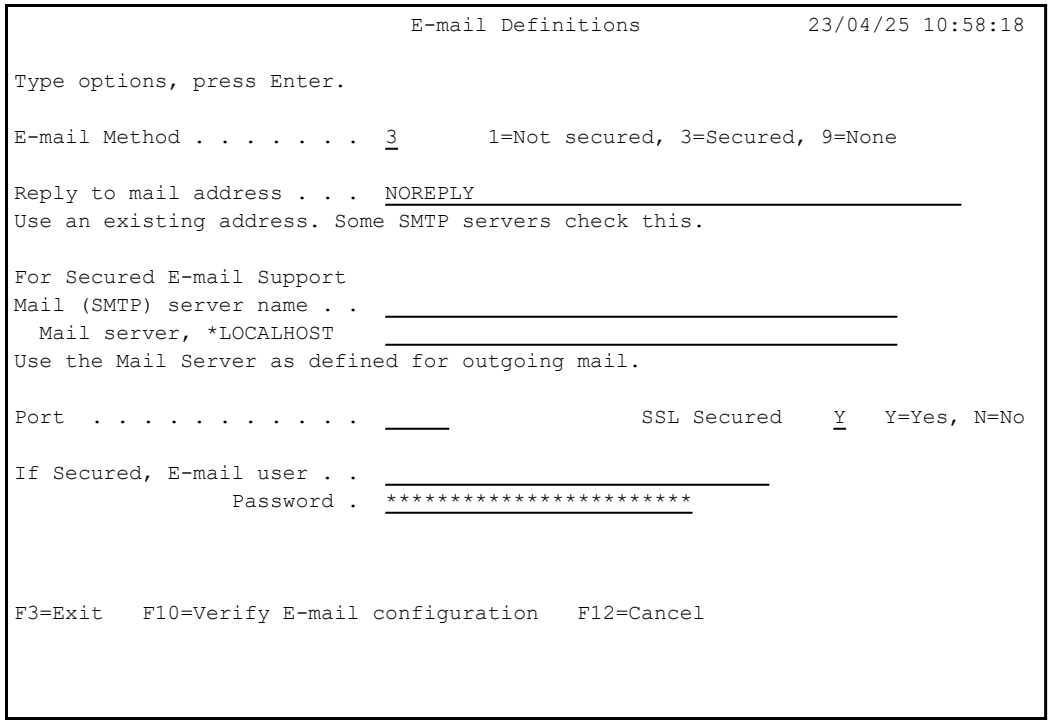
Email Definitions

Before Capture can send e-mail messages, your System i must be properly configured to end e-mail and at least one e-mail user must be defined in the Directory Entries table (*WRKDIRE*). This procedure can be quite complex and is beyond the scope of this manual.

Refer to the appropriate IBM documentation for more details on these procedures.

To configure Capture to send e-mail messages, perform the following steps:

1. Select **2. Email Definitions** from the **BASE Support** menu (*STRCPT > 89*). The **E-MailDefinitions** screen appears.



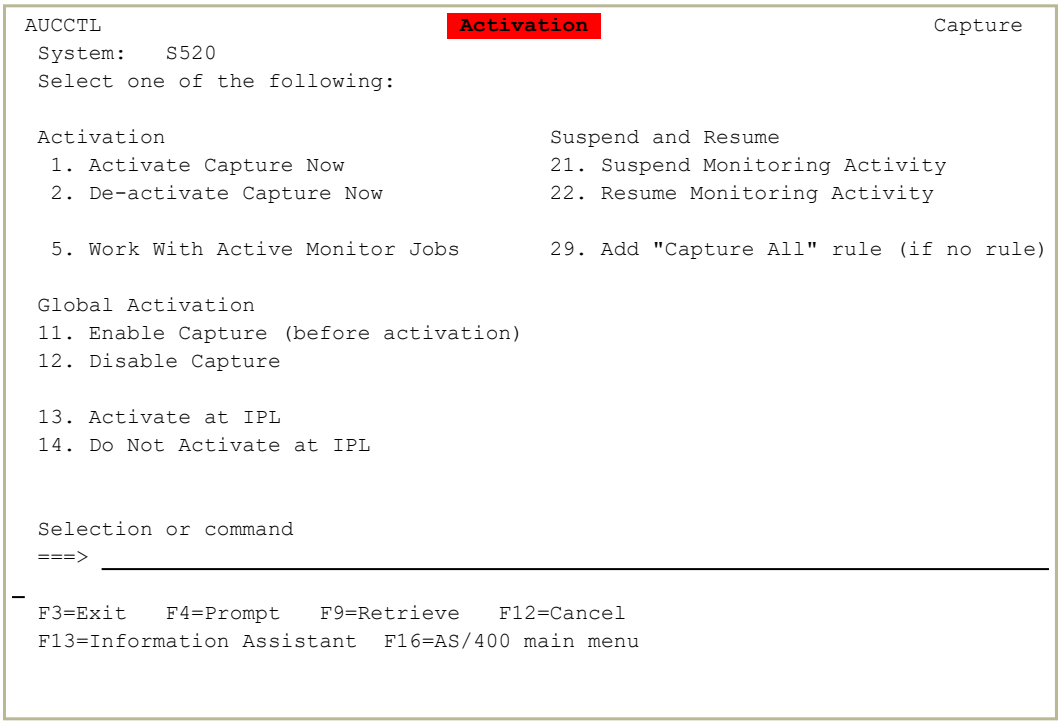
2. Type options and press **Enter**.

NOTE: For more information about configuring email settings, refer to the Email Definitions in the iSecurity Installation and Base Support user guide.

Activating Capture

You must activate the Capture monitor in order to enable the automatic capture features. It is strongly recommended that you configure Capture to activate automatically each time an IPL occurs on your IBM i.

To work with activation, select **11. Activation** from the main menu (*STRCPT*). You should perform each of the following activities prior to using Capture for the first time.



Local Activation

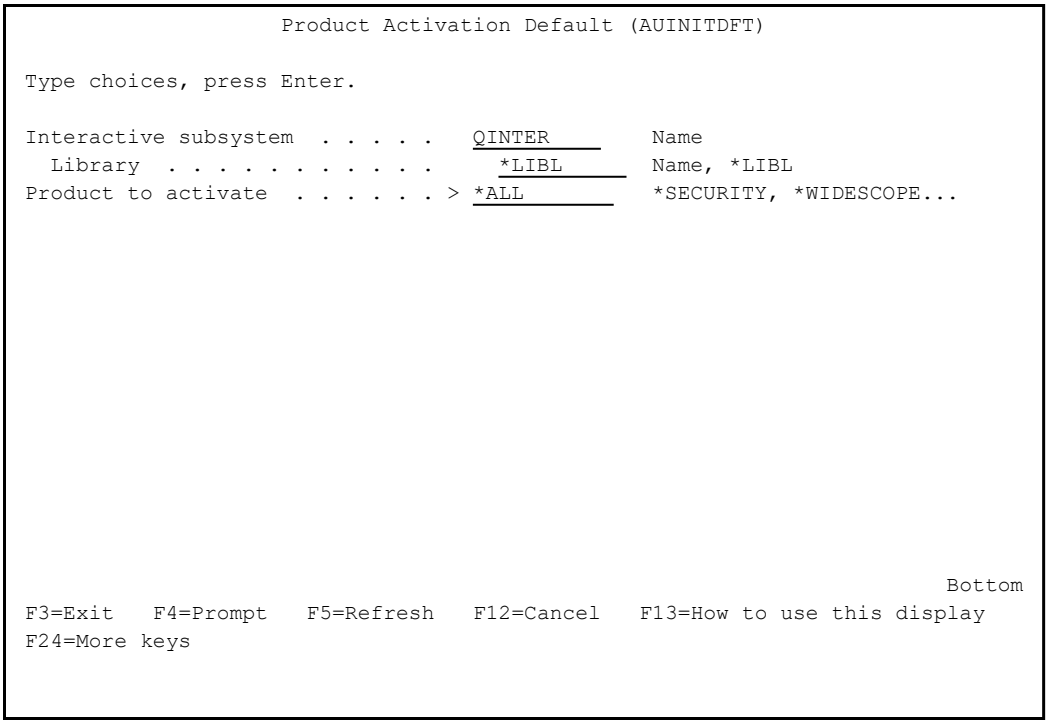
- To activate the Capture monitor, select **1. Activate Capture Now** from the **Activation** menu.
- To de-activate the Capture monitor, select **2. De-activate Capture Now** from the **Activation** menu.

Global Activation

Manual Activation

To enable Capture :

1. Select **11. Enable Capture (before activation)** from the **Activation** menu (*STRCPT > 11*). The **Product Activation Default** screen appears.



The body of the screen contains these fields:

Interactive subsystem

The name of the subsystem for which you want to enable Capture . The default value is **QINTER**.

Library

The name of the library of the subsystem for which you want to enable Capture. The default value is **LIBL**.

Product to activate

The products for which you are activating Capture. Possible values include:

- ***SECURITY:** Enable Capture for all Raz-Lee security products.
- ***WIDESCOPE:** Enable Capture for all Raz-Lee security products.
- ***ALL:** Enable Capture for the entire subsystem.
- ***NONE:** This parameter should only be *NONE when you are disabling Capture .

2. Enter the required parameters and press Enter . Capture is enabled.

To disable Capture :

1. Select **12. Disable Capture** from the **Activation** menu (*STRCPT > 11*). The **Product Activation Default** screen appears, as shown for Activating Capture.

2. Set the **Product to Activate** field to ***NONE**.

3. Press **Enter**. Capture is disabled.

Automatic Activation

- To activate Capture automatically each time an IPL occurs, select **13. Activate at IPL** from the **Activation** menu (*STRCPT > 11*).
- To cancel automatic activation, select **14. Do Not Activate at IPL** from the **Activation** menu (*STRCPT > 11*).

Verifying that the Capture Monitor is Active

Select **`5. Work With Active Monitor Jobs`** from the **`Activation`** menu (*STRCPT > 11*) to view the Capture monitor subsystem. The **`Work with Subsystem Jobs`** screen appears. It should display several lines similar to those on the screenshot below.

```
                          Work with Subsystem Jobs                   S520
                                                          07/05/20  12:43:25
Subsystem  . . . . . . . . . . :   ZCAPTURE

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  Job         User        Type     -----Status-----  Function
__   AUCAP#MON   SECURITY7P  AUTO     ACTIVE            DLY-60
__   AUCAP#QSH   SECURITY7P  AUTO     ACTIVE            PGM-CAQSHR
__   AUCAP#SR1   SECURITY7P  AUTO     ACTIVE            PGM-AUCRUNR
__   AUCAP#SR2   SECURITY7P  AUTO     ACTIVE            PGM-AUCRUNR
__   AUCAP#SR3   SECURITY7P  AUTO     ACTIVE            PGM-AUCRUNR
__   AUCAP#SR4   SECURITY7P  AUTO     ACTIVE            PGM-AUCRUNR
__   QJSCCPY     SECURITY7P  BATCH    ACTIVE            PGM-QSCCPY
__   QJSCCPY     SECURITY7P  BATCH    ACTIVE            PGM-QSCCPY
       More...
Parameters or command
===> ____________________________________________________________________
F3=Exit      F4=Prompt   F5=Refresh   F9=Retrieve   F11=Display schedule data
F12=Cancel   F17=Top     F18=Bottom
```

Capture All Rule

If you have not set any capture rules, you can set a general rule to capture all activity.

1. Select **`29. Add "Capture All" rule (if no rule)`** from the **`Activation`** menu (*STRCPT > 11*). The rule is created.

Practical Tutorials for Working with Capture

Defining Your First Capture Rule

You must define Capture rules in order to begin capturing user screens automatically. In a new installation there are no default rules, therefore, screen captures will not occur until you define some rules. The following steps will guide you through the process of defining your first Capture rule. This example will capture all screen activity for the security officer (*QSECOFR*). The purpose of this exercise is simply to introduce you to the rule definition process. A detailed explanation of the various options can be found in Rules.

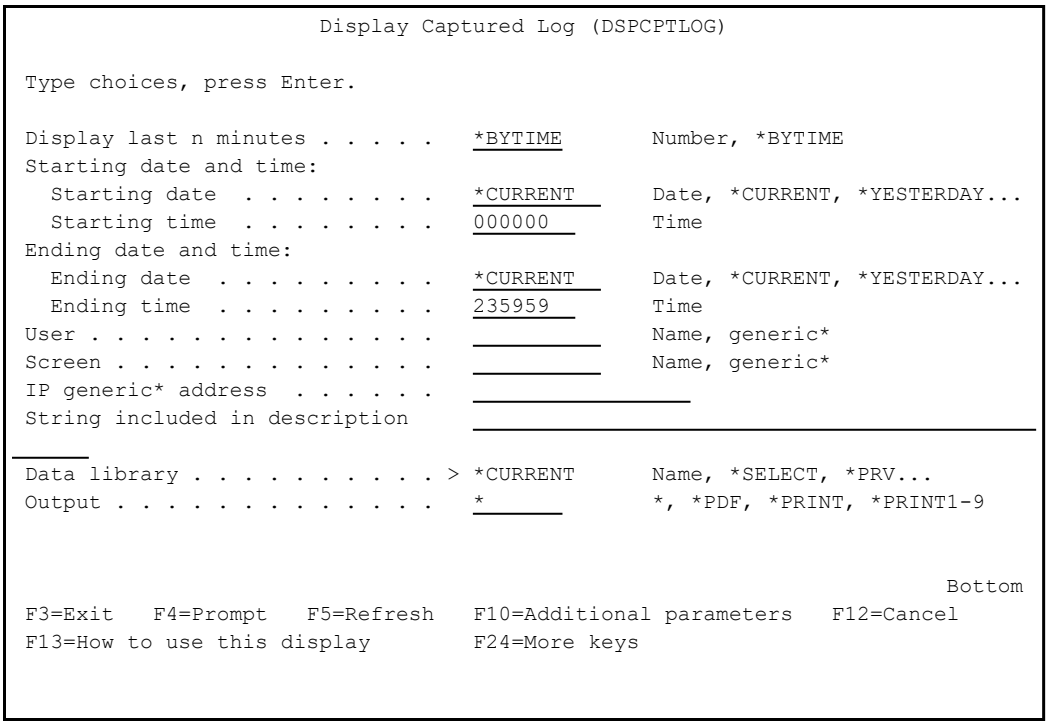
1. Select **1. Capture Rules** from the main menu. The **Work with Capture Rules** screen appears.
2. Press **F6** to add a new rule. The **Add Rule** screen appears.
3. Type *'10'* in the **Sequence** field to cause this rule to be executed first.
4. Type a meaningful, descriptive text in the **Description** field.
5. Type '**ALL*' in the **IP Address** field. This indicates that the rule applies to all incoming addresses.
6. Type '*0.0.0.0*' in the **Subnet Mask** field. The subnet mask is required even though the rule applies to all IP addresses.
7. Type a user profile, a group or a special authority in the **User*, Special Auth,LMTCPB** field. This causes the rule to apply only to this user profile.
8. Type a '*Y*' in the **Copy screen** and **Log CL program commands** fields. This changes the job attributes to *LOGCLPGM(*YES)* and causes Screen to save screens, the job log and the CL command log for this user.
9. Press **Enter** to save the rule.
10. Press **F3** to exit the **Work with Capture Rules** screen.
11. Sign on to your IBM i system as the *QSECOFR* and perform some routine tasks. Capture will record your activity for later review.

Viewing Your First Captured Screens

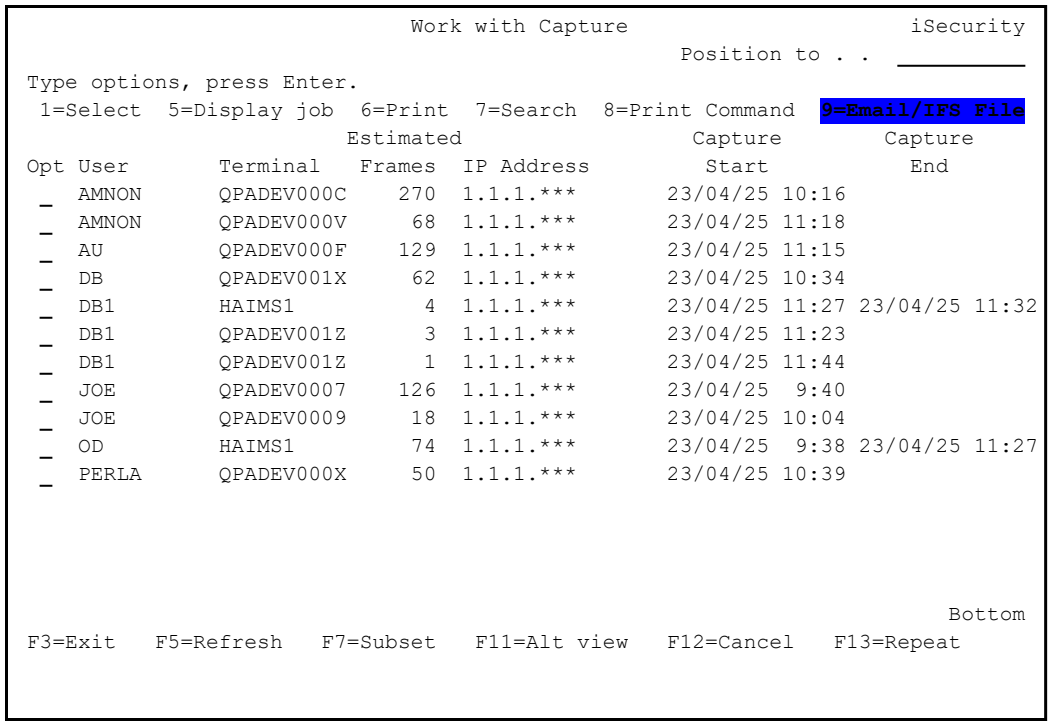
When Capture has been activated and rules created, the system begins saving screen captures and logs immediately according to the rule parameters. You can view captured screens at any time after a capture session begins.

In this exercise, you will view several of the screens captured by the rule that you defined in the previous tutorial.

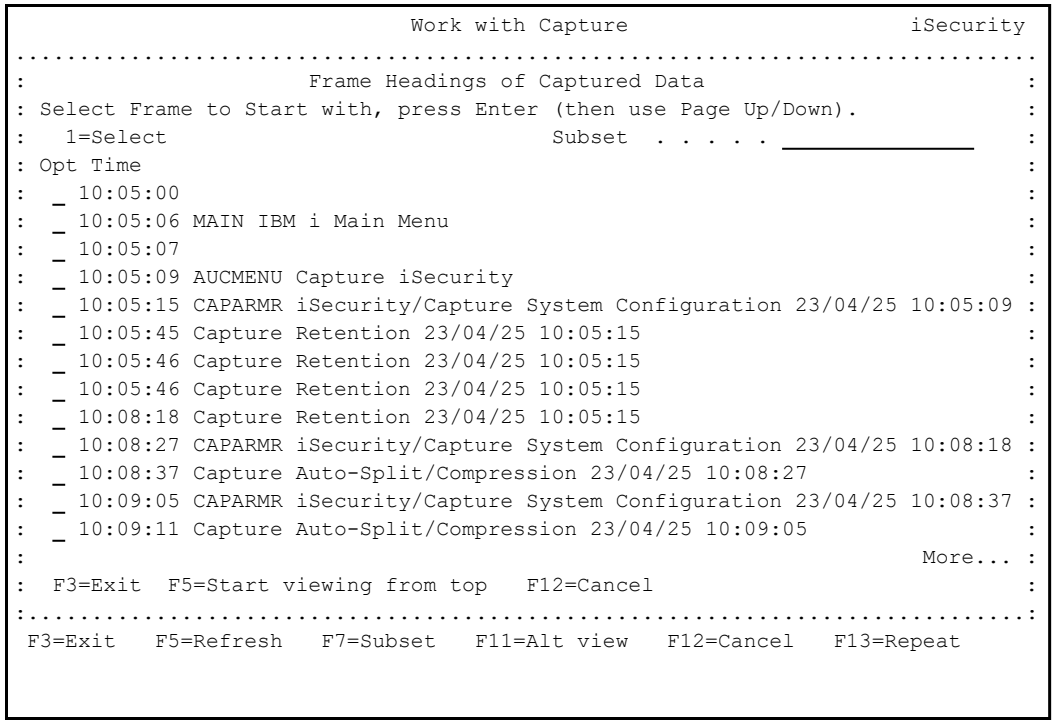
1. Select **41. Display Current Log** from the main menu (*STRCPT*). The **Display Captured Log** screen appears. This screen allows you to filter and display only those capture sessions that you wish to work with.



