SEE/Change

Change Management for the AS/400

Version 4.2

4

Change Manager User and Reference Manual

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What is SEE/Change Change Manager ?

The Change Manager enables you to:

- set up and maintain Change Requests (CRs)
- ! allocate them to technical staff and
- Promote them through the Change Management cycle at the development centre and at the various remote production systems.

For whom is SEE/Change Change Manager intended ?

The Change Manager is intended to be used primarily by:

- change control coordinators responsible for user liaison.
- analysts and project leaders responsible for application maintenance and development life cycle.

What this manual assumes you already know

It is assumed you have a working knowledge of the AS/400 and are familiar with its operating system OS/400, in particular the following features:

- libraries
- library lists and current library
- message handling
- jobs and job logs

Please refer to the appropriate OS/400 manuals for further information about the above topics.

It is also assumed you have a general working knowledge of SEE/Change. A separate manual entitled *SEE/Change General Introduction* contains information common to all SEE/Change modules, including the following items you should be familiar with:

- common command keys
- using list panels and pull-down menus
- using entry panels, prompting and pop up windows
- using online help
- handling messages
- submitting batch jobs

Change Manager functions

The following are the main Change Manager functions:

- Function WRKINVRQS (Work with Investigation Requests) enables you to raise new IRs, maintain existing IR details and track their progress at the development centre. This is a *Problem Manager* function that is also available from the Change Manager.
- Function LSTINVRQS (List Investigation Requests) enables you to list IRs, using various report formats and selection criteria. This is a *Problem Manager* function that is also available from the Change Manager.
- Function WRKCHGRQS (Work with Change Requests) is the main Change Manager function that enables you to create new CRs, maintain existing CR details and track their progress at the development centre.
- Function LSTCHGRQS (List Change Requests) enables you to list CRs, using various report formats and selection criteria.
- Function WRKCRACT (Work with CR Actuals) enables you to enter actual hours and costs and amend estimates for CRs being managed.
- Function WRKMVTAUT (Work with Movement Authorizations) enables you to grant and revoke movement authorisation for all CRs being managed. Alternatively, you can use functions GRTMVTAUT and RVKMVTAUT (Grant/Revoke Movement Authorizations) to grant and revoke authorizations for a specific CR.
- Function LSTMVTLOG (List Movement Logs) enables you to list movement transactions from the SEE/Change central repository that contains movement transaction logs generated when CRs are promoted through the change management cycle at the local system.
- Function PRGMVTLOG (Purge Movement Logs) enables you to purge transactions from the SEE/Change central movement repository.
- Function PRGCHGDTA (Purge Change Management Data) enables you to purge all types of IR/CRrelated information, including movement transactions. You can use this function to reduce the size of the SEE/Change database and to remove old historical information that is no longer needed.
- Function PRGARCLVL (Purge Archive Levels) enables you to drop all excess archive levels for all objects of an application, immediately.

Change Manager menus

Option 60. More Change Manager Options will take you to secondary menu SEECHG2.

```
SECHG2 THENON/SEE Change Manager

TSPLSYD

Select one of the following:

1. Work with Change Request Actuals

11. List Object Movement Transaction Log

21. Purge Change Management Data

22. Purge Object Movement Transaction Log

50. Change Batch Submit Defaults

Selection or command

===>

F3=Exit F4=Prompt F9=Retrieve F12=Cancel

F13=User support F16=System main menu
```

Option **50. Change Batch Submit Defaults**. Refer to *SEE/Change General Introduction* for further information about submitting jobs to batch.

Investigation Requests (IRs)

An Investigation Request (IR) contains details about a problem or request raised with the Information Systems (IS) department.

You raise an IR at the development centre responsible for the application area relating to your request. After the IR is raised, the development centre is referred to as the *IR originating development centre*.

IRs are uniquely identified by an IR number. This consists of the system code of the originating development centre where you lodge the request, followed by a sequentially allocated six-digit number that is unique within the originating development centre.

After you have created an IR, and following the investigation process, IS personnel can progress the IR using the Change Manager:

- If the reported problem or request does not require any software changes, the IR can be closed with reference to a different IR, or it can be closed with a text document clarifying the problem.
- If software changes are required, one or more Change Requests (CRs) can be opened under the IR.

For a more detailed description of IRs, refer to *Working with Investigation Requests* in *Problem Manager* User and Reference Manual.

Change Requests (CRs)

The CR is the basic operational unit of the change management cycle, and enables work areas to be established, source members to be compiled and objects to be retrieved and modified.

Up to 99 CRs can be opened under any one IR. A CR has a unique reference number automatically generated by the system. This is an eight-digit number that consists of the IR number followed by a two-digit CR sequence number between 01 and 99.

Each CR is associated with only one application. If software changes are required to be carried out for multiple applications under the same IR, multiple CRs must be opened; one for each application.

All items registered under any one CR are handled as one unit.

The Change Manager enables you to manipulate IRs and CRs. Refer to *Action codes* on page 4-69 for details of options available against IRs.

