Change Tracker™

The Program and File Change Tracking Component

Software Version: 1.26

Updated: November 11, 2015

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Visit our web site at www.razlee.com.

Record your product authorization code here.

Computer Model	
Serial Number	
Authorization Code	

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About This Manual

This user guide is intended for system administrators and security administrators responsible for the implementation and management of security on System i (AS/400) systems. However, any user with basic knowledge of System i operations will be able to make full use of this product after reading this book.

Product Documentation Overview

Raz-Lee takes customer satisfaction seriously. Our products are designed for ease of use by personnel at all skill levels, especially those with minimal System i experience. The documentation package includes a variety of materials to get you up to speed with this software quickly and effectively. We hope you find this user manual informative; your feedback is important to us. Please send your comments about this user manual to docs@razlee.com.

Printed Materials

This user guide is the only printed documentation necessary for understanding this product. It is available in user-friendly PDF format and 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/.

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

Typography Conventions

The following conventions are used for ease in understanding the information types presented.

- IBM i (OS/400) commands system messages, menu options, field names, function key names are written in **Arial Bold**.
- References to chapters or sections and emphasis are written in ***Italic.***
- Key combinations are separated by a dash, for example: Shift-Tab.

iSecurity Product Suite

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.

The iSecurity Product Suite includes:

Product	Description
Anti-Virus	Anti-Virus is a dedicated iSeries-specific product engineered to provide full protection to the server, its file contents, and resident iSeries or System i dedicated software.
AP-Journal	AP-Journal automatically manages database changes by documenting and reporting exceptions made to the database journal.
Assessment	Assessment checks your ports, sign-on attributes, user privileges, passwords, terminals, and more. Results are instantly provided, with a score of your current network security status with its present policy compared to the network if iSecurity were in place.
Audit	Audit is a security auditing solution that monitors System i events in real-time. It includes a powerful query generator plus a large number of predefined reports. Audit can also trigger customized responses to security threats by means of the integrated script processor contained in Action.
Authority On Demand	Authority on Demand provides an advanced solution for emergency access to critical application data and processes, which is one of the most common security slips in System i (IBM i) audits. Current manual approaches to such situations are not only error-prone, but do not comply with regulations and often-stringent auditor security requirements.

Product	Description
Capture	Capture silently captures and documents user screens for tracking and monitoring, without any effects on system performance. It also preserves job logs for subsequent review. Capture can run in playback mode and can be used to search within texts.
Change Tracker (this product)	Change Tracker automatically tracks modifications in the software and file structure within production libraries. Changes are tracked at both the object and source levels. It does not require any special actions by programmers.
COMMAND	COMMAND monitors and filters commands and its parameters before they are run, enabling you to control each parameter, qualifier or element, in conjunction with the context in which it is about to run. Options include Allow, Allow with Changes and Reject. It includes a comprehensive log, proactive alerting and easily integrates with SIEM.
DB-Gate	**Direct IBM i Client-only Access to Non-DB2 Databases** DB-Gate empowers IBM i customers with exciting data access capabilities, based on Open Database Connectivity (ODBC), employing standard OS/400 facilities to enable fully database-transparent access to remote systems.
Firewall	Firewall protects and secures all types of access, to and from the System i, within or outside the organization, under all types of communication protocols. Firewall manages user profile status, secures entry via pre-defined entry points, and profiles activity by time. Its Best Fit algorithm determines the validity of any security-related action, hence significantly decreasing system burden while not compromising security.

Product	Description
Password	Password provides a first-tier wall of defense for users by ensuring that user passwords cannot be easily cracked.
Screen	Screen protects unattended terminals and PC workstations from unauthorized use. It provides adjustable, terminal- and user-specific timeout capabilities.
View	View is a unique, patent-pending, field-level solution that hides sensitive fields and records from restricted users. This innovative solution hides credit card numbers, customer names, etc. Restricted users see asterisks or zeros instead of real values. View requires no change in existing applications. It works for both SQL and traditional I/O.
Visualizer	Visualizer is an advanced DWH statistical tool with state-of-the-art technology. This solution provides security-related data analysis in GUI and operates on summarized files; hence, it gives immediate answers regardless of the amount of security data being accumulated.

Introducing Change Tracker

Raz-Lee Security's Change Tracker, part of the iSecurity suite, automatically tracks modifications in the software (Native objects, IFS and System libraries), at both the object and source levels. It then logs the event with details about the object that has been changed as well as the source that was used to create the object.

The product works fully automatically and does not require any intervention by programmers; users can no longer bypass the system, intentionally or maliciously.

Change Tracker automatically records every revision, collecting all relevant information, including object attributes, source code, and more. Tracking characteristics can be set per library or folder.

Change Tracker includes two different options to track changes:

- **Real-time Mode** analyzes activities routinely logged in the operating system log (QAUDJRN). Records the details of the change event, the object attributes and the relevant sources.
- **Periodic Mode** analyzes changes at preset intervals. Change Tracker automatically records the revision between predefined time intervals, collecting all relevant information, including object attributes, source code, and more.

You can access the different Change Tracker features from the main menu or from the iSecurity GUI interface. The various feature groups are described in the following chapters.

NOTE: Change Tracker inherits some generic functionality that is part of the base part of iSecurity. As such, some references are made to other manuals - especially the iSecurity *Audit User Manual* for a complete explanation.

The Need for Change Tracker

Since software changes can adversely affect company business, even approved updates require detailed auditing. IT managers must have the ability to identify the cause for changes in system behavior and quickly resolve problems. There are numerous, well-publicized cases where unauthorized changes were made in order to hide malicious code that performed harmful activities, sometimes even illegal.

All regulations–SOX, HIPAA, PCI, BASEL II, and other audit-mandated regulations–require auditing and traceability of software production libraries. To ensure internal data security, a company needs to maintain a list of all programs moved to production libraries including when this occurred, who approved the activity, etc. to avoid a Trojan horse entering and then taking over the system.

Change Tracker Contrasted with Standard Change Management Systems

Normally a full scale Change Management Software (CMS) is used to provide the auditing and traceability of software production libraries. A CMS generally offers control over the full process of software development, but is dependent on information entered by users and procedures that must be followed. CMS are also expansive and complex to be implemented. CMS products are also expensive in terms of manpower, time and cost, and are complex to implement.

This is especially true for organizations which are SMBs (small/medium business). Besides being based on users entering information, a CMS cannot promise a full log of all changes. Change Tracker was specifically designed to provide this essential data that may be otherwise lacking, all that automatically - with virtually no user intervention.

Change Tracker is very simple to setup and use, and is completely accurate. As such, it provides companies with thorough tracking of software changes entering production, without the difficulty of implementing a full scale CMS. Companies that successfully run a CMS realize that it can only record activities sent through the system, but that bypassing the CMS is a real threat.

As Change Tracker logs all activity on the operating system, companies do not face a situation where a program was added to production and not logged.

Change Tracker can be used in environments where a CMS is also in use. In such a situation Change Tracker identifies changes made by the authorized procedures used by the CMS and clearly identifies them. Alternatively, such changes can be eliminated leaving Change Tracker logged information to include only changes that were done without authorization.

Whether or not a CMS exists, auditors will appreciate this auditing enhancement and take advantage of Change Tracker's reporting options to quickly verify if things were changed outside the CMS, tailor reports according to definitions for specific libraries, as well as identify who made suspicious changes and when.

Summary of typical CMS Limitations

Change Management Systems (CMS) are regularly used to help auditors pinpoint the source of irregularities. But due to their nature, there are a variety of challenges associated with such systems, that are not answered, including:

- Tracking is not complete and cannot assure 100% logging of changes.
- Tracking measures can be bypassed by users with high authority or by problems in the CMS setup.
- Complicated implementation procedures.
- Requires changes in the procedures used for development in the organization.
- Requires training of entire development unit of the organization.
- Are suitable primarily for large organizations.
- High usage costs.

Change Tracker Benefits

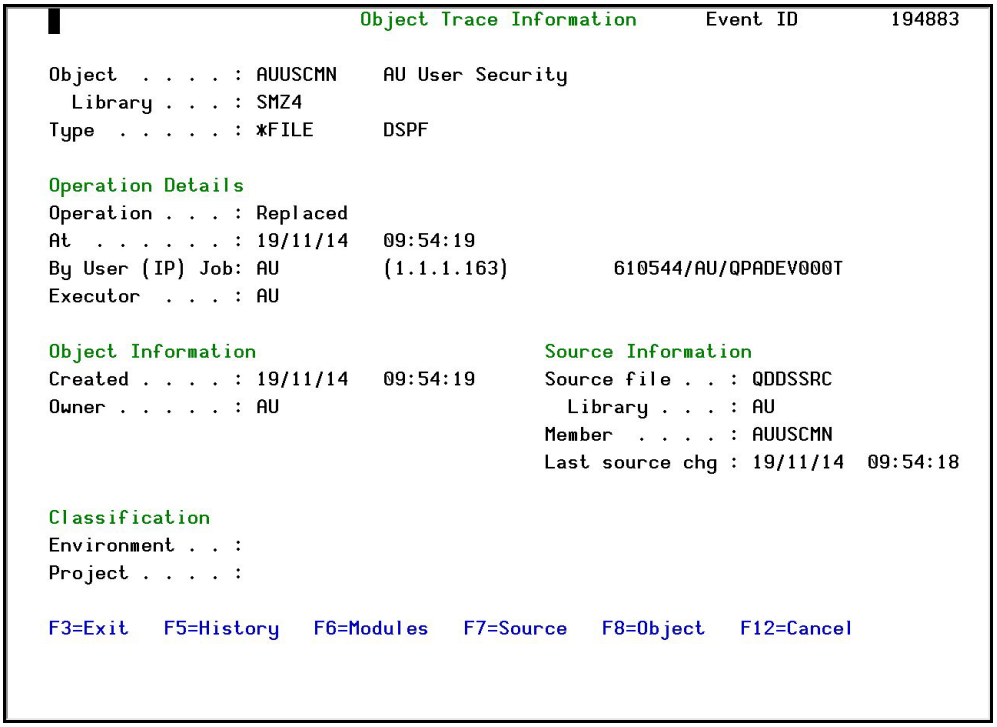
- Collects information in real-time, directly from the QAUDJRN. All changes are logged.
- No user intervention is required.
- Very rapid implementation enables your organization to get up and running immediately.
- No changes in the organization development procedures are required.

- No training is required except for the product manager whose training is relatively brief.
- Log entries are automatically classified in accordance with the company's conventions in the areas of the *environment*, *tasks* and *executors*.
- The Journal receivers of QAUDJRN are not needed and they are analyzed in Real-Time.
- Object attributes are collected automatically.
- Source used for objects can optionally be collected and saved, allowing future ability to view and compare versions with each other.
- Auditors have access to all the data they require, such as who made changes, why, when and from which IP address.
- Includes a fully-operative, field-proven report generator and scheduler, making the on-going mission of auditing changes a relatively easy task.
- Detailed traceability logs.
- Competitive pricing.

```
                    Work with Native Objects - All Changes     19/11/14 - 20/11/14
                                                               Object*  *ALL
                                                               Library* *ALL
Type options, press Enter.
 1=Select   2=Set Env-Prj  5=History  6=Modules  7=Source  8=Object  P=PDM

                          Attribute            Add/Rmv
Opt Library    Object      Type   Date      Time
 _  SMZ4       AUUSSWFM   DSPF    19/11/14  8:00   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  8:56   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:02   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:10   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 R Deleted
 _  SMZ4       AUUSCMN    DSPF    19/11/14  9:54   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 A Created
 _  SMZ4       AUUSCMN    MENU    19/11/14  9:54   Replaced
 _  SMZ4       AUUSSTFM   DSPF    19/11/14 10:09   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:50   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:51   Replaced
 _  SMZ4       AUUSSSFM   DSPF    19/11/14 10:53   Replaced
                                                                          More...
F3=Exit   F5=Refresh   F10=Last Chg.       F11=View 2  F12=Cancel  F13=Repeat
F14=Clear Repeat       F15=Subset/Sort     F17=Top     F18=Bottom
```

Figure 2-1. Work with Native Objects Screen - All Changes



```
                          Object Trace Information      Event ID        194883

Object  . . . . . : AUUSCMN    AU User Security
  Library . . . . : SMZ4
Type  . . . . . . : *FILE      DSPF

Operation Details
Operation . . . . : Replaced
At  . . . . . . . : 19/11/14   09:54:19
By User (IP) Job: AU         (1.1.1.163)         610544/AU/QPADEV000T
Executor  . . . . : AU

Object Information                          Source Information
Created . . . . . : 19/11/14   09:54:19      Source file . . . : QDDSSRC
Owner . . . . . . : AU                          Library . . . . : AU
                                            Member  . . . . . : AUUSCMN
                                            Last source chg : 19/11/14  09:54:18

Classification
Environment . . . :
Project . . . . . :

F3=Exit   F5=History   F6=Modules   F7=Source   F8=Object   F12=Cancel
```

Figure 2-2. Object Trace Screen

System Requirements

- Operating System: V5R3 or higher.
- CPU impact is minimal as software changes are infrequent and normally do not occur during peak processing time
- Required Disk space is also small. It can be easily regulated, based on definitions such as the period to keep information online, and for which libraries to keep sources. All sources are highly compressed.

User Interfaces

As with all other components of iSecurity, Change Tracker provides both a Green Screen interface as well as a GUI interface. These two interfaces can be used interchangeably as preferred by the user.

Native OS/400 Green Screen User Interface

Change Tracker is a user-friendly product. The user interface follows standard IBM i CUA conventions. All product features are available via the menus, so users are never required to memorize command name. Many features are also accessible via the command line, for the convenience of experienced users.

Menus

Product menus allow easy access to all features with a minimum of keystrokes. Menu option numbering and terminology are consistent throughout this product as well as 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.

Data Entry Screens

Data entry screens include many features such as:

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

Getting Started and General Definitions

Starting Change Tracker

To begin using Change Tracker, type **STRCT** on a command line. The main menu is displayed.

NOTE: If a product password is requested, type **QSECOFR**.

```
CTMAINMN                          Change Tracker                      iSecurity
                                                            System:   S520
Native Objects                          Reporting
 1. Object Changes                      41. Queries and Reports
 2. Source Members Changes

IFS Objects                             Control
11. IFS Changes                         71. Activation

PTFs
21. PTF Objects Activity Log
25. PTF Status

Definitions                             General
31. General Definitions                 81. System Configuration
                                        82. Maintenance Menu


Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 3-1. Change Tracker Main Menu

General Definitions

The **General Definitions** menu is reached by selecting **31. General Definitions** from the Main menu.

```
CTINCMN                        General Definitions        iSecurity/Change-Tracker
                                                                System:   S520
Scope of Tracking                          Entities
 1. Libraries                              31. Environments
 2. PTF                                    32. Projects
                                           33. Executors
 5. IFS Directories                        34. Time Groups
 6. IFS Directories to Exclude             35. General Groups

Executor Identification                    Validate QAUDLVL Setting
21. Executor Auto Identification           71. Check QAUDLVL Setting
Use this option also to isolate
changes made by a CMS (Change
Management System).

Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 3-2. General Definitions Menu

NOTE: In order to improve performance, most definitions that are used in Real-Time mode are periodically loaded to the product, and then accessed from the memory. As such, changes made to definitions may affect processing later than expected.

Setting up System Values for Real Time Tracking

Real Time tracking is based on the information that is logged by the operating system in the QAUDJRN. The amount of information is controlled by the System Values.

Change Tracker **does not** require the QAUDJRN Journal Receivers to be retained on the disk.

Items to track	Basic Tracking	Extended Tracking	Periodic
Event details (who, when, job ID, IP, nature of event)	Y	Y	
Object attributes	Y	Y	
Save of sources used for objects	Y (optional)	Y (optional)	
Log (and optionally save source) changes in source files		Y	
Log changes in members and triggers in non-source files			

Validate QAUDLVL Setting

The Check QAUDLVL Setting option, activated by selecting **71. Check QAUDLVL Setting** from the **General Definition** menu, checks if the system values are properly set for Basic and Extended operation.

It is recommended to check the **QAUDLVL** setting before starting to use Change Tracker and after every change to the **QAUDLVL** system value. The result of this check is a message which describes the **QAUDLVL** setting's compliance to the requirements.

Before you can use this option, you must first activate Change Tracker, as described in Activation Mode on page 38.

Basic Tracking

Tracking in real time requires auditing system values to be set properly.

Ensure the following settings for basic tracking:

- System value **QAUDLVL** must include ***CREATE *DELETE *OBJMGT *SAVRST** for basic operation.

Extended Tracking

In addition to tracking object changes, the product can track changes to file members and file triggers. Extended Tracking is available for native objects only.

Ensure the following settings for extended tracking, tracking of changes in file members and file triggers. These settings are in addition to those required for basic tracking:

- System value **QAUDCTL** must include ***OBJAUD**

- System value **QAUDLVL** must include ***CREATE *DELETE *OBJMGT *SAVRST** for basic operation.
- For Extended operation the **QAUDLVL** must also include either ***SECURITY** or the combination of ***SECRUN** and ***SECCFG**.

In addition, to track member activity in PF-SRC, PF and LF, the file must be set for auditing of ***CHANGE/*READ**. To set this option use option **6=Extended Tracking** from the definition of Libraries:

1. In the **Work with Libraries** screen (accessed by selecting **1. Libraries** from the General Definition menu), use option **6=Extended Tracking** for the relevant library and press **Enter**. The **Extended Tracking** window appears.

```
                                Work with Libraries
                                            Subset by Environment *ALL
Type options, press Enter.                        by Library . . *ALL
    ..................................................................
 1= :                          Extended Tracking                     :
    :                                                                :
Opt :  To track member activity in PF-SRC, PF and LF the file must be  : ject
    :  set for auditing of *CHANGE/*READ.                            :
 _  :  Use this option to ensure files are audited.                  :
 _  :                                                                :
 6  :   1. Set *CHANGE to non-audited PF-SRC files                   :
 _  :   2. Set *CHANGE to non-audited data PF files                  :
 _  :   3. Set *CHANGE to non-audited LF files                       :
 _  :                                                                :
 _  :  ===> ▌                                                        :
 _  :                                                                :
 _  :  F3=Exit   F12=Cancel                                          :
    :                                                                :
    :                                                                :
    :                                                                :
    :................................................................: ottom
 F3=Exit    F6=Add new                F12=Cancel
```

Figure 3-3. Work with Libraries Screen - Extended Tracking

Options	Description
1	Set ***CHANGE** to non-audited PF-SRC files
2	Set ***CHANGE** to non-audited data PF files
3	Set ***CHANGE** to non-audited LF files

2. Set the options as described and press **Enter**.

Performance Consideration

Setting Extended Tracking causes the addition of the audit type **ZC - Object Changed** to QAUDJRN. This by itself has an absolutely minor performance impact. Taking into consideration that in most cases Extended Tracking is not required or can be limited to only those files which require it (such as source files or multi-member DB files), this impact is negligible.