2. Press **Enter** to display the capture sessions for the current day. The **Work with Capture** screen appears allowing you to select a specific capture session to view.



3. Type **1** to the left of the line showing the user. The **Frame Headings of Captured Data** pop-up window appears.

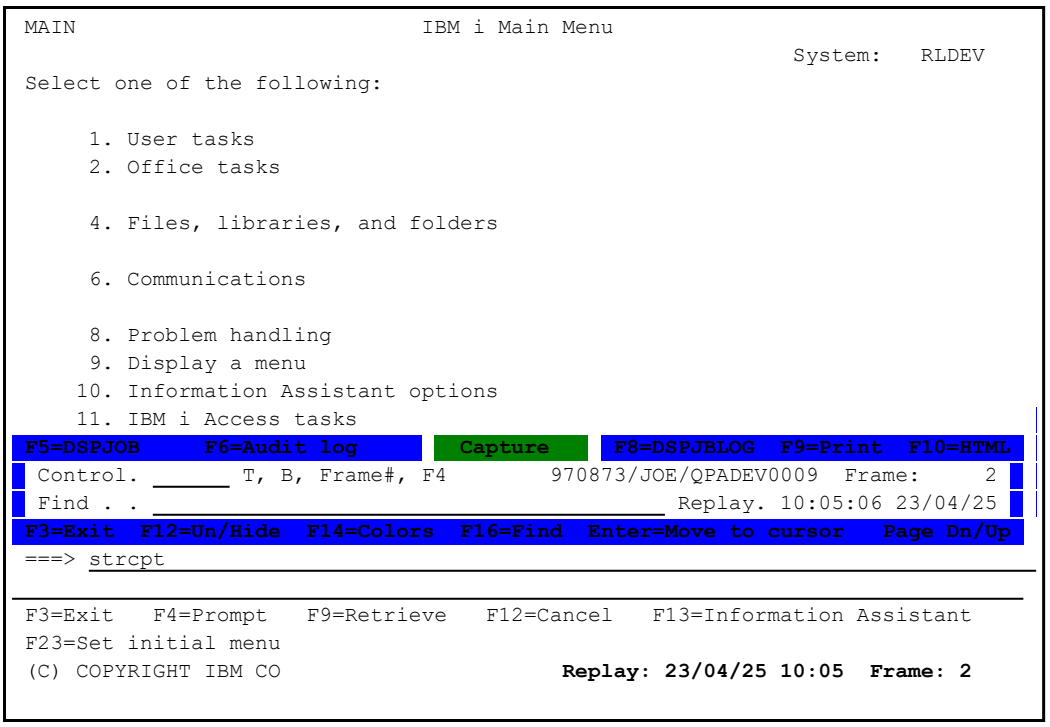


You can choose to review captured screens using one of the following methods:

Type **1** in the **Opt** field next to a specific entry to display that screen.

Press **F5=Start viewing from top** to display the entire capture sequence from the beginning. This option eliminates the need to select each screen individually.

The **Replay** screen now appears showing the first screen captured in the session. A floating **Capture** menu appears by default on all **Replay** screens. Press **F12** to hide the **Capture** menu. Press **F12** again and the **Capture** menu re-appears.



Press **Page Down** and **Page Up** to scroll through the captured screens for this session. In the example above, the user JOE starts iSecurity Capture.

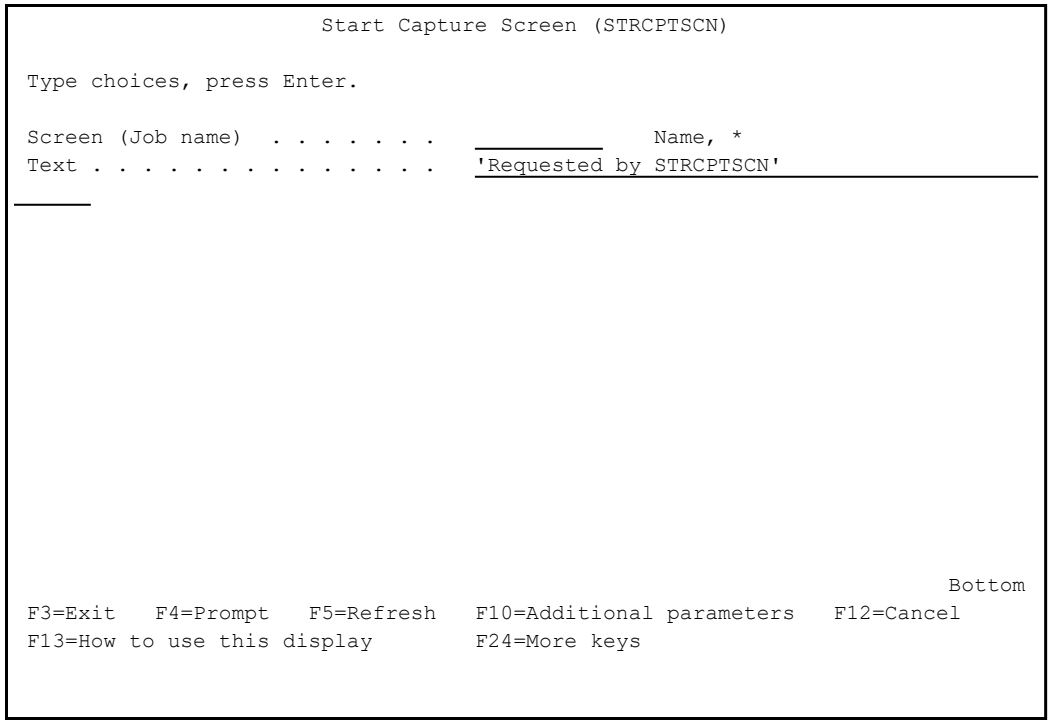
Click at the top of the screen and press **Enter=Move to cursor** . The **Capture** menu moves to the top, revealing the data hidden underneath.

Type '*B*' in the **Control** field inside the **Capture** menu. The last screen captured in this session appears. Type '*2*' in the **Control** field. The second screen is displayed. You get the picture.

Press **F3** to exit the capture session. Press **F3** again to return to the main menu.

Start Capture Screen

Select **`3. Start Capture Screen`** from the main menu (*STRCPT*). The **`Start Capture`** screen appears. This screen allows you to immediately start capture sessions according to the screen (session/terminal) or the job name.



In order to end this action, Select **`4. End Capture Screen`** from the main menu (*STRCPT*) and insert the screen or job name that you wish to immediately stop capture.

Capture Rules

Capture uses rules to initiate capture sessions automatically according to one or more**Trigger criteria** covering different situations. Additionally, you can also use Action rules to trigger capture sessions based on events detected by other iSecurity components, such as Audit and Firewall .

Overview of Capture Rules

Strategic Approach

An effective audit trail is composed of data from several sources. Capture is most effective when used to supplement evidence collected from other security auditing tools (such as Audit) and network security tools (such as Firewall). Logs and reports generated by these tools provide an extensive written audit trail for virtually all security and system events. It is not necessary to have a visual audit trail for every event detected by these tools. However, a visual audit trail is highly appropriate for certain specific events and situations

Capture is provides you with tools that allow you to capture only those sessions where a visual audit trail is appropriate. You can define rules that trigger automatic captures according to a variety of conditions, such as time, user profile, IP address, and so on. Capturing all sessions at all times is **not recommended** because it may consume excessive system resources and contribute to performance degradation, especially in large organizations.

You should define capture rules to create a visual audit trail only when appropriate according to your security policies, regulatory environment, and operational requirements. The following paragraphs present a few examples of situational strategies.

Transaction Auditing in High Volume Environments

In environments with high transaction volumes, such as banking, retail, e-business, distribution, and so on, it is unrealistic to capture a lot of screen activity. In such cases, it would be more appropriate to capture a small sample of transactions for review. For example, you could define rules to

capture input activity by various users for limited time periods on a rotating basis. Should subsequent review uncover a high error rate or suspicious activity, you should create rules to capture a larger sample for these users.

Alternatively, you may wish to capture all or most activity of a particularly sensitive nature such as users responsible for offshore bank transfers, workstations dedicated to classified data or activity occurring outside of normal working hours.

Security Breaches and Suspicious Activity

Suspicious activity may be uncovered by auditing captured screen samples or by other security tools. In such cases, it is appropriate to create a visual audit trail for the particular user, workstation or IP address involved. Captured screens and command logs can supply crucial forensic evidence for legal proceedings or disciplinary action.

You can also use Action rules to initiate a capture session automatically upon detection of a suspected security breach or other suspicious activity.

Error Tracking and Debugging

Technical support departments can use Capture to provide visual evidence of specific user activities occurring immediately prior to error conditions. When a user reports an error condition, technical support personnel can initiate a manual screen capture prior to asking the user to replicate the condition. Programmers can initiate capture sessions by defining rules for specific users or test workstations while debugging new programs or features. They can also use Firewall rules to trigger a capture session automatically whenever a specific program or command is executed.

Trigger Criteria

Capture rules consist of Trigger criteria that, when true, initiate capture sessions automatically. A rule may contain several criteria, all of which must be true in order to trigger a capture session. Trigger criteria allow you to initiate capture sessions only when specifically required. Below are brief explanations of the various trigger criteria.

IP Address

You can initiate a capture session for a connection originating from a specific IP addresses or for a range of IP addresses with the subnet mask. Additionally, you can use the Boolean **Not** field value to specify trigger criteria for all IP addresses **except** those specified in the rule.

For example, if you wish to capture all sessions that originate outside your local area network, use the IP address and subnet mask to define the range of valid addresses in your LAN and then select the Boolean **Not** field value.

Day and Time (Time Groups)

You can initiate a capture session automatically at specific times and on specific days by using predefined sets of day and time combinations called **Time Groups** . After it is defined, a given Time Group may be used in any number of rules. If you change the definition of a Time Group, the change is incorporated automatically into all rules using that group. Additionally, you can use the **Boolean Not** field value to specify trigger criteria for activity occurring outside the times specified in the rule.

For example, if you wish to capture activity for specific users working on the night shift, define a Time Group covering the days and working hours for the night shift and then specify this Time Group as a trigger criterion in your rules.

Terminal Session or Job

You can initiate a capture session for a specific terminal session by specifying the terminal name for that session. This is useful when tracking suspicious activity at a specific workstation.

You can also use the generic indicator ' ***** ' at the end of a text string to apply a trigger criteria to all terminal sessions beginning with the specified text string. For example, type ' ***QPADEV**** ' to start a capture session for sessions beginning with ' ***QPADEV*** '.

User Profile

You can initiate a capture session for a specific user. This is useful when tracking activity by specific users irrespective of the workstation or session name.

You can also use the generic indicator ‘ ***** ’ at the end of a text string to apply a trigger criteria to activity for all user profiles beginning with the specified text string. For example, type ‘ ***J**** ’ to start a capture session for users beginning with the letter ‘ ***J*** ’.

Subsystem

You can initiate a capture session for jobs initiated under a particular subsystem. For example, if all of your payroll management applications run under a specific subsystem, you can capture all sessions using the payroll system with a single rule.

End Capture Session

You can specify a fixed time and date for the capture session to end. By default, a capture session ends only when the terminal session ends. This trigger criterion overrides the default.

Working with Time Groups

Time groups allow you to apply pre-defined sets of time-based criteria to capture rules without having to define complex criteria for each rule.

Time group filters can be:

- Inclusive – Include all activities occurring during time group periods
- Exclusive – Include all activities not occurring during time group periods

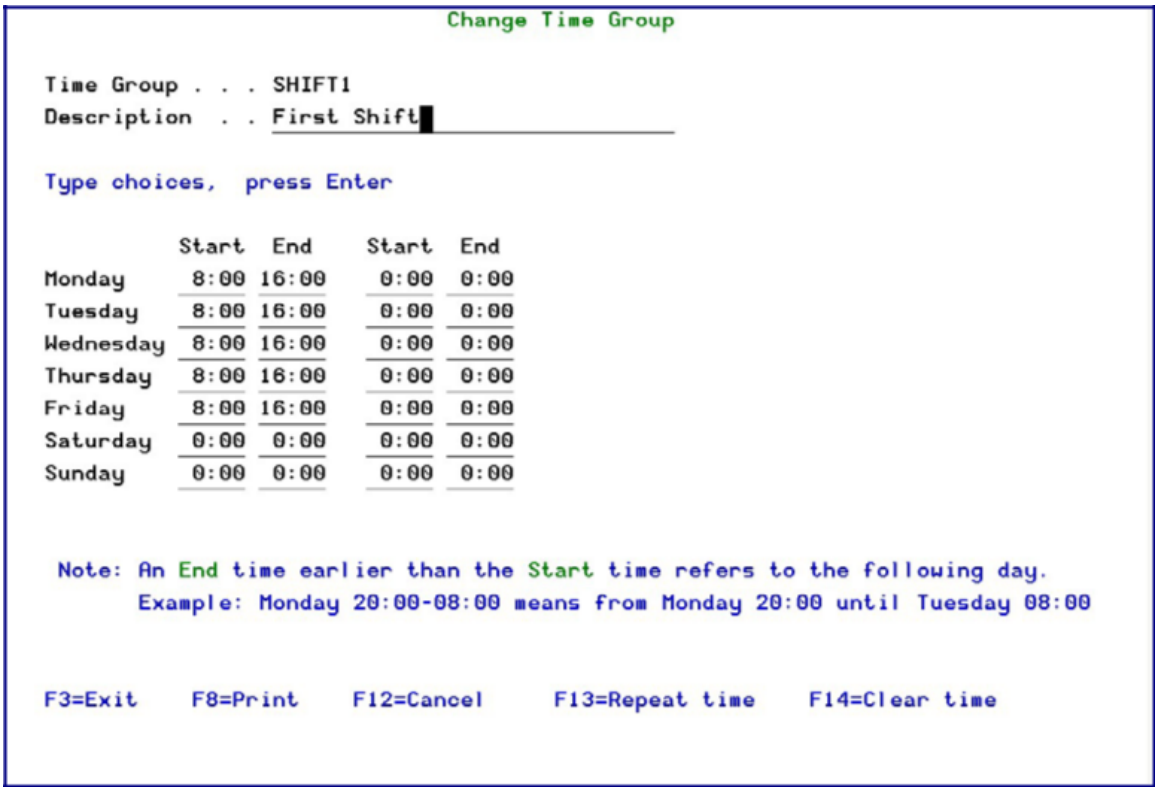
For example, you may define rules to track the activities of certain employees during normal working hours and others during nights and weekends. You can accomplish all of this with just one time group using the following guidelines.

1. Create a time group that defines normal working hours for each day of the week.
2. Use an inclusive time group filter (activities occurring during the time group periods) for each rule covering activity during normal working hours.
3. Use an exclusive time group filter (activities not occurring during the time group periods) for each rule covering activity outside of normal working hours.

Defining Time Groups

To define a Time Group, perform the following steps:

1. Select **21. Time Groups** from the Main menu. The **Define Time Groups** screen appears.
2. Select an existing time group to modify or press **F6** to create a new time group.
3. Enter the starting and ending times for each day of the week. Press **Enter** when finished.



The body of the screen includes these fields:

Description

A text description of the time group

Start and End

The starting and ending times for each group on that day, in 24-hour notation.

NOTE : If the ending time is less that the starting time, the period is considered to roll forward to the next day. For example, the period **20:00 – 08:00** extends from 20:00 until 08:00 the next morning.

The screen uses these function keys, in addition to the usual ones:

F13 (Shift-F1)

Copy starting and ending times from the cursor line to all subsequent days.

F14 (Shift-F2)

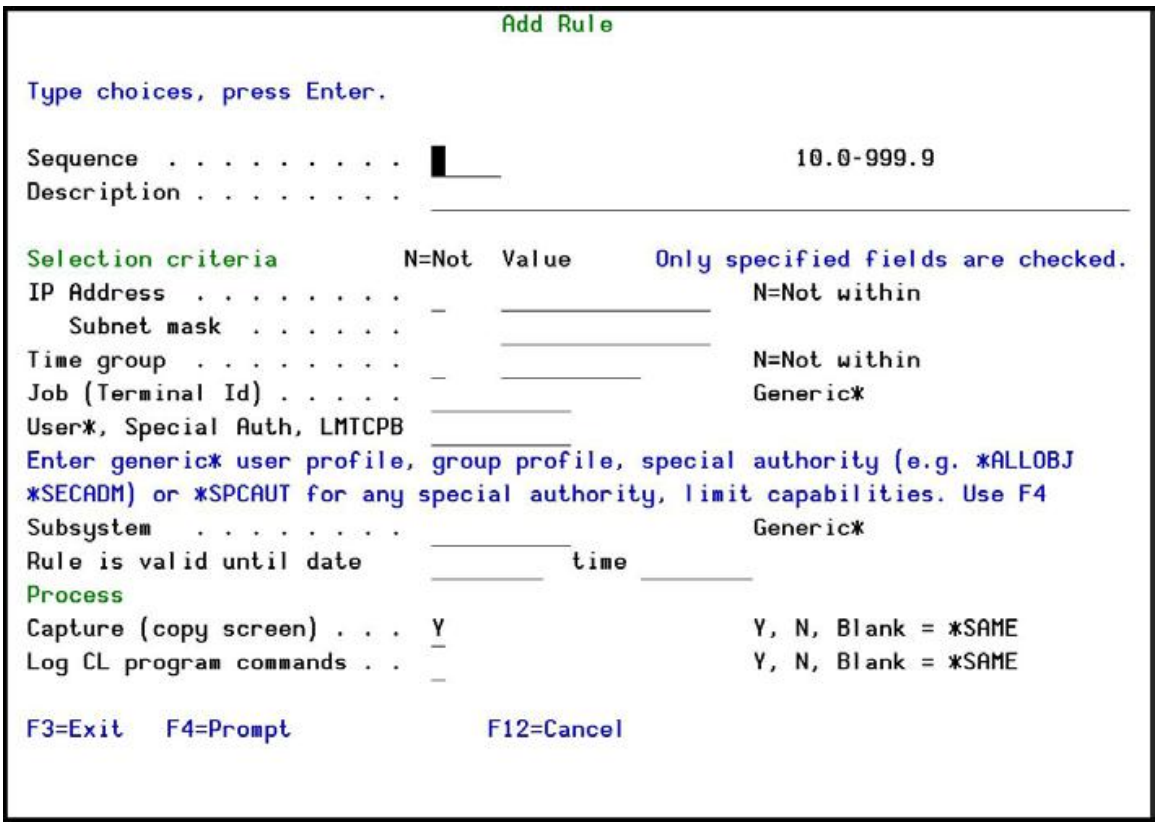
Erase the starting and ending times for the cursor line and all lines below it.

Defining Rules for Automatic Capture Sessions

This section describes the procedures and data entry screens for defining rules that initiate capture sessions automatically.

To create or modify a rule:

1. Select **1. Capture Rules** from the **Main** menu. The Work with Capture Rules screen appears.
2. Press **F6** . The **Add Rule** screen appears. Leave a field blank if there are no trigger criteria for that item.



The body of the screen includes these fields:

Sequence

The sequence number for this rule. Rules are processed in sequential order according to this value.

Description

A text description of this rule.

IP Address

An IP address in decimal notation. Type '**N**' in the Not field to apply this rule to all IP addresses other than that which is specified.

- ***ALL**: All IP addresses
- ***LCL**: All local 5250 (Twinax) terminal connections

Subnet mask

Subnet mask specifying IP address ranges. Press F4 for help.

Time group

Time group that contains the times during which this rule will be applied. Press F4 to select from list. Type '**N**' in the Not field to apply this rule to any time outside of that specified in the group.

Job (Terminal ID)

Terminal session name (This is also the job name.)

User*, Special Auth, LMTCPB

IBM i (OS/400) user profile or profile group

Subsystem

Subsystem in which the job is running

Rule is valid until ...

Date and time when the capture session is to end. If Blank, the rule is valid until the end of the terminal session.

Copy screen

Y: Capture and retain user screens

Keep CL commands

Y: Changes the job attributes to *LOGCLPGM(*YES)* .