Managing CRs and IRs

Primary function WRKCHGRQS enables you to access all IRs and CRs in the system. You can create and update CRs, and manipulate the status of both CRs and IRs using this function.

IR status codes

The following table shows the possible status codes for IRs:

IR Status Code	Description
*ENT - Entered	IR entered, no action yet
*VST - Investigat	IR under investigation
*CRS - Opened Crs One or more CRs have been created under the IR, and one or more of these are curre development.	
*REF - Closed/Ref	IR is closed with reference to another IR (no CRs created)
*TXT - Closed/Txt	IR is closed with textual response only (no CRs created)
*CMP - Completed	IR is closed. All CRs created under the IR have been promoted to Live/Production

- When an IR is entered (via function WRKINVRQS) it is created with the status of *ENT.
- When you create the first CR under the IR, the status is automatically changed to *CRS.
- When all CRs under the IR have been completed, i.e; they have all been successfully promoted to the Live/Production environment at the development centre, the IR status is automatically changed to *CMP.

You can explicitly change the IR status using the following action options:

16=Chg IR *VST	To change the IR status to *VST.		
17=CIs IR *TXT	To change the IR status to *TXT.		
18=CIs IR *REF	To change the IR status to *REF. You must first identify the IR being used as the reference base, using 19=Mark IR ref .		
19=Mark IR ref	To identify the IR used as the reference base for closing another IR with the *REF option.		

Text documents

There are three types of text documents associated with the change management cycle. You can access these documents from the main list panel of function WRKCHGRQS:

- User text User text is for use by end users and/or personnel responsible for user liaison to supply information to IS describing end users' requests or problems. User text is associated with investigation requests (IRs). One user text document can be maintained for each IR. User text is always included in the release packet and is distributed to remote systems. User text can be entered using action option **27=User text**.
- IS text IS text is for use by information systems (IS) personnel responsible for user liaison to supply information in response to users' requests or problems. It can be used to clarify a problem that does not require any software changes, or to provide instructions and guidelines to complement the software changes made against the IR. One IS text document can be maintained against each IR. IS text is always included in the release packet and is distributed to remote systems. IS text can be entered via *Change Manager* function WRKCHGRQS or *Development Manager* functions WRKCRDEV and WRKCROBJ. You can edit IS text using action option **29=IS text**.
- Devpt
textDevelopment text is for use by information systems (IS) specialists to provide
technical documentation for internal IS purposes. Development text is
associated with the CR. Against each CR one development text document can
be maintained. Generally, the development text is intended to be used as an
internal IS document, but it can be collected into the release text, which is
revised when a software release is created. Development text is usually entered
via Development Manager functions WRKCRDEV and WRKCROBJ, but you
can edit it here using action option 28=Dev text.

The word processing facility used to enter text is either Office/400 or SEU (the AS/400 Source Entry Utility). You specify which program is used in general parameter @WRD. Refer to *Maintaining general parameters* in *Configuration Manager User and Reference Manual*.

You can also set up the system so that a document template is automatically presented when you create the text document. Refer to *Document types and templates* in *Configuration Manager User and Reference Manual*.

Notifying IR text changes

IRs are displayed using function WRKINVRQS, which is for use by users to report problems and raising IRs, and in function WRKCHGRQS for use by change control coordinators.

Users can communicate with change control coordinators using the user text attached to the IR. Change control co-ordinators can communicate with users using the IS text attached to the IR.

Users and change control coordinators can each switch a **TXT** flag against the IR to notify that additional text has been entered or existing text has been modified:

• In function WRKINVRQS, specify **Notify text changes ?** . . : ***YES** when creating or changing the IR. After the change control coordinator displays the user text, the **TXT** flag is switched off in function WRKCHGRQS.

• In function WRKCHGRQS, use action option **26=Notify chgs** against the IR. After the user displays the IS text, the **TXT** flag is switched off in function WRKINVRQS.

Setting up new CRs

Action option **3=Create CR** from function WRKCHGRQS enables you to create a CR under an existing IR. You can create new CRs under any software-related IR that has the status of *ENT, *VST or *CRS. You cannot create CRs under a non-software IR (that is, an IR that was created for an application area rather than an application). If the IR is closed, and you want to re-open it and allocate more CRs, you must first use action option **16=Chg IR *VST** to change the IR status to *VST.

For information about creating a new IR and its first CR at the same time, see page 4-77.

Allocating CRs to IS specialists

When you create a CR you can allocate it to a user or group profile. You can also leave the CR unallocated and later use the change option to allocate it.

When the CR is allocated, it appears in *Development Manager* function WRKCRDEV for the allocated user profile, or for all users belonging to the allocated group profile.

You can change and re-allocate the CR to a different user or group profile. SEE/Change changes the authorisation of all parts contained in the CR work library (if it has already been created) to reflect this change.