Change Tracking Methods

Change Tracker users select one of two methods to track changes in the system. Both methods require minimum resources.

- **Real Time Mode** is the preferred method as it records the information about the event which caused the change (who, when, from where) in addition to the details of the change.
- **Periodic Mode** records only the changes.

Each Library and Folder may be set to use only one of the methods.

Enabling Change Tracking

To enable Change Tracker to run, select option **81. System Configuration** from the main menu and then select **1. Activation Mode**. Perform the steps described in Activation Mode on page 38.

Scope of Tracking

Libraries

The **Work with Libraries** screen defines which native objects libraries should be controlled and the attributes of the controls.

To define the Libraries to control, select **1. Libraries** from the **General Definitions** menu. The **Work with Libraries** screen appears.

```
                                Work with Libraries
                                            Subset by Environment *ALL
Type options, press Enter.                         by Library . . *ALL
                                                   by Text  . . .
 1=Select  3=Copy  4=Delete  5=DSPLIB  6=Extended Tracking
               Tracking  Keep     -Member activity-        -- Defaults --
Opt Library     Method   Source   PF-SRC      Other     Environment  Project
    *ALL         R/T       Y        N          N
    ALEX         R/T       Y        A          Y
    AU           R/T       Y        A          Y        AU           FIXES
    CT           R/T       Y        A          Y        CT           TEST
    SMZJ       Periodic    Y        N          N        JOURNAL      TEST
    SMZT         R/T       Y        A          Y        CT           TEST
    SMZ4         R/T       Y        N          Y        AU           TEST
                                                                      Bottom
 F3=Exit    F6=Add new                F12=Cancel
```

Figure 3-4. Work with Libraries Screen

See Adding or Modifying a Library on page 17 for a detailed descriptions of the fields.

Options	Description
1=Select	Select a definition of a library to work with.
3=Copy	Copy a definition of a library.
4=Delete	Delete a definition of a library.
5=DSPLIB	Display the library contents.
6=Extended Tracking	Specify extended tracking options for the library.

Function Keys	
F6=Add new	Adds a new library.

Subset Filter

The displayed list of libraries can be filtered further by subsets of Environment, Library, and Text. For example, if the characters **MZ** are entered in the subset by library, only libraries containing the string **MZ** will be displayed.

Adding or Modifying a Library

1. From the **Work with Libraries** screen, open a screen to modify or add a new library. The appropriate screen appears.

```
                                  Modify Library

 Type choices, press Enter.

 Library . . . . . . . . . .  ALEX          Name, *ALL

 Tracking object activity:
   Keep source for object  .  Y             Y=Yes, N=No.
   Keep object (w/o data)  .  O             Y=Yes, N=No, O=Optional-if no source
 Extended tracking for member activity:
   Source files members  . .  A             Y=Yes, N=No, A=All (inc. contents)
   PF/LF member add/rmv  . .  Y             Y=Yes, N=No
   Object must be audited for *CHANGE/*READ
 Tracking method . . . . . .  R             R=Real-time,
                                            P=Periodic, every    0 minutes.
 Defaults
 Environment . . . . . . . .  __________    Name (e.g. HR, JDE-TST, ERP-PROD)
 Project . . . . . . . . . .  ________      Name (e.g. CVT, WEB)
 Defaults are applied automatically, and can be changed later.


 F3=Exit    F4=Prompt    F12=Cancel
```

Figure 3-5. Modify Library Screen

Field	Description
Library	Name of library. ***ALL**. This definition applies to any library which is not specifically mentioned. **Generic***. Track a group of libraries. For example, enter SMZ* to track all libraries that begin with SMZ.
Tracking Method	Specifies the method by which changes are tracked. • **R=Real Time Tracking.** The operating system log **QAUDJRN** is monitored to identify relevant changes. This monitoring is performed in real time. • **P=Periodic.** The library is periodically scanned to identify changes made since the last scan. The period of change is defined in the *General Configuration* section in the *Audit User Manual*. • **S=Skip.** No Tracking will be done for this library.
Tracking object activity	This area refers to activities that are tracked when a change to the object occurs.

Field	Description
Keep source for object	The source is kept in a compressed mode and can later be restored with the same source change date and time. The source is kept only if the last source change date and time is identical to the one used to create the object. If the object was created in a different system, then, if the source change date and time are identical in the source available on the current system it will be kept. • **Y=Yes**. The source used to create the object is kept when the object is changed. • **N=No**. The source will not be kept.
Keep object (w/o data)	• **Y=Yes**. The object is kept when the object is changed. • **N=No**. The object will not be kept. • **O=Optional - if no source**. The object will only be kept if there is no source.
Extended tracking for member activity	Source and data files member activity can be tracked separately from tracking the object activity. In order to track member activity, the file must be set for auditing. See Extended Tracking on page 13 for a detailed explanation.
Source files members	Specifies activities to be performed on source files. • **Y=Yes**. Activity is logged. • **N=No.** Activity is not logged. • **A=All** (inc. contents). Activity is logged and the source member is saved.
PF/LF member add/rmv	Specifies activities to be performed for changes made to data files. Such changes can be adding/removing of members or triggers. • **Y=Yes**. Activity is logged. • **N=No**. Activity is not logged.
Auto set for new activities	Specifies defaults assigned to changes made in this library.
Environment	Assign the changed libraries to the environment.
Project	The objects in this library will be marked as part of the specified project.

Function Keys	Description
F4=Prompt	Opens a list to select 1 or more libraries.

2. Modify the field definitions and press **Enter**.

While tracking changes in a general software library has great importance, tracking changes in the OS (Operating System) and related software product libraries may have an even higher significance. Changes to such programs are called PTF (Program Temporary Fix) and are manipulated by IBM PTF related commands.

Change Tracker can track the actual activity that occurs in software product libraries and identify the license program and PTF ID these changes are related to.

To work with PTF definitions, select **2. PTF** from the **General Definitions** menu. The **Work with PTF Definition** screen appears.

```
                              Work with PTF Definition

 Type options, press Enter.

  1=Select
                 Tracking        -- Defaults --
 Opt Library      Method      Environment  Project
  *PTF             R/T        PTF          QSYS

                                                                    Bottom
  F3=Exit                                F12=Cancel
```

Figure 3-6. Work with PTF Definition Screen

Options	Description
1=Select	Modify the PTF definition.

Modifying PTF Definition

1. In the **Work with PTF Definition** screen, type **1** next to the ***PTF** definition and press **Enter**. The **Modify PDF Definition** screen appears.

```
                              Modify PTF Definition

Type choices, press Enter.

PTF Definition  . . . . . .  *PTF

Tracking method . . . . . .  R                R=Real-time, P=Periodic
For Periodic, the library will be scanned for changes every    5 minutes.

Defaults
Environment . . . . . . . .  __________       Name (e.g. SYSTEM)
Project . . . . . . . . . .  ________         Name (e.g. TR1, M05)





Defaults are applied Automatically, but can be changed later.

F3=Exit   F4=Prompt     F12=Cancel
```

Figure 3-7. Modify PTF Definition Screen

Field	Description
Tracking Method	Specify by which method the changes will be tracked: • **R/T=Real Time Tracking.** The operating system log **QAUDJRN** is monitored to identify relevant changes. This monitoring is performed in real time. • **P=Periodic.** The library is periodically scanned to identify changes made since the last scan. The period of change is defined in the *General Configuration* section in the *Audit User Manual*.
Defaults	
Environment	Environment the PTF is running in.
Project	Project running in the environment.

Function Keys	Description
F4=Prompt	Opens a prompt screen to select 1 or more PTF definitions.

2. Modify the field definitions and press **Enter**.

IFS Directories

To work with IFS directories, select **5. IFS Directories** from the **General Definitions** menu. The **Work with IFS Directories** screen appears.

```
                          Work with IFS Directories
                                          Subset by Dir*  . . .  _______________
Type options, press Enter.                     by text  . . . .  _______________
 1=Select   3=Copy   4=Delete   5=WRKLNK
                                            Tracking      -Defaults-
Opt Directory                               Method   Environment Project
  _  /alex                                    R/T
  _  /home/AU/                              Periodic
  _  /test2                                 Periodic
  _
```

Figure 3-8. Work with IFS Directories Screen

Field	Description
Subset	Filter by: **Dir*** (directory) **Text**

Options	Description
1=Select	Modify an existing IFS directory. Perform the steps described in Adding or Modifying an IFS Directory on page 22.
3=Copy	Copy the chosen directory. 1. Specify the new name and path of for the copy of the directory you selected. 2. Press **Enter** twice to confirm and return to the Work with IFS Directories screen.
4=Delete	Delete an existing IFS directory.
5=WRKLNK	Runs the **Work with Object Links** Command.

Function Keys	Description
F6=Add new	Add a new IFS directory.

Adding or Modifying an IFS Directory

1. In the **Work with IFS Directories** screen, select the directory you want to change, type **1** and press **Enter**, or press F6 to define a new directory. The appropriate screen appears.

```
                                Modify Directory

Type choices, press Enter.   Example: /home/AU/

Directory . . . . . . . . .  /alex
Enter full path (e.g. /ggg/). This applies also to all sub-directories.


Tracking method . . . . . .  R                R=Real-time (QAUDJRN),
                                              P=Periodic, every    5 minutes.

Defaults
Environment . . . . . . . .  __________       Name (e.g. HR, FINANCE, ERP, CRM)
Project . . . . . . . . . .  ________         Name (e.g. CVT, WEB)




Defaults are applied automatically, but can be changed later.

F3=Exit    F4=Prompt    F12=Cancel
```

Figure 3-9. Modify IFS Directory Screen

Field	Description
Directory	**IFS directory path**
Tracking Method	Specifies the method by which changes are tracked. • **R/T=Real Time Tracking.** The operating system log **QAUDJRN** is monitored to identify relevant changes. This monitoring is performed in real time. • **P=Periodic, every __ minutes.** The directory is periodically scanned to identify changes made since the last scan. A detailed description is provided in the *General Configuration* section in the *Audit User Manual*.
Defaults	Specifies defaults assigned to changes made in this directory.
Environment	Assign the changed directories to the environment.
Project	The objects in this directory will be marked as part of the specified project.

Function Keys	Description
F4=Prompt	Opens a prompt screen to select 1 or more IFS directories.

2. Modify the field definitions and press **Enter**.

IFS Directories to Exclude

To exclude IFS directories from the scan, select **6. IFS Directories to Exclude** from the **General Definitions** menu. The **Work with IFS Directories to Exclude** screen appears.

```
                    Work with IFS Directories to Exclude
                                          Subset by directory .
Type options, press Enter.                     by text  . . . .
  1=Select     4=Delete

Opt Directory                             Text
 _  dddd                                  ffffffffffffff
 _  dir                                   text
 _  mmmmmmmmmmmum/kkkkkttttt
 _  ss                                    s
 _  ssss
 _

                                                                Bottom
 F3=Exit     F6=Add new     F12=Cancel     F22=Display entire directory
```

Figure 3-10. Work with IFS Directories to Exclude Screen

Field	Description
Directory	IFS directory path
Text	User-entered description of directory.
Subset	Filter by **directory** or by a string in the **text** description.

Options	Description
1=Select	Modify an existing IFS directory. Perform the steps described in Adding or Modifying an IFS Directory to Exclude on page 24.
4=Delete	Exclude the chosen IFS directory from tracking.

Function Keys	Description
F6=Add new	Add a new IFS directory to exclude from tracking.
F22=Display entire directory	Displays all objects in the directory.

Adding or Modifying an IFS Directory to Exclude

Use this option to exclude directories from tracked.

1. In the **Work with IFS Directories to Exclude** screen, select the directory you want to change, type **1** and press **Enter**, or press **F6** to define a new directory. The appropriate screen appears.

```
                        Modify IFS Directory to Exclude

Type options, press Enter.

Directory  . .  /temp

Text . . . . .  Temporary Directory


Operations performed in the directory defined above will be excluded.




F3=Exit    F4=Prompt    F12=Cancel        F22=Enter entire directory
```

Figure 3-11. Modify IFS Directory to Exclude Screen

Field	Description
Directory	IFS directory path
Text	User-entered description of directory.
Subset by directory	Filter by directory name.
[Subset by] text	Filter by text description.

Function Keys	Description
F4=Prompt	Opens the Work with Object Links screen. Refer to the relevant IBM documentation for more details.
F22=Enter entire directory	Expands the free text **Directory** field to enter the full directory path.

2. Modify the field definitions and press **Enter**.

Executor Auto Identification

Use this option to identify the executor with a meaningful name. The executor is identified by a combination of the program and / or the user who executed the change.

The same executor can be defined by more than one program/user combination.

Once identified as an executor, it is possible to disregard the activity. This option provides:

- Clarity regarding the actual executor of the transaction
- Ability to work in an environment in which an active Change Management System (CMS) is working and Change Tracker is used solely to identify and track changes not made via the CMS. It is possible to eliminate such tracking information. To do so, set Keep activity in Change Tracker to **N**.

To define **Executors Auto Identification**, select **21. Executors Auto Identification** from the **General Definitions** menu. The **Work with Executors Auto Identification** screen appears.

```
                    Work with Executors Auto Identification
                                          Subset by user  . . .  __________
Type options, press Enter.                     by text  . . . .  ______________
  1=Select    4=Delete

Opt  Program     Library     User        Executor    Keep
 _   AR0001      LAWSON                  LN           Y
 _   CMSSTART    CMSLIB                  CMSADM       N

                                                                   Bottom
 F3=Exit    F6=Add new    F12=Cancel
```

Figure 3-12. Work with Executors Auto Identification Screen

Options	Description
1=Select	Modify the chosen executor. Perform the steps described in Adding or Modifying an Executor Auto Identification on page 26.
4=Delete	Deletes the chosen Executor Auto Identification.

Function Keys	Description
F6=Add new	Add a new Executor Auto Identification to track.

Adding or Modifying an Executor Auto Identification

1. In the **Work with Executors Auto Identification** screen, select the executor you want to change, type **1** and press **Enter**, or press **F6** to define a new executor. The appropriate screen appears.

```
                        Modify Executors Identification

 Type options, press Enter.

 Selection criterias:
 Program  . . . . . . . . . . . . CMSSTART        Leave empty for any value
   Library  . . . . . . . . . . . CMSLIB
 -and-
 User . . . . . . . . . . . . . .                 Leave empty for any value

 Result:
 Executor appears as  . . . . . . CMSADM

 Keep activity in Change Tracker. N                Y=Yes, N=No (ignore change)
 If the Program & User represents a Change Management System (CMS) that is use,
 you may consider setting Keep=N and use the CMS info instead.

 Remark . . . . . . . . . . . . . ________________________________________


 F3=Exit   F4=Prompt   F12=Cancel
```

Figure 3-13. Modify Executors Identification Screen

Field	Description
Selection Criteria	Opens the Modify Executors Identification screen. You can also select Select the executor modify. Opens the Modify Directory screen.
Program	Filter by name of program. Leave empty for no filtering.
Library	Filter by name of library. Leave empty for no filtering.
User	Filter by name of library. Leave empty for no filtering.
Result	
Executor appears as	Name assigned to executor
Keep activity in Change Tracker	If the Program & User represents a Change Management System (CMS) that is use, you may consider setting N and use the CMS info instead. **Y=Yes, N=No** (ignore change)
Remark	Free text field to add remarks.

Function Keys	Description
F4=Prompt	Opens a prompt screen to select 1 or more executors.

2. Modify the field definitions and press **Enter**.

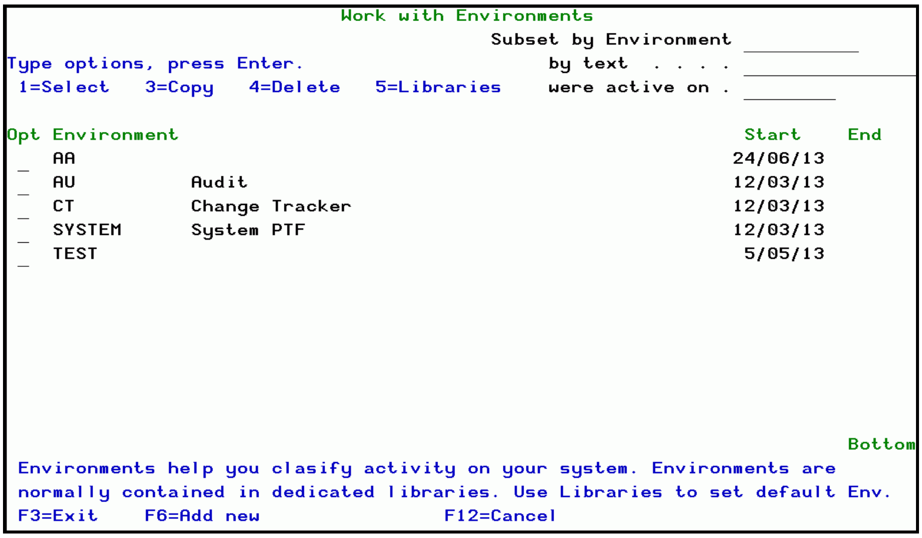
Entities

Environments

Environments help you classify activity on your system. They can either be an actual environment or a virtual environment to which one or more projects are assigned.

Environments are normally contained in dedicated libraries. **Work with Environments** defines which environments should be controlled and the attributes of the controls. Use Libraries to display current libraries assigned to the environment.