3. Enter your trigger criteria and press **Enter** .

Manually Initiating Capture Sessions

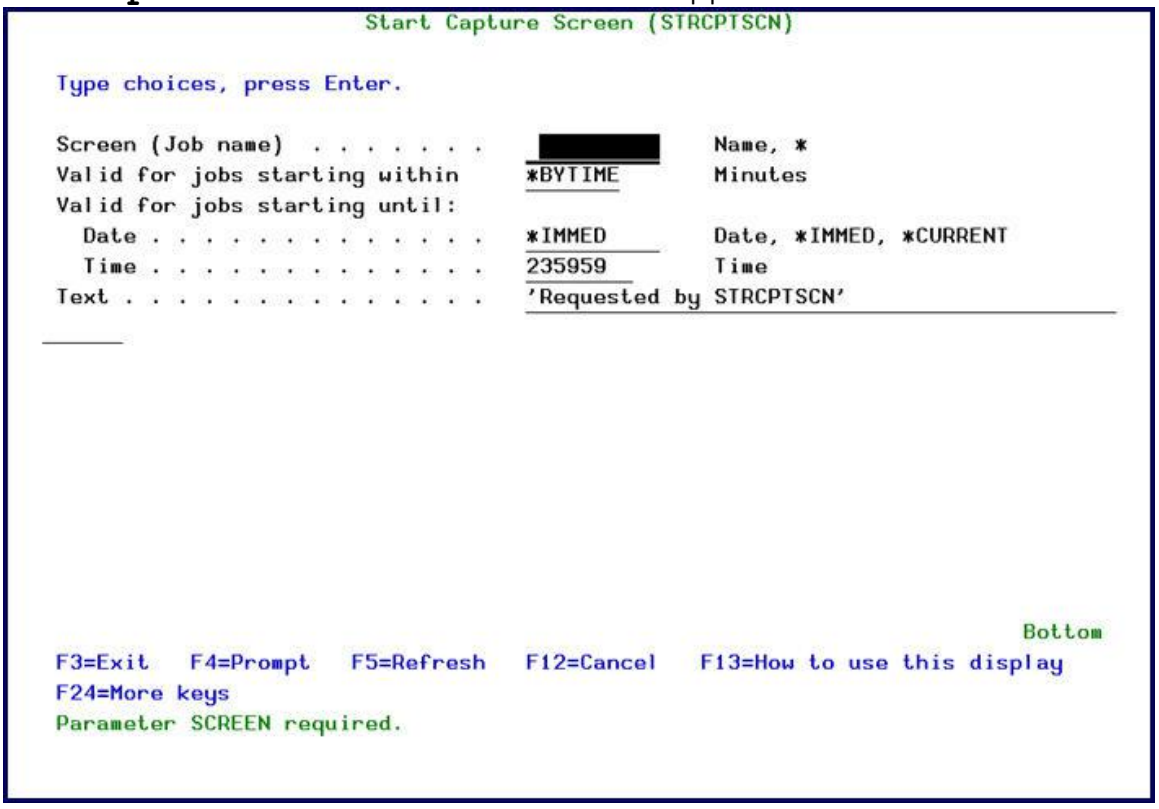
You can initiate a capture session either from the main menu or from any command line. This option is useful if you discover a security breach or suspicious activity. Technical support personnel may also wish to initiate a capture session manually while troubleshooting error conditions or debugging applications.

Manual capture sessions may be started for any active job. You must know the job name (terminal session name) in order to perform this action. Use the ***STRCPTSCN*** command to obtain the job name.

Starting a Capture Session from Capture

To manually start a capture session:

1. Select **`3. Start Capture Screen`** from the main menu. The **`Capture Screen`** command screen appears.



The body of the screen includes these fields:

`Screen (Job name)`

Terminal session name (this is also the job name)

Valid for jobs starting within

Enter the number of minutes

Valid for jobs starting until

Enter the date and time after which this capture session will end. Press **F4** for options.

Text

Description of this capture session

2. Enter parameters as described in the following table. Enter your trigger criteria and press **Enter** .

Starting a Capture Session from the Command Line

To start a capture session from outside Capture :

1. Enter the *STRCPTSCN* command from any command line. The **Capture Screen** command screen appears.
2. Enter parameters as described in "Starting a Capture Session from the Command Line" above

NOTE: In case the command *STRCPTSCN* is used for the same screen it is running in, no initial *GRINIT* is required.

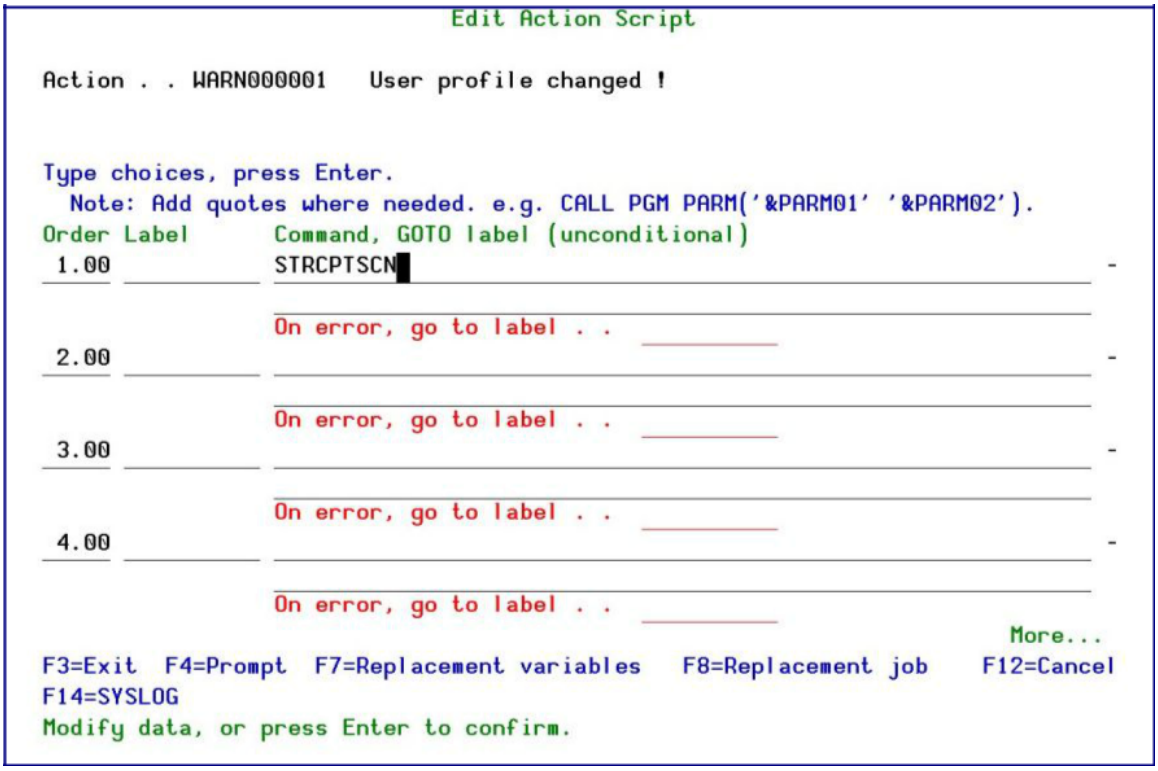
Using Action to Trigger a Capture Session

You can use an Action command script to initiate a capture session automatically upon detection of a particular event, such as suspicious activity or an error condition. This powerful feature allows you to capture user activity silently and invisibly whenever these conditions are detected by Audit real time auditing or if a violation of Firewall rules occurs.

Real time auditing must be active at in order to take advantage of this feature. Additionally, if you are using a Firewall rule, you must configure the IBM i (OS/400) server to allow Action to react. Refer to the documentation for these products for further details.

To use Action to trigger a Capture Session:

1. Define a real time auditing rule, as described in the Audit manual.
2. Define your rule until the **`Edit Action Script`** screen appears.



3. Enter the *STRCPTSCN* command to capture a device or the *STRCPTUSR* command to capture a user profile on the first line.
4. Press **`F4`** to add parameters. The Start Capture Screen appears.
5. Press **`F10`** to view all parameters.
6. Enter the required parameters and press **`Enter`** .

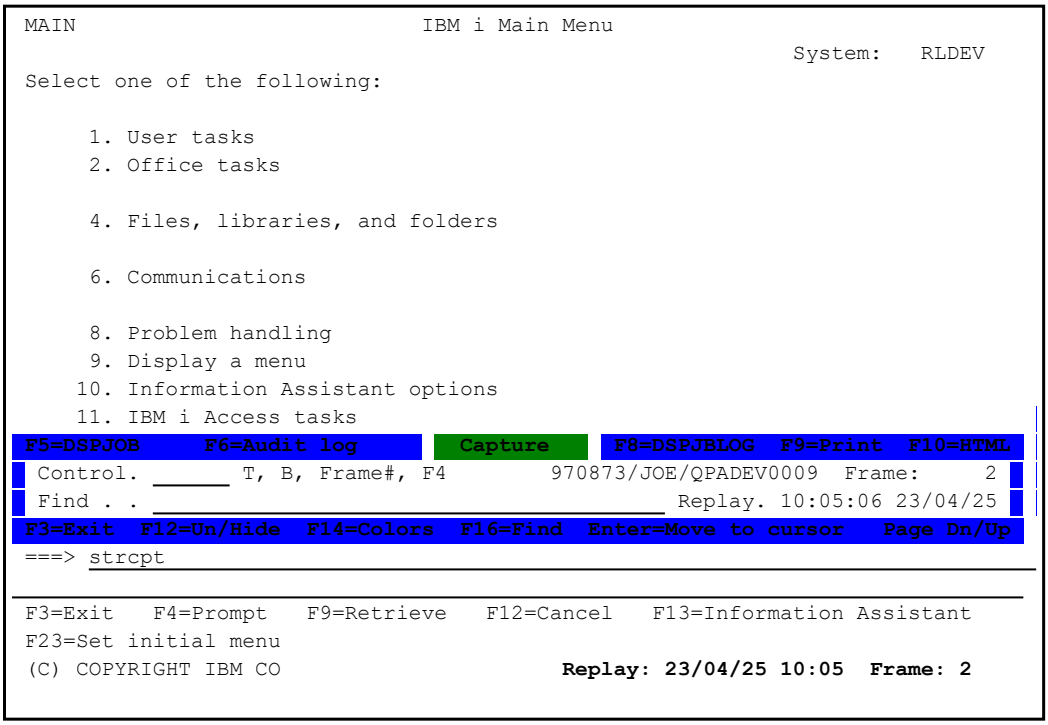
7. Press **F7** and select variables from the list. This inserts a **replacement variable** in the command script representing session (job) name.
8. Press **Enter** twice to complete the process.

Your capture session will begin automatically whenever the conditions defined in your rule are fulfilled.

Auditing User Activity

Reviewing Captured Screens

You can replay captured screens by means of an intuitive process and easy-to -use tools for locating the captured data screens and logs. Captured screens are arranged as **frames** in individual capture sessions. Within each session, you can scroll through the frames sequentially or you can use the floating **Capture Menu** to move directly to a particular screen or search for screens containing a specific text string.



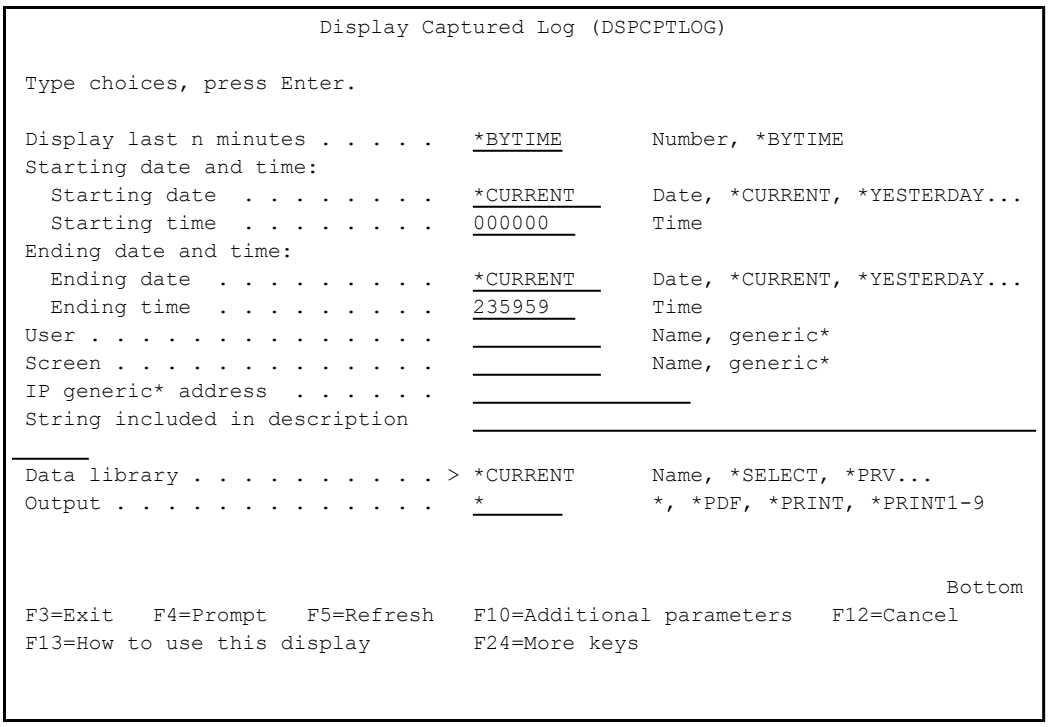
While reviewing the replay of captured screens, you can also use the Capture menu to display the job log, the Display Job menu and the Audit history log that relates to the current capture session.

The sections that follow describe the procedure and options for reviewing and auditing user activity as displayed on captured screens.

Selecting Screen Capture Sessions for Audit

You can work with screen capture sessions from either current data or restored data.

1. From the **Capture** main menu, select either **41. Display Current Log** or **42.Display Restored Log**. The **Display Captured Data** command screen appears. This screen allows you to select and display only those capture sessions that you wish to work with.



The body of the screen contains these fields:

Display Last n Minutes

Select only those records occurring within the previous number of minutes as specified by the user To use the values from the next field, enter ***BYTIME**.

Starting Date & Time / Ending Date & Time

Select only those records occurring within the range specified by the starting and ending date/time combination.

Enter an appropriate specific date or time or use these values:

- ***CURRENT**: Today (Current Date)
- ***YESTERDAY**: Previous date

- ***WEEKSTR/*PRVWEEKS**: Current week/Previous week
- ***MONTHSTR/*PRVMONTH**: Current month/Previous month
- ***YEARSTR/ *PRVYEARS**: Current year/ Previous year
- ***SUN - *SAT**: Day of week

User

IBM i (OS/400) user profile or profile group

Screen

Terminal session name (This is also the job name)

IP Generic Address

IP address in decimal notation. Leave blank for all IP addresses.

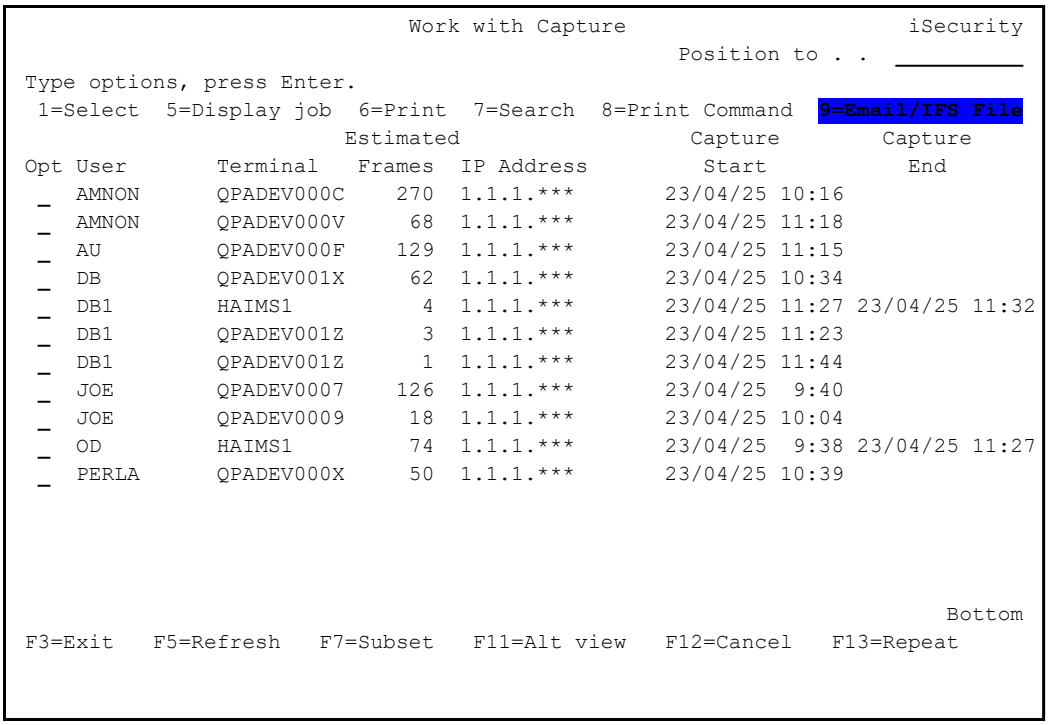
String included in description

Text contained in Capture session descriptions. Only sessions containing this text string in the description field will be displayed.

Data library

For restored data only: Enter the name of the library to which the data was backed up. The name of the library is SMCP*yymmdd* , where *yymmdd* is the date of the backup.

2. Press **Enter** to display the capture sessions for the selected date and time. The **Work with Captures** screen appears which allows you to select a specific capture session to view. Each line represents a single capture session.



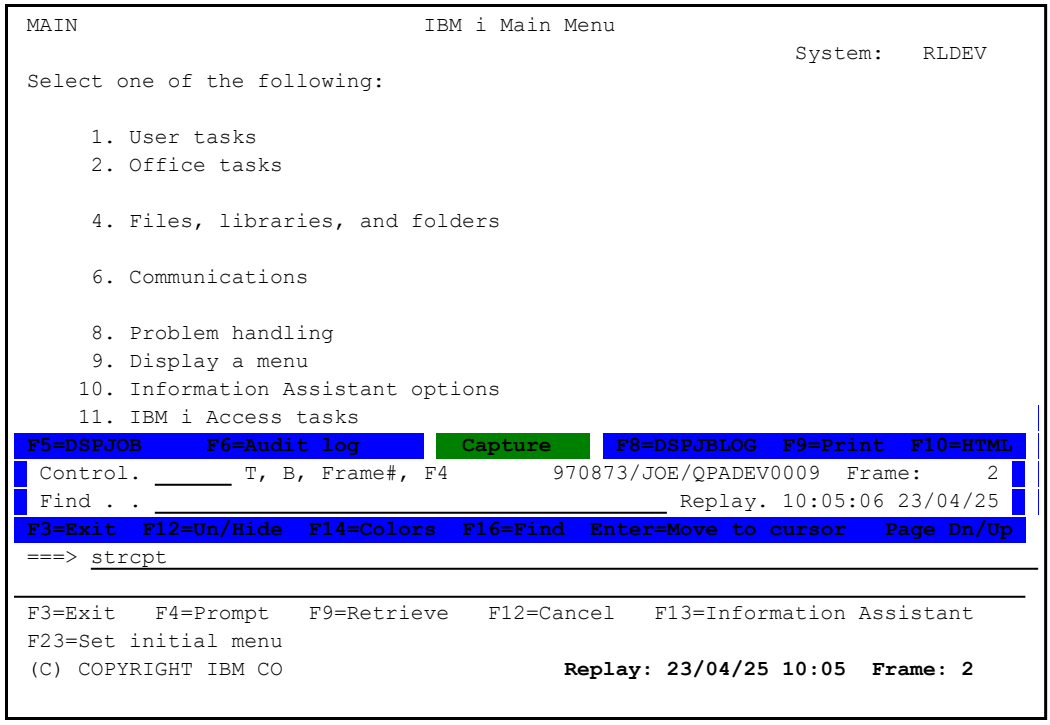
- **1**: Replay screens in the selected capture session
- **5**: Display the IBM i (OS/400) Display Job (***DSPJOB***) menu for the selected capture session (Active jobs only)
- **6**: Print selected frames in the selected capture session
- **7**: Perform a free text search on the selected capture session. Type the search string in the pop-up window that appears and then press **Enter** to jump to the first screen containing the search string.
- **8**: Print the selected Capture session
- **9**: Mails the selected capture session as an HTML email

You can use these function keys in addition to the usual ones:

- **F7**: Refine selection parameters to display a smaller subset of the capture
  sessions
- **F11**: Toggle the screen display to show different capture session parameters
- **F13 (Shift+F1)**: Repeat the option entered on the current line for all subsequent lines. For example, if you type ‘ 1 ’ to select the fifth line, you can press **F13** to select all lines that follow.