Assigning the CR type

When the CR is created you specify the CR type. You can define your own CR types - refer to parameter code CRTP under *Maintaining general parameters* in *Configuration Manager User and Reference Manual*. Regardless of the changes you make in the list of CR types available for selection, two types are always present; they are:

*CLS CR Closed - no development *EMG Emergency Fix

Controlling development characteristics

When you create or change a CR, you can specify certain items that affect the development environment for the CR. These are briefly explained below:

Planned concurrent dev	d Specifies whether concurrent development of the same source is allowed under the CR. This is relevant for CRs created with a CR type other than Emergency Fix (*EMG). Emergency Fix CRs are allowed concurrent development by default.			
Library list level	Specifies the type of library list used within the CR work library. The values you can specify depend on the application configuration. Usually this value is set to *BAS, which indicates that the base application library list is used. If the application allows site or group specific software, then you can specify that the library list associated with a specific site (*SIT xxx) or group (*GRP xxx) is used. Refer to <i>Managing the CR library list</i> in <i>Development Manager User and Reference Manual</i> .			
Retrieval Restriction	Specifies whether source retrieval is unrestricted (*NO), restricted to source members belonging to the level specified for the library list (*LVL), or disallowed (*YES). This enables the change controller to retrieve the required members, and then change retrieval restriction to *YES, thereby blocking any further member retrieval into the CR.			

Recording time and costs

When you create or change the CR, you can enter an estimate of the number of hours and of the cost for the CR.

Function WRKCRACT enables you to enter the number of hours and cost actually spent on the CR. Both the estimated and actual values are retained and used in the work-in-progress and throughput statistics displays of the *Audit Manager*.

Refer to Working with CR actuals on page 4-115.

Data filtering

Access to IRs and CRs can be restricted through data filters. When you are enrolled in SEE/Change, a data filter can be associated with your enrolment record. If such a data filter is assigned and active, your access to information is restricted to the specifications contained in that data filter.

The administrator may allow you to change to a filter other than the one assigned to you via your enrolment record. The filter that is in force at any one time is the *current filter*.

Apart from controlling access to information, the current filter can contain default values for fields on some Change Manager panels, and can also contain specifications for what should happen when you press Enter on some panels. For more information about filtering, see page 4-64.

Assigned filter

When a filter is assigned to your enrolment record, the administrator also specifies whether you are allowed to override the assigned filter:

- If you are not allowed to override the assigned filter, you cannot switch to any other filter, but you can change your assigned filter to be more restrictive.
- If you are allowed to override the assigned filter, you can switch to any other filter, or change your assigned filter without any restrictions.

Filter specifications

Data filter specifications vary depending on the SEE/Change function you are working with. While working with CRs, the current data filter specifications can restrict you to:

- a list of applications
- a list of sites
- a list of IR categories
- a list of IR status codes
- a list of CR type codes
- a list of CR status codes

The current data filter specifications also apply when you create a new CR. If a filter is assigned to your enrolment record, and if you are not allowed to override that filter, then the values you specify for application, site and category must be included in the filter specifications. If one or more of these are not included in the filter, you see an error message, and the CR is not created.

Changing the filter

If you are allowed to override your assigned filter, you can remove restrictions by blanking out one or more entries in any of the above lists. For example, if your current filter lists application codes DST and FIN, you are restricted to these two applications. If you blank out both these codes, you remove any restriction to do with applications, and you gain access to all applications.

All changes you make to your assigned filter are temporary, and are in effect while you are signed on. After you sign off the terminal and sign on again, your assigned filter reverts to its original specifications. If you want to change your assigned filter permanently, ask your SEE/Change administrator to make these changes to the original specifications. Refer to *Enrolling users* in *Configuration Manager User and Reference Manual*.

Promoting CRs through the change management cycle

The following environments are implicit to the change management cycle:

- ***DEV** The CR development environment, which is the collection of CR work libraries at the application development centre system.
- *MDL The Module/Integration environment, which is optional and can be defined at the application development centre system only. It is typically used by programmers and project leaders for Module and Integration testing.
- *ACP The Acceptance/QA environment, which is optional and can be defined at the application development centre system and at remote production systems. It is typically used by end-users for Acceptance and Quality Assurance testing.
- *LIV The Live/Production environment is mandatory at the development centre system for each application, and also at each production system where the application is used.

The following diagram illustrates the flow of the change management cycle:



CR status codes

A status code is maintained for each CR. When you create a CR, its status is set to *DEV. The status code and status last change date are updated as the CR is promoted through the change management cycle. The following table describes each of the possible status codes:

Status Code	Mnemonic	Description	
*DEV	*DEV - Developmnt	Under development	
*TST	*TST - Testing	Ready for testing	
*ERM	*ERM - Err/Integr	Errors detected while being promoted to the Module/Integration environment	
*MDL	*MDL - Integratn	In the Module/Integration environment	
*ERA	*ERA - Err/Accept	Errors detected while being promoted to the Acceptance/QA environment	
*ACP	*ACP - Acceptance	In the Acceptance/QA environment	
*RDY	*RDY - Rdy/Rlease	Ready for Release	
*ERL	*ERL - Err/Live	Errors detected while being promoted to the Live/Production environment	
*LIV	*LIV - Live/Prod	In the Live/Production environment	

When the CR promote job is submitted for execution, the CR status is changed to indicate an error status. If the job ends successfully, the CR status code is updated to reflect the CR's current position within the change management cycle. If the job ends abnormally, the CR error status is left unchanged.