To work with **Environments**, select **31. Environments** from the **General Definitions menu**. The **Work with Environments** screen appears.



```
                             Work with Environments
                                          Subset by Environment __________
Type options, press Enter.                     by text  . . . .  __________________
 1=Select    3=Copy    4=Delete    5=Libraries     were active on .  ________

Opt Environment                                                  Start    End
 _  AA                                                          24/06/13
 _  AU           Audit                                          12/03/13
 _  CT           Change Tracker                                 12/03/13
 _  SYSTEM       System PTF                                     12/03/13
 _  TEST                                                         5/05/13









                                                                         Bottom
 Environments help you clasify activity on your system. Environments are
 normally contained in dedicated libraries. Use Libraries to set default Env.
 F3=Exit     F6=Add new                       F12=Cancel
```

Figure 3-14. Work with Environments Screen

Field	Description
Environment	Assign the changed objects to the environment.
Start	Start time
End	End time

Options	Description
1=Select	Modify an environment.
3=Copy	Copy an environment.
4=Delete	Delete an environment.
5=Libraries	Display current libraries assigned to the environment .

Function Keys	Description
F6=Add new	Opens a prompt screen to select 1 or more environments.

Adding or Modifying an Environment

1. In the **Work with Environments** screen, select the environment you want to change, type **1** and press **Enter**, or press **F6** to define a new environment. The appropriate screen appears.

```
                                Modify Environment

Environment  AP JOURNAL
Owner . . .
Start . . .  11/07/13
End . . . .

Description:

F3=Exit                          F12=Cancel
```

Figure 3-15. Modify Environment Screen

Field	Description
Environment	Assign the changed objects to the environment.
Owner	Owner of the environment.
Start	Start time
End	End time
Description	Free text field to describe of environment.

Function Keys	Description
F6=Add new	Opens a prompt screen to select 1 or more environments.

2. Modify the field definitions and press **Enter**.

Projects

By classifying activities in terms of site-specific Projects, object and source changes can be viewed in a more meaningful manner.

To work with **Projects**, select **32. Projects** from the **General Definitions** menu. The **Work with Projects** screen appears.

```
                                Work with Projects
                                            Subset by project . . _________
Type options, press Enter.                       by text  . . . . ______________
  1=Select   3=Copy   4=Delete                   were active on . _________

Opt Project                                                      Start     End
  _ FIXES     Fixes                                              9/04/13
  _ TEST      Test                                              12/03/13
  _ TEST2                                                        5/05/13
  _ TEST3                                                        5/05/13
  _

                                                                         Bottom
 Classifying activity in Project terms, helps to look at the object/source
 changes in a meaningful way. Use Libraries to set the current default Project.
 F3=Exit    F6=Add new                F12=Cancel
```

Figure 3-16. Work with Projects Screen

Field	Description
Project	Name of the project
Start	Start time
End	End time

Options	Description
1=Select	Modify a project.
3=Copy	Copy a project.
4=Delete	Delete a project.
Subset	Filter by: • **project** • **text** • **were active on** - were active during the time period.

Function Keys	Description
F6=Add new	Add a new project to work with.

Adding or Modifying a Project

1. In the **Work with Projects** screen, select the project you want to change, type **1** and press **Enter**, or press **F6** to define a new project. The appropriate screen appears.

```
                                  Modify Project

Project . .   QSYS          PTF trace of QSYS
Owner . . .
Start . . .   5/08/14
End . . . .
Environment   PTF

Description:

F3=Exit     F4=Prompt            F12=Cancel
```

Figure 3-17. Modify Project Screen

Field	
Project	Name of the project
Owner	Owner of the project
Start	Start time
End	End time
Environment	Environment the project is running in.
Description	Free text area to type descriptive information.

Function Keys	
F4=Prompt	Opens a prompt screen to select 1 or more projects.

2. Enter or update the information and press **Enter**.

Executors

To define **Executors**, select **33. Executors** from the **General Definitions** menu. The **Work with Executors** screen appears.

```
                              Work with Executors

Type options, press Enter.                  Subset by task . . .  __________
 1=Select    3=Copy    4=Delete                     by text . . .  ______________

Opt Executor
 _  AFRIC        text
 _  ALEX
 _  MDCMS
 _  RAZLEE
 _  TEST         TEST TEST
 _  YURI         Yuri
 _

                                                                        Bottom
F3=Exit    F6=Add new                       F12=Cancel
```

Figure 3-18. Work with Executors Screen

Options	Description
1=Select	Modify an executor.
3=Copy	Copy an executor.
4=Delete	Delete an executor.
Subset	Filter by **Task**, **Text**

Function Keys	Description
F6=Add new	Add a new executor.

Adding or Modifying an Executor

1. In the **Work with Executors** screen, select the executor you want to change, type **1** and press **Enter**, or press **F6** to define a new executor. The appropriate screen appears.

```
                                Modify Executor

Executor . .  CMSADM       CMS administrator


Description:
Aldon change management administrator

 F3=Exit                  F12=Cancel
```

Figure 3-19. Modify Executor Screen

Field	Description
Executor	Name of the executor, followed by a free text entry field.
Description	Free text area to type descriptive information.

Function Keys	Description
F4=Prompt	Opens a prompt screen to select 1 or more executors (**Add New Executor** screen only).

2. Enter or update the information and press **Enter**.

Time Groups

The description and steps for defining Time Groups are provided in the *Audit User Manual*.

General Groups

The description and steps for defining General Groups are provided in the *Audit User Manual*.

Activating Change Tracking

To activate real time tracking, select option **71. Activation** from the main menu. The **Activation** menu appears.

All the displayed options are part of *Audit*. For detailed descriptions of these features and how to use them, please see the *Audit User Manual*.

```
CTSETMN                              Activation                    Change Tracker
                                                                 System:   S520
    *Real Time Mode*                          *Periodic Mode*
Activation                                Activation
 1. Activate ZAUDIT subsystem              51. Activate Periodic Mode
 2. De-activate ZAUDIT subsystem           52. De-activate Periodic Mode
 5. Work with Active Jobs

Auto-Activation at IPL
11. Activate ZAUDIT subsystem at IPL
12. Do Not Activate ZAUDIT sbs at IPL

Manual Activation                         Use 81, 1 to control activation
31. Start Real-Time Auditing
32. End Real-Time Auditing
35. Set Start of Auditing Time


Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 3-20. Activation Menu

Real Time Tracking

Table 3-1 on page 34 describes the actions available for Real Time tracking on the **Activation** menu.

Table 3-1: Real Time Mode Commands

Key	Command	Description
Activation		
1	**Activate ZAUDIT System**	Activate ZAUDIT subsystem. Enable Change Tracker and Real-time tracking must both be enabled in Activation Mode (**81,1**). To activate Change Tracker in Real Time mode, it is first necessary to enable Changer Tracker and Real time tracking in the **Activation Mode** screen.
2	**De-activate ZAUDIT System**	Stop Real Time tracking activity.
5	**Work with Active Jobs**	Display and manipulate jobs run under the ZAUDIT subsystem.
Auto-Activation at IPL		
11	**Activate ZAUDIT subsystem at IPL**	Activate ZAUDIT at IPL.
12	**Do Not Activate ZAUDIT subsystem at IPL**	Do not activate ZAUDIT at IPL.

Table 3-1: Real Time Mode Commands

Key	Command	Description
Manual Activation		
31	**Start Real-Time Auditing**	Initiate auditing in real-time mode. ZAUDIT subsystem must be activated before using this option.
32	**End Real-Time Auditing**	Stop auditing in real-time mode. Only the Real Time active jobs is ended.
35	**Set Start of Auditing Time**	Set the "starting point" of time to start collecting information.

NOTE: If Real Time is activated for the first time or reactivated after a long inactive period, it is recommended that you only activate during off-peak hours.

Periodic Tracking

Table 3-2 on page 35 describes the actions available for Periodic tracking on the **Activation** menu (Figure 3-20 on page 34).

Table 3-2: Periodic Mode Commands

Key	Command	Description
Activation		
51	**Activate Periodic Mode**	Initiates a background Periodic job that monitors libraries that were defined as periodic tracking libraries. See Activate Periodic Tracking on page 41.
52	**De-activate Periodic Mode**	De-activate Change Tracker Periodic mode. See Deactivate Periodic Tracking on page 42.

Controlling Tracking

System Configuration

The **System Configuration** menu controls the global options for Change Tracker including the authorization code. To access the **System Configuration** menu, select **81. System Configuration** from the Main menu.

```
iSecurity            Change Tracker System Configuration     18/11/14 09:26:31

Select one of the following:

Change tracker                          SIEM Support
 1. Activation Mode                     71. Setting Syslog
                                        72. Setting Severity by Event Type
 3. Native Objects Definitions
 4. PTF Objects Definitions

 9. Retention Period


Action Definitions                      General
13. E-Mail Definitions                  91. Language Support
                                        99. Copyright Notice

Selection ===>  _

Release ID . . . . . . . . . . . . . .  01.11 14-11-04    44DE466  520 7459
Authorization code . . . . . . . . . .  T01501750008               1   S520

F3=Exit    F22=Enter Authorization Code
```

Figure 4-1. System Configuration Screen

NOTE: General Activation procedures (**71** in the Main menu) are Audit functions and are described in the *Audit User Manual*.

Change Tracker Definitions

Activation Mode

To access the **Activation Mode** screen, select **1**. **Activation Mode** from the **System Configuration** Main Menu. The **Activation Mode** screen appears.

```
                              Activation Mode                 17/06/13 16:25:07


Enable Change Tracker  . . . . . . .   Y        Y=Yes, N=No

Enable Real Time Tracking  . . . . .   Y        Y=Yes, N=No

Periodic Tracking runs every . . . .     5      0=Not in use, 1-9999 minutes

Two methods may be used to track changes: Real Time and Periodic.
Both methods require minimum resources.

Real Time Detection is the preferred method as it records the information about
the change in addition to the details of the operation that caused the change.

Periodic Tracking is recommended to delay detection for convenient times.

Both methods, Real Time and Periodic, can be used simultaneously. Each Library
and Folder may be set to use only one of the methods.



F3=Exit  F12=Previous
```

Figure 4-2. Activation Mode Screen

Field	Description
Enable Change Tracker	Change Tracker must be enabled even if *Audit* is running. **Y=Yes; N=No**.
Enable Real Time Tracking	Real-time tracking will be performed. **Y=Yes; N=No**,
Periodic Tracking runs every . . .	Interval for Periodic tracking **0**=No periodic tracking will be performed. **1-9999 minutes**. For example if **5**, then changes are tracked every **5** minutes.

NOTE: If you set both **Enable Change Tracker** and **Enable Real Time Tracking** to **Y**, then even if the **Real-Time Auditing (All systems) parameter** in **Audit** is set to N, activating the **ZAUDIT** subsystem activates the **Audit** job. You access the parameter from the **Auto start activities in ZAUDIT** option in the **System Configuration** menu in **Audit** (**STRAUD -->81-->5**)

Native Objects Definitions

To access the **Native Objects** screen, select **3**. **Native Objects Definition** from the **System Configuration** Main Menu.

```
                                Native Objects                 17/06/13 16:35:50

Type choices, press Enter.

Native object types to track, or *ALL  . .  *CMD        *FILE       *PGM
                                            ___________ ___________ ___________
                                            ___________ ___________ ___________

F3=Exit       F4=Prompt       F12=Previous
```

Figure 4-3. Native Objects Screen

Field	Description
Native object types to track, or *ALL	Enter the types of native objects to track or ***ALL** to track all types.

Function Key	Description
F4=Prompt	Opens a prompt list to select one or more object types. 1. Type **1** next to the object type to select it. 2. To select another type select a different line and press **F4** to reopen the prompt list.

Changes on these objects will begin to be tracked after Re-Activation of Change Tracker (and Audit, if necessary).

PTF Objects Definitions

To access the **PTF Objects** screen, select **4**. **PTF Objects Definition** from the **System Configuration** Main Menu.

System libraries include objects normally maintained by the users. These include objects with types of ***USRPRF**, ***LIB**, ***DEVD**, history files, **QHST**, and other objects.

```
                          PTF Objects Definitions          20/11/14 15:14:12

  Type choices, press Enter.

  PTF Tracker omits user objects . . . . . .  Y            Y=Yes, N=No
  System libraries may contain user-maintained objects; these include objects
  of types *USRPRF / *LIB / *DEVD, QHST history files and more.

  F3=Exit   F12=Previous
```

Figure 4-4. PTF Objects Screen

Field	Option
PTF Tracker omits local system objects	**Y=Yes**. Local objects will not be tracked **N=No**. Local objects will be tracked.

Activate Periodic Tracking

To activate periodic tracking, select **71**. **Activation** from the **Change Tracker** Main Menu, and then select **51**. **Activate Periodic Mode** from the **Activation** Menu. The **Add Job Schedule Entry** screen appears.

```
                        Add Job Schedule Entry (ADDJOBSCDE)

 Type choices, press Enter.

 Job name . . . . . . . . . . . . > CT#PRIOD       Name, *JOBD
 Schedule date  . . . . . . . . . > *CURRENT       Date, *CURRENT, *MONTHSTR...
 Schedule time  . . . . . . . . . > *CURRENT       Time, *CURRENT

                           Additional Parameters

 Text 'description' . . . . . . . > 'Change Tracker Periodic mode'
_____

                                                                        Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display        F24=More keys
```

Figure 4-5. Add Job Schedule Entry Screen

Field	Description
Job Name	**Name** – Name of the job ***JOBD** – Job Description
Schedule Date	**FIRST-DATE** – Invalid date that must be changed to one of the following options: ***CURRENT** – Submit job on the current date ***MONTHSTR** – Submit job on the first day of the month ***MONTHEND** – Submit job on the last day of the month ***NONE** – No start date is specified
Schedule Time	**FIRST-TIME** – Invalid time that must be changed to one of the following options: **Time** – Submit job at the specified time (24-hour format) ***CURRENT** – Submit the job at the current time
Omit Date	**Date** – Specify a maximum of 20 dates on which the job is not submitted. Enter **+** and press **Enter** to open more fields for additional dates. ***NONE** – There are no dates when a job is not submitted

Field	Description
Recovery Action	Specifies the recovery action to take if the job cannot be submitted at the designated time because the system is powered down or in restricted state. ***SBMRLS** – Job is submitted in the released state ***SBMHLD** – Job is submitted in the held state ***NOSBM** – Job is not submitted
Message Queue	Specifies the qualified name of the message queue to which message are sent **Name** – Specific message queue ***USRPRF** – Message queue specified in the user profile under which the submitted job runs is used ***NONE** – Completion messages are not sent. Error messages are sent to the **QSYSOPR** message queue
Library	Library where the message queue resides Name – Specific library ***LIBL** – Library List ***CURLIB** – Current Library
Text Description	Text that briefly describes the job schedule entry

Deactivate Periodic Tracking

To deactivate periodic tracking, select **71**. **Activation** from the **Change Tracker** Main Menu, and then select **52**. **Activate Periodic Mode** from the **Activation** Menu. All periodic tracking is immediately stopped.

Retention Period

To define the period of time to save tracking information, select **9**. **Retention Period** from the **System Configuration** Main Menu. The **Change Tracker System Periods** screen appears.

```
                    Change Tracker System Definitions       6/07/15 08:51:33

 Type choices, press Enter.

 Retention period (days)  . . . . . . . . .  9999        Days, 9999=*NOMAX
 Applies for Native objects . . . . . . . .  Y           Y, N
             Source . . . . . . . . . . . .  Y           Y, N
             IFS  . . . . . . . . . . . . .  Y           Y, N
             PTF  . . . . . . . . . . . . .  Y           Y, N
 Auto run maintenance . . . . . . . . . . .  SUN         *NO,
                                                         /1.../99=Every nn days,
                                                         MON...SUN=Weekly,
                                                         1...31=Monthly

 Backup program for removed activity  . . .  *NONE       Name, *STD, *NONE
   Backup program library . . . . . . . . .  __________
 A specified backup program can run before deleting old data. It will backup
 all data deleted after the retention period expires.  The *STD (default)
 backup program is SMZT/CTSOURCE CTLOGBKP.


 F3=Exit    F12=Previous
```

Figure 4-6. Retention Periods

Field	Description
Retention period (days)	Use this option to determine how long information will be retained. **0 - 9999** **9999=*NOMAX** - Information will retained for an unlimited time.
Applies for	The retention period will apply for the following parameters:
Native [objects]	**Y**=Yes, **N**=No
Source [objects]	**Y**=Yes, **N**=No
IFS [objects]	**Y**=Yes, **N**=No
PTF	**Y**=Yes, **N**=No
Auto run maintenance	*NO = /1..../99 = Every nn days MON...SUN = 1 .... 31 = Monthly

Field	Description
Backup program for removed activity	A specified backup program may run before deleting old information. This information will backed before deletion. The ***STD** (default) backup program is **SMZT/CTSOURCE CTLOGBKP**. **Name, *STD, *NONE**
Backup program library	Set the location of the backup program.

SIEM Support

Change Tracker integrates with SIEM systems by sending security alerts to the Syslog. Message alerts can contain detailed event information about changes to both objects and source files.

Setting Syslog

The Syslog definitions for **Change Tracker** are defined in **Audit**. In the Audit System Configuration menu (accessed by option 81 in the Audit main menu), use option 32 to set the specific Syslog parameters. For more details, see the *Audit User Manual*.

Setting Severity by Event Type

You can define for what level of severity Syslog messages should be sent, to avoid overloading your system with unnecessary information.

1. Select **72. Setting Severity by Event Type** in the **Change Tracker System Configuration** menu. The **Setting Syslog Severity by Event Type** screen appears.

```
                    Setting Syslog Severity by Event Type    24/11/14 15:01:31

 Send SYSLOG messages (for SIEM) .   Y          Y=Yes, N=No


 Type choices, press Enter.
   Blank=Do not send   0=Emergency   1=Alert   2=Critical   3=Error
   4=Warning   5=Notice   6=Info   7=Debug

 Severity  Event Type
           Native object
    _      IFS object
    _      PTF object
    _      Source file changes
    _









 F3=Exit   F12=Previous
```

Figure 4-7. Setting Severity by Event

Field	Description
Send SYSLOG messages (for SIEM)	**Y**=Yes **N**=No

Field	Description
Severity	Enter the severity range from which the SYSLOG message will be sent for the following: • Native objects • IFS objects • PTF objects • Source file changes The severity levels are: • 0 = EMERGENCY • 1 = ALERT • 2 = CRITICAL • 3 = ERROR • 4 = WARNING • 5 = NOTICE • 6 = INFORMATIONAL • 7 = DEBUG

2. Enter your parameter choices and press **Enter**.

General

Language Support

A detailed description of this option is provided in the *Audit User Manual*.

Copyright Notice

This screen displays the current Raz-Lee copyright notice and the General Public License (GPL) where necessary.

Maintenance

The Maintenance Menu enables you to set and display global definitions for **Change Tracker**. To access the Maintenance Menu, select **82. Maintenance Menu** from the **Change Tracker** main menu.

Change Tracker

This section allows you to ensure that all computers in your network are using the same definitions.

Export Definitions

Create an SAVF file containing the definitions and settings you want to export.

1. Select **1. Export Definitions** from the **Maintenance Menu**. The **Export Change Tracker Defns.** screen appears.