Navigating Through a Capture Session

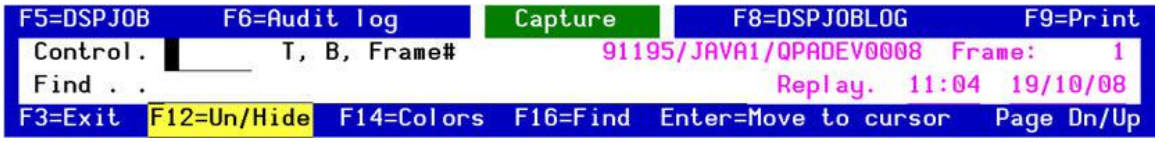
When you select a capture session, the **Replay** screen appears showing the first frame (captured screen). The floating **Capture** menu appears by default on all **Replay** screens. Press **F12** to hide the **Capture** menu. Press **F12** again and the **Capture** menu re-appears.



- To scroll through the captured screens one screen at a time, use the **Page Down** and **Page Up** keys.
- To move the **Capture** menu and show the text below, simply move the cursor to another line on the screen and press **Enter** . The **Capture** menu moves to the cursor location.
- To hide or re-display the **Capture** menu, Press **F12** .
- To move to the last frame in the capture session, type ' ***B*** ' (Bottom) in the **Control** field inside the **Capture** menu. To move to the first frame, type ' ***T*** '. To move to a specific frame, type the frame number.

Using the Capture Menu

The floating Capture menu serves as a convenient control panel for navigating through frames and for displaying job and audit history logs associated with the current capture session. The following table describes the features available from this menu.



The menu contains these fields:

Control

Move to a specific frame in the capture session

- **T** = First frame (Top)
- **B** = Last frame (Bottom)
- Frame Number = Move to the designated frame

Replay

Shows the capture time, date and frame number for the current frame

Find

Type a text string here to search for frames containing that string

You can use these function keys from the menu:

- F3: Exit the current capture session
- F5: Show the Display Job screen associated with the current capture session
- F6: Display the audit history log associated with the current capture session
- F8: Display the job log associated with the current capture session
- F9: Print one or more frames from the current capture session
- F12: Hide or un-hide the Capture menu
- F16 (Shift+F4): Change the color used to highlight the search text string in frames
- Enter: Move the Capture menu to the cursor position
- PgUp/PgDn: Scroll forward or backward through frames

Free Text Search

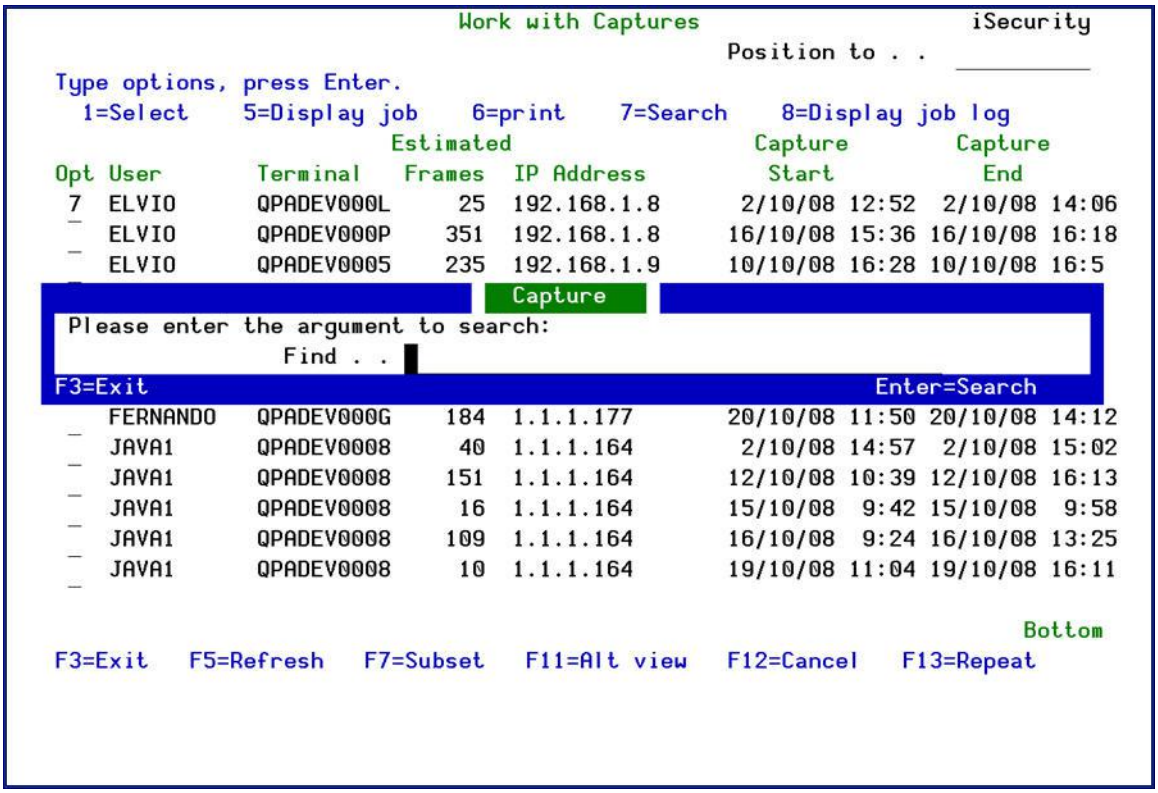
Capture lets you search for screens within a capture session that contain a specific text string. This powerful feature allows you to locate specific screens quickly and easily within a capture session containing hundreds of screens. For example, you can use the free text search to locate screens containing:

- Specific data items, such as customer numbers or transaction codes
- Occurrences of error messages
- Use of certain commands, applications or parameters
- Programming keywords
- User profiles names

The free text search feature is available from both the **Work with Captures** list screen and from the **Capture** menu on replay screens. The basic procedure is the same with both methods.

Searching from the Work with Captures List Screen

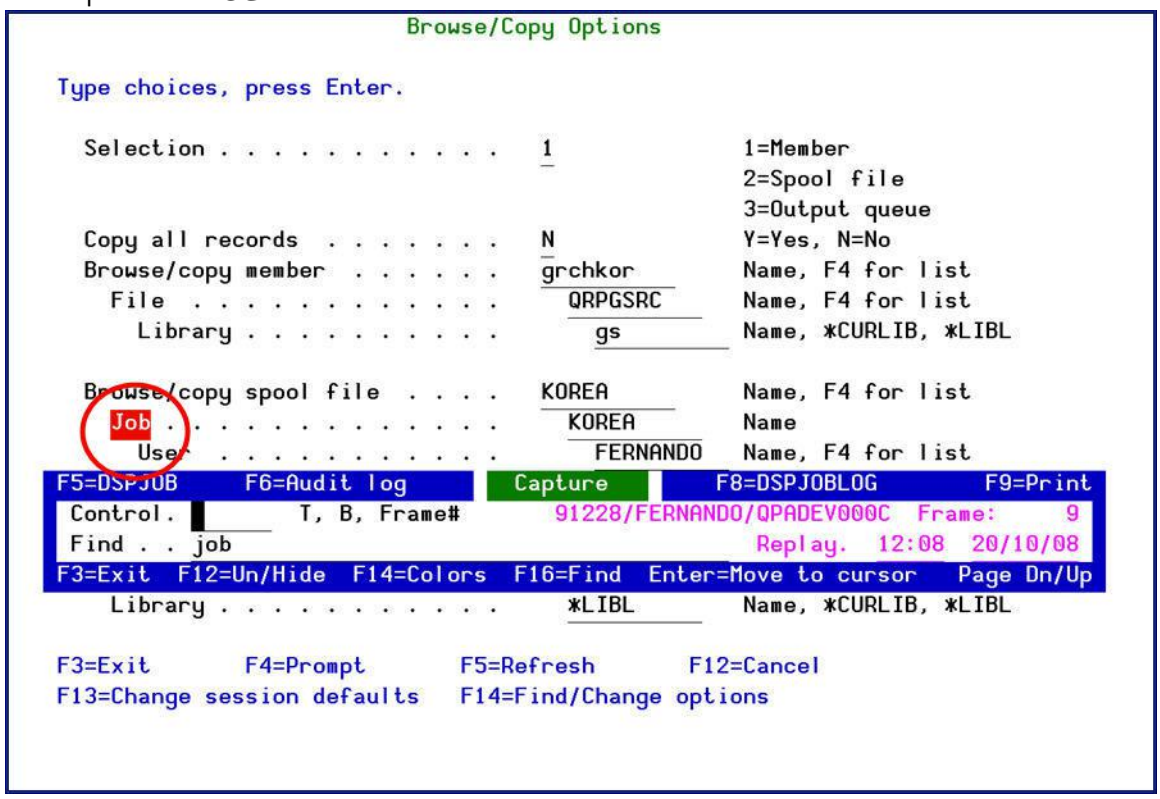
1. Type '**7**' in the option field on any capture session line in the list and press **Enter** .
2. Type the search string in the pop-up window and press **Enter** again.



4. The first replay screen containing the desired text string appears. The text string appears highlighted in the color specified in system configuration (Default = Red). You can change this color by pressing F14.
5. To search for additional occurrences of the text string, press **F16** .

Searching Using the Capture Menu

1. Type the search string in the **Find** field in the **Capture** menu and press **Enter** .



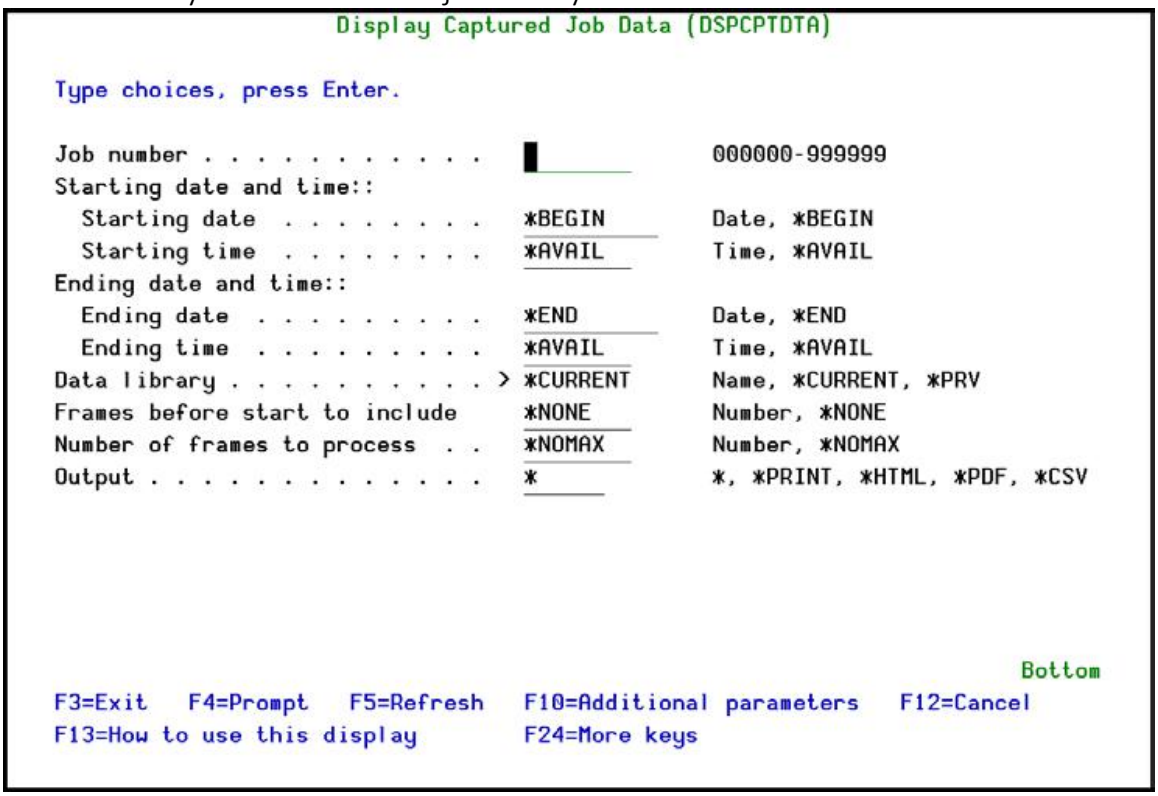
2. The first replay screen containing the desired text string appears. The text string appears highlighted in the color specified in system configuration (Default = Red). You can change this color by pressing F14.
3. To search for additional occurrences of the text string, press **F16** .

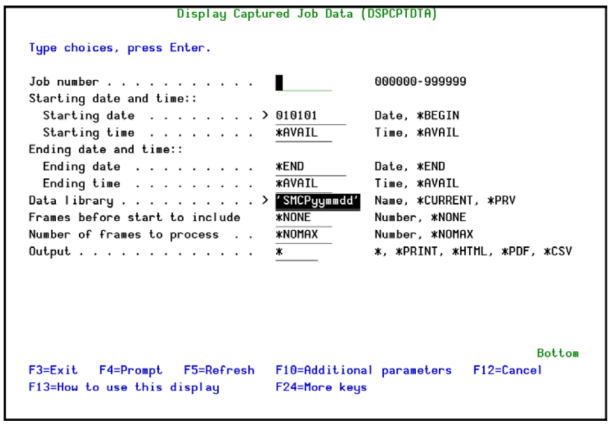
Printing and Mailing Captured Screens

While reviewing the replay of captured screens, you can also use the Capture menu to print/mail the job log, the Display Job menu and the Audit history log that relates to a specific job within a capture session.

Printing/Mailing Jobs from a Captured Session

1. From the **Capture** main menu, select either **45. Display Current Data** or **46. DisplayRestored Data**. The **Display Captured Job Data** command screen appears. This screen allows you to select the job that you wish to work with.





The screen contains these fields:

Job number

000000 - 999999

Starting Date & Time / Ending Date & Time

Select only those records occurring within the range specified by the starting and ending date/time combination.

Enter an appropriate specific date or time or use these values:

- ***CURRENT**: Today (Current Date)
- ***YESTERDAY**: Previous date
- ***WEEKSTR/*PRVWEEKS**: Current week/Previous week
- ***MONTHSTR/*PRVMONTH**: Current month/Previous month
- ***YEARSTR/ *PRVYEARS**: Current year/ Previous year
- ***SUN - *SAT**: Day of week

Data library

For restored data only: Enter the name of the library to which the data was backed up. The name of the library is SMCP*yymmdd* , where *yymmdd* is the date of the backup.

Frames before start to include

The number of frames before the start to include. To include none, enter ***NONE**.

Number of frames to process

The number of frames to process. To process all frames, enter ***NOMAX**.

Output

The destination for the output.

- *
- *PRINT
- *HTML
- *PDF
- *CSV

Keep as IFS file

- *NO
- *YES

Directory

Mail to

Mail text

Delete if attached

- *NO
- *YES

Compress and send together

- *NO
- *YES

-

Capture Business Items

Business Items are the unique keys that access your data, such as a social security number, an insurance policy number, a bank account number. Use the Business Items menu to capture information relating to these important pieces of data.

Business Items provides all screen-related activities for specific business items and allows you to do the following:

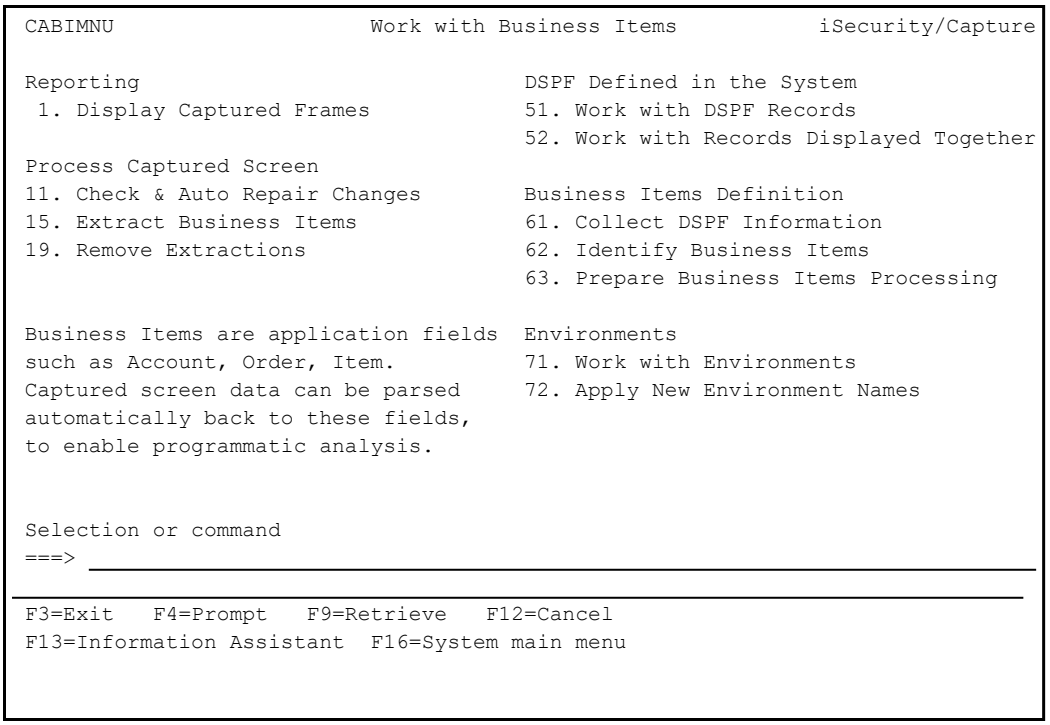
- Extract business-items
- Isolate business items, even if programmers change their placement, as business item position is obtained directly from display file objects
- Detect related “environment” aspects such as the bank whose screen data is being viewed, whether the screen is from a test or production environment, and so on.
- Log all screens and pertinent information such as the job name, current user, name of display file and record format, name of the program which sent the screen and the line number within the program, library list, and so on.
- Send captured screens via HTML email to relevant people, aids in documenting the application, admissible in court, enables search and playback of captured screens Capture Business Items uses files CAFF and CABI, both of which are located in library SMZCDTA. The files are connected by the common fields of Job Name and Job Number. It is the responsibility of your organization to manage these files and to ensure that they do not fill up.

To use Capture Business Items, use the following workflow:

- Enable Business Items, as described in Auto-Save Definition
- You can define a period of time in days after which all Capture files will automatically besaved.
- Defining Business Items Support on page 21.
- Define Business Items, as described in Business Items Definition on page 67.

- If you set **Analyze run environment by *LIBL** to **Y** when you enabled Business Items, define the Business Items environments, as described in Environments on page 71.
- Define where Business Items appear in Display Files, as described in Extract BusinessItems on page 61.
- On a regular basis, check if any changes have been made in the Display Files, as described in Check and Auto Repair Changes on page 60.

To access the Work with Business Items menu, select **61. Work with Business Items** from the main menu (*STRCPT*). The **Work with Business Items** menu appears.