When the CR movement/promote job is queuing for execution, or when it is active, an additional movement-in-progress (MIP) code is maintained against the CR. The following table describes each of the MIP codes:

Queueing

*ACP	Q/Accept - Que	uing pro	mote to Accept/QA
*IAC	Q/Inst Acp-	Queuing	install to Accept/QA
*ILV	Q/Inst Liv-	Queuing	install to Live/Prod
*LIV	Q/Live -	Queuing	promote to Live/Prod
*MDL	Q/Integrtn-	Queuing	promote to Mdl/Integ
*RDV	Q/Backout -	Queuing	backout to develpmnt
*RDY	Q/Ready -	Queuing	change to *RDY
*RLS	Q/Release -	Queuing	release packaging
*TST	Q/Test -	Queuing	change to *TST
Execut	ion		
*ACP	X/Accept -	Execute	promote to Accept/QA
*IAC	X/Inst Acp-	Execute	install to Accept/QA
*ILV	X/Inst Liv-	Execute	install to Live/Prod
*LIV	X/Live -	Execute	promote to Live/Prod
*MDL	X/Integrtn-	Execute	promote to Mdl/Integ
*RDV	X/Backout -	Execute	backout to develpmnt
*RDY	X/Ready -	Execute	change to Ready *RDY
*RLS	X/Release -	Execute	release packaging
*TST	X/Test -	Execute	change to Test *TST

The main list panel of function WRKCHGRQS shows the CR status against each CR line.

When you display or change the CR details, its current status is shown against the item entitled: Current

Status / Date. If the CR is currently being promoted, its MIP code is shown against the item entitled: **Movement in Progress**.

Selecting the promote type

Action option **11=Move/promote** enables you to request a promote operation. A window is displayed showing a list of promote types for selection.

The list contains the following types:

*MDL	Promote to the Module/Integration environment
*ACP	Promote to the Acceptance/QA environment
*LIV	Promote to the Live/Production environment
*RDV	Backout and revert to development

If a promote type cannot be selected, the selection field against the type is protected, and a short narrative explaining why the type cannot be selected is shown instead of the promote type description.

The following should be considered before promoting a CR:

- 1 Source and object modification can only be done in the CR development environment when the CR is open for development, i.e; when its status is *DEV. When the CR is promoted to any other environment, the CR is implicitly closed for development (unless the CR is under concurrent development).
- 2 In the *Development Manager*, the CR status can be switched from the status of *DEV to the status of *TST. The status of *TST is used to indicate to the change control coordinator that the CR is ready for testing. You cannot promote a CR that is in the status of *DEV; the CR must first be moved to the status of *TST.
- 3 While a CR status indicates that it is in the Module/Integration or Acceptance/QA environments, the CR work library still exists but it is not accessible. When requesting a promote operation, the *RDV option to backout and revert to development is always available. This option reverses all previous movements and the CR is again accessible for development.
- 4 If the CR's application is configured for use at one or more remote production systems, you must first change the CR status to *Ready for Release* (*RDY) and allocate it to a release before you can promote it to the Live/Production environment at the development centre system. Refer to *Preparing a CR for release* on page 4-24.
- 5 A successful *LIV promotion of a CR signals the end of the change management cycle for that CR. After all CR parts have been promoted into the Live/Production environment, all source members are automatically delivered to their respective source pools. If the *Multiple Versioning* option is not selected when the application is configured, the CR work library is removed. Any further application part modifications must be carried out in the context of a new CR.
- 6 If archiving is configured for the application, you can request a reversion (*RDV) operation for a CR that has already been promoted to the Live/Production environment. This effectively restores the Live/Production environment to its status before the CR was promoted to this environment. For further details about the archiving facility and the implications of using the *RDV option refer to *Archiving* on page 4-47.
- 7 If promotion to Module/Integration or Acceptance/QA is requested, and a database-type application part in the CR has already been delivered to Module/Integration or Acceptance/QA by another CR, the promotion request is rejected. See *Managing concurrent development*, on page 4-24.

Checks performed during CR movement/promotion

Promotion to *TST

If there is no Mdl/Integ environment configured for the application, extra processing ensures database integrity within the CR library.

Each logical file registered in the CR is analyzed. If a logical file is based on any physical file that is not in the CR library, then:

- ! The current version of the logical file is removed from the CR library.
- Each based-on physical file that is not in the CR library is duplicated back into the CR library. Note that if a copy of the physical file already exists in the CR library, that file is used.
- The logical file is re-compiled into the CR library, to ensure that it is based on physical files that all reside in the CR library.