```
                    Export Change Tracker Defns.    (EXPSTDFN)

 Type choices, press Enter.

 Collection type  . . . . . . . .                 *NEW, *ADD, *OLD
 Work library and SAVF in QGPL  .   *AUTO         Name, *AUTO (ST + System)

                                                                      Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Figure 4-8. Export Change Tracker Defns.

Field	Description
Collection type	***NEW =** ***ADD =** ***OLD =**
Work library and SAVF in QGPL	Destination of the export library. ***AUTO** = ST + the name of the originating system **Name**= name of target library.

2. Enter the required parameters and press **Enter**.

Import Definitions

Import the SAVF file containing the exported definitions and settings to another computer or LPAR.

1. Select **2. Import Definitions** from the **Maintenance Menu**. The **Import Change Tracker Defns.** screen appears.

```
                    Import Change Tracker Defns.   (IMPSTDFN)

 Type choices, press Enter.

 Input type . . . . . . . . . . .   *SAVF         *LIB, *SAVF



                                                                  Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Figure 4-9. Import Change Tracker Defns.

Field	Description
Input type	*SAVF = *LIB =
Save file	Name of the *SAVF
Library	The library that contains the SAVF **Name** = Enter the name of the specific library ***LIBL** = Use the library list
CT Options	***UPD** = Add new rules and update existing rules ***REPLACE** = Replace the existing rules with the imported rules ***BYSUBJECT** = Import the rules by subject ***SAME** = Use the existing definition
Keep backup in library	The name of the library to keep the backup of the rules

2. Enter the required parameters and press **Enter**.

Display Definitions

This feature enables the user to display and print the **Change Tracker** definitions

1. Select **5. Display Definitions** from the **Maintenance Menu**. The **Display CT Definitions** screen appears.

```
                         Display CT Definitions (DSPCTDFN)

  Type choices, press Enter.

  Report type  . . . . . . . . . .   _____        *ALL, *CFG
  Format . . . . . . . . . . . . .   *DETAILS     *LIST, *DETAILS
  Output . . . . . . . . . . . . .   *            *, *PRINT, *PRINT1-*PRINT9


                                                                        Bottom
  F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
  F24=More keys
```

Field	Description
Report type	*ALL = *CFG =
Format	*LIST = Short form *DETAILS = Full form
Output	* = Display ***PRINT, *PRINT1 - *PRINT9** = Print Queues

2. Select choices and press **Enter**.

Change Tracker Specific

Fix Change Tracker Log

Use this option to fix Change Log entries for specific time periods.

1. Select **21. Fix change Tracker Log** from the **Maintenance Menu**. The **Fix CT Log Entries** screen appears.

```
                          Fix CT Log Entries (FIXLOG)

 Type choices, press Enter.

 Data to work with  . . . . . . .   *ALL         *ALL, *NATIVE, *PTF, *IFS...
 Display last minutes . . . . . .   *BYTIME      Number, *BYTIME
 Starting date and time:
   Starting date  . . . . . . . .   *START       Date, *CURRENT, *YESTERDAY...
   Starting time  . . . . . . . .   000000       Time
 Ending date and time:
   Ending date  . . . . . . . . .   *CURRENT     Date, *CURRENT, *YESTERDAY...
   Ending time  . . . . . . . . .   235959       Time
 Execution mode . . . . . . . . .   *            *, *BATCH

                                                                        Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Field	Description
Data to work with	***ALL** = ***NATIVE** = ***PTF** = ***IFS** = ***SRC** =
Display last minutes	**Number** = Select only those records occurring within the previous number of minutes as specified by the user ***BYTIME** = Use the date and time range specified (default)
Starting date	Select only those records occurring within the range specified by the starting date and time specified below **Date** = Enter a specific date in DDMMYY format ***CURRENT** = The current date (day the report runs) ***YESTERDAY** = The day before the current date ***WEEKSTR** = Beginning of the current week ***PRVWEEKS** = Beginning of the previous week ***MONTHSTR** = Beginning of the current month ***PRVMONTHS** = Beginning of the previous month ***YEARSTR** = Beginning of the current year ***PRVYEARS** = Beginning of the previous year ***MON - *SUN** = Day of the current (or previous) week ***START** = (default)

Field	Description
Starting time	The starting time on the date selected in HHMMSS format
Ending date	Select only those records occurring within the range specified by the ending time and date specified below **Date** = Enter a specific date in DDMMYY format ***CURRENT** = The current date (day the report runs) (default) ***YESTERDAY** = The day before the current date ***WEEKSTR** = Beginning of the current week ***PRVWEEKS** = Beginning of the previous week ***MONTHSTR** = Beginning of the current month ***PRVMONTHS** = Beginning of the previous month ***YEARSTR** = Beginning of the current year ***PRVYEARS** = Beginning of the previous year ***MON - *SUN** = Day of the current (or previous) week
Ending time	The starting time on the date selected in HHMMSS format
Execution mode	***** = Run the correction immediately online ***BATCH** = Run the correction in a batch job

2. Select choices and press **Enter**.

Trace Definition Modifications

You can send all changes to the Change Tracker definitions to a journal.

Add Journal

Select **71. Add Journal** from the **Maintenance Menu**. The **Create Journal - Confirmation** screen appears. Press **Enter** to confirm.

```
CTMINTM                          Maintenance Menu                    iSecurity/Base
                                                                     S520
Select  :                Create Journal - Confirmation              :
        :                                                           :
Change  :   You are about to start journaling the product files.    :
 1. Exp :   The journal receivers will be created in library        :
 2. Imp :   SMZTJRND . If this library does not exist, it will      :
 5. Dis :   be automatically created.                                :
        :                                                           :
Change  :   If you wish to create the library in a specific ASP,    :
21. Fix :   you should press F3=Exit, create this library, and      :
        :   run again this option.                                  :
        :                                                           :
        :   Run this program again after future release upgrades.    :
        :                                                           :
        :   Press Enter to start journaling, F3 to Exit.            :
        :                                                           :
        :   F3=Exit                                                 :
Selecti :                                                           :
===> 71 :...........................................................:

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 4-10. Create Journal - Confirmation

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

Remove Journal

Select **72. Remove Journal** from the **Maintenance Menu**. The **End Journal - Confirmation** screen appears. Press **Enter** to confirm.

```
CTMINTM                          Maintenance Menu                iSecurity/Base
                                                            System:   S520
Select  ..............................................................
        :                End Journal - Confirmation                  :
Change  :                                                            :
 1. Exp :   You are about to end journaling the product files.       :
 2. Imp :   The journaling will stop in library SMZTJRND             :
 5. Dis :                                                            :
        :   Press Enter to end journaling.                           :
Change  :                                                            :
21. Fix :   F3=Exit                                                  :
        :                                                            :
        :............................................................:


                                     Uninstall
                                     98. Uninstall Change Tracker

Selection or command
===> 72

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 4-11. End Journal - Confirmation

Display Journal

1. Select **79. Remove Journal** from the **Maintenance Menu**. The **Display Current Journal** screen appears.

```
                    Display APP Current Journal (DSPAPCRJ)

 Type choices, press Enter.

 Display last minutes . . . . . .   *BYTIME        Number, *BYTIME
 Starting date and time:
   Starting date  . . . . . . . . > *PRVMONTHS     Date, *CURRENT, *YESTERDAY...
   Starting time  . . . . . . . .   000000         Time
 Ending date and time:
   Ending date  . . . . . . . . .   *CURRENT       Date, *CURRENT, *YESTERDAY...
   Ending time  . . . . . . . . .   235959         Time
 User profile . . . . . . . . . .   *ALL           Name, *ALL
 Program name . . . . . . . . . .   *ALL           Name, *ALL
 Job name . . . . . . . . . . . .   *ALL           Name, *ALL
   User . . . . . . . . . . . . .                  Name
   Number . . . . . . . . . . . .                  000000-999999
 Number of records to process . .   *NOMAX         Number, *NOMAX
 Output . . . . . . . . . . . . .   *               *, *PRINT, *PDF, *HTML..

                                                                        Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display        F24=More keys
```

Figure 4-12. Display Current Journal

Field	Description
Display last minutes	**Number** = Select only those records occurring within the previous number of minutes as specified by the user ***BYTIME** = Use the date and time range specified (default)
Starting date	Select only those records occurring within the range specified by the starting date and time specified below **Date** = Enter a specific date in DDMMYY format ***CURRENT** = The current date (day the report runs) ***YESTERDAY** = The day before the current date ***WEEKSTR** = Beginning of the current week ***PRVWEEKS** = Beginning of the previous week ***MONTHSTR** = Beginning of the current month ***PRVMONTHS** = Beginning of the previous month ***YEARSTR** = Beginning of the current year ***PRVYEARS** = Beginning of the previous year ***MON - *SUN** = Day of the current (or previous) week ***START** = (default)
Starting time	The starting time on the date selected above. HHMMSS format

Field	Description
Ending date	Select only those records occurring within the range specified by the ending time and date specified below **Date** = Enter a specific date in DDMMYY format ***CURRENT** = The current date (day the report runs) (default) ***YESTERDAY** = The day before the current date ***WEEKSTR** = Beginning of the current week ***PRVWEEKS** = Beginning of the previous week ***MONTHSTR** = Beginning of the current month ***PRVMONTHS** = Beginning of the previous month ***YEARSTR** = Beginning of the current year ***PRVYEARS** = Beginning of the previous year ***MON - *SUN** = Day of the current (or previous) week
Ending time	The starting time on the date selected above.HHMMSS format
User profile	**Name =** ***ALL =**
Program name	**Name =** ***ALL =**
Job name	**Name =** ***ALL =**
User	**Name =**
Number	**Number =**
Number of records to process	**Number =** ***NOMAX =**
Output	*** =** ***PDF =** ***HTML =** ***CSV =** ***OUTFILE =** ***PRINT =** ***PRINT1 - PRINT9 =**
Add column headings	***YES =** ***NO =**
File to receive output	**Name =** ***AUTO =**
Library	**Name =** ***DATE =** ***LIBL =** ***CURLIB =**
Replace or add records	***REPLACE =** ***ADD =**
Output format	***STD =** ***EXT =**
Display format	***LIST =** ***DETAIL =**
Structure output by file	***ALL =** ***ALLHDR =** ***BYFLD =**
Analyze business data	

Field	Description
Business item ID	1 - 15 = *ALL =
Test	EQ = NE = GT = GE = LT = LE = LIKE = NLIKE = LIST = NLIST =
Value	
Mail to	
Mail text	
Object size to allow attach	Number = *NO = *NOMAX =
Delete if attached	*NO = *YES =
Compress and send together	*NO = *YES =
Starting journal receiver	Name = *CURRENT = *CURRCHAIN =
Library	Name = *LIBL = *CURLIB =
Ending journal receiver	Name = *CURRENT =
Library	Name = *LIBL = *CURLIB =
Starting time millisecond	Number =
Ending time millisecond	Number =
Object (*Temp for attach only)	*TEMP = *AUTO =
Directory (‘dir’)	/iSecurity/report output/ = *DATE =
User defined data	

2. Enter your required parameters and press **Enter**. The requested report is produced.

Uninstall

Uninstall Change Tracker

Use this feature if for any reason you need to uninstall **Change Tracker**.

1. Select **98. Uninstall Change Tracker** from the **Maintenance Menu**. The **Uninstall SECURITYTP** screen appears.

```
                          Uninstall SECURITYTP

You are about to uninstall this product.
All program files, data and definitions will be deleted.
You are advised to print this screen for further reference.
Before proceeding, ensure that:
  o The product has been entirely de-activated
  o No user or batch job is working or intends to work with this product


To run uninstall procedure you should do the following:
  o Exit from the current session
  o Open a new session using QSECOFR or equivalent user profile
  o Enter: CALL SMZT/CTRMVPRD

Once the uninstall is completed, enter: DLTLIB SMZT
Backups of previous releases might exist under the name QGPL/P_SMZ*
To confirm proper uninstall, use DSPUSRPRF SECURITYTP TYPE(*OBJOWN)



F3=Exit
```

Figure 4-13. Uninstall

2. Follow the directions on the screen to uninstall the product. You might want to print the screen for ease of working.

Base Support

The **BASE Support** menu enables you to work with various settings that are common for all modules of iSecurity. This menu, with all its options, is in all iSecurity major modules. To access the **BASE Support** menu, select **89. BASE Support** from the **Change Tracker** main menu.

```
AUBASE                          BASE Support                    iSecurity/Base
                                                          System:    S520

Other                                   General
 1. Email Address Book                  51. Work with Collected Data
 2. Email Definitions                   52. Check Locks
                                        58. *PRINT1-*PRINT9, *PDF Setup
                                        59. Global Installation Defaults

Operators and Authority Codes           Network Support
11. Work with Operators                 71. Work with network definitions
12. Work with AOD, P-R Operators        72. Network Authentication
                                        73. Check Authorization Status
14. Work with Authorization
15. Authorization Status                74. Send PTF
                                        75. Run CL Scripts
                                        76. Current Job CntAdm Log
                                        77. All Jobs CntAdm Log

Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 4-14. BASE Support menu

Other

Email Address Book

You can define the email address to be used for each user profile. You can also use this option to define an email group, with multiple addresses.

1. Select **1. Email Address Book** from the **BASE Support** menu. The **Work with Email Address Book** screen appears.

```
                         Work with Email Address Book

Type options, press Enter.
  1=Modify   3=Copy   4=Remove                Position to .  ___________
                                              Subset  . . .  ______________

Opt  Name        Entries
 _   ENGLAND         1  ENGLAND
 _   FRANCE          1  FRANCE
 _   GERMANY         1  GERMANY
 _   YURIW           2  YURIW
 _

                                                                   Bottom
F3=Exit   F6=Add new   F12=Cancel
```

Figure 4-15. Work with Email Address Book

2. Press **F6** to add a new address entry (or type **1** next to a name to modify it). The **Add Email Name** screen appears.

```
                                   Add Email Name
Type choices, press Enter.

Name  . . . . . . . .
Description . . . .

Email address(s) (blank, comma, new-line separated)

                                                                        More...
F3=Exit   F4=Prompt   F12=Cancel
```

Figure 4-16. Add Email Name

3. Enter a **Name**, **Description**, and all the associated email addresses and press **Enter**.

Email Definitions

Change Tracker can send out automatic emails for events that you define.

1. Select **2. Email Definitions** from the **BASE Support** menu. The **E-mail Definitions** screen appears.

```
                              E-mail Definitions              7/07/15 12:07:50

 Type options, press Enter.

 E-mail Method . . . . . . .  3       1=Advanced, 2=Native, 3=Secured, 9=None
 Advanced or Secured mode is recommended for simplicity and performance.

 Advanced/Secured E-mail Support
 Mail (SMTP) server name . .  smtp.1and1.com
                              Mail server, *LOCALHOST
 Use the Mail Server as defined for outgoing mail in MS Outlook.
 Reply to mail address . . .  DONOT@REPLY.COM
 If Secured, E-mail user . .  anyuser@anycompany.com
                 Password .   ******************************
 Native E-mail
 E-mail User ID and Address.                User Profile.
 Users must be defined as E-mail users prior to using this screen.
 The required parameters may be found by using the WRKDIRE command.
 This option does not support attached files.


 F3=Exit   F12=Cancel
```

Figure 4-17. Email Definitions

Field	Description
E-mail Method	**1=Advanced** **2=Native** **3=Secured** **9=None** Advanced or Secured mode is recommended for simplicity and performance. Note: If using **2=Native**, Users must be defined as E-mail users prior to using this screen. The required parameters may be found by using the WRKDIRE command. This option does not support attached files
Mail (SMTP) server name	The name of the STMP server or ***LOCALHOST**
Reply to mail address	The e-mail address to receive replies
If secured, email user and Password	If you chose **1=Advanced** or **3=Secured** for the E-mail method, enter the email user that will be used to send the emails and the password of that user
Email user ID and Address	If you chose **2=Native** for the E-mail method, enter the user ID and address that will be used to send the emails
User Profile	If you chose **2=Native** for the E-mail method, enter the user profile that will be used to send the emails

2. Enter the required fields and press **Enter**.

Operators and Authority Codes

Work with Operators

The Operators' authority management is now maintained from one place for the entire **iSecurity** on all its modules.

There are three default groups:

- ***AUD#SECAD** - All users with both ***AUDIT** and ***SECADM** special authorities. By default, this group has full access (Read and Write) to all **iSecurity** components.
- ***AUDIT** - All users with ***AUDIT** special authority. By default, this group has only Read authority to **Audit**.
- ***SECADM** - All users with ***SECADM** special authority- By default, this group has only Read authority to **Firewall**.

iSecurity related objects are secured automatically by product authorization lists (named **security1P**). This strengthens the internal security of the product. It is essential that you use Work with Operators to define all users who have ***SECADM**, ***AUDIT** or ***AUD#SECAD** privileges, but do not have all object authority. The **Work with Operators** screen has Usr (user management) and Adm for all activities related to starting, stopping subsystems, jobs, import/export and so on. **iSecurity** automatically adds all users listed in **Work with Operators** to the appropriate product authorization list.

Users may add more operators, delete them, and give them authorities and passwords according to their own judgment. Users can even make the new operators' definitions apply to all their systems; therefore, upon import, they will work on every system.

Password = *BLANK for the default entries. Use **DSPPGM GSIPWDR** to verify. The default for other user can be controlled as well.

If your organization wants the default to be *BLANK, then the following command must be used:

CRTDTAARA SMZTMPC/DFTPWD *char 10

This command creates a data area called DFTPWD in library SMZTMPC. The data area is 10 bytes long and is blank.

NOTE: When installing **iSecurity** for the first time, certain user(s) might not have access according to the new authority method. Therefore, the first step you need to take after installing is to edit those authorities.

To modify operators' authorities:

1. Select **11. Work with Operators** from the **BASE Support** menu. The **Work with Operators** screen appears.