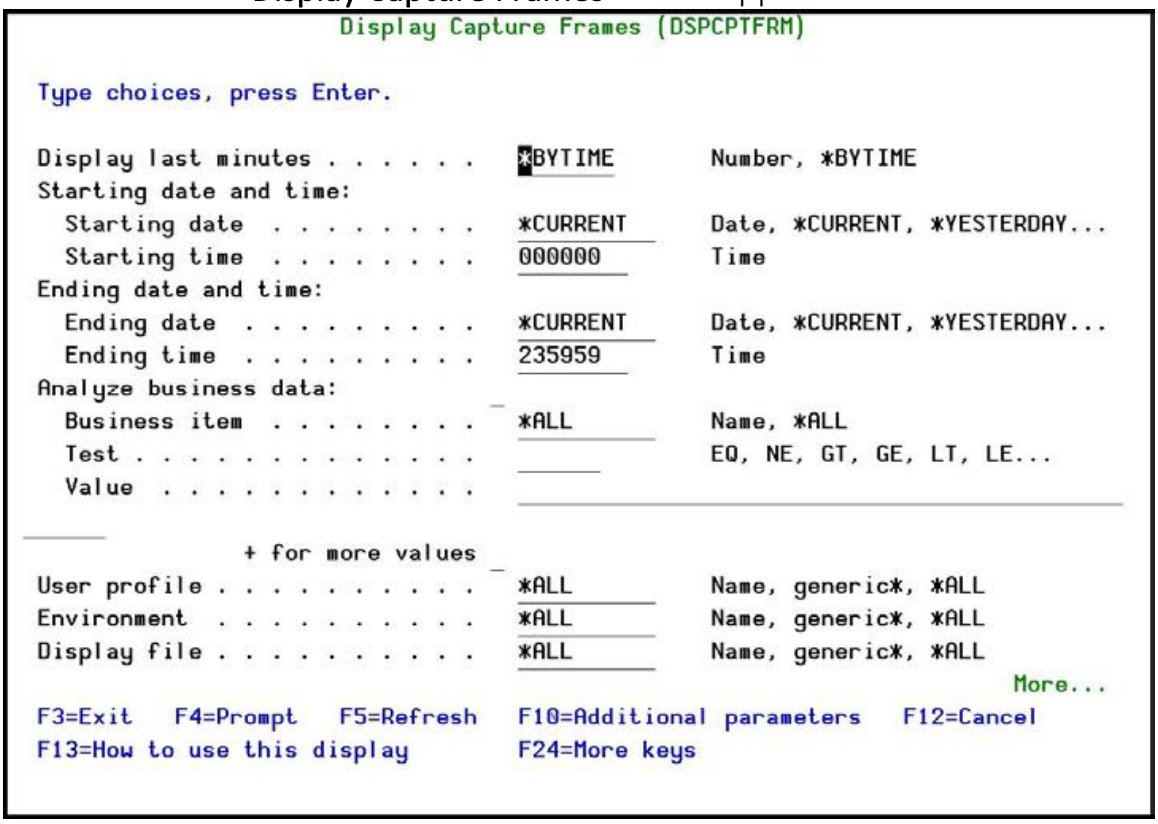
Reporting

Display Captured Frames

Displaying the captured frames allows you to see a step by step replay of the actions that were performed on the selected Business Items.

To display captured frames:

1. Select **1. Display Captured Frames** from the **Business Items Handling** menu. The **Display Capture Frames** screen appears.



The screen includes these fields:

Display Last n Minutes

Select only those records occurring within the previous number of minutes as specified by the user To use the values from the next field, enter ***BYTIME**.

Starting Date & Time / Ending Date & Time

Select only those records occurring within the range specified by the starting and ending date/time combination.

Enter an appropriate specific date or time or use these values:

- ***CURRENT**: Today (Current Date)
- ***YESTERDAY**: Previous date
- ***WEEKSTR/*PRVWEEKS**: Current week/Previous week
- ***MONTHSTR/*PRVMONTH**: Current month/Previous month
- ***YEARSTR/ *PRVYEARS**: Current year/ Previous year
- ***SUN - *SAT**: Day of week

Analyze business data

Business item

The name of one of your defined business items or ***ALL**

Test

If you enter a Business Item, you can filter further by testing it for specific values. You can use the following for testing:

- **EQ**: Equals the value in the **Value** field
- **NE**: Not Equal to the value in the **Value** field
- **GT**: Greater Than the value in the **Value** field
- **GE**: Greater Than or Equal to the value in the **Value** field
- **LT**: Less Than the value in the **Value** field
- **LE**: Less Than or Equal to the value in the **Value** field
- **LIKE**: Contains the value in the **Value** field
- **NLIKE**: Does not contain the value in the **Value** field
- **LIST**: Is in the List in the **Value** field
- **NLIST**: Is not in the List in the **Value** field

Value

The value to which the Business Item is compared

User Profile

Selects a subset of records by user profile. This can be a username, a Generic* name, or ***ALL**.

Environment

Selects a subset of records by environment. This can be a name, a Generic* name, or ***ALL**.

Display File

Selects a subset of records by display file. This can be a name, a Generic* name, or ***ALL**.

Program Name

Filter by the name of the program that created the record.

Library

The Library that contains the program

Job Name

User

Filter records by IBM i (OS/400) job name user.

Number

Filter records by IBM i (OS/400) job number.

Filter by time group

Relationship

- ***IN**: Include all records in time group
- ***OUT**: Include all records not in time group
- ***NONE**: Do not use time group, even if included in query definition
- ***QRY**: Use time group as specified in query definition

Time group

The name of the time group. Enter ***SELECT** to select the time group at run time.

Filter using query rules

The name of an existing query to use. Leave it at ***NONE** if not using an existing query.

Number of records to process

The maximum number of records to process. Set it to ***NOMAX** to process all the records.

Output

- *****
- ***PRINT**

- ***PRINT1 – PRINT9**
- ***OUTFILE**

Outfile format

- * BYLINE
- *FRAME

File to receive output

Name

The name of the field to receive output

Library

The library containing the file, or ***LIBL**

Output member options

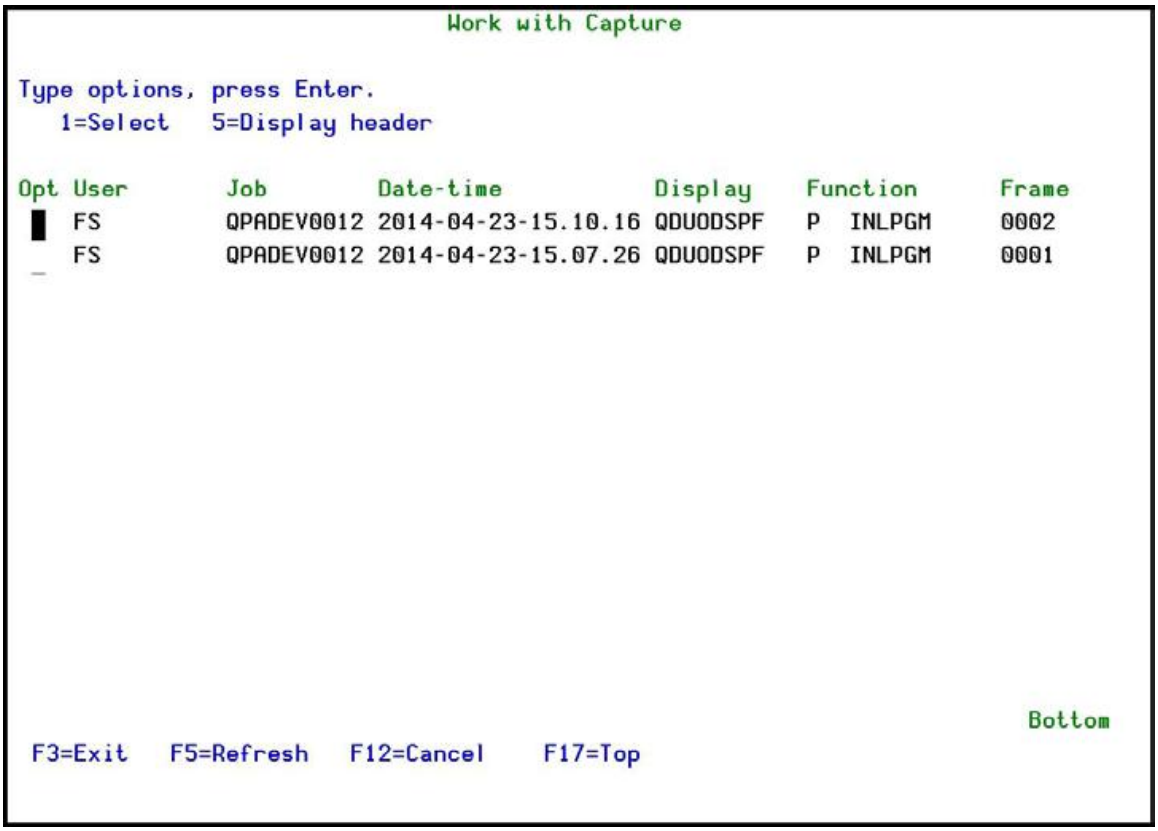
Member to receive output

The name of the member, or ***FIRST**

Replace or add records

- *REPLACE
- *ADD

2. Enter your required parameters and press Enter . The Work with Capture screen appears with the appropriate entries.



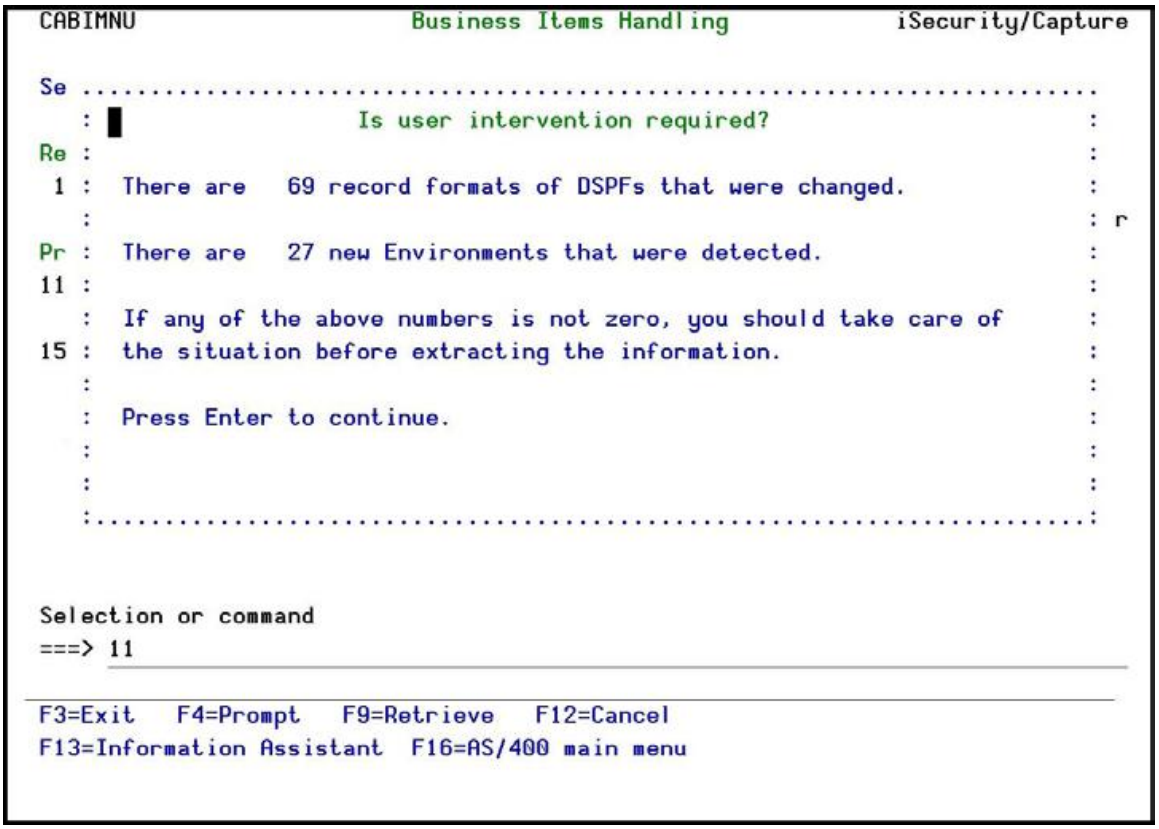
3. Select option **1** to open the captured frames of a session or option **5** to see header information.

Check and Auto Repair Changes

Once a day you should check that your Business Items are up to date.

To perform the daily check:

1. Select **11. Check & Auto Repair Changes** from the **Business Items Handling** menu. The **Is user intervention required?** screen appears.



2. If the screen reports that either DSPFs or environments were changed, run the processes described in Business Items Definition on page 67.

Extract Business Items

Run an automatic procedure to extract all Business Items appearances in display files.

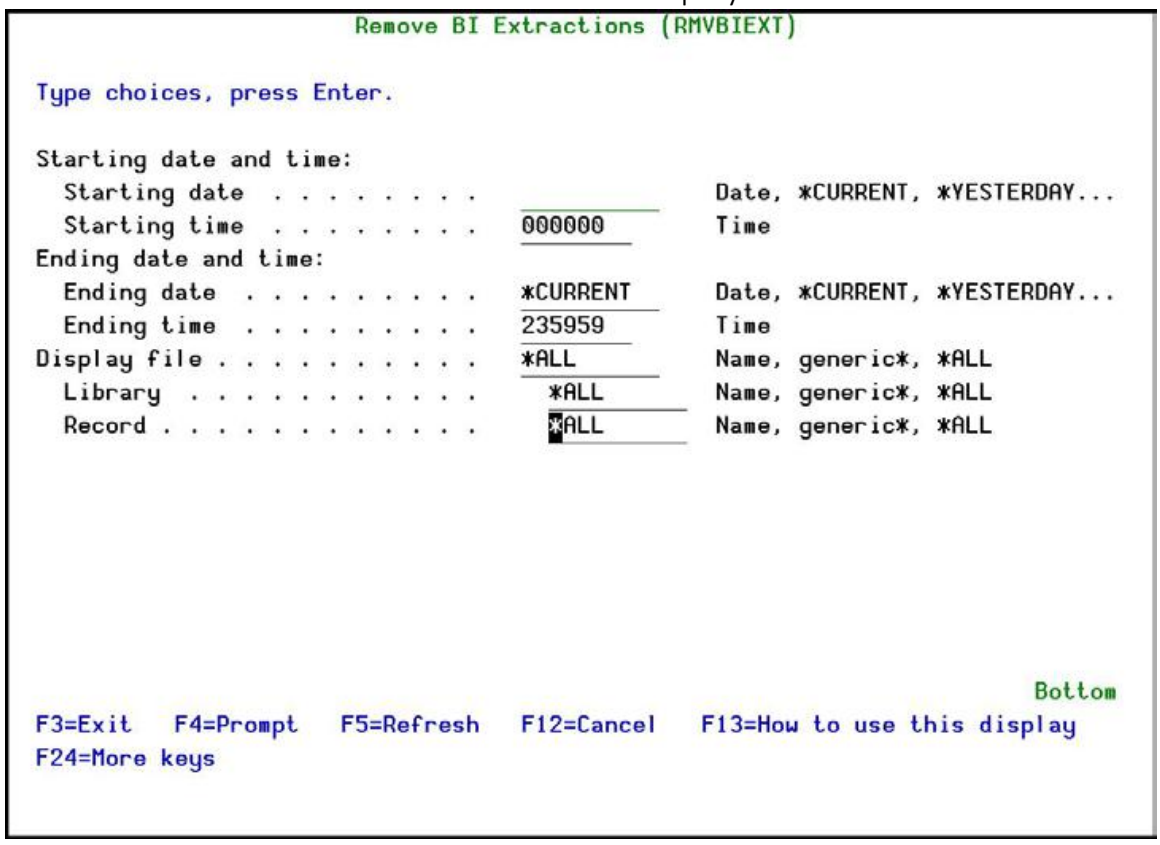
To extract the Business Items, select **15. Extract Business Items** from the **Business Items Handling** menu. If found, the Business Items are extracted. A message shows the result of the process.

Remove Extractions

You can remove some of the extracted Business Items from the repository.

To remove the extracted Business Items:

1. Select **19. Remove Extractions** from the **Business Items Handling** menu. The **Remove BI Extractions** screen is displayed.



Starting Date & Time / Ending Date & Time

Remove only those Business items records for which the event occurred within the range specified by the starting and ending date/time combination.

Enter an appropriate specific date or time or use these values:

- ***CURRENT**: Today (Current Date)
- ***YESTERDAY**: Previous date
- ***WEEKSTR/*PRVWEEKS**: Current week/Previous week
- ***MONTHSTR/*PRVMONTH**: Current month/Previous month
- ***YEARSTR/ *PRVYEARS**: Current year/ Previous year
- ***SUN - *SAT**: Day of week

Display file

Selects a subset of records by display file. This can be a specific file name, a Generic* name, or ***ALL**.

Library

Selects a subset of records by library. This can be a specific name, a Generic* name, or ***ALL**.

Record

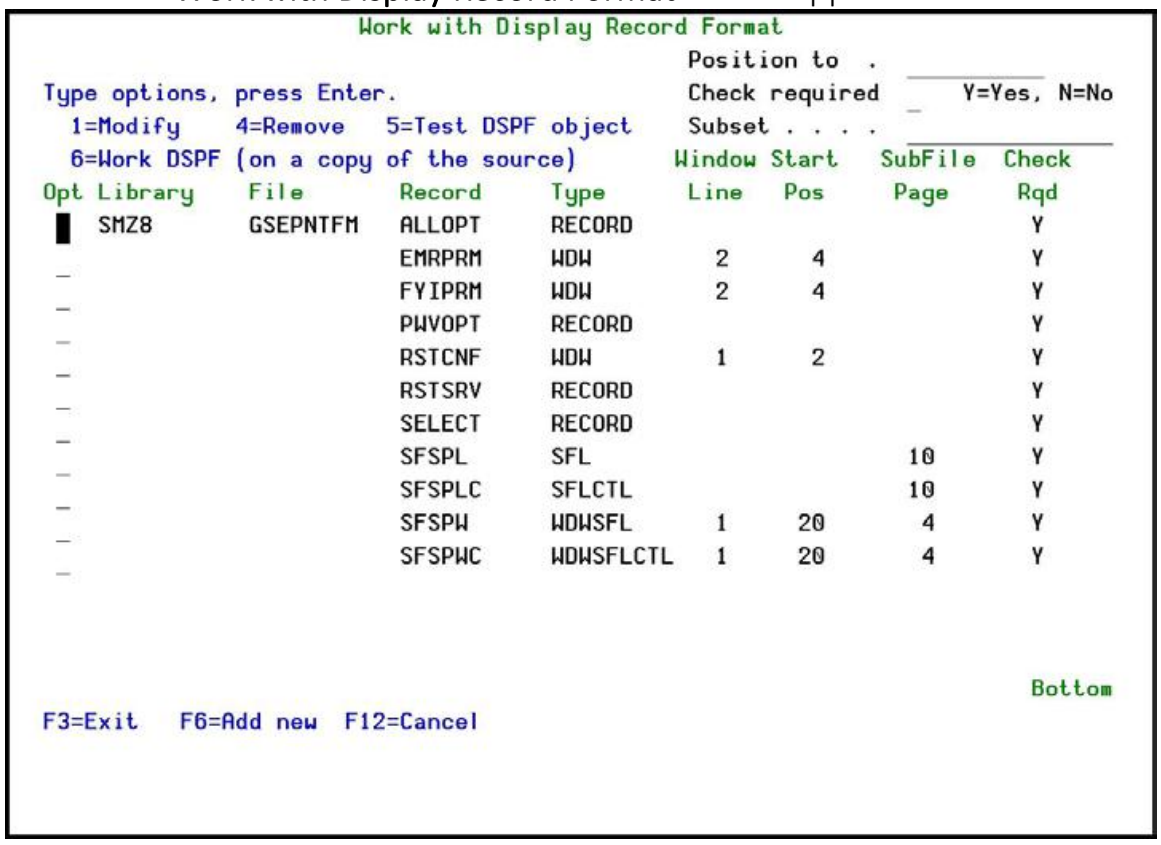
Selects a subset of records by record. This can be a specific name, a Generic* name, or ***ALL**.

2. Enter your required parameters and press Enter . The appropriate extracted Business Items are removed from the system.