Every physical file and logical file that is refreshed in the CR library is reported in the CHKLOG message queue in the CR library, which can be reviewed using action option **65=Chk CR log** in function *Work with Change Requests* (WRKCHGRQS), or by using function *Display CR Message Log* (CHKLOG). If errors occur while refreshing the CR library, they are reported in message queue CHKLOG, and CHKCR_TST processing is terminated with errors (the CR status is not updated).

The CR library is refreshed to ensure that if the CR is subsequently packaged for release before it has been promoted to the Live/Prod environment, then the packaged CR parts will reflect database relationships as they exist within the development environment of the CR.

Promotion to Live/Production

LANSA CRs

- *BEFORE and *AFTER processing runs over every Mdl/Integ database library that is configured in the local SEE/Change environment.
- Database objects are imported to every Mdl/Integ database library configured in the local SEE/Change environment.

Non-LANSA CRs

- *BEFORE and *AFTER processing runs over every Mdl/Integ database library configured in the local environment.
- Database objects will now be delivered to every Mdl/Integ database library that is configured in the local environment.
- When determining the target library for a promotion operation, SEE/Change searches for a target library according to the following hierarchy:

- Specific object-level override
- Application level override by CR Type
- Application level override by Object Type
- Standard application configuration
- After the CR has been successfully promoted to Live/Production at the development centre site and the source pools have been updated, then if the CR library is being retained, the following items are refreshed in the CR library:
 - If a program is compiled into the Live/Production environment, then the copy of the program in the CR library is removed, and the compiled live version of the program is duplicated back into the CR library.
 - Each logical file registered in the CR is analyzed. If a logical file is based on a physical file that is not in the CR library, then:
 - The current version of the logical file is removed from the CR library.
 - For each based-on physical file that is not in the CR library, the live version of the file is duplicated back into the CR library. If a copy of the physical file already exists in the CR library, that file is used.
 - The logical file is re-compiled into the CR library, to ensure that it is based on physical files that all reside in the CR library..

Every program, physical file and logical file that is refreshed in the CR library is reported in the 'Error Log' report. If any problem occurs while refreshing the CR library, it is reported in the 'Error Log' report, a message is returned to the job that initiated the promotion operation to indicate that errors have occurred, and the promote to Live/Prod completes successfully - it is then the responsibility of the user to manually refresh the CR library as required.

The CR library is refreshed to ensure that when the CR is subsequently packaged for release, with CR version '*CRLIB' specified, then the packaged CR objects will reflect the state of the Live/Prod environment at the time that the CR was promoted to the Live/Prod environment.

• Database objects are packaged for release as follows:

CR	Mdl/Integ	Packaged
Version	Configured?	from
n/a	Ν	CR library
n/a	Y	Mdl/Integ library
*LATEST	n/a	Live/Prod library
*CRLIB	n/a	CR library
	CR Version n/a *LATEST *CRLIB	CRMdl/IntegVersionConfigured?n/aNn/aY*LATESTn/a*CRLIBn/a

When a live CR is being packaged under CR version '*CRLIB', a logical file being compiled into the release packet uses the source member from the CR library, and is compiled over the CR development library list.

Preparing a CR for release

The *Release Manager* handles the allocation of CRs to a release, and the packaging and distribution of releases.

A CR can be allocated to a release only if it is in the status of *Ready for Release* (*RDY). You can flag a CR as ready for release by using action option **14=Chg CR *RDY**. This can be done at any point in the change management cycle, provided that the CR status is other than *DEV or *LIV.

Even after release distribution you can backout a CR and revert it to development. This feature enables you to distribute releases for user acceptance testing at production systems, in addition to the acceptance testing conducted at the development centre.

Checking the CR library

CR integrity checks are automatically performed when a CR that is in the status of *Ready for Testing* (*TST) is selected for a promote operation or is selected for status change to *Ready for Release*. The checking process is executed as part of the job that is submitted or executed interactively.

The checking can result in one or more errors and/or warnings. When you execute the job interactively and only warnings are detected, these warnings are shown and you can choose to ignore them. When you execute the job in batch, warnings are assumed to be ignored, but the completion message indicates that one or more warnings exist.

Whenever the checking process is executed, all error and warning messages generated are stored in message queue CHKLOG in the CR work library. You can view the message log of the last execution of the checking process by using option **65=Check CR log**.

For further details about what is checked, refer to *Checking the CR library* in *Development Manager User* and *Reference Manual*.

Managing concurrent development

When you request a movement/promote operation, or when you allocate the CR to a release, the concurrent development status of each source member registered under the CR is checked, and warning messages notify you of the status of all the other versions of the same source member name under development. You can choose to ignore the warning and continue processing, or abort the movement/promote request.

Program (*PGM) parts

If the target Module/Integration or Acceptance/QA environment for the movement/promote request already contains the same application part name from a different CR, a warning message will notify you that the CR entry in that other CR is removed before the current movement/promote request is processed. This in effect enables you to update the target environment with the latest version without having to revert the other CR to development.