```
                                Work with Operators

Type options, press Enter.
  1=Select   3=Copy    4=Delete
                      Auth.level: 1=*USE, 9=*FULL, 3=*QRY(FW,AU,CT), 5=*DFN(CT)
   User       System  FW SC PW CM AV AU AC CP JR VW VS RP NO CT PR UM EN ADM
   *AUD#SECAD S520     9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9
   *AUDIT     S520                 9  9  9  9  9     9
   *SECADM    S520     9  9  9     9              9  9              9
   ALEX       S520     9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9     9
   AU         S520     9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9     9
   AV         S520     9  9  9     9  9  9  9  9  9  9  9  9  9  9  9  9  9
   EVGTST     S520     9  9  9     9  9  9  9  9  9  9  9  9        9  9  9
   JAVA       S520     9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9  9
   JR         S520     9  9  9     9  9  9  9  9  9  9  9  9  9     9     9
   LOWUSR     S520
                                                                      More...
FW=Firewall    SC=Screen   PW=Password   CM=Command     AU=Audit      AC=Action
AV=Antivirus   CP=Capture  JR=Journal    VS=Visualizer  UM=User Mgt.  ADM=Admin
RP=Replication NO=Native Obj.Compliance  CT=Chg Tracker PR=Pwd Reset  VW=View
EN=Encryption/Tokenization

F3=Exit    F6=Add new    F8=Print   F11=*SECADM/*AUDIT authority   F12=Cancel
```

Figure 4-18. Work with Operators

2. Type **1** next to the user to modify his authorities (or press **F6** to add a new user). The **Modify Operator** screen appears.

```
                                Modify Operator

Operator  . . . . . . . . .    QSECOFR
System  . . . . . . . . . .    S520              *ALL, Name
Password  . . . . . . . . .    *SAME             Name, *SAME, *BLANK

Authorities by module:   1=*USE, 9=*FULL, 3=*QRY (FW and AU), 5=*DFN (CT)
Firewall (FW) . . . . . . . .  9        Screen (SC) . . . . . . . . .  9
Password (PW) . . . . . . . .  9        Command (CM)  . . . . . . . .  9
AntiVirus (AV)  . . . . . . .  9        Audit (AU)  . . . . . . . . .  9
Action (AC) . . . . . . . . .  9        Capture (CP)  . . . . . . . .  9
Journal (JR)  . . . . . . . .  9        View (VW) . . . . . . . . . .  9
Visualizer (VS) . . . . . . .  9        Replication (RP)  . . . . . .  9
Native Object Compliance (NO)  9        Change Tracker (CT) . . . . .  9
Password Reset (PR) . . . . .  9        User Management (UM)  . . . .  9
Encryption/Tokenization (EN)   9        Product Administrator (ADM) .  9

The Report Generator is used by most modules and requires 1 or 3 in Audit.
Consider 1 or 3 for your auditors (with 3 they can create/modify queries).


F3=Exit    F12=Cancel
```

Figure 4-19. Modify Operator

Field	Description
Password	**Name** = Password ***Same** = Same as previous password when edited ***Blank** = No password
1 = *USE	Read authority only
9 = *FULL	Read and Write authority
3 = *QRY	Run Queries. For auditor use
5 = *DFN	For Change Tracker use

Most modules use the Report Generator, which requires access to the Audit module. For all users who will use the Report Generator, you should define their access to the Audit module as either **1** or **3**. Option 1 should be used for users who will only be running queries. Use option 3 for all users who will also be creating/modifying queries.

3. Set authorities and press Enter.

A message appears to inform that the user being added/modified was added to the Authority list that secures the product's objects; the user carries Authority *CHANGE and will be granted Object operational authority. The Authority list is created in the installation/release upgrade process. The SECURITY_P user profile is granted Authority *ALL whilst the *PUBLIC is granted Authority *EXCLUDE. All objects in the libraries of the product (except some restricted special cases) are secured via the Authority list.

Work with AOD, P-R Operators

To modify operators' authorities:

1. Select **12. Work with AOD, P-R Operators** from the **BASE Support** menu. The **Work with Operators** screen appears.

```
                              Work with Operators

Type options, press Enter.
  1=Select   4=Delete
                    Authority level: 1=*USE   9=*FULL
Opt User            System    AOD PR  USP  Adm
 _  *AUD#SECAD      S520       9   9   9    9
 _  ALEX            S520       9   9   5    9
 _  AV              S520       9            9
 _  JAVA2           S520       9   9   9    9
 _  LOWUSR          S520       9   9   9    9
 _  OD              S520       9   9   9    9
 _  OS              *ALL
 _  TZION           S520       9   9   9    9
 _  WEAKUSR         S520       9
 _  YORAM           S520       9            9
 _

                                                                      Bottom
AOD=Authority on Demand   PR=Password Reset    USP=User Provisioning
                                              Adm=Administrator
F3=Exit    F6=Add new    F8=Print   F11=*SECADM/*AUDIT authority   F12=Cancel
```

Figure 4-20. Work with Operators - AOD

2. Type **1** next to the user to modify his authorities (or press **F6** to add a new user). The **Modify Operator** screen appears.

```
                                  Modify Operator

Type choices, press Enter.

Operator  . . . . . . . . .    QSECOFR
System  . . . . . . . . . .    S520              *ALL, Name
Password  . . . . . . . . .    *SAME             Name, *SAME, *BLANK

Authorities by subject:
Authority on Demand . . . .    9                 1=*USE, 4=Limited *EMERGENCY
                                                 5=*EMERGENCY, 8=Limited *FULL
                                                 9=*FULL
Password Reset  . . . . . .    9                 1=*USE, 9=*FULL
User Provisioning . . . . .    9                 1=*USE, 5=*ENTRY, 9=*FULL
Product Administrator . . .    9                 1=*USE, 9=*FULL

Note: Emergency operator can enable or modify emergency rules. This allows
      solving of critical problems without the intervention of the security
      administrator.
      The term Limited denotes that the user cannot change PIN codes.

F3=Exit    F12=Cancel
```

Figure 4-21. Modify Operator

Field	Description
Password	Name = Password Same = Same as previous password when edited Blank = No password
1 = *USE	Read authority only
9 = *FULL	Read and Write authority
3 = *QRY	Run Queries. For auditor use
5 = *DFN	For Change Tracker use

3. Set authorities and press **Enter**.

   A message appears to inform that the user being added/modified was added to the Authority list that secures the product's objects; the user carries Authority *CHANGE and will be granted Object operational authority. The Authority list is created in the installation/release upgrade process. The SECURITY_P user profile is granted Authority *ALL whilst the *PUBLIC is granted Authority *EXCLUDE. All objects in the libraries of the product (except some restricted special cases) are secured via the Authority list.

Work with Authorization

You can insert license keys for multiple products on the computer using one screen.

1. Select **14. Work with Authorization** from the **BASE Support** menu. The **Add iSecurity Authorization** screen appears.

```
                    Add iSecurity Authorization (ADDISAUT)

 Type choices, press Enter.

 *BASE, Audit, Action:
   Part 1 . . . . . . . . . . . .   *SAME        4..., *SAME
   Part 2 (optional)  . . . . . .   ____________
 Compliance, Replication:
   Part 1 . . . . . . . . . . . .   *SAME        N..., *SAME
   Part 2 (optional)  . . . . . .   ____________
 Firewall, Screen, Password:
   Part 1 . . . . . . . . . . . .   *SAME        8..., *SAME
   Part 2 (optional)  . . . . . .   ____________
 Capture:
   Part 1 . . . . . . . . . . . .   *SAME        C..., *SAME
   Part 2 (optional)  . . . . . .   ____________
 AP-Journal:
   Part 1 . . . . . . . . . . . .   *SAME        J..., *SAME
   Part 2 (optional)  . . . . . .   ____________

                                                                   More...
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Figure 4-22. Add iSecurity Authorization (ADDISAUT)

2. Enter the required parameters and press **Enter**.

Authorization Status

You can display the current authorization status of all installed iSecurity products on the local system.

1. Select **15. Authorization Status** from the **BASE Support** menu. The **Status of iSecurity Authorization** screen appears.

```
 44DE466  520 7459    Status of iSecurity Authorization      LPAR Id 1 S520

Opt: 1=Select

Opt Library      Release ID      Product
 _  SMZ4 Code A  12.81 15-07-07  *BASE, Audit, Action, Syslog, CntAdm, CmplEval
                     Valid-until 2015-07·····    Auth 401507746642 ···********
 _  SMZ4 Code B  12.81 15-07-07  Compliance (User,Native,IFS), Replication
                     Valid-until 2015-08·····    Auth N01508780534 ···********
 _  SMZ5         03.1  12-03-25  View
                     Valid-until *NOCODE·····    Auth ********** ***********
 _  SMZ8         17.16 15-06-08  Firewall, Screen, Command, Password
                     Valid-until 2015-07·····    Auth 801507723719 ···********
 _  SMZB         02.33 14-07-16  DB-Gate
                     Valid-until 2015-07·····    Auth B01507733541 ···********
 _  SMZC         03.38 15-06-10  Capture, w/BI
                     Valid-until 2015-08·····    Auth C01508781686 ···********
 _  SMZJ         08.47 15-06-17  AP-Journal (Comp, Appl, Bus, Alert, Read, Vis)
                     Valid-until 2015-08·····    Auth J01508703004 ···********
 _  SMZO         04.43 15-06-22  Authority on Demand,Pwd-Reset (Web, Green)
                     Valid-until 2015-08·····    Auth O01508774917 1**********
                                                                       More...
F3=Exit
```

Figure 4-23. Status of iSecurity Authorization

2. Select a specific line and type **1** in the **Opt** field to see the authority details of one specific product.

NOTE: Codes that will expire in less than 14 days appear in pink
Permanent codes have deliberately been hidden in this screenshot.

General

Work with Collected Data

Administrators can view summaries of journal contents of various products by day, showing the number of entries for each day together with the amount of disk space occupied.

1. Select **51. Work with Collected Data** from the **BASE Support** menu. The **Work with Collected Data** screen appears.

```
                         Work with Collected Data            S520

 Type options, press Enter.

 Module . . . . . . . . . .                1=Firewall
                                           2=Audit
                                           3=Action
                                           4=Capture
                                           5=Journal
                                           6=Change Tracker
                                           7=Authority On Demand

 F3=Exit
```

Figure 4-24. Work with Collected Data

2. Enter **6 (Change Tracker)** and press **Enter**. The **Work with Collected Data - Change Tracker** screen appears.

```
                    Work with Collected Data - Change Tracker              S520

 Type options, press Enter.                          Total Size (MB):     1,657.0
   5=Display

 Opt Application      Size (MB)   From Date
  _  DTA               1,657.0    CT Add Source Info Fil

                                                                          Bottom

 F3=Exit                  F12=Cancel
```

Figure 4-25. Work with Collected Data - Change Tracker

3. Select **5** to see detailed information about a specific entry.

Check Locks

You need to run this option before you upgrade your system to check if any of the **Change Tracker** files are being used. If they are, you must ensure that they are not in use before you run the upgrade.

1. Select **52. Check Locks** from the **BASE Support** menu. The **Check Locks** screen appears.

```
GSLCKMNU                          Check Locks                          iSecurity
                                                              System:    S520
Select one of the following:

Check Locks
   1. Data Base Files

   -. Display Files
      End this session. Enter CHKSECLCK OBJTYPE(*DSPF) from a new session.

   -. All File Types
      End this session. Enter CHKSECLCK OBJTYPE(*ALL ) from a new session.





Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=Information Assistant  F16=AS/400 main menu
```

Figure 4-26. Check Locks

2. Follow the instructions on the screen.

*PRINT1 - *PRINT9 Setup

Change Tracker allows you to define up to nine specific printers to which you can send printed output. These may be local or remote printers. ***PRINT1-*PRINT9** are special values which you can enter in the **OUTPUT** parameter of any commands or options that support printed output.

Output to one of the nine remote printers is directed to a special output queue specified on the ***PRINT1-*PRINT9 User Parameters** screen, which, in turn, directs the output to a print queue on the remote system. You use the ***CHGOUTQ*** command to specify the IP address of the designated remote location and the name of the remote output queue.

By default, two remote printers are predefined. ***PRINT1** is set to print at a remote location (such as the home office). ***PRINT2** is set to print at a remote location in addition to the local printer. In addition:

- ***PRINT3** creates an excel file.
- ***PRINT3-9** are user modifiable

To define remote printers:

1. Select **58. *PRINT1 - *PRINT9, PDF Setup** from the **BASE Support** menu. The **Printer Files Setup** screen appears.

```
                                Printer Files Setup

Select one of the following:

  1. *PRINT1-*PRINT9 Setup
  2. *PDF Setup

Selection ===>

F3=Exit
```

Figure 4-27. Printer Files Setup

2. Enter **1** and press **Enter**. The ***PRINT - *PRINT9 Setup** screen appears.

```
                              *PRINT1-*PRINT9 Setup

Type options, press Enter.
Using OUTPUT(*PRINTn) where n=1-9, provides extra control over prints.
Use this screen to specify parameters for this feature. This functionality can
be modified. For details see the original source SMZ8/GRSOURCE GSSPCPRT.

Press·F14·for·setup·instructions
        OutQ       OutQ       Save
*PRINT  Name       Library      Hold   Description
   1                                   ____________________________________
   2                                   ____________________________________
   3    CONTROL    SMZ4DTA       Y    Local+OUTQ that print on the remote
   4                                   ____________________________________
   5                                   ____________________________________
   6                                   ____________________________________
   7                                   ____________________________________
   8                                   ____________________________________
   9                                   ____________________________________
                                                                      Bottom

F3=Exit    F8=Print       F12=Cancel          F14=Setup instructions
```

3. Enter the name of the local output queue and library as shown in the above example. You can optionally enter a description.

Field	Description
OutQ name	The name of the local output queue
OutQ Library	The library of the local output queue
Save	**Y** = Yes **N** = No
Hold	**Y** = Yes **N** = No
Description	Enter a meaningful description (optional)

4. Enter the following command on any command line to direct output to the remote printer. This assumes that the designated output queue has already been defined.

```
CHGOUTQ OUTQ('local outq/library') RMTSYS(*INTNETADR)
+   RMTPRTQ('outq on remote') AUTOSTRWTR(1) CNNTYPE(*IP) TRANS-
FORM(*NO)
+   INTNETADR('IP of remote')
```

Parameter	Description
OUTQ()	Name of the local output queue
RMTPRTQ()	Name of the remote output queue
INTNETADR()	IP address of the remote system

If the desired output queue has not yet been defined, use the CRTOUTQ command to create it. The command parameters remain the same.

For example, ***PRINT4** in the above screen, the following command would send output to the output queue '**MYOUTQ**' on a remote system with the IP address '1.1.1.100' as follows:

```
CHGOUTQ OUTQ(CONTROL/SMZTMPA) RMTSYS(*INTNETADR)
+   RMTPRTQ(MYOUTQ) AUTOSTRWTR(1) CNNTYPE(*IP) TRANSFORM(*NO)
+   INTNETADR(1.1.1.100)
```

PDF Setup

The operating system, from release 6.1, directly produces *PDF prints. In the absence of such support a standard *PDF is printed by other means.

To define PDF printers:

1. Select **58. *PRINT1 - *PRINT9, PDF Setup** from the **BASE Support** menu. The **Printer Files Setup** screen appears.

```
                                Printer Files Setup

 Select one of the following:

   1. *PRINT1-*PRINT9 Setup
   2. *PDF Setup




 Selection ===>

 F3=Exit
```

Figure 4-28. Printer Files Setup

2. Enter **1** and press **Enter**. The ***PDF Setup** screen appears.

```
                                   *PDF Setup

 The operating system, from release 6.1, directly produces *PDF prints.
 In the absence of such support a standard *PDF is printed by other means.

 When the operating system *PDF capability exists, it is used, and the
 Query Generator uses the printer file SMZ4/AUQRYPDF to print the *PDF.

 This file is shipped with the following parameters:

   CHGPRTF FILE(SMZ4/AUQRYPDF) LPI(8) CPI(15) PAGRTT(*COR)

 You may wish to change the attributes of this printer file to suit your
 needs.

 Such changes must be re-applied after each iSecurity/Base (SMZ4) upgrade.



 Press Enter to continue...
```

3. Follow the instructions on the screen.

NOTE: You must re-perform this task after every upgrade of **Change Tracker**.

Global Installation Defaults

You can set the parameters that iSecurity uses to control the Installation and upgrade processes.

1. Select **59. Global Installation Defaults** from the **BASE Support** menu. The **Global Installation Defaults** screen appears.

```
                         Global Installation Defaults


General purpose cmd library . .  QGPL
ASP for data libraries  . . . .  01
Expiration message control  . .  _
Wait for STROBJCVN to end . . .  Y
Expiration warning days default  14
SBS to start Autostart Job  . .  QSYSWRK    *LIBL
Syslog UDP Source Port  . . . .  _____
Syslog UDP Source IP address  .  ____________________________________________
Allow group access to IFS . . .  N
Excel extension . . . . . . . .  .XLS        .XLS, .XML, ...
Use AP-Journal  . . . . . . . .  Y


Consult Raz-Lee support before changing values.


F3=Exit   F12=Cancel
```

Parameter	Description
General purpose cmd library	An alternative library to QGPL from which all **STR***, **RUN***, and ***INIT** commands will be run.
ASP for data libraries	• Products being installed for the first time will be installed to this ASP. This refers to the product library and data library (for example, SMZ4, SMZ4DTA) • In some products such as AP-Journal, other libraries are created. For example, in the AP-Journal a library is created per application. When created you are prompted with the CRTLIB (Create Library) so that you can set the ASP number. • Change the current ASP of the library. All future upgrades will use this ASP. • All products will try to preserve the current ASP at upgrade time. Due to its sensitivity, you should check it.
Expiration message control	**Y**=Yes **N**=No

Parameter	Description
Wait for STROBJCVN to end	**Y**=Yes **N**=No When installing the product on an OS400 version which is not the one that it was created for, objects require conversion and this is normally done in a batch job sent to work parallel to the installation. If you want the conversion to run inline, (wait until it ends), this field should be set to **Y**.
Expiration warning days default	All products whose authorization expires in less than this number of days are reported as an exception. Enter a number between 01 and 99. The default is **14** days.
SBS to start Autostart Job	The Subsystem name and library to use for the Autostart Job.
Syslog UDP Source Port	The source port for Syslog UDP
Syslog UDP Source IP Address	The source IP address for Syslog UDP
Allow group access to IFS	**Y**=Yes **N**=No Allow access to IFS from group profiles.
Excel extension	The extension to be used when creating Excel files **.XLS** **.XML**
Use AP-Journal	**Y**=Yes **N**=No If you want to use the self-journaling option that will allow you to trace all changes made to iSecurity products, enter **Y**.