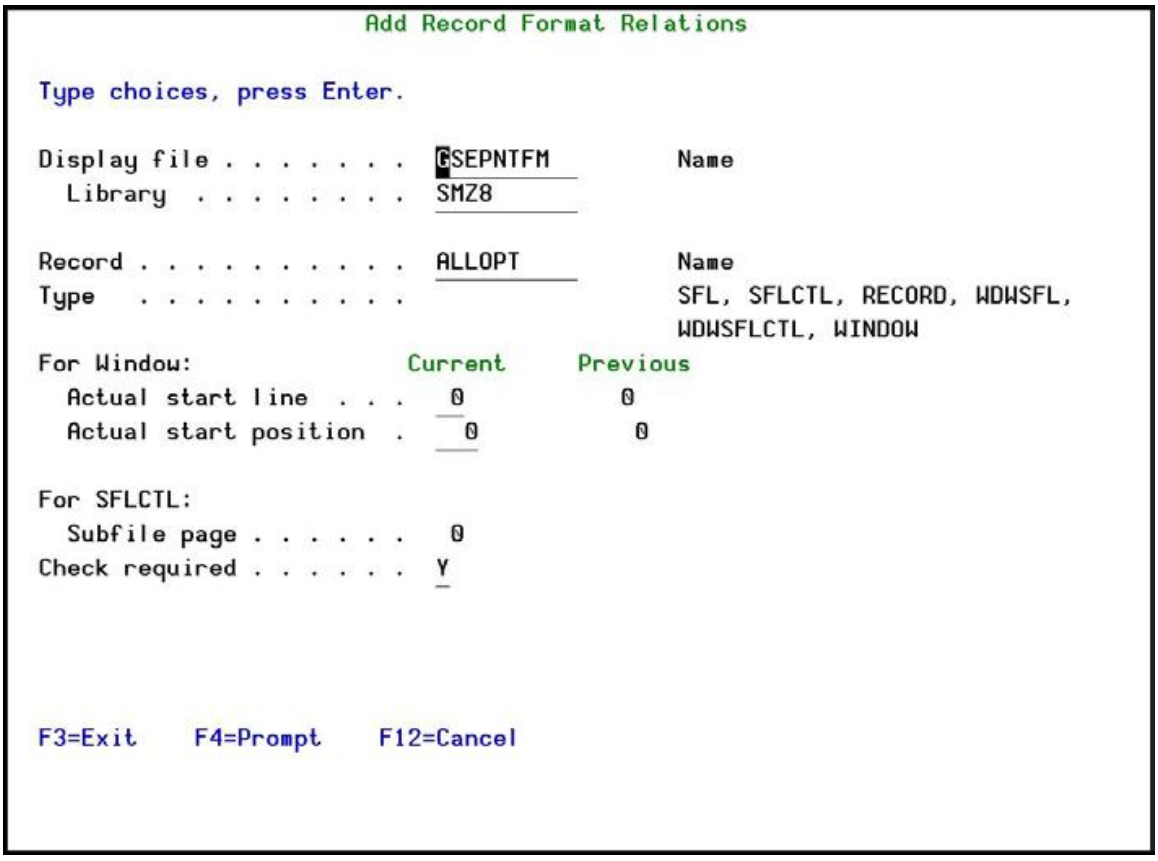
DSPF Defined in the System

Work with DSPF Records

1. Select **51. Work with DSPF Records** from the **Business Items Handling** menu. The **Work with Display Record Format** screen appears.



2. Type **1** next to a format to modify it or press **F6** to add a new format. The **Add RecordFormat Relations** screen appears. Values are pre-populated according to the position of the cursor in the **Work with Display Record Format** screen.



The body of the screen includes these fields:

Display file

Selects a subset of records by display file. This can be a specific file name, a Generic* name, or ***ALL**.

Library

Selects a subset of records by library. This can be a specific name, a Generic* name, or ***ALL**.

Record

Selects a subset of records by record. This can be a specific name, a Generic* name, or ***ALL**.

Type

- SFL
- SFLCTL
- RECORD
- WDWSFL

- WDWSFLCTL
- WINDOW

For Window:

Actual start line

The start line of the window

Actual start position

The starting position of the window

For SFLCTL

Subfile page

The subfile page of the SFLCTL

Check required

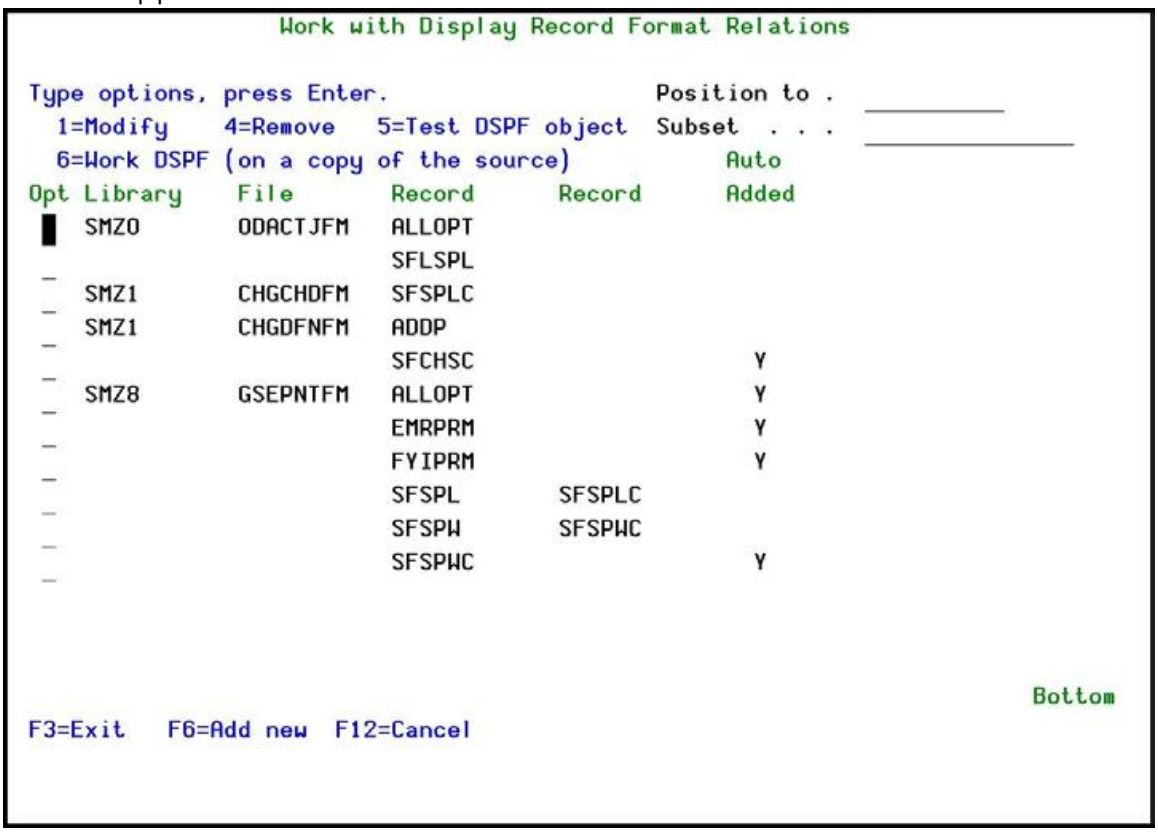
If set to Y, this record will be shown as requiring intervention in the Is user intervention required? screen, as shown in"Work with DSPF Records" on page 75.

3. Enter your selection parameters and press Enter . The Work with Display RecordFormat screen re-appears.
4. Press Enter . The Auto Update DSPF Record and Fields screen appears.
5. Press Enter . Changes to DSPFs are automatically corrected in the Repository.

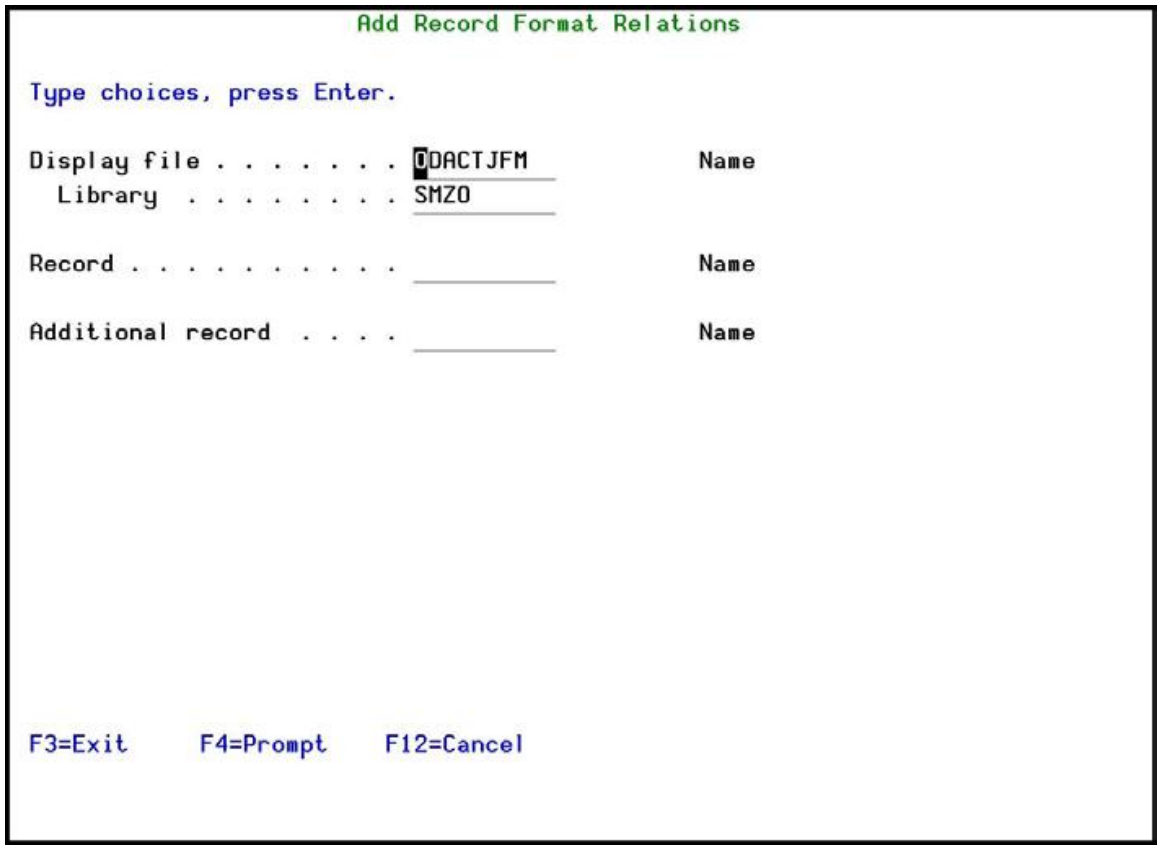
For DSPFs that have been modified, changes such as the position of fields on the screen or changes to the SFLPAG (Subfile page) are automatically corrected. Other changes, such as the renaming of Records or Fields, require user intervention.

Work with Records Displayed Together

1. Select **52. Work with Records Displayed Together** from the **Business ItemsHandling** menu. The **Work with Display Record Format Relations** screen appears.



2. Type **1** next to a format to modify it or press **F6** to add a new format. The **Add RecordFormat Relations** screen appears. Values are pre-populated according to the position of the cursor in the **Work with Display Record Format** screen.



3. Enter your selection parameters and press **Enter** .

Business Items Definition

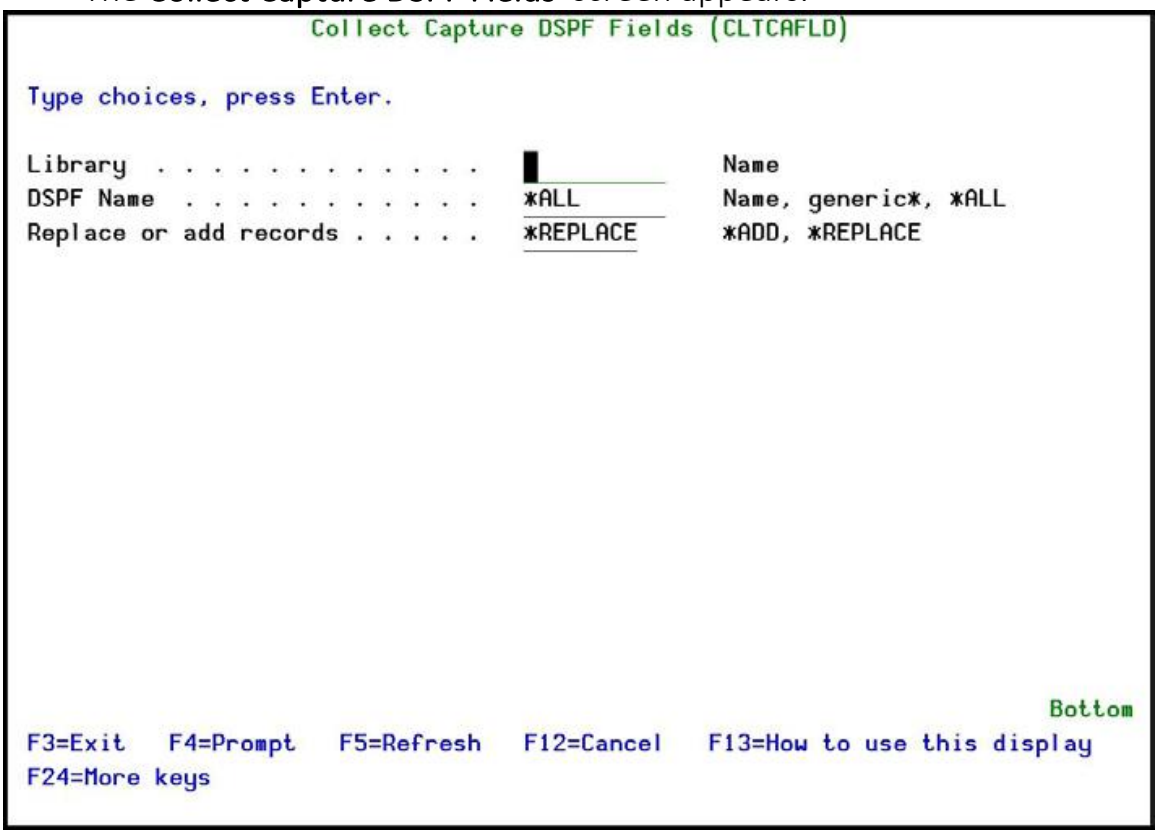
To work with Business Items in Capture , you must first define them to Capture . You do this by first collecting fields from all display files in the systems that you want to capture and then within that collection of fields, you identify the relevant Business Items.

Collect DSPF Fields

You must run this option once for every library for which you want to collect display fields. After you have run the option for every library, run the process described in Identify BusinessItems on page 68.

To collect display file fields from a library:

1. Select **61. Collect DSPF Fields** from the **Business Items Handling** menu. The **Collect Capture DSPF Fields** screen appears.



The body of the screen includes these fields:

Library

The name of the library for which you want to collect display fields

DSPF Name

The name of the Display File. This can be a specific name, a Generic* name, or ***ALL**

Replace or add records

- ***ADD**: Add the records to the file.
- ***REPLACE**: Replace the records in the file.

For the first library for which you collect fields, use either ***ADD** or ***REPLACE**. For all consequent libraries, use ***ADD**.

Note that if you work with QTEMP, you must finish the process by running Identify Business Items before signing off from the session. If you sign off, then all information is lost and you must repeat the collection process again. Also, if you work with QTEMP, you must run the Identify Business Items option from the same workstation.

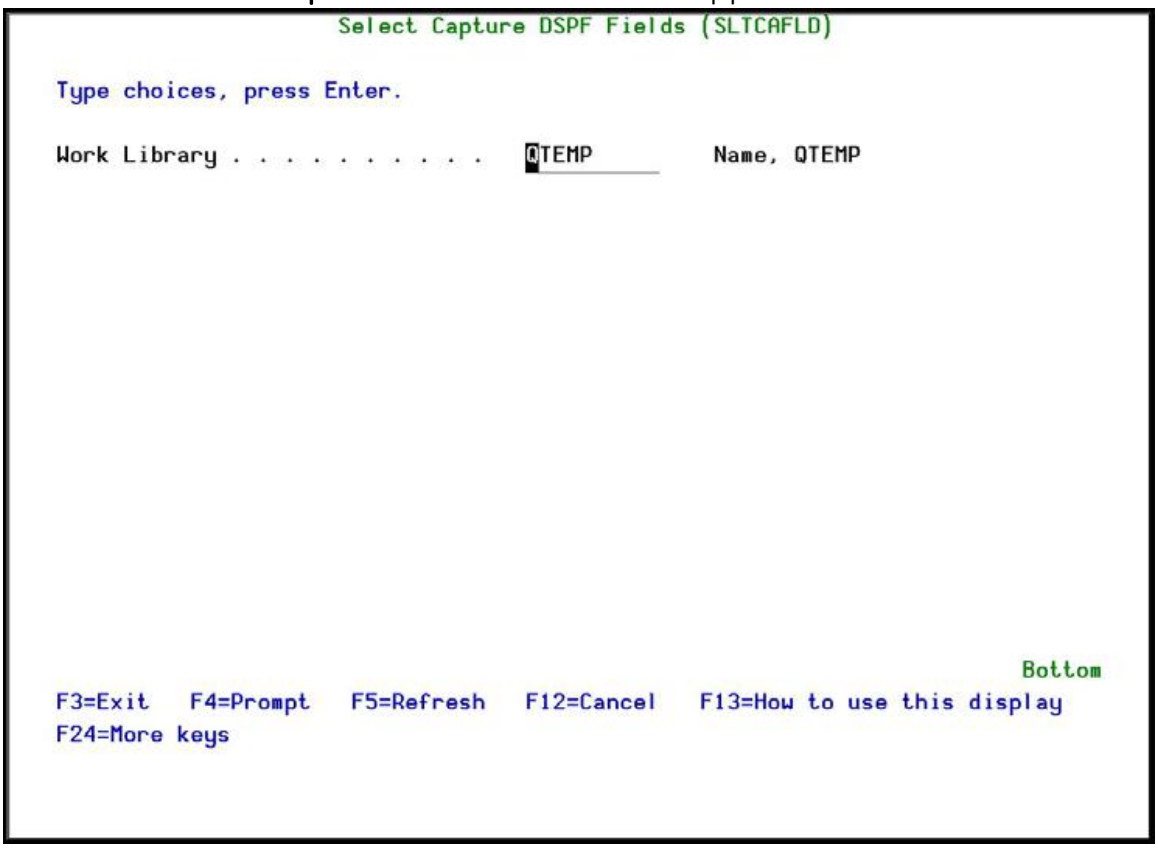
2. Enter your required parameters and press Enter . The fields that match the parameter requirements are collected.