If, after removing the CR entry (as above), the other CR contains no parts, then the status of that other CR is automatically changed to *DEV.

Database (*DB) parts

If Module/Integration or Acceptance/QA movement is requested, and a database part in the CR has already been delivered to either Module/Integration or Acceptance/QA by the other CR, the promotion request is rejected and an error message is issued.

In this situation, the CR can be promoted to the Live/Production environment only. Then, when the promotion is requested, an additional warning message is issued to indicate which of the testing environments (Module/Integration or Acceptance/QA) will be bypassed by the database part during the promotion. This enables one version of the database part to be delivered to the Live/Production environment without interfering with another version of the same application part that is being currently tested under another CR.

Automatic backout and revert to development

When you request a movement/promote operation other than *RDV, you are prompted to confirm whether the backout and revert to development operation is automatically invoked when one or more errors are detected while promoting the CR.

This feature is available only if the 'Auto revert if promote errors' flag is set for the application. For details of this flag, see the section on working with the Application Details panel, in the *SEE/Change Configuration User and Reference Manual*.

This feature is useful for unattended operations, where you want to ensure that your target environment is either upgraded successfully, or is unchanged, but is not partially updated with errors.

If you select this automatic backout feature, the *RDV operation is initiated if an error occurs during the delivery of any of the application parts registered in the CR. Note:

- If an error occurs during the execution of a *BEFORE program, no *RDV operation is initiated since no application part has been processed yet.
- If an error occurs during the execution of an *AFTER program, or while delivering source to live source pools at the development centre system, no *RDV operation is initiated since all application parts have already been processed successfully.

For more details about *BEFORE and *AFTER processes, refer to *Developing *BEFORE*, *AFTER and *LOAD processes in *Development Manager User and Reference Manual*.

Overriding the application configuration

When you promote a CR, the application parts registered under the CR are moved or duplicated into the target libraries according to the application configuration details.

You can override certain application configuration details for a specific application part. Normally, these override details are maintained by IS personnel using *Development Manager* functions. You can also maintain these details using action option **22=Overrides** from function DSPCROBJ, which displays a list of application parts under the CR, and can be requested from the main list panel of function WRKCHGRQS using action option **8=Display obj**.

The override details you specify are recorded permanently against the application part. They are not recorded against the CR. After you specify the overrides, they are used for every movement/promote operation of that application part, regardless of the CR context. To cancel the overrides, you must explicitly remove them. To remove overrides, you request the override facility for the application part and then use the delete command key.

When the application is configured, you specify whether override details are included in the release packet and distributed to remote systems. If the override details are distributed, you can specify, at the development centre system, override details for the local system and for each of the remote systems that use the application. The details for the remote systems are included in the release packet and are installed at each remote system before installing the software included in the release. If the override details are not distributed, you can specify local override details only.

For further details about the items you can override, refer to *Specifying configuration overrides* on page 4-105.

Managing movement authorisation

SEE/Change incorporates an authorisation mechanism that controls CR movements at each system. This feature enables you to nominate multiple lists of users whose explicit authorisation is required before a CR promote operation can be effected. These lists are referred to as Thenon Authorisation Lists (TALs).

The CR movement/promote requests that can be subject to TALs are:

- *MDL Promote to the Module/Integration environment at the application development centre.
- *ACP Promote to the Acceptance/QA environment at the application development centre.
- ***RDY** Change the CR status to *Ready for release*.
- *LIV Promote to the Live/Production environment at either the application development centre, or at remote production systems.
- *ALC Allocate CRs to a release.
- ***RLS** Release to a Live/Production environment.

SEE/Change works with the following levels of TALs:

- ***SYS** System-level TAL, used to control all local CR movements. You can maintain the nominated user list in the *Configuration Manager*.
- ***APP** Application-level TAL, used to control movements of all CRs belonging to a specific application. You can maintain the nominated user list in the *Configuration Manager*.
- *CR CR-level TAL, used to control the movements of a specific CR. You can maintain the user list by selecting action option **40=Wrk aut 1st** from the main list panel of function WRKCHGRQS.

Movement authorisation checks

When you request CR promotion, all authorisation lists are checked. If one or more of the nominated users have not yet authorised the movement, the promote request is not submitted, and one or more messages indicate the outstanding user or group names.

The following table shows the authorizations that are checked when the various promote requests are processed:

	Movement authorisation			
Promote request	*MDL	*ACP	*RDY	*LIV
To Module/Integration environment (*MDL)	Х			
To Acceptance/QA environment (*ACP)	х	х		
Change CR status to Ready for release (*RDY)	х	х	х	
To Live/Production environment (*LIV)	х	х	х	х

Special concessions are made as follows:

- If the user/group profile of the movement/promote requester is the only outstanding user for authorisation, authorisation is made implicit.
- If the user/group profile of the movement/promote requester is QSECOFR, checking is bypassed.