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

NOTE: You should not change any of the values in this screen without first consulting with Raz-Lee support staff at support@razlee.com.

Network Support

Work with Network Definitions

To get current information from existing report or query. Adjusting the system parameters only, to collect information from all the groups in the system to output files that can be sent via email.

1. Select **71. Work with network definitions** from the **BASE Support** menu. The **Work with Network Systems** screen appears.

```
                          Work with Network Systems     System type: AS400

 Type options, press Enter.
   1=Select    4=Remove    7=Export dfn.   9=Verify communication
                                              Position to . . . _________
 Opt   System    Group
 _     RAZLEE2   *NONE
 _     RAZLEE3   *G2
 _     S520      *G1
 _

                                                                      Bottom
 F3=Exit    F6=Add New    F7=Export dfn cmd    F12=Cancel
```

Figure 4-29. Work with Network Systems

2. Press **F6** to define a new network system to work with. The **Add Network System** screen appears.

```
                              Add Network System        System type: AS400

 Type choices, press Enter.

 System  . . . . . . . . . . .  _______          Name
 Description . . . . . . . . .  ______________________________________________
 Group where included  . . .  *NONE              *Name
 Where is QAUDJRN analyzed .  *SYSTEM            Name, *SYSTEM

 Local Copy Details
 Default extension Id. . . .  __                 Alphanumeric value

 Communication Details
 Type  . . . . . . . . . . .  *IP                *SNA, *IP
 IP or remote name . . . . .  ______________________________________________

 Use Network Authentication (from previous menu) on this system and on the
 remote one, after adding a system or modifying Communication Details.
 cbis enables product to communicate between the systems.


 F3=Exit                F12=Cancel

 Modify data, or press Enter to confirm.
```

Figure 4-30. Add Network System

Parameter	Description
System	The name of the system
Description	A meaningful description of the system
Group where included	Enter the name of the group to which the system is assigned
Where is QAUDJRN analyzed	Give the name of the System where QAUDJRN is analyzed. Enter *SYSTEM if it is analyzed locally.
Default extension ID	Enter the extension ID for local copy details
Type	The type of communication this system uses ***SNA** ***IP**
IP or Remote Name	Enter the IP address or SNA Name, depending on the **Type** of communication you defined

3. Enter your required definitions and press **Enter to confirm**.

Network Authentication

To perform activity on remote systems, you must define the user SECURITY2P with the same password on all systems and LPARS with the same password.

Product options which require this are:

- referencing a log or a query with the parameter SYSTEM()
- replication user profiles, passwords, system values
- populating definitions, log collection, and so on

To authenticate the system:

1. Select **72. Network Authentication** from the **BASE Support** menu. The **Network Authentication** screen appears.

```
                              Network Authentication

 Type choices, press Enter.

 User for remote work  . . .  SECURITY2P        Name
 Password  . . . . . . . . .  ▌

 Confirm password  . . . . .


 In order to perform activity on remote systems, the user SECURITY2P must be
 defined on all systems and LPARS with the same password.
 Product options which require this are:
 - referencing a log or a query with the parameter SYSTEM()
 - replication user profiles, passwords, system values
 - populating definitions, log collection, etc.

 Values entered in this screen are NOT preserved in any iSecurity file.
 They are only used to set the user profile password and to set server
 authentication entries. Ensure that SysVal QRETSVRSEC is set to 1.

 F3=Exit                                        F12=Cancel
```

Figure 4-31. Network Authentication

2. Enter the SECURITY2P user password twice and press **Enter**.

NOTE: The values entered in this screen are NOT preserved in any iSecurity file; they are only used to set the user profile password and to set server authentication entries. Ensure that the **Return Server Security Data** system value (**QRETSVRSEC**) is set to **1** (Retain Data).

Check Authorization Status

You can set up the system so that the local *SYSOPR will get messages for all network wide authority problems.

Before you run this command, you must allow the system to run network commands and scripts. See Run CL Scripts on page 86 for more details.

1. Select **73. Check Network Authority Status** from the **BASE Support** menu. The **Check Razlee Authorization** screen appears.

```
                    Check Raz-Lee Authorization (CHKISA)

 Type choices, press Enter.

 Product or *ALL  . . . . . . . .   *ALL          *ALL, AU, NS, GR, CA, JR...
 System to run for  . . . . . . .   *CURRENT      Name, *CURRENT, *group, *ALL..
 Inform *SYSOPR about problems  .   *NO           *YES, *NO
 Days to warn before expiration     *DFT          Number, *DFT

                          Additional Parameters

 Sent from  . . . . . . . . . . .   *NO           Character value, *NO
 By job number  . . . . . . . . .   *NO           Character value, *NO

                                                                      Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Figure 4-32. Check Raz-Lee Authorization

Parameter	Description
Product or *ALL	***ALL** = report on all products **AU** = Audit **NS** = Native Object Security **GR** = Firewall **CA** = Capture **JR** = AP-Journal **OD** = Authority On Demand **AV** = Anti-Virus **CT** = Change Tracker **DB** = DB-Gate **VW** = View
System to run for	The system to run the authorization check for: **Name** = The name of a specific system in the network ***CURRENT** = The current system ***group** = The name of a group of systems ***ALL** = All systems in the network
Inform *SYSOPR about problems	***YES** = ***NO** =

Parameter	Description
Days to warn before expiration	**Number** = Any system whose expiry date is less than this number of days will be reported. The default number of days is 14. ***DFT**
Sent from	Value ***NO**
By job number	Value ***NO**

2. Enter your required options and press **Enter**.

Send PTF

This option allows you to run of a set of commands that will send objects as a PTF. This option is restricted to iSecurity products only. If you need to send PTFs for other products, please contact RazLee Support.

Before you can use this option, ensure that you define the entire network, as described in Work with Network Definitions on page 79, and that you define user SECURITY2P on all nodes, using the same password, as described in Network Authentication on page 80.

To send PTFs

1. Select **74. Send PTF** from the **BASE Support** menu. The **iSecurity Send PTF** screen appears.

```
                          iSecurity Send PTF (RLSNDPTF)

  Type choices, press Enter.

  System to run for  . . . . . . .  *          Name, *CURRENT, *group, *ALL..
  Objects  . . . . . . . . . . . .             Name, generic*, *ALL, *NONE
                 + for more values
  Library  . . . . . . . . . . . .             Name, ISECSETUP
  Object types . . . . . . . . . .  *ALL       *ALL, *ALRTBL, *BNDDIR...
                 + for more values
  Save file  . . . . . . . . . . .  *LIB       Name, *LIB
    In library . . . . . . . . . .    QGPL     Name
  Send SAVF to remote library  . .  *AUTO      Name, *AUTO (RL+job number)
  On remote, backup LIB to SAVF  .  *NONE      Name, *NONE, *LIB
    In library . . . . . . . . . .             Name
  Restore the objects  . . . . . .  *NONE      Name, generic*, *NONE, *ALL
    Into library . . . . . . . . .             Name, *LIB, *SAVF, ISECSETUP
  Call the installation pgm  . . .  *NONE      Name, *NONE
    Library  . . . . . . . . . . .             Name, *LIBL, *RSTLIB

                                                                   More...
  F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
  F13=How to use this display        F24=More keys
```

Figure 4-33. iSecurity Send PTF

Parameter	Description
System to run for	The system to run the authorization check for: **Name** = The name of a specific system in the network ***CURRENT** = The current system ***group** = The name of a group of systems ***ALL** = All systems in the network
Objects	The objects you want to send. You can enter multiple values Name = A specific object generic* = A group of objects with the same prefix *ALL= All the objects *NONE= No objects need to be extracted, the SAVF has already been prepared
Library	The name of the library that contains the objects
Object types	The object types to be sent
Save file / Library	The name and library of the SAVF to contain the objects. If you enter ***LIB** for the file name, the name of the library containing the objects will be used. If you enter ***AUTO** as a name for the library, a library will be created with the name of RL*<jobnumber>*

Parameter	Description
Remote library for SAVF	The name of the remote library to receive the SAVF to contain the objects. If you enter ***AUTO** as a name for the library, a library will be created with the name of RL<*jobnumber*>
Restore objects	The objects to be restored **Name** = A specific object **generic*** = A group of objects with the same prefix ***ALL**= Restore all objects ***NONE**= Do not restore any objects
Restore to library	The name of the library to receive the restored objects **Name** = A specific library ***LIB** = the name of the original library containing the objects will be used. ***SAVF**= the same name as the SAVF
Program to run / Library	The name and library of a program to run after the objects have been restored.
Parameters	The parameters for the program that runs after the restore.

2. Enter your required options and press **Enter**.

Run CL Scripts

This option allows you to run of a set of commands either from a file or by entering specific commands as parameters. Each command must be preceded by a label:

LCL: Run the following command on the local system

RMT: Run the following command on the remote system

SNDF: Send the save file (format: library/file) to RLxxxxxxxx/file (xxxxxxxx is the local system name)

You can use this option to define the commands to run to check system authorities, as described in Check Authorization Status on page 82.

Before you can use this option, ensure that you define the entire network, as described in Work with Network Definitions on page 79, and that you define user SECURITY2P on all nodes, using the same password, as described in Network Authentication on page 80.

1. Select **75. Run CL Scripts** from the **BASE Support** menu. The **iSecurity Remote Command (RLRMTCMD)** screen appears.

```
                    iSecurity Remote Command (RLRMTCMD)

 Type choices, press Enter.

 System to run for  . . . . . .   *              Name, *CURRENT, *group, *ALL..
 Starting system  . . . . . . .   *START         Name, *START
 Ending system  . . . . . . . .   *END           Name, *END
 Allow run on local system  . . .  *YES          *NO, *YES
 Source file for commands . . . .  *CMDS         Name, *CMDS
   Library  . . . . . . . . . . .                 Name, *LIBL
 Source member  . . . . . . . .                  Name
 Cmds-LCL:cmd RMT:cmd SNDF:savf

                 + for more values

                                                                      Bottom
 F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
 F24=More keys
```

Figure 4-34. iSecurity Remote Command

Parameter	Description
System to run for	The system to run the authorization check for: **Name** = The name of a specific system in the network ***CURRENT** = The current system ***group** = The name of a group of systems ***ALL** = All systems in the network
Starting system	Use to define a the start of a subset within ***group** or ***ALL** This is useful if you want to rerun a command that previously failed
Ending system	Use to define a the end of a subset within ***group** or ***ALL** This is useful if you want to rerun a command that previously failed
Allow run on local system	***YES** = The remote command can run on the local system ***NO** = The remote command cannot run on the local system
Source file for commands	**Name** = The file where the commands to run are stored. ***CMDS** = Use the commands entered below
Library	**Name** = The library that contains the commands source file ***LIBL** =
Source member	**Name** = The member that contains the commands

Parameter	Description
Cmds -LCL:cmd RMT:cmd SNDF:savf	The commands that can be run (if the **Source file for commands** parameter is ***CMDS**): **LCL:cmd** = A command that will be run on the local computer **RMT:cmd** = A command that will be run on a remote computer **SNDF:savf** =

2. Enter your required options and press **Enter**.

Current Job CntAdm Log

Select **76. Current Job CntAdm Messages** from the **BASE Support** menu to display the current job log.

All Job CntAdm Log

Select **77. All Jobs CntAdm Messages** from the **BASE Support** menu to display the job log for all jobs.

Reporting

This chapter explains how to display changes and create reports.

Native Objects

The following options display changes in native objects.

Object Changes

1. To define the native data to display from the log, select option **1. Object Changes** from the main menu. The **Specify Data to Work With** screen appears.

```
                          Specify Data to Work With          28/04/15 15:23:15

 Type selections (name, generic*), press Enter. F16 for Sort.

 Starting date and time  .  27/04/15   0:00:00
 Ending date and time  . .  28/04/15  23:59:59

 Library . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Object  . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Type  . . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Attribute . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK

 Environment . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Project . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Executor  . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK

 Text (included) . . . . .  *ANY

 Ignore lower/upper case .  Y   Y=Yes, N=No
 Omit "Renamed from" . . .  Y   Y=Yes, N=No
 Omit "Saved info."  . . .  N   A=All, O=Obj, S=Src, B=Both, N=No
 F3=Exit    F4=Prompt    F12=Cancel    F16=Sort
```

Figure 5-1. Specify Data to Work With Screen

Fields	Description
Starting date and time	Starting date and time range for viewing the data log
Ending date and time	Ending date and time range for viewing the data log
Library	Library where the object is located **Name, generic*, *ALL, *BLANK**

Fields	Description
Object	Object that was changed **Name, generic*, *ALL, *BLANK**
Type	Type of object **Name, generic*, *ALL, *BLANK**
Attribute	Different attributes of the object **Name, generic*, *ALL, *BLANK**
Environment	Environment where the project is running. **Name, generic*, *ALL, *BLANK**
Project	Project running in the environment. **Name, generic*, *ALL, *BLANK**
Executor	User that performed this operation. **Name, generic*, *ALL, *BLANK**
Text (included)	String of text that appears within the log.
Ignore lower / upper case	All matches regardless of letter case. **Y=Yes; N=No**
Omit "Renamed from"	You can choose to omit Rename changes **Y=Yes; N=No**
Omit "Saved info."	You can choose to omit saved information changes **A=All; S=Src; O=Obj; B=Both; N=No**

Function Keys	Description
F4=Prompt	Opens a list to select criteria for the above fields.
F16=Sort	Determine the order the information will be displayed by field.

2. Enter the required parameters and press **Enter**. The **Work with Native Objects - All Changes** screen appears.
3. Before you press **Enter**, you can press **F16** to set the sort sequence of the results. The **Specify Sort** screen appears. You can sort on one or more of the following fields:
   - Date and time
   - Library
   - Object
   - Type
   - Attribute
   - Environment
   - Project
   - Executor

```
                                Specify Sort                26/11/14 15:48:15

 Type choices, press Enter. F16 to Specify Data to Work With.

                            Seq.     A/D
 Date and time . . . . . .  _         _

 Library . . . . . . . . .  _         _
 Object  . . . . . . . . .  _         _
 Type  . . . . . . . . . .  _         _
 Attribute . . . . . . . .  _         _

 Environment . . . . . . .  _         _
 Project . . . . . . . . .  _         _
 Executor  . . . . . . . .  _         _



 F3=Exit    F16=Specify Data to Work With    F12=Cancel
```

Figure 5-2. Specify Sort

Fields	Description
Seq	The order the fields will be sorted in.
A/D	Sort this field in Ascending or Descending order.

Function Keys	Description
F16=Specify Data to Work With	Return to the **Specify Data to Work With** screen to define the data filters.

4. Enter the required sort parameters and press **Enter**. The **Work with Native Objects - All Changes** screen appears.

```
                    Work with Native Objects - All Changes     19/11/14 - 20/11/14
                                                               Object*  *ALL
                                                               Library* *ALL
Type options, press Enter.
 1=Select   2=Set Env-Prj  5=History  6=Modules  7=Source  8=Object  P=PDM

                          Attribute            Add/Rmv
Opt Library    Object      Type   Date      Time
 _  SMZ4       AUUSSWFM   DSPF    19/11/14  8:00   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  8:56   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:02   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:10   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 R Deleted
 _  SMZ4       AUUSCMN    DSPF    19/11/14  9:54   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 A Created
 _  SMZ4       AUUSCMN    MENU    19/11/14  9:54   Replaced
 _  SMZ4       AUUSSTFM   DSPF    19/11/14 10:09   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:50   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:51   Replaced
 _  SMZ4       AUUSSSFM   DSPF    19/11/14 10:53   Replaced
                                                                          More...
F3=Exit   F5=Refresh   F10=Last Chg.       F11=View 2  F12=Cancel  F13=Repeat
F14=Clear Repeat       F15=Subset/Sort     F17=Top     F18=Bottom
```

Figure 5-3. Work with Native Objects Changes Screen

Fields	Description
Library	The source library and target (new) library.
Object	Object that was changed (as described in the Operation field)
Type	Type of the object
Date	Date the change was made
Time	Time the change was made
Add/Rmv	**A**=Object was added. **R**=Object was removed.

Options	Description
1=Select	Opens the Object Trace Information screen as described in Working with Object Trace Information on page 94.
2=Set Env-Prj	Opens the Set to Environment-Project screen as described in Working with Environment-Project on page 96.
5=History	Opens the Data to Work With screen, followed by the Work with History screen to view the selected object's change history. Details are provided in Working with History on page 100.
6=Modules	Opens the Work with Modules screen to view the different modules contained in the object. Details are provided in Working with Modules on page 102.

Options	Description
7=Source	Opens the Work with Object Source screen to display the source of the object, compare it with other versions and restore the object source from the specified version. Details are provided in Working with Object Source on page 104.
P=PDM	Opens PDM screen as described in Source Members Changes on page 105.

Function Keys	Description
F5=Refresh	Refresh the list.
F10=All/First/Last Changes	Toggle to group and then sort by most earliest/latest or all changes.
F11=View 1/2/3	Display additional information regarding the activities.
F13=Repeat	Repeat last option (example **1** to select).
F14=Clear Repeat	Clear the repetition from the cursor location downward on the list.
F15=Subset/Sort	Returns to the **Specify Data to Work With** filter screen to allow a narrowing down of the list of objects to track.
F17=Top	Top of list
F18=Bottom	Bottom of list

Work with Native Objects

5. From the **Work with Native Objects - All Changes** screen, select one or more objects by typing **1** next to them and pressing **Enter**. The **Object Trace Information** screen appears.

Working with Object Trace Information

The Object Trace information is displayed in detail in Figure 5-4 on page 94.