Identify Business Items

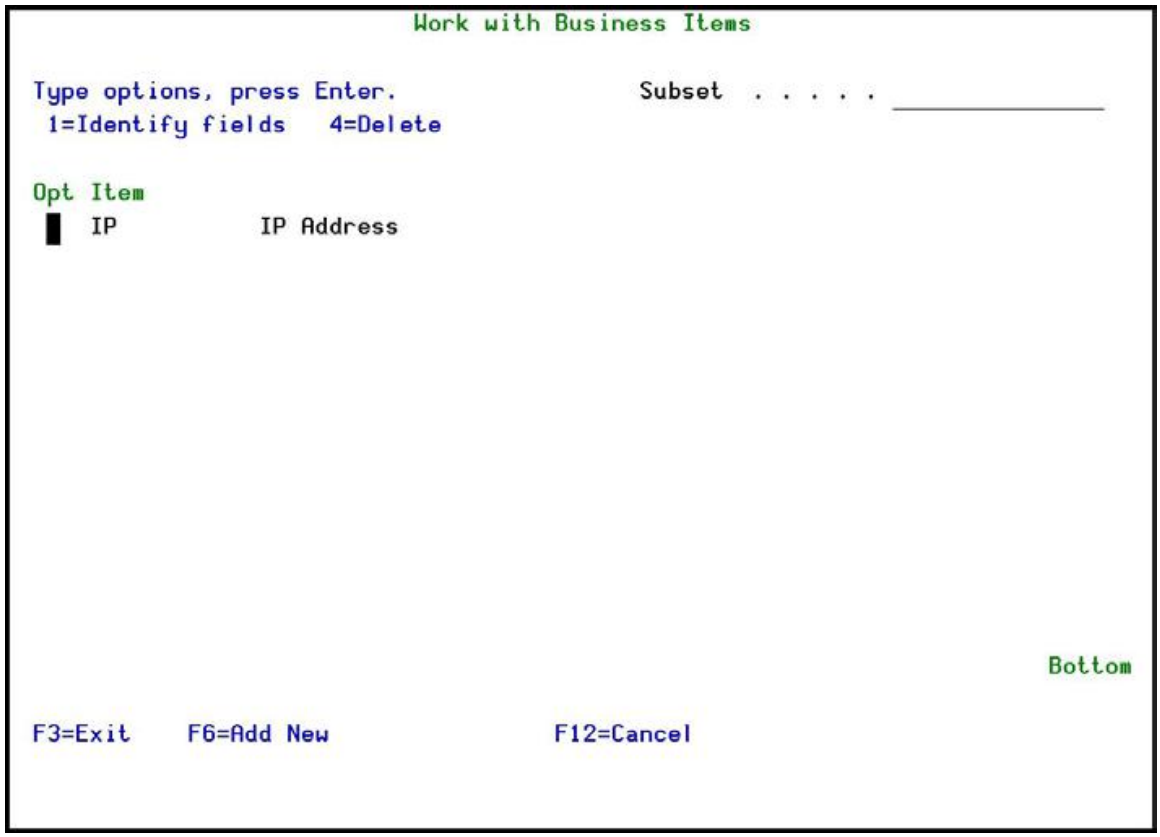
Before you identify the Business Items in the display files, you must first prepare the information by running the process described in "Identify Business Items" above

To collect display file fields from a library:

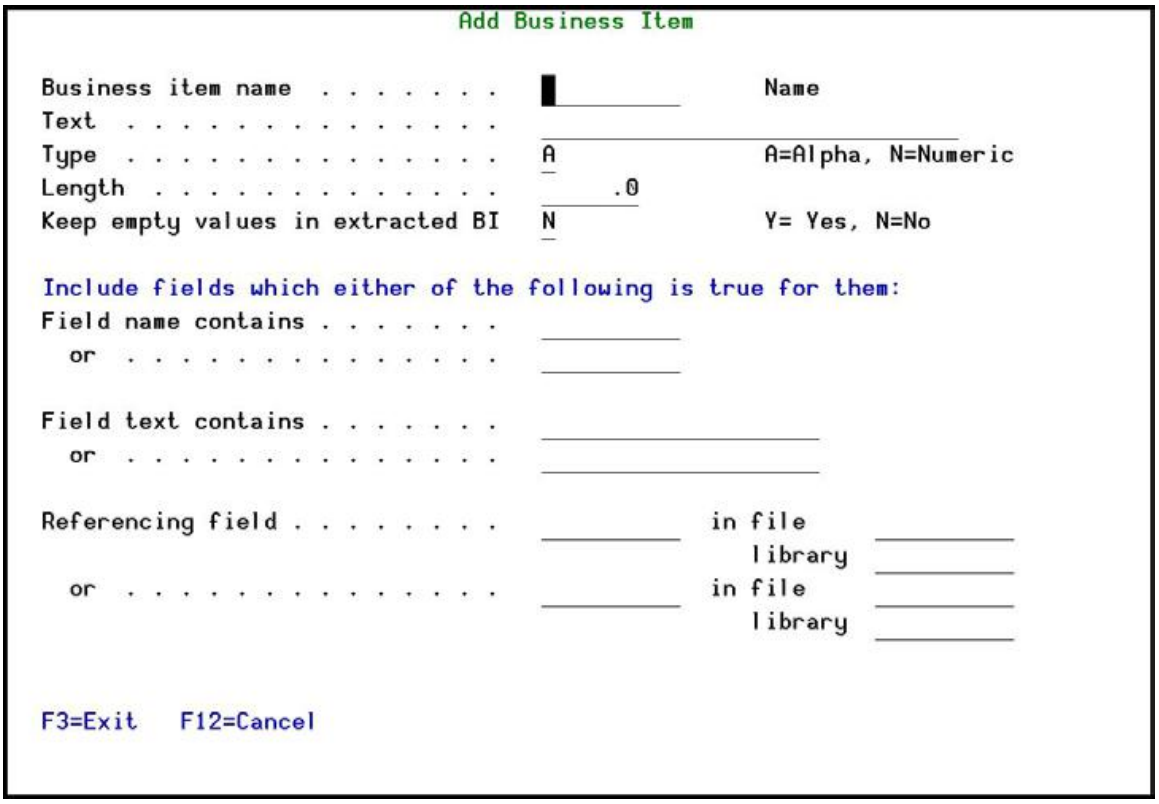
1. Select **62. Identify Business Items** from the **Business Items Handling** menu. The **Select Capture DSPF Fields** screen appears.



2. Enter the **Work Library** you used in the Collect DSPF Fields process and press **Enter** . The **Work with Business Items** screen appears.



3. Press **F6** to add new Business Items. The **Add Business Item** screen appears. Use this screen to filter for Business Items you want to track.



Parameter or Option

The body of the screen contains these fields:

Business item name

Type a name for the Business Item

Text

Type a meaningful description for the Business Item

Type

The type of field to search for:

- **A** : Alphanumeric
- **N** : Numeric

Length

Enter the field length to search for. For a numeric field, include the number of decimal places.

Keep empty values in extracted BI

You can choose whether you want to extract a Business Item whose value is empty.

- **Y** : Yes
- **N** : No

Define fields which either of the following is true for them

Field name contains

Filters for field name.

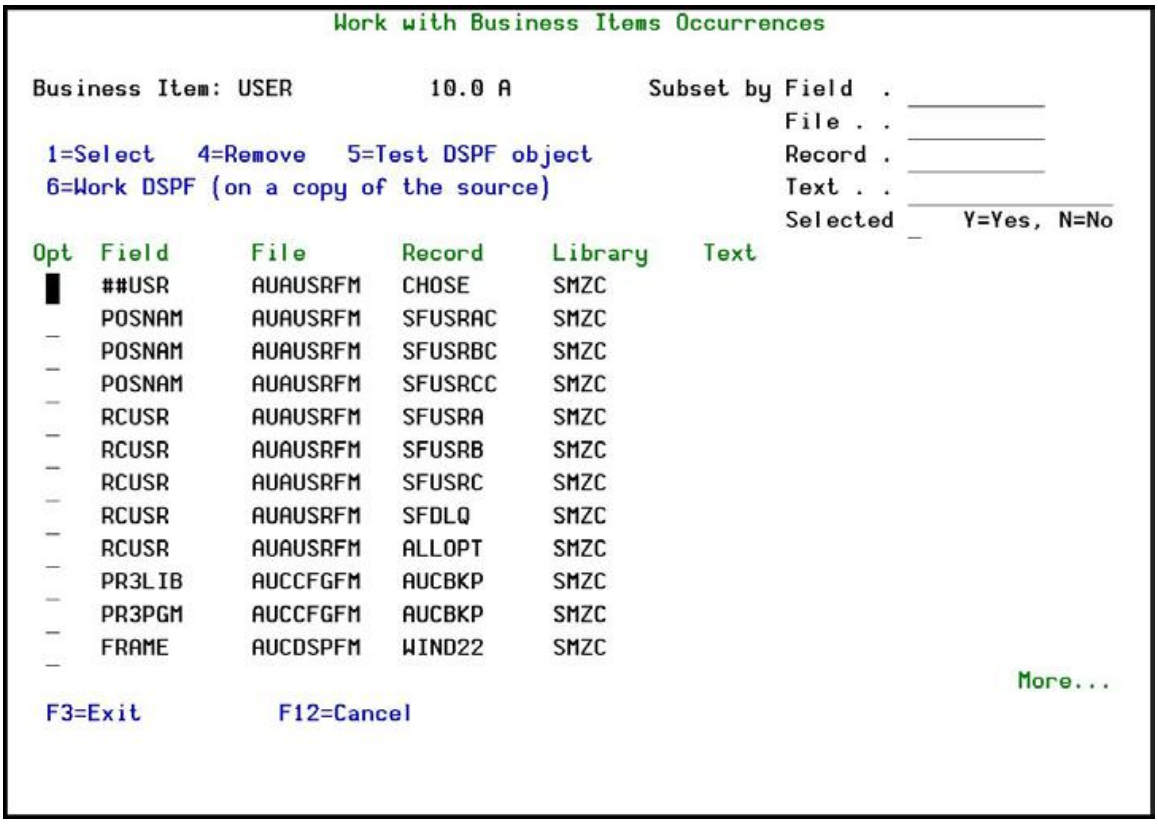
Field text contains

Filters for field text

Referencing field

Filters for referencing fields. Enter the field name, the file name and the library.

4. Enter your selection parameters and press Enter . The Work with Business Items Occurrences screen appears, showing all fields that meet the selection parameters.



5. Use option **1** to select all the fields you want to include and press **Enter**. The fields you want to track for this Business Item are chosen.

Prepare Business Items Processing

You should finally run a process to check if any changes have been made to the Display Files that contain the Business Items.

To prepare Business Items processing:

1. Select **63. Prepare Business Items Processing** from the **Business ItemsHandling** menu. The **Prepare Business Items Processing** screen appears.

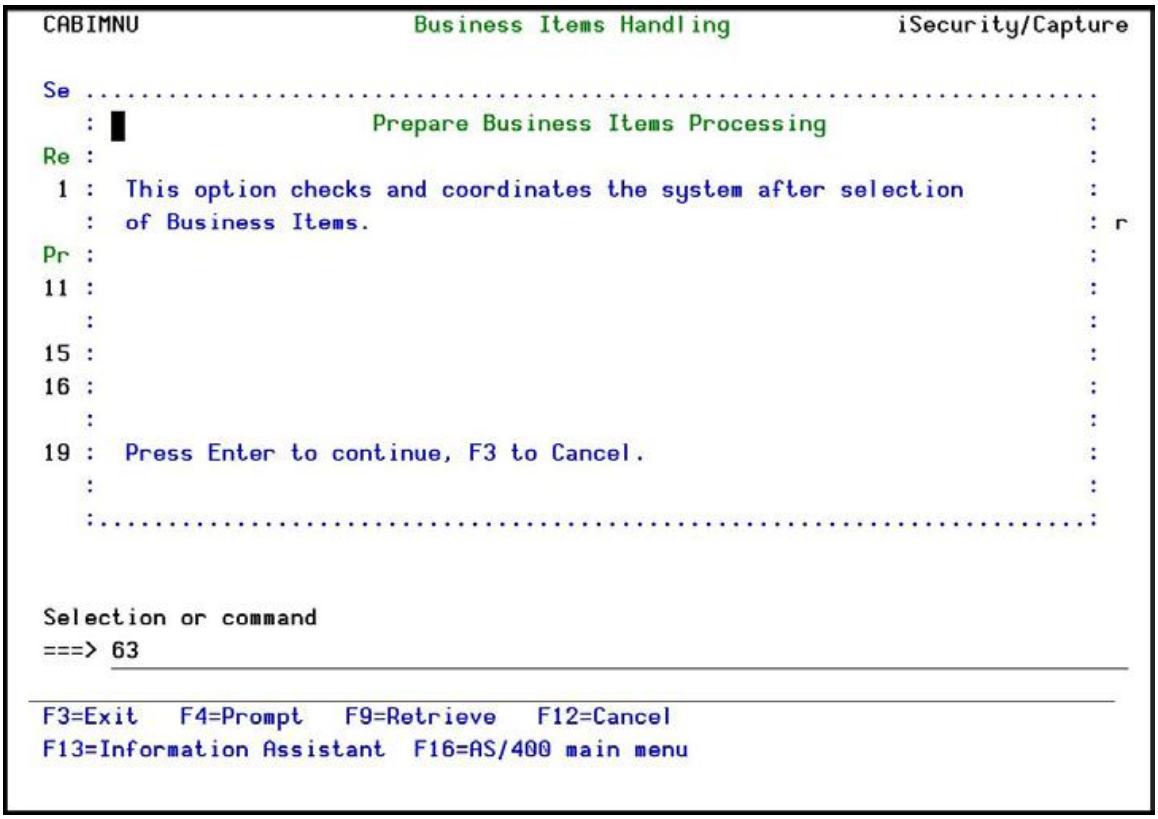


Figure 42: Prepare Business Items Processing

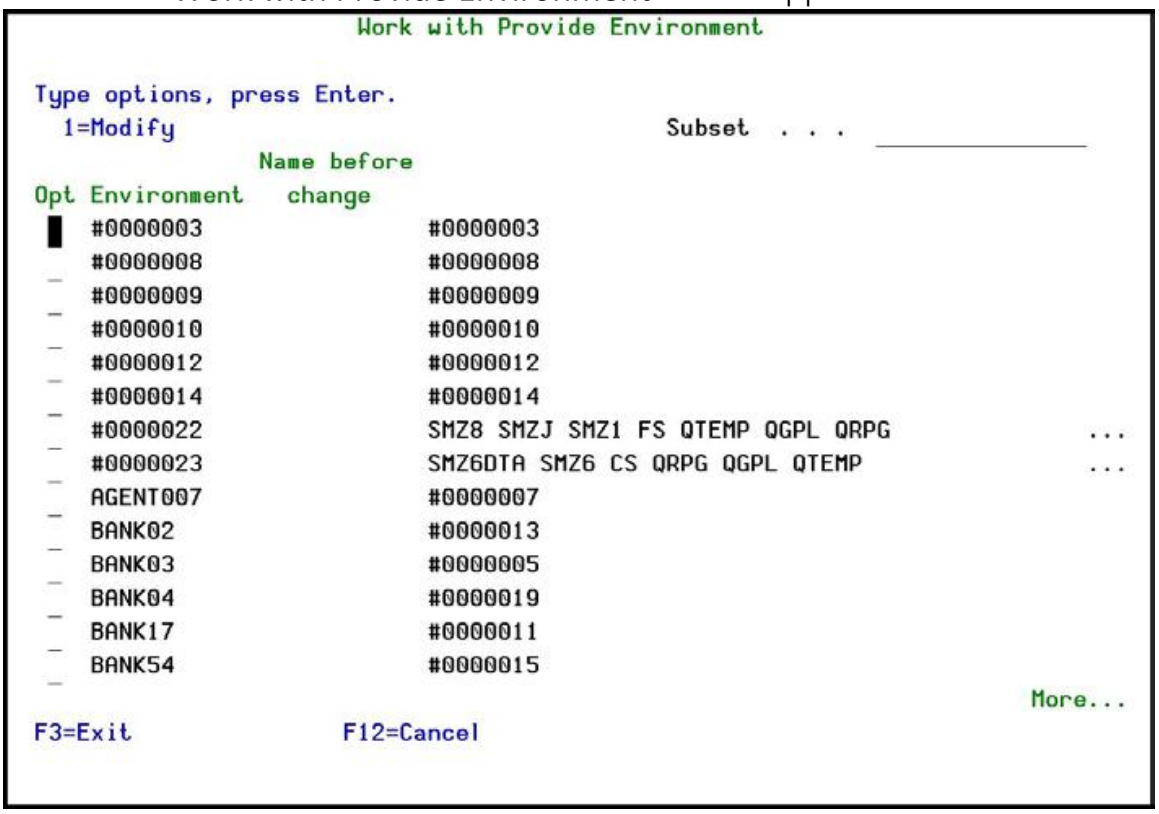
2. Press **Enter** . The display files are checked and a message showing the result of the checks appears.
3. If the message indicates that changes were detected, you must re-run the processes described in *Extract Business Item* , on page 61.

Environments

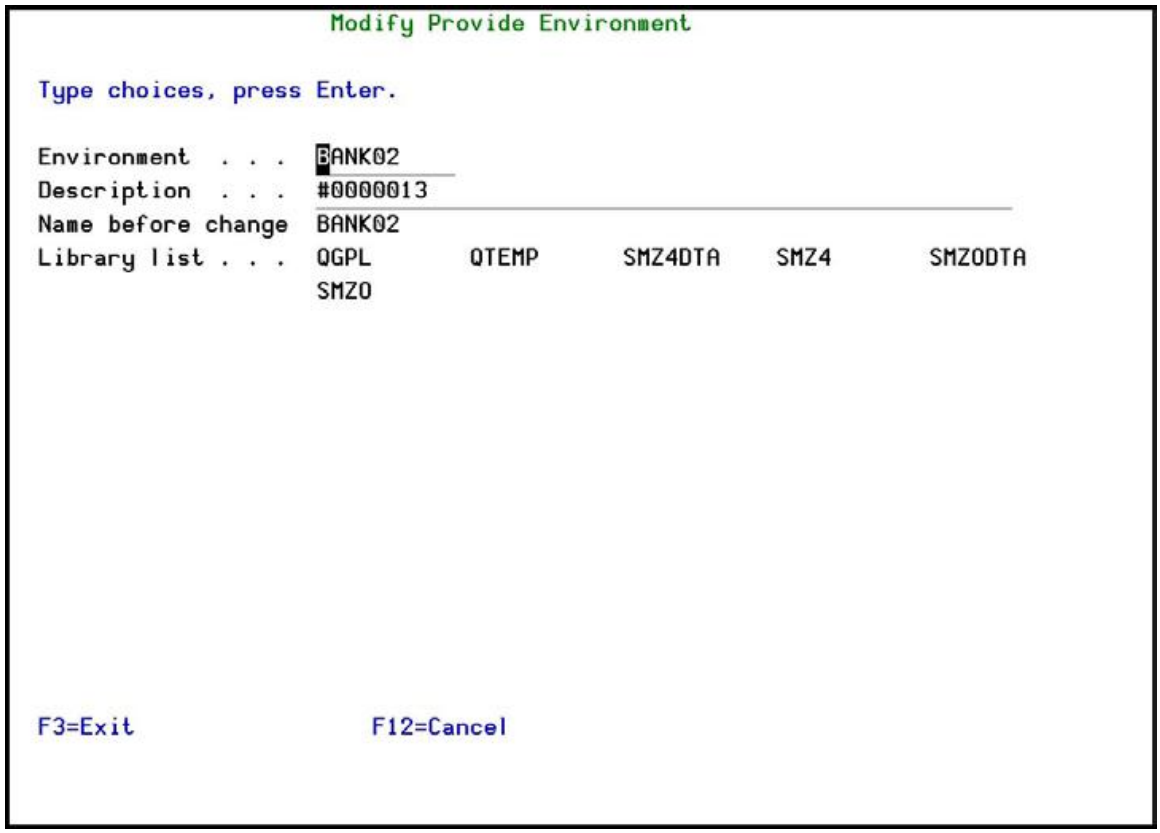
If, when you configured Business Items Support, you answered **Y** for the **Analyze runenvironment by *LIBL** , then temporary environment names are allocated automatically by Library List (See "Environments" above for more details). You should change these names to a meaningful name.

Work with Environments

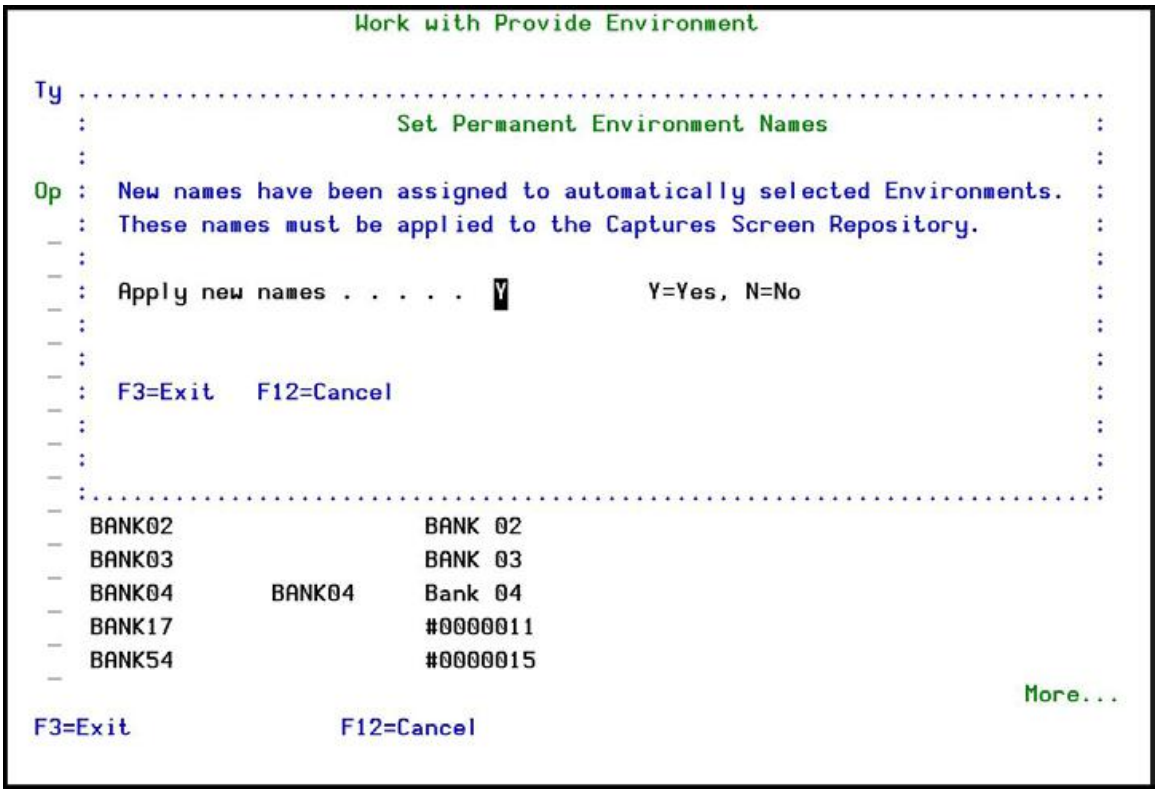
1. Select **71. Work with Environments** from the **Business Items Handling** menu. The **Work with Provide Environment** screen appears.