Granting and revoking movement authorisation

You can grant and revoke movement authorisation for your user or group profile by using action option **41=Grt mvt aut** or **42=Rvk mvt aut** from the main list panel of function WRKCHGRQS. A window with a list of possible movement/promote request types is shown for selection.

Alternatively, you can use option **21. Work with Movement Authorizations** from menu SEECHG to view all CRs requiring movement authorisation from your user or group profile. You can then authorise multiple movement/promote requests against multiple CRs in one go.

Monitoring release distribution and implementation

The *Release Manager* handles the allocation of CRs to a release, and the packaging and distribution of releases.

After a release has been distributed, you can monitor the release status of a particular CR by using action option **9=RIs distrib** from the main list panel of function WRKCHGRQS. A window is displayed showing a list of all release packets that contain the selected CR, and their current status.

The list shows a line for each combination of target system and target environment. Against each line SEE/Change displays the creation date of the release packet and the selected distribution method, which is one of:

TAPE Release packet distributed using magnetic tape. **COMS** Release packet distributed via the *Communication Manager*.

Whenever a CR is installed or is promoted at a remote production system, the completion details of that operation are communicated back to the development centre system, so that change control coordinators can monitor, at the development centre, the CR implementation at the various remote systems without having to passthrough to each one.

For this information to be sent and received at the development centre system, you must ensure that the QSNADS subsystem and *Communication Manager* (QDMS subsystem) are both active.

You can use action option **10=Network Sts** from the main list panel of function WRKCHGRQS to view this information. The following status items are transmitted back to the development centre system from each remote system:

- The last install/promote operation date.
- The last install/promote type.
- The CR status at the end of the promote operation.
- The release number (as known on the target system).
- The last install/promote job details.

The information is transmitted regardless of whether the release was sent using the *Communication Manager* or via tape.

Object movements

When the CR is promoted, each of the application parts registered under the CR are processed. The following explains a number of critical issues relating to this processing.

Movement transaction patterns

Each application part is internally associated with an *object reference id*. Each object reference id defines a number of change management attributes. One of these is the type of originating and target library associated with the part, which can be a program library (*PGM) or a database library (*DB).

The movement patterns depend on the transaction type, and on whether the application part being manipulated is associated internally with program libraries or database libraries.

SEE/Change assumes that the structure of the library list associated with the target environment allows for:

- multiple program libraries that are searched to resolve a program object
- a single database library containing all the data associated with the environment.

The following table shows the general library list structure for the various environments:

Library included in the LIBL	*MDL environment	*ACP environment	*LIV environment
*MDL database library	x		
*ACP database library		х	
*LIV database library			х
*MDL program library	X		
*ACP program library	Х	х	
*LIV program library	x	x	х

So, for example, if a program is promoted to the Module/Integration environment, it is duplicated from the CR work library into the *MDL program library. If the same program is then promoted to the Acceptance/QA environment, it is **moved** from the *MDL program library to the *ACP program library.

If a database file is promoted to the Module/Integration environment, it is duplicated from the CR work library into the *MDL database library. If the same database file is then promoted to the Acceptance/QA environment, it is **duplicated** from the *MDL database library to the *ACP database library.

For further details about library list structures, refer to *Job descriptions and library lists* in *Configuration Manager User and Reference Manual.*

The following diagrams demonstrate the movement patterns for the main transaction types.



Promote to Module/Integration environment (*MDL)

- Program-type application parts are duplicated from the CR work library into the application Module/Integration program library.
- Database-type application parts are duplicated from the CR work library into the Module/Integration database library. If the file already exists in the Module/Integration library, an attempt is made to retain existing members and data under the new file description.



Promote to Acceptance/QA environment (*ACP)

- Program-type application parts are duplicated from the CR work library into the application Acceptance/QA program library. If the CR has been previously promoted to the Module/Integration environment, the application part is removed from the Module/Integration library.
- Database-type application parts are duplicated from the Module/Integration database library into all the Acceptance/QA database libraries that were configured for the application at the local system.

If the CR has not been previously promoted to the Module/Integration environment, the database application part is implicitly promoted to this environment as part of this promote operation.

If the database file already exists in the Acceptance/QA library, an attempt is made to retain existing members and data under the new file description.



Promote to Live/Production environment (*LIV)

- Program-type application parts are duplicated from the CR work library into the application Live/Production program library. If the CR has been previously promoted to the Module/Integration environment, the application part is removed from the Module/Integration library. If the CR has been previously promoted to the Acceptance/QA environment, the application part is removed from the Acceptance/QA library.
- Database-type application parts are duplicated from the Module/Integration database library into all the Live/Production database libraries that were configured for the application at the local system.

If the CR has not been previously promoted to the Module/Integration environment, the database application part is implicitly promoted to this environment as part of this promote operation. If the CR has not been previously promoted to the Acceptance/QA environment, the database application part is implicitly promoted to this environment as part of this promote operation.

If the file exists in the Live/Production library, an attempt is made to retain existing members and data under the new file description.