```
                          Object Trace Information      Event ID        194883

Object  . . . . . : AUUSCMN    AU User Security
  Library . . . . : SMZ4
Type  . . . . . . : *FILE      DSPF

Operation Details
Operation . . . . : Replaced
At  . . . . . . . : 19/11/14   09:54:19
By User (IP) Job: AU         (1.1.1.163)         610544/AU/QPADEV000T
Executor  . . . . : AU

Object Information                          Source Information
Created . . . . . : 19/11/14   09:54:19     Source file . . . : QDDSSRC
Owner . . . . . . : AU                         Library . . . . : AU
                                            Member  . . . . . : AUUSCMN
                                            Last source chg : 19/11/14  09:54:18

Classification
Environment . . . :
Project . . . . . :

F3=Exit   F5=History   F6=Modules   F7=Source   F8=Object   F12=Cancel
```

Figure 5-4. Object Trace Information Screen

Fields	Description
Object	Object that was changed (as described in the Operation field)
Library	The source library and target (new) library.
Type	Type of the object
Operation Details	
Operation	Operation type (for example, moved, deleted, and so on)
At	Date and time
By User (IP) Job	User, IP, and job information
Executor	User that performed this operation.
Object Information	
Created	Time and date the object was created
Owner	Owner of the object
Authority Used	For programs - type of authority used. ***USER/*OWNER**
Modules	For programs - number of modules.
Classification	
Environment	Environment to which the object belongs.
Project	Project to which the object belongs

Fields	Description
Source Information	
Source file	Location of the source file
Library	Library where the source file is located
Member	Name of the member of the object
Last Source Change	Last date and time the source used to create the object was changed

Function Keys	Description
F5=History	Opens the Work with History Changes screen.
F6=Modules	Searches for Modules for this object.
F7=Source	Opens the Work with Object Source screen.

Working with Environment-Project

This option allows you to reassign the changed objects to a different environment/project.

1. Select option **1. Object Changes** from the main menu. The **Specify Data to Work With** screen appears.

```
                          Specify Data to Work With          28/04/15 15:23:15

 Type selections (name, generic*), press Enter. F16 for Sort.

 Starting date and time  .  27/04/15   0:00:00
 Ending date and time  . .  28/04/15  23:59:59

 Library . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Object  . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Type  . . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Attribute . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK

 Environment . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Project . . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK
 Executor  . . . . . . . .  *ALL                 Name, generic*, *ALL, *BLANK

 Text (included) . . . . .  *ANY

 Ignore lower/upper case .  Y   Y=Yes, N=No
 Omit "Renamed from" . . .  Y   Y=Yes, N=No
 Omit "Saved info."  . . .  N   A=All, O=Obj, S=Src, B=Both, N=No
 F3=Exit    F4=Prompt    F12=Cancel    F16=Sort
```

Figure 5-5. Specify Data to Work With Screen - Environment/Project

Fields	Description
Starting date and time	Starting date and time range for viewing the data log
Ending date and time	Ending date and time range for viewing the data log
Library	Library where the object is located **Name, generic*, *ALL, *BLANK**
Object	Object that was changed **Name, generic*, *ALL, *BLANK**
Type	Type of object **Name, generic*, *ALL, *BLANK**
Attribute	Different attributes of the object **Name, generic*, *ALL, *BLANK**
Environment	Environment where the project is running. **Name, generic*, *ALL, *BLANK**
Project	Project running in the environment. **Name, generic*, *ALL, *BLANK**

Fields	Description
Executor	User that performed this operation. **Name, generic*, *ALL, *BLANK**
Text (included)	String of text that appears within the log.
Ignore lower / upper case	All matches regardless of letter case. **Y=Yes; N=No**
Omit "Renamed from"	You can choose to omit Rename changes **Y=Yes; N=No**
Omit "Saved info."	You can choose to omit saved information changes **A=All; S=Src; O=Obj; B=Both; N=No**

Function Keys	Description
F4=Prompt	Opens a list to select criteria for the above fields.
F16=Sort	Determine the order the information will be displayed by field.

2. Enter the relevant criteria and press **Enter**. The **Work with Native Objects** screen appears.

```
                    Work with Native Objects - All Changes     19/11/14 - 20/11/14
                                                               Object*  *ALL
                                                               Library* *ALL
Type options, press Enter.
 1=Select   2=Set Env-Prj  5=History  6=Modules  7=Source  8=Object  P=PDM

                          Attribute            Add/Rmv
Opt Library    Object      Type   Date      Time
 _  SMZ4       AUUSSWFM   DSPF    19/11/14  8:00   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  8:56   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:02   Replaced
 _  SMZ4       AUUSSWR    RPGLE   19/11/14  9:10   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 R Deleted
 _  SMZ4       AUUSCMN    DSPF    19/11/14  9:54   Replaced
 _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54 A Created
 _  SMZ4       AUUSCMN    MENU    19/11/14  9:54   Replaced
 _  SMZ4       AUUSSTFM   DSPF    19/11/14 10:09   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:50   Replaced
 _  SMZ4       AUUSSPFM   DSPF    19/11/14 10:51   Replaced
 _  SMZ4       AUUSSSFM   DSPF    19/11/14 10:53   Replaced
                                                                          More...
F3=Exit   F5=Refresh   F10=Last Chg.       F11=View 2  F12=Cancel  F13=Repeat
F14=Clear Repeat       F15=Subset/Sort     F17=Top     F18=Bottom
```

Figure 5-6. Work with Native Objects - All Changes Screen

NOTE: Fields, options and function keys are similar to those described in Figure 5-3 on page 92.

---

3. Choose **2=Set Env-Prj** for the changed objects that you want to reassign. The **Set to Environment-Project** screen appears.

```
        1 entries          Set to Environment-Project

Type options, press Enter.
Set to Environment  . . . . .  *DFT            *SAME, *DFT, Blanks=None
Set to Project  . . . . . . .  *DFT            *SAME, *DFT, Blanks=None

Replace existing data . . . .  Y                Y=Yes, N=No

Object      Library     Type     Attribute   Environment  Project
PUUSCMN     SMZ4        *PGM     CLLE

F3=Exit   F4=Prompt   F12=Cancel
```

Figure 5-7. Set to Environment-Project Screen

Fields	Description
Set to Environment	Assign the changed object to the Environment. ***SAME, *DFT, Blanks = None**
Set to Project	Assign the changed object to the Project. ***SAME, *DFT, Blanks = None**
Replace Existing data	Replaces the name of the Environment/Project the changed object was assigned to.
Object	Object that was changed
Library	Library where the object is located
Type	Type of object.
Attribute	Different attributes of the object
Environment	Environment the project is currently assigned to
Project	Project the project is currently assigned to

Function Keys	Description
F4 Prompt	Prompts to select existing Environments/Projects from a list.

Working with History

To work with History:

1. Select **1. Object Changes** from the main menu and press **Enter**. The **Specify Data to Work With** screen opens.
2. Enter the relevant criteria and press **Enter**. The **Work with Native Objects** screen appears.
3. Choose **5=History** for the changed objects whose history you want to view. The **Work with History Changes** screen appears.

```
                        Work with History - All Changes      19/11/14 - 20/11/14
                                                             Object*  AUUSCMN
                                                             Library* SMZ4
 Type options, press Enter.
  1=Select   2=Set Env-Prj            6=Modules  7=Source  8=Object  P=PDM

                          Attribute            Saved
 Opt Library    Object      Type   Date      Time Inf
  _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54   Deleted
  _  SMZ4       AUUSCMN    DSPF    19/11/14  9:54   Replaced
  _  SMZ4       AUUSCMN    *MSGF   19/11/14  9:54   Created
  _  SMZ4       AUUSCMN    MENU    19/11/14  9:54   Replaced
  _

                                                                        Bottom
 F3=Exit   F5=Refresh   F10=Last Chg.        F11=View 2  F12=Cancel  F13=Repeat
 F14=Clear Repeat       F15=Subset/Sort      F17=Top     F18=Bottom
```

Figure 5-8. Work with History - All Changes Screen

Fields	Description
Library	The name of the library
Object	The name of the object
Type	Type of the object
Date	Date the change was made
Time	Time the change was made
Saved Inf	The action that was performed on the object.

Options	Description
1=Select	Opens the Object Trace Information screen as described in Working with Object Trace Information on page 94.

Options	Description
2=Set Env-Prj	Opens the Set to Environment-Project screen as described in Working with Environment-Project on page 96.
6=Modules	Opens the Work with Modules screen to view the different modules contained in the object. Details are provided in Working with Modules on page 102.
7=Source	Opens the Work with Object Source screen to display the source of the object, compare it with other versions and restore the object source from the specified version. Details are provided in Working with Object Source on page 104.
P=PDM	Opens PDM screen as described in Source Members Changes on page 105.

Function Keys	Description
F5=Refresh	Refresh the list.
F10=First/Last Change	Toggle to group and then sort by most earliest/latest change.
F11=View 1/2/3	Toggle to display additional information.
F13=Repeat	Repeat last option (example **1** to select).
F14=Clear Repeat	Clear the repetition form the cursor location downward on the list.
F15=Subset/Sort	Returns to the Specify Data to Work With filter screen to allow a narrowing down of the list of objects to track.
F17=Top	Top of list
F18=Bottom	Bottom of list

Working with Modules

The **Work with Modules** screen is accessed using option **6** from the **Work with Native Objects - All Changes** screen (See Work with Native Objects on page 93).

```
                              Work with Modules                 16/04/15 18:59:47
 Program: AUIOSWR     Text: AU-Work with IFS Object Security Exceptions
 Library: SMZ4        Date:  4/01/15                Modules in program:        1
 Type options, press Enter.                         Subset:
  1=Select    7=Source   8=Object

 Opt Library    Module     Attribute  Date
  ▌  QTEMP      AUIOSWR    RPGLE       4/01/15

                                                                        Bottom

 F3=Exit   F5=Refresh                                  F12=Cancel  F13=Repeat
 F14=Clear Repeat       F15=Subset/Sort      F17=Top     F18=Bottom
```

Figure 5-9. Work with Modules Screen

Fields	Description
Subset	Type subset to filter for.
Library	Name of the library.
Module	Name of the module
Attribute	Different attributes of the object
Date	Date the change was made

Options	Description
1=Select	Opens the **Module Information** screen to display additional information about the selected module.
7=Source	Opens the **Module Source** screen to display the source and allow comparison with other versions.
8=Object	Opens the **Module Object** screen to display the object and allow comparison with other versions.

Function Keys	Description
F5=Refresh	Refresh the list.
F13=Repeat	Repeat last option (example **1** to select).
F14=Clear Repeat	Clear the repetition form the cursor location downward on the list.
F15=Subset/Sort	Returns to the **Specify Data to Work With** filter screen to allow a narrowing down of the list of objects to track.
F17=Top	Top of list
F18=Bottom	Bottom of list

Working with Object Source

The **Work with Object Source** screen is accessed using option **7** from the **Work with Native Objects Changes** screen as described in Work with Native Objects on page 93. Some options are inherited from that screen.

```
                          Work with Object Source        Event ID          56828

Object  . . . . .  AUALRSR
  Library . . . .  SMZ4
Type  . . . . . .  *PGM     RPG
Description . . .  AU-Send alert

Source file . . .  QRPGSRC
  Library . . . .  AU
Member  . . . . .  AUALRSR
Last change time.  03/06/13  18:59:36

Type choice, press Enter.

Selection . . . .  _                      1=Display source
                                          2=Compare with other versions
                                          3=Compare and print results

                                          9=Restore source
```

Figure 5-10. Work with Object Source Screen

Field	Description
Object	Object that was changed
Library	Library where the object is located
Type	Type and attribute of the object
Description	Description of the object
Source file	Source file of the object
Library	Library where the source file is located
Member	Name of the member.
Last Change Time	Last date and time the source was changed.

Selections	Description
1=Display Source	Opens the actual source file to browse the program.
2=Compare with other versions	See Comparing with Other Versions on page 109.
3=Compare and print results	Opens a list to select the object source to compare to and then print the results.
9=Restore Source	Restores the saved source.

Source Members Changes

To define the source members changes to view from the log, select option **2. Source Members Changes** from the main menu. The **Specify Data to Work With** screen appears.

```
                          Specify Data to Work With          28/04/15 15:25:12

  Type selections (name, generic*), press Enter. F16 for Sort.

  Library . . . . . . . . . .  _________            Name

  Starting date and time  .  27/04/15   0:00:00
  Ending date and time  . .  28/04/15  23:59:59
  File  . . . . . . . . . .  *ALL                   Name, generic*, *ALL
  Member  . . . . . . . . .  *ALL                   Name, generic*, *ALL
  Type  . . . . . . . . . .  *ALL                   Name, generic*, *ALL
  Attribute . . . . . . . .  *ALL                   Name, generic*, *ALL

  Environment . . . . . . .  *ALL                   Name, generic*, *ALL, *BLANK
  Project . . . . . . . . .  *ALL                   Name, generic*, *ALL, *BLANK
  Executor  . . . . . . . .  *ALL                   Name, generic*, *ALL, *BLANK

  Text (included) . . . . .  *ANY

  Ignore lower/upper case .  Y   Y=Yes, N=No
  Omit "Renamed from" . . .  Y   Y=Yes, N=No
  Omit "Saved info."  . . .  N   A=All, O=Obj, S=Src, B=Both, N=No
  F3=Exit    F4=Prompt    F12=Cancel    F16=Sort
```

Figure 5-11. Specify Data to Work With Screen for Source Members Changes

Fields	Description
Library	Library where the object is located **Name, generic*, *ALL, *BLANK**
Starting date and time	Starting date and time range for viewing the data log
Ending date and time	Ending date and time range for viewing the data log
File	File that was changed **Name, generic*, *ALL, *BLANK**
Member	File member
Type	Type of object **Name, generic*, *ALL, *BLANK**
Attribute	Different attributes of the object **Name, generic*, *ALL, *BLANK**
Environment	Environment where the project is running. **Name, generic*, *ALL, *BLANK**
Project	Project running in the environment. **Name, generic*, *ALL, *BLANK**

Fields	Description
Executor	User that performed this operation. **Name, generic*, *ALL, *BLANK**
Text (included)	String of text that appears within the log.
Ignore lower / upper case	All matches regardless of letter case. **Y=Yes; N=No**
Omit "Renamed from"	You can choose to omit Rename changes **Y=Yes; N=No**
Omit "Saved info."	You can choose to omit saved information changes **A=All; S=Src; O=Obj; B=Both; N=No**

Function Keys	Description
F4=Prompt	Opens a list to select criteria for the relevant fields.
F16=Sort	Determine the order the information will be displayed by field.

Work with Members History 1

From the **Work with Native Objects** screen, select one or more objects by typing **1** next to them and pressing **Enter**.

```
                          Object Trace Information      Event ID         23868

Object  . . . . : TEST1      aa
  Library . . . : ALEX
Type  . . . . . : *FILE      PF-MBR

Operation Details
Operation . . . : Add Member TEST1
At  . . . . . . : 15/05/13   23:00:20
By User (IP) Job: SECURITY1P (*LCL-GS@ALEX)      867947/SECURITY1P/GS@ALEX
Executor  . . . : SECURITY1P

Object Information                          Source Information
Created . . . . : 15/05/13   23:00:20       Source file . . : AUDDSSRC
Owner . . . . . : SECURITY1P                  Library . . . : QTEMP
                                            Member  . . . . : TEST1
                                            Last source chg : 15/05/13  23:00:20

Classification
Environment . . :
Project . . . . :

F3=Exit    F5=History    F6=Modules    F7=Source    F12=Cancel
```

Figure 5-12. Member Trace Information Screen

Fields	Description
Operation Details	
Operation	Operation type (for example, moved, deleted, and so on)
At	Date and time
By User (IP) Job	User, IP, and job information
Executor	User that performed this operation.
Object Information	

Fields	Description
Object	Environment to which the object belongs.
Library	Project to which the object belongs
Created	Time and date the object was created
Owner	Owner of the object
Classification	
Environment	Environment to which the object belongs.
Project	Project to which the object belongs

Function Keys	Description
F7=Source	Opens the Work with Object Source screen as shown below.

Work with Member Source

The **Work with Object Source** screen is accessed from the **Work with Native Objects Changes** screen (**F7**) as described in Work with Members History 1 on page 106.

```
                          Work with Object Source       Event ID          56828

Object  . . . . .  AUALRSR
  Library . . . .  SMZ4
Type  . . . . . .  *PGM    RPG
Description . . .  AU-Send alert

Source file . . .  QRPGSRC
  Library . . . .  AU
Member  . . . . .  AUALRSR
Last change time.  03/06/13  18:59:36

Type choice, press Enter.

Selection . . . .  _                     1=Display source
                                         2=Compare with other versions
                                         3=Compare and print results

                                         9=Restore source
```

Figure 5-13. Work with Member Source Screen

Field	Description
Source file	Source file of the object
Library	Library where the object is located
Member	Name of the member.
Type	Type of the object
Attribute	Attribute of the object
Description	Description of the object
Library	Library where the source file is located
Last Change Time	Last date and time the source was changed.

Selections	Description
1=Display Source	Opens the actual source file to browse the program.
2=Compare with other versions	See Comparing with Other Versions on page 109.
3=Compare and print results	Opens a list to select the object source to compare to and then print the results.
9=Restore Source	Restores the saved source.

Comparing with Other Versions

1. From the **Work with Members Changes** screen choose the relevant members to compare (**8**).

```
Library: AU            Work with Members - All Changes        6/07/13 -  7/07/13
                                                              Member* *ALL
                                                              File*   *ALL
Type options, press Enter.
 1=Select  2=Set Env-Prj  7=View Source  8=Compare Source  P=PDM

                                                 Add/
Opt File        Member     Type    Date      Time Remove
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 10:50   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 10:51   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 10:53   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 10:57   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 10:58   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 11:01   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 11:02   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 11:04   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 11:10   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 11:11   Open Member
 _  QDDSSRC     AUIOSEFM   DSPF     7/07/13 13:19   Open Member
 _  QRPGLESRC   AUIOSER    RPGLE    7/07/13 13:27   Open Member
                                                                        More...
F3=Exit   F4=Prompt   F5=Refresh   F10=Last Chg.        F11=View 2  F12=Cancel
F13=Repeat  F14=Clear Repeat       F15=Subset/Sort      F17=Top     F18=Bottom
```

Figure 5-14. Work With Members Changes Screen

2. Select objects for comparison by typing **8** next to them and pressing **Enter**. The **Work with Object Source** screen opens displaying detailed changes.

```
                         Work with Object Source        Event ID        56828

Object  . . . . .  AUALRSR
  Library . . . .  SMZ4
Type  . . . . . .  *PGM    RPG
Description . . .  AU-Send alert

Source file . . .  QRPGSRC
  Library . . . .  AU
Member  . . . . .  AUALRSR
Last change time.  03/06/13  18:59:36

Type choice, press Enter.