2. Type **1** by the Environment you want to change. The **Modify Provide Environment** screen appears.



3. Update either the Environment field, or the Description field, or both fields, and press
   Enter twice. The Work with Provide Environment screen appears.
4. Press F3 to exit the Work with Provide Environment screen. The Set PermanentEnvironment Names screen appears. This screen allows you to apply your changes to the Captures Screen Repository.



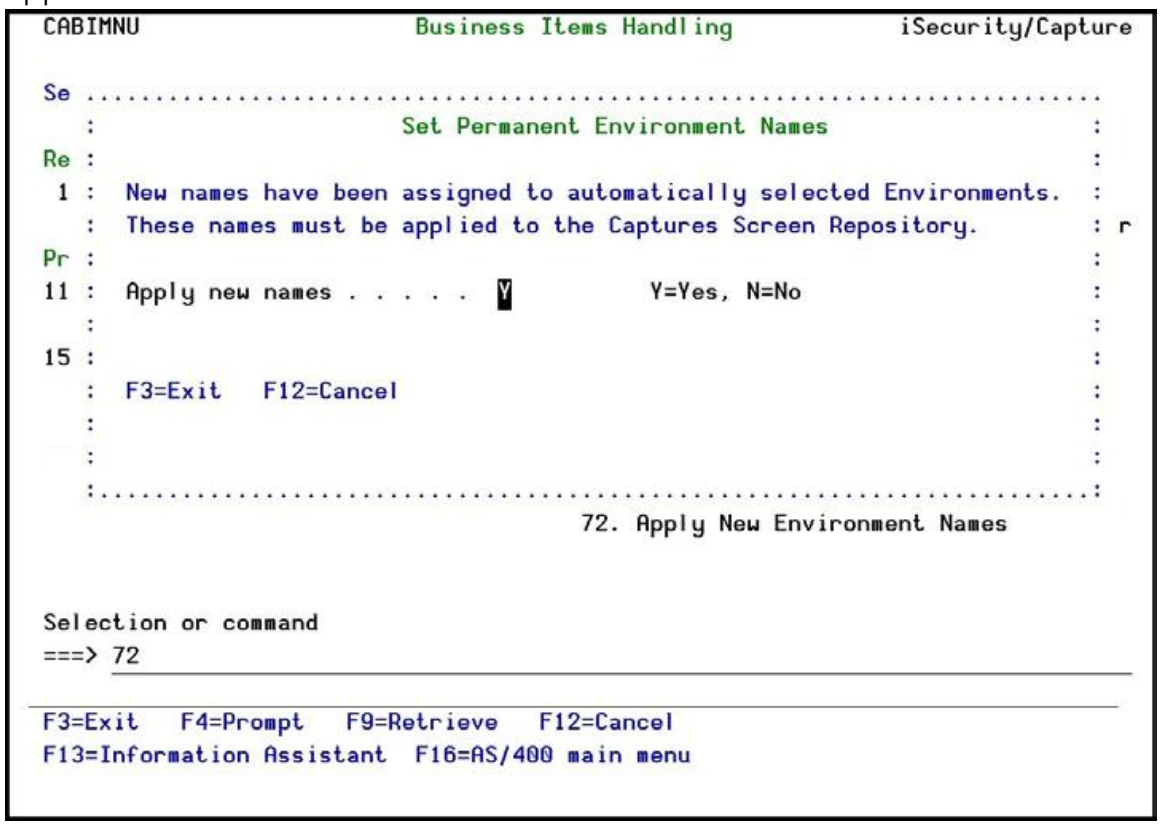
5. Enter **Y** and press **Enter** to apply the new names.

If you enter **N** or exit this screen using **F3** or **F12** , you can apply the changes later using option **72. Apply New Environment Names** . If you have many changes to do, you might want to update all the changes together.

Apply New Environment Names

If you have multiple changes to Environment Names, you can apply all the changes at the same time.

1. Select **72. Apply New Environment Names** from the **Business Items Handling** menu. The **Set Permanent Environment Names** screen appears.

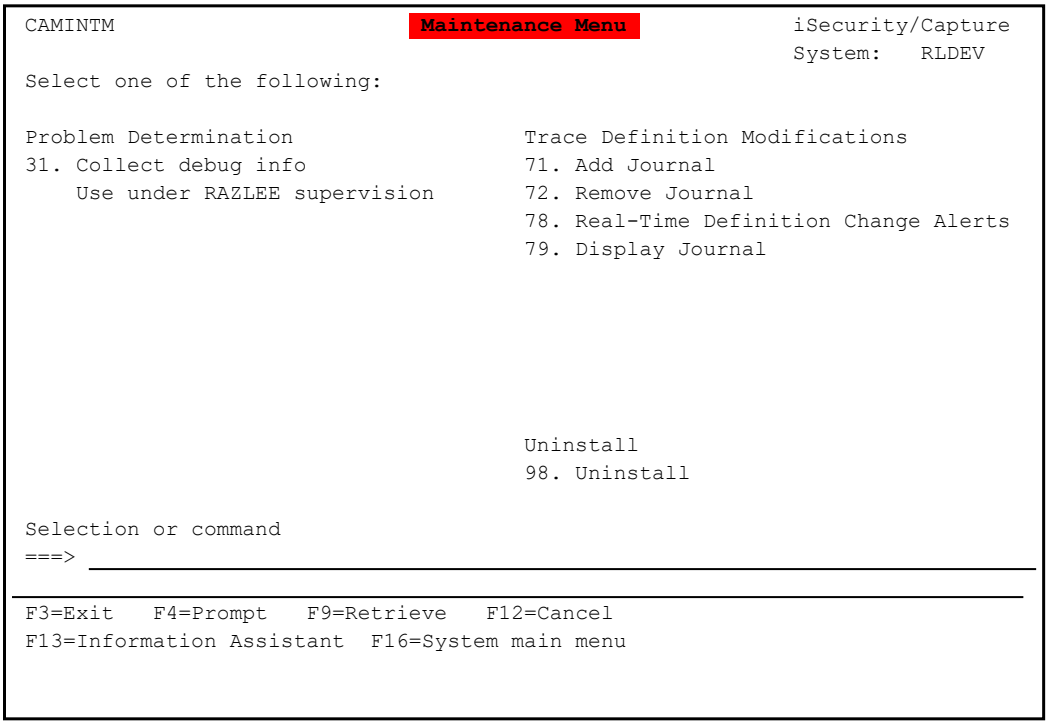


2. Press **Enter** to apply your changes.

5

Maintenance Menu

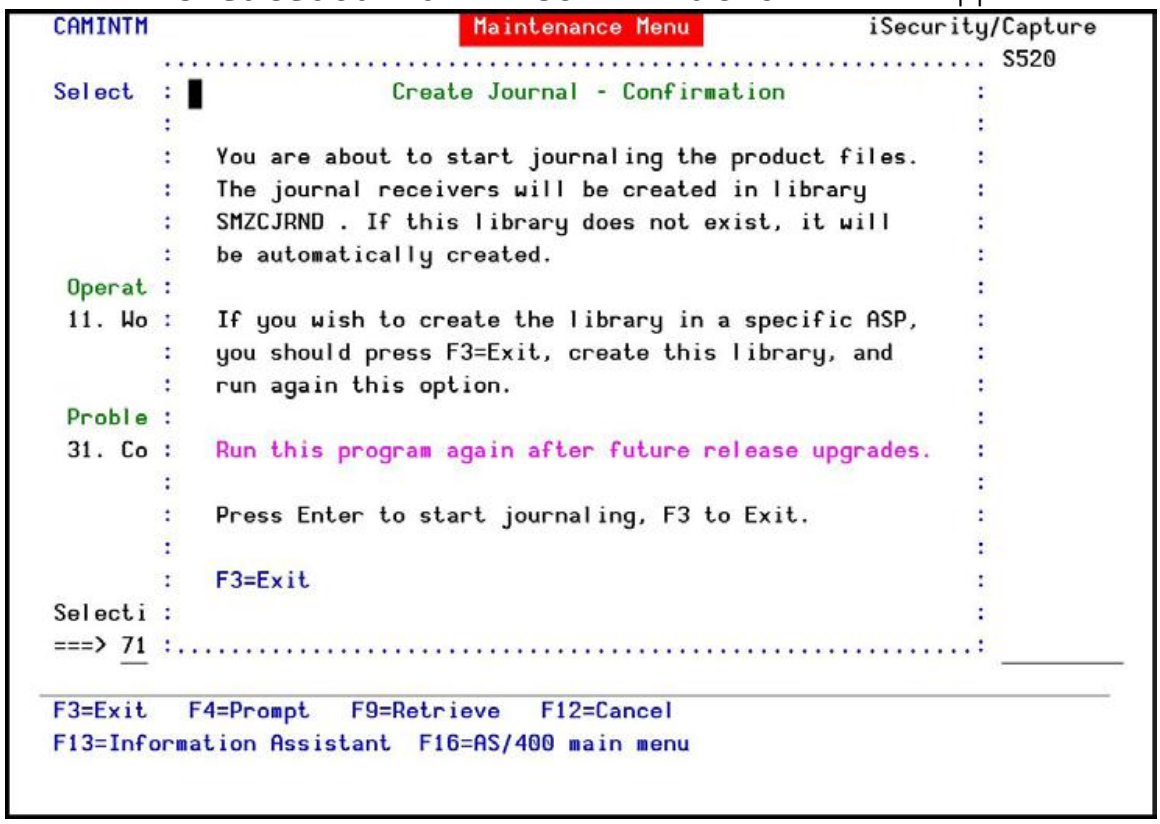
The **Maintenance Menu** enables you set and display global definitions for **iSecurity Capture**. To access the **Maintenance Menu** , select **82. Maintenance Menu** from the main menu (*STRCPT*). The **Maintenance Menu** appears.



Journal Files

Add Journal

1. Select **71. Add Journal** from the **System Maintenance** menu. The **CreateJournal – Confirmation** screen appears.



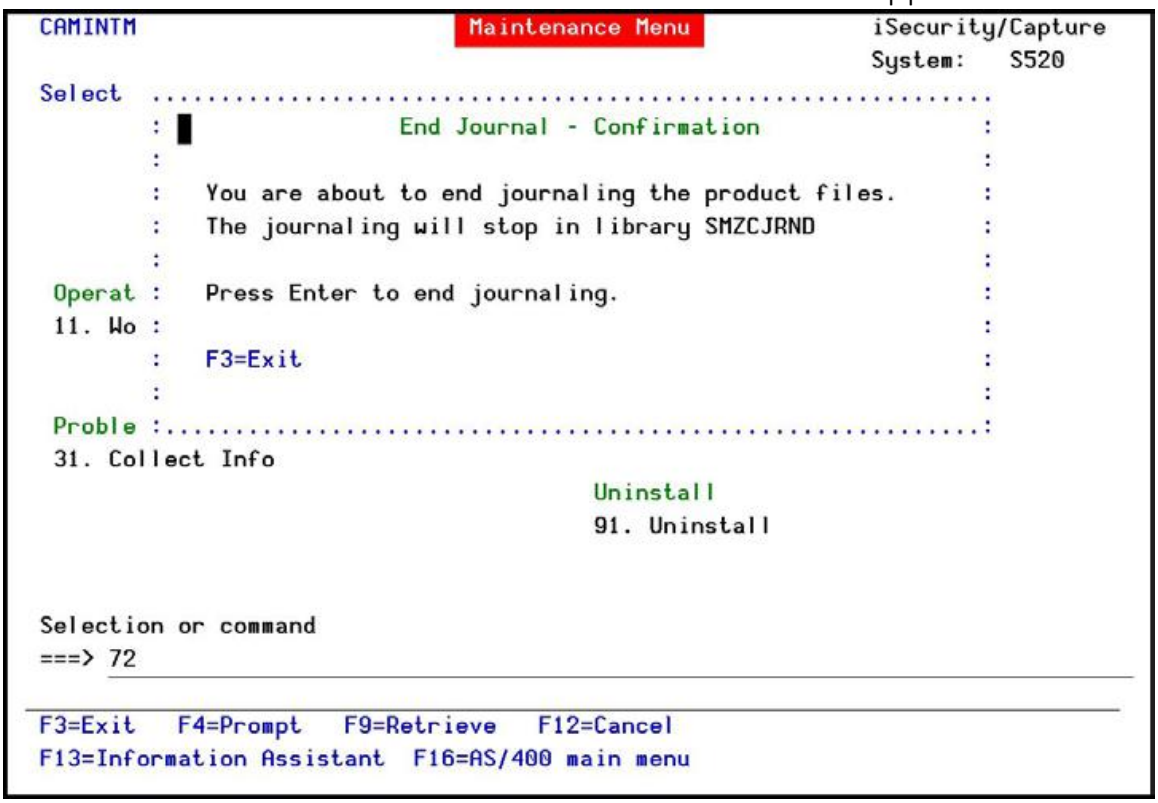
2. Press **Enter** to confirm. The process of journaling the product files begins. The journal receivers will be created in library **SMZCJRND** . If this library does not exist, it will be automatically created.

NOTE: If you wish to create the library in a different ASP, press F3=Exit, create the library and run this option again.

NOTE: You must re-run this option after every release upgrade.

Remove Journal

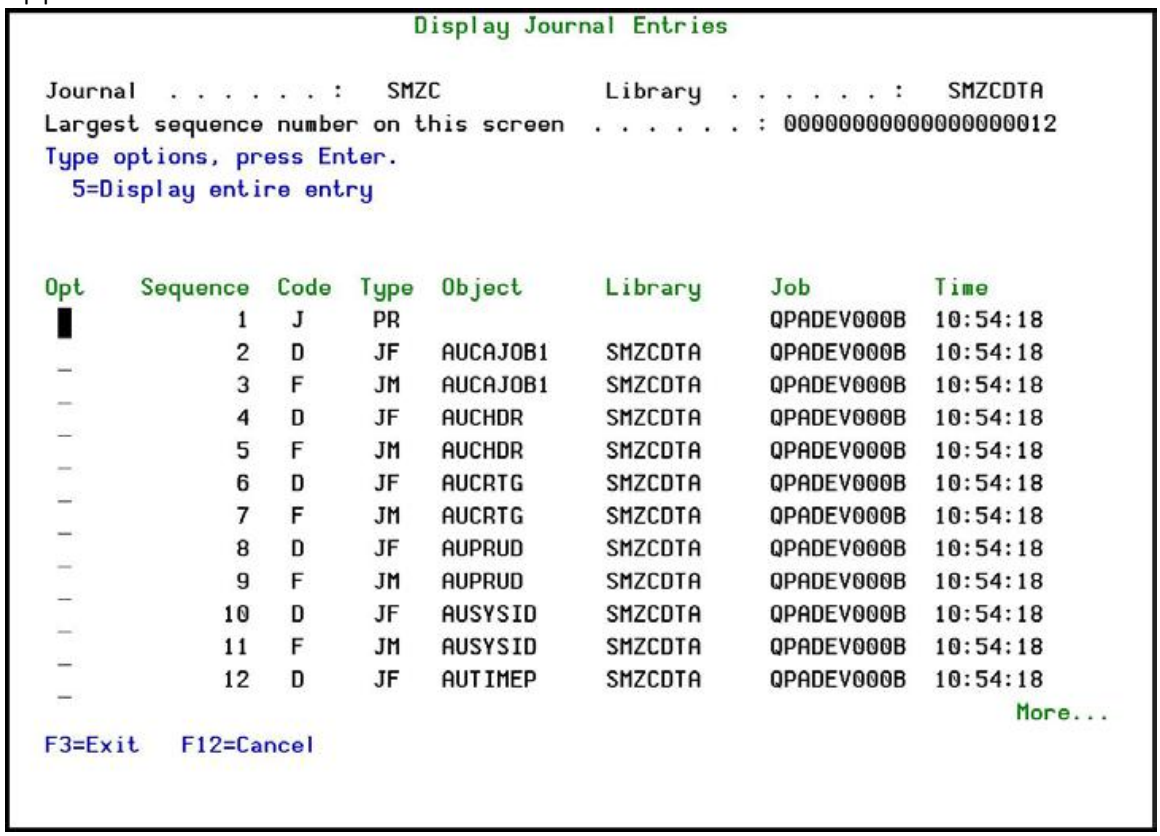
1. Select **`72. Remove Journal`** from the **`System Maintenance`** menu. The **`EndJournal – Confirmation`** screen appears.



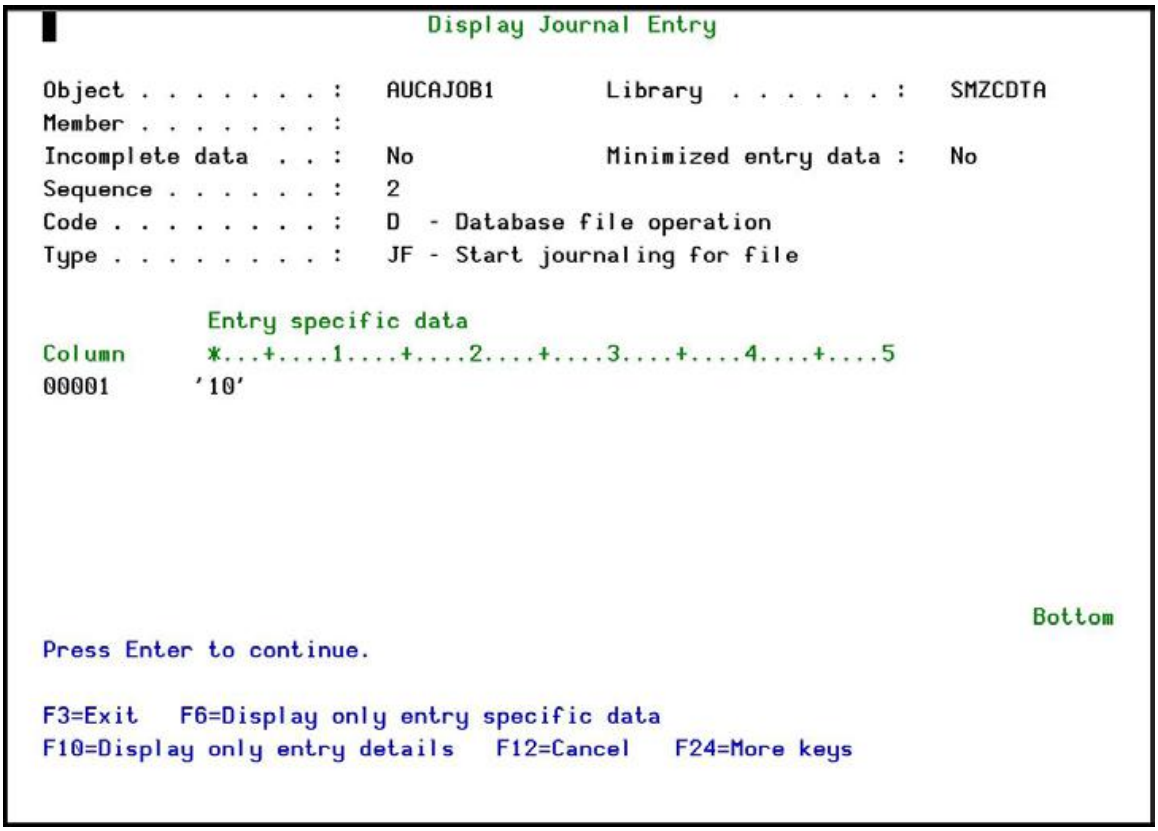
2. Press **`Enter`** to confirm.

Display Journal

1. Select **79. Display Journal** from the **System Maintenance** menu. The **DisplayJournal Entries** screen appears.



2. To display a specific entry, type **5** by that entry and press **Enter** . The **DisplayJournal Entry** screen appears.


Display Journal Entry
Object . . . . . : AUCAJOB1 Library . . . . . : SMZCDTA
Member . . . . . :
Incomplete data . . : No Minimized entry data : No
Sequence . . . . . : 2
Code . . . . . : D - Database file operation
Type . . . . . : JF - Start journaling for file
Entry specific data
Column *...+....1....+....2....+....3....+....4....+....5
00001 '10'
Bottom
Press Enter to continue.
F3=Exit F6=Display only entry specific data
F10=Display only entry details F12=Cancel F24=More keys

Uninstall

Choose **98. Uninstall Product** from the **Maintenance** Menu, and follow the directions on the screen.