Selection . . . .  _                    1=Display source
                                        2=Compare with other versions
                                        3=Compare and print results

                                        9=Restore source
```

Figure 5-15. Work with Object Source Screen

NOTE: Other operations are performed in a similar manner to Native Objects on page 89.

IFS Objects

IFS Changes

To work with IFS changes, select **11. IFS Changes** from the Main menu. The **IFS Changes** (**Specify Data to Work With**) appears.

```
                          Specify Data to Work With          28/04/15 15:26:47

 Type selections (name, generic*), press Enter. F16 for Sort.

 Starting date and time  .  27/04/15   0:00:00
 Ending date and time  . .  28/04/15  23:59:59

 Object link . . . . . . .  *ALL
 Directory . . . . . . . .  *ALL
 Type  . . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Attribute . . . . . . . .  *ALL                 *ALL, *BLANK, value

 Environment . . . . . . .  *ALL                 *ALL, *BLANK, value
 Project . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Executor  . . . . . . . .  *ALL                 *ALL, *BLANK, value

 Text (included) . . . . .  *ANY                 *ANY, *BLANK, value

 Ignore lower/upper case .  Y   Y=Yes, N=No
 Omit "Renamed from" . . .  Y   Y=Yes, N=No
 Omit "Saved info."  . . .  N   A=All, O=Obj, S=Src, B=Both, N=No
 F3=Exit    F4=Prompt    F16=Sort    F12=Cancel
```

Figure 5-16. Specify Data to Work With Screen

```
                  Work with IFS Objects - All Changes        1/01/13 -  8/07/13
 *** Periodic detection marked in pink ***   Object Link* *ALL
                                             Directory*   *ALL

Type options, press Enter.
 1=Select   2=Set Env-Prj

Opt Object link            Typ/Att Date        Add/Rmv
 _  mail.test15            *STMF    8/05/13 12:48 A Created
 _  mail.test22            zip/jar  8/05/13 15:58 A Created
 _  mail.test12            *STMF    8/05/13 15:58 R Deleted
 _  mail.test13            *STMF    8/05/13 15:58 R Deleted
 _  mail.test14            *STMF    8/05/13 15:58 R Deleted
 _  mail.test15            *STMF    8/05/13 15:58 R Deleted
 _  mail.test22            zip/jar  8/05/13 15:58 R Deleted
 _  mail6.gz               *STMF    8/05/13 15:59 R Renamed to mail66.gz
 _  mail66.gz              *STMF    8/05/13 15:59 A Renamed from mail6.gz
 _  mail3.gz               *STMF    8/05/13 16:00 R Deleted
 _  mail4.gz               *STMF    8/05/13 16:00 R Deleted
 _  mail43.gz              *STMF    8/05/13 16:00 R Deleted
                                                                        More...
F3=Exit  F5=Refresh  F10=Last Chg.        F11=View 2  F12=Cancel    F13=Repeat
F14=Clear Repeat F15=Subset/Sort F17=Top  F18=Bottom  F22=Display entire field
```

Figure 5-17. Work with IFS Objects Changes

F22 displays the complete path to the object.

To view the complete object link, move your cursor to the desired object and press F22. The **Work with IFS Object Changes (Links)** screen appears.

```
                  Work with IFS Objects - All Changes        1/01/13 -  8/07/13
 *** Periodic detection marked in pink ***   Object Link* *ALL
                                             Directory*   *ALL

Type options, press Enter.
.......................................................................
:                              Object Link                            :
: /home/AU/mail.test15                                                :
:                                                                     :
:                                                                     :
:                                                                     :
:                                                                     :
:                                                                     :
:                                                                     :
:  F12=Cancel                                                         :
:                                                                     :
:.....................................................................:
 _  mail4.gz               *STMF    8/05/13 16:00 R Deleted
 _  mail43.gz              *STMF    8/05/13 16:00 R Deleted
                                                                        More...
F3=Exit  F5=Refresh  F10=Last Chg.        F11=View 2  F12=Cancel    F13=Repeat
F14=Clear Repeat F15=Subset/Sort F17=Top  F18=Bottom  F22=Display entire field
```

Figure 5-18. Work with IFS Objects Changes - Link

To view the IFS Object Trace information, select an object by typing and **1** next to the object and pressing **Enter**. The **IFS Object Trace Detailed Information** screen appears.

```
                        IFS Object Trace Information    Event ID          5558

Object  . . . . : mail5.gz
  Directory . . : /home/AU
Type  . . . . . : *STMF      zip/jar

Operation Details
Operation . . . : Created
At  . . . . . . : 20/03/13   17:34:41
By User (IP) Job: CT         (1.1.1.167)         749744/CT/QPADEV000G
Executor  . . . : YURI       SMZT/STRCT

Object Information
Created . . . . : 20/03/13   17:34:41                 Owner . . . .: CT
Changed . . . . : 20/03/13   17:34:42                 Set user ID .: *NO
Size (bytes). . :       584,476                      Primary group: *NONE
Number of links :             1

Classification
Environment . . :
Project . . . . :

F3=Exit   F12=Cancel   F22=Display entire field
```

Figure 5-19. IFS Object Trace Detailed Information

Working with IFS Object Links

To change environment and projects in the logs for one or more objects, select them by typing **2** next to them and pressing **Enter**. The **Work with IFS Objects Changes** screen appears.

```
                    Work with IFS Objects - All Changes     1/01/13 -   8/07/13
 *** Periodic detection marked in pink ***   Object Link* *ALL
                                             Directory*   *ALL
Type options, press Enter.
 1=Select    2=Set Env-Prj


Opt Object link              Size (bytes) A/R Environment Project  Executor
    mailsend1PDeya                110,758  A                        RAZLEE
 2  mailsend1PDeya                110,758  R                        RAZLEE
    mailsendETDe7a                110,758  A                        RAZLEE
 2  mailsendETDe7a                110,758  R                        RAZLEE
    mailsendDjDiYa                 35,020  A                        RAZLEE
 2  mailsendDjDiYa                 35,020  R                        RAZLEE
    mailsenduDFtia                      0  A                        RAZLEE
    mailsenduDFtia                      0  R                        RAZLEE
    mailsendYPFuUa                      0  A                        RAZLEE
    mailsendYPFuUa                      0  R                        RAZLEE
    mailsendNjF0ua                      0  A                        RAZLEE
    mailsendNjF0ua                      0  R                        RAZLEE
                                                                         More...
F3=Exit  F5=Refresh  F10=Last Chg.        F11=View 1  F12=Cancel    F13=Repeat
F14=Clear Repeat F15=Subset/Sort F17=Top  F18=Bottom  F22=Display entire field
```

Figure 5-20. Work with IFS Objects Changes Screen

Fields	Description
Object	Object that was changed (as described in the Operation field)
Directory	The directory where the IFS object is stored
Type and Attribute	Type and attribute of the object
Operation	What happened to the object (for example, moved, deleted, and so on)
Performed by	User that made the change
Date-time	When the change was made
Job	Job that made the change
IP Address	The computer on which the change was made
Created	Time and date the object was created

Options	Description
1=Select	Displays the IFS Object Trace Information screen.
2=Set Prj-Tsk	Displays the Set to Project-Task screen

Function Keys	Description
F5=Refresh	Refresh the list.

Function Keys	Description
F10=First/Last Change	Toggle to group and then sort by most earliest/latest change.
F11=View 1/2/3	Toggle to display additional information.
F13=Repeat	Repeat last option (example **1** to select).
F14=Clear Repeat	Clear the repetition form the cursor location downward on the list.
F15=Subset/Sort	Returns to the **Specify Data to Work With** filter screen to allow a narrowing down of the list of objects to track.
F17=Top	Top of list
F18=Bottom	Bottom of list

Queries and Reports

Change Tracker offers powerful functions included from the **Audit** product:

- 41. Queries and Reports
- 81. System Configuration
- 82. Maintenance Menu

Before installing Change Tracker, be sure to download **Audit**, as the SMZ4 libraries are required for Change Tracker.

For a full explanation of the functionalities common to **Audit**, please see the latest version of the *Audit User Manual*.

Work with PTFs

Change Tracker enables users to track PTF (program temporary fix) objects. The following sections describe how to access the logs of this tracked data.

PTFs

PTF Objects Activity Log

To define PTF data to view from the log, select option **21. PTF Objects Activity Log** from the main menu. The **Specify Data to Work With** screen appears.

```
                          Specify Data to Work With          28/04/15 15:32:09

 Type selections (name, generic*), press Enter. F16 for Sort.

 Starting date and time  .  27/04/15   0:00:00
 Ending date and time  . .  28/04/15  23:59:59

 PTF . . . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Product . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Library . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Object  . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Type  . . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Attribute . . . . . . . .  *ALL                 *ALL, *BLANK, value

 Environment . . . . . . .  *ALL                 *ALL, *BLANK, value
 Project . . . . . . . . .  *ALL                 *ALL, *BLANK, value
 Executor  . . . . . . . .  *ALL                 *ALL, *BLANK, value

 Text (included) . . . . .  *ANY                 *ANY, *BLANK, value
 Ignore lower/upper case .  Y   Y=Yes, N=No
 Omit "Renamed from" . . .  Y   Y=Yes, N=No
 Omit "Saved info."  . . .  N   A=All, S=Src, O=Obj, B=Both, N=No
 F3=Exit    F4=Prompt    F16=Sort    F12=Cancel
```

Figure 6-1. Specify Data to Work With Screen - PTF

Field	Description
Starting date and time	Starting date and time range for viewing the data log
Ending date and time	Ending date and time range for viewing the data log
PTF	PTF object that was changed
Product	Product that the PTF fixes
Library	Library where the object is located

Field	Description
Object	Object that was changed
Type	Type of object
Attribute	Attributes of the object
Environment	Environment to which the object belongs
Project	Project within the application that is running.
Executor	User that performed this operation.
Text (included)	Specific text that appears within the log
Ignore lower/upper case	All matches regardless of letter case **Y=Yes** **N=No**
Omit "Renamed from"	You can choose to omit Rename changes **Y=Yes; N=No**
Omit "Saved info."	You can choose to omit saved information changes **A=All; S=Src; O=Obj; B=Both; N=No**

Function Keys	Description
F4=Prompt	Opens a prompt screen to select 1 or more PTF definitions.
F16	Toggles additional columns of data: **Seq** – Defines the parameter to use for sorting the results **A/D** – Defines the sorting order: Ascending or Descending

Working with PTF Trace

Once the data to work with is specified, press **Enter** to display the results in the **Work with PTF Objects** screen.

```
                    Work with PTF Objects - All Changes     1/01/13 -   8/07/13
                                                        PTF Number* *ALL
                                                           Product* *ALL
Type options, press Enter.
 1=Select   2=Set Env-Prj   5=History   6=Modules   7=Source
 8=Display PTF    9=Display PTF Cover Letter

Opt Product PTF        Rel    Library  Object  Add/Rmv
 _   5722PT1 SI20475   V5R3M0 QPFR     QPZA000028 R Renamed to QPZR000028
 _   5722PT1 SI20475   V5R3M0 QPFR     QPZR000028 A Renamed from QPZA000028
 _   5722PT1 SI18541   V5R3M0 QPFR     QPZA000026   Owner QSYS replaces QSYS
 _   5722PT1 SI19427   V5R3M0 QPFR     QPTITVRR   R Renamed to QPZR000026QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPZR000026 A Renamed from QPTITVRR  QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPZA000026 R Renamed to QPTITVRR  QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPTITVRR   A Renamed from QPZA000026QSYS
 _   5722PT1 SI19427   V5R3M0 QPFR     QPTSYSWK   R Renamed to QPZR000027QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPZR000027 A Renamed from QPTSYSWK  QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPZA000027 R Renamed to QPTSYSWK  QSYS
 _   5722PT1 SI18541   V5R3M0 QPFR     QPTSYSWK   A Renamed from QPZA000027QSYS
 _   5722PT1 SI18908   V5R3M0 QPFR     QPGCRTJP   R Renamed to QPZR000025QSYS
                                                                      More...
F3=Exit   F5=Refresh   F10=Last Chg.       F11=View 2  F12=Cancel  F13=Repeat
F14=Clear Repeat       F15=Subset/Sort     F17=Top     F18=Bottom
```

Figure 6-2. Work with PTF Objects Changes Screen

Field	Description
Product	Number of product
PTF	Number of PTF
Rel	Operating System release version
Library	The source library
Object	Object that was changed
Add/Rmv	**A**=Object was added. **R**=Object was removed.
Appl.	Application to which the object belongs.
Project	Project to which the object belongs.
Executor	User that performed this operation.
Type/Attr.	Type and attribute of the object
Date	Date the change was made
Time	Time the change was made
Operation	What happened to the object (for example, moved, deleted, and so on)
Performed by	User that made the change
Modules	The number of modules that were created from the source
Optimized	**Yes**=The object was optimized **No**=The object was not optimized (Empty) = No operation was recorded for optimization.
Application	Application to which the object belongs
Project	Project to which the object belongs.
Task	Task to which the object belongs

Options	Description
1=Select	Modify an existing PTF definition Opens the **PTF Trace** screen as shown in Figure 6-3 on page 119.
2=Set Prj-Tsk	Display the **Set to Project-Task** screen.
4=Delete	Delete a PTF definition.
5=History	Opens the **Specify Data to Work With** screen, followed by the Work with History screen to view the selected object's change history. Details are provided in Working with History on page 100.
6=Modules	Opens the **Work with Modules** screen to view the different modules contained in the object. Details are provided in Working with Modules on page 102.
7=Source	Opens the **Work with Object Source** screen to display the source of the object, compare it with other versions and restore the object source from the specified version. Details are provided in Working with Object Source on page 104.
8=Display PTF	Displays the **Display PTF Status** screen, shown below.
9=Display PTF Cover Letter	Provides an explanation on the changes included in this PTF * For more details on this screen, see Reporting on page 89.

Function Keys	Description
F5=Refresh	Refresh the list.
F10=All/First/Last Changes	Toggle to group and then sort by most earliest/latest or all changes.
F11=View 1/2/3	Toggle to display additional information.
F13=Repeat	Repeat last option (example **1** to select).
F14=Clear Repeat	Clear the repetition form the cursor location downward on the list.
F15=Subset/Sort	Returns to the **Specify Data to Work With** filter screen to allow a narrowing down of the list of objects to track.
F17=Top	Top of list
F18=Bottom	Bottom of list

PTF Trace Information

```
                              PTF Trace Information        Event ID          7551

Object  . . . . : QPTITVRR
  Library . . . : QPFR                      PTF . . . . . . : SI19427
Type  . . . . . : *PGM                      Product . . . . : 5722PT1
                                            Release . . . . : V5R3M0
Operation Details
Operation . . . : Renamed to QPZR000026QSYS
At  . . . . . . : 28/03/13   13:36:23
By User (IP) Job: CT         (1.1.1.167)          758850/CT/QPADEV000B
Executor  . . . :            SMZT/STRCT

Object Information                          Source Information
Created . . . . : 11/08/05   13:57:20
Owner . . . . . : QSYS
Authority used  :
Modules . . . . :

Classification
Environment . . :
Project . . . . :

F3=Exit    F5=History    F6=Modules    F7=Source    F12=Cancel
```

Figure 6-3. PTF Trace Information Screen

Fields	Description
Object	Object that was changed (as described in the Operation field)
Library	The source library and target (new) library.
Type	Type of the object
Operation Details	
Operation	Operation type (for example, moved, deleted, and so on)
At	Date and time
By User (IP) Job	User, IP, and job information
Executor	User that performed this operation.
Object Information	
Created	Time and date the object was created
Owner	Owner of the object
Authority Used	For programs - type of authority used. ***USER/*OWNER**
Modules	For programs - number of modules.
Classification	
Environment	Environment to which the object belongs.
Project	Project to which the object belongs
Source Information	
Source file	Location of the source file
Library	Library where the source file is located.
Member	Name of the member of the object.

Fields	Description
Last Source Change	Last date and time the source used to create the object was changed.

Function Keys	Description
F5=History	Opens the **Work with History Changes** screen.
F6=Modules	Searches for Modules for this object.
F7=Source	Opens the **Work with Object Source** screen.

PTF Status

This option will produce the current status of PTFs in the system, and may take a few minutes to complete.

1. Select **25. PTF Status** from the main menu. An information screen appears.
2. Optional step: Press **F10** to produce a report in various formats (SPLF, HTML, PDF, CSV...) and send it by e-mail.
3. Press **Enter**. The **PTF status** screen appears.

```
Z5F_ALL                              PTF Status                              S520
5F PTF Status                                                   01/01/13 - 08/07/13
Control:                T, B, +/-nnn, Wnnn, F4=Position to field        W:      1
PTF      |Product|PTF     |Encoded|Type                |Library    |Status
         |       |Release|Type    |                    |           |
_________|_______|_______|________|____________________|___________|_________________

SI10948 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI14755 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI16250 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI16500 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI16579 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI17221 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI17617 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI18908 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI19427 5722PT1 050300  I       Immediate          QPFR       Temporarily appl
SI20475 5722PT1 050300  I       Immediate          QPFR       Temporarily appl


                                                                        Bottom

F3=Exit  F7=Subset  F8=Print                F10=Entire message F11=Single entry
F14=Reorder    F16=Scan    F17=Top    F18=Bottom    F19=Left    F20=Right
```

Figure 6-4. Display PTF Status Screen

Field	Description
Product ID	ID of the product updated by the PTF
IPL Source	From where the system is started during the IPL process
Release	Release number of the PTF
PTF ID	Supplied by the software provider
Status	Current status of the PTF

Field	Description
IPL Action	Indicates whether action will be taken on the next unattended normal IPL to apply or remove this PTF. If IPL action is indicated, enter the option to display PTF details to determine which action is to be performed.
PTF Save File	Indicates whether a save file exists that contains the PTF
Cover Letter	Indicates if a cover letter exists for this PTF
On Order	Indicates whether the PTF is on order

Options	Description
1=Select	Modify an existing PTF definition.
4=Delete	Delete a PTF definition.

Function Keys	Description
F7=Subset	
F8=Print	
F10=Entire message	
F11=Single entry	
F16=Scan	
F17=Top	Top of list
F18=Bottom	Bottom of list
F19=Left	Left side of screen (list)
F20=Right	Right side of screen (list)

Comments

We hope you found this user manual informative; your comments are important to us!

Raz-Lee Security wants its user manuals to be as helpful as possible; please send your comments about this user manual to docs@razlee.com.