Backout and revert back to development (*RDV)

For program-type application parts, if the CR has been previously promoted to the Module/Integration environment, the application part is removed from the Module/Integration library. If the CR has been previously promoted to the Acceptance/QA environment, the application part is removed from the Acceptance/QA library.

For database-type application parts, if the part exists in the Live/Production environment, then the part is restored from the Live/Production database library into all Module/Integration and Acceptance/QA database libraries.

When restoring the object from the live library, an attempt is made to retain existing members and data under the restored file description.



Create release packet (*RLS)

- Program-type application parts are duplicated into the release packet from the CR work library, or if the CR work library is no longer available, from the application Live/Production program library.
- Database-type application parts are duplicated into the release packet from the Module/Integration database library. If the CR has not been previously promoted to the Module/Integration environment, the database application part is implicitly promoted to this environment as part of this release packet create operation.

All database relationships are maintained within the release packet.



Install to ACP/QA environment at remote systems (*IAC)

- An implicit backout is executed for each CR included in the release before installation of the release at the remote production system.
- Program-type application parts are duplicated from the release packet into the application Acceptance/QA program library.
- Database-type application parts are duplicated from the release packet into all Acceptance/QA database libraries configured for the application at the local system.

If the file already exists in the Acceptance/QA library, an attempt is made to retain existing members and data under the new file description.


Instal to Live/Prod environment at remote systems (*ILV)

- Program-type application parts are duplicated from the release packet into the application Live/Production program library.
- Database-type application parts are duplicated from the release packet into all Acceptance/QA and Live/Production database libraries configured for the application at the local system.

If the file already exists in any of these libraries, an attempt is made to retain existing members and data under the new file description.

Movement logs

At each network location, SEE/Change holds a central repository of transactions for all local application part movements. One movement record is recorded for each application part promoted or installed. If, for example, a database object is promoted into a number of database libraries, a record is written for each of these target libraries. These transactions are removed from the system when you execute function PRGMVTLOG (Purge Movement Logs) or PRGCHGDTA (Purge Change Management Data).

You can view the movement transaction information using action option **20=Movements** from the various list panels that show the application parts contained in the CR.

Whenever you promote or install a CR locally, two reports are automatically generated:

- **Error Log** Shows a list of messages that were generated in the course of promoting or installing the CR. If an error is encountered, the corresponding error message is listed in this report. Other messages indicate the job start, the job completion and any messages generated by user-defined processes attached to the CR like *BEFORE and *AFTER processes, or user-defined processes associated with the object. For a further description of these processes refer to *Development Manager User and Reference Manual*.
- **Object Log** Shows a list of application part movements affected by the promote or install job, extracted from the local movement repository. You can reproduce this report using function LSTMVTLOG (List Movement Logs).

The transaction number uniquely identifies each transaction record. For each transaction, the transaction type code indicates the context and purpose of the transaction, the operation code indicates the type of manipulation that was executed, and the completion code indicates whether the operation has been successful or has terminated with errors. The following tables show the various codes and their meaning.

Refer to pages 4-161 and 4-162 for report examples.

Movement transaction types

The following table shows all the movement transaction types used internally by SEE/Change; they are recorded in the movement logs.

Movement Transaction Type	Movement description
*ACP	Promote to Acceptance/QA environment
*ARC	Archive from Live/Production environment
*ARP	Archive from live source pool (at the development centre system)
*DCR	Delete CR work library
*IAC	Install to Acceptance/QA environment (at remote production systems)
*ILV	Install to Live/Production environment (at remote production systems)
*LIV	Promote to Live/Production environment
*MDL	Promote to Module/Integration environment (at the development centre system)
*RDV	Backout and revert to development
*RLS	Create release packet
*RSL	Restore from archive to Live/Production environment
*RSP	Restore from archive to live source pool (at the development centre system)
*RST	Restore from Live/Production to Acceptance/QA and Module/Integration databases
*SRC	Promote source member to live source pool (at the development centre system)

Movement operation codes

For any one transaction, SEE/Change may execute one or more actual operations. The operation code identifies the main operation for the transaction.

Movement Operation Code	Operation description
*BYP	Bypass site database due to overrides
*CPL	Compile source member
*CPY	Copy source file
*DLT	Delete object and/or member
*DUP	Duplicate object and/or member
*LNS	LANSA export/import
*MOV	Move object and/or member
*MRG	Merge message file

Movement completion codes

The completion code indicates whether the transaction operations have completed successfully, whether warnings exist, or whether errors have caused one or more operations to end abnormally. If any transaction ends with an error completion code, the whole CR promote operation is considered to be an operation that ended abnormally, and the CR status is updated with an error code.

Movement Completion Code	Completion status description
*CHK	Movement completed OK, but work library could not be deleted
*E00	Associated record in error
*E01	Error - Object not found
*E02	Error - Originating library not found
*E03	Error - Target library not found
*E04	Error - Target source file not found
*E05	Error - Cannot determine work library name
*E06	Error - Work library prefix not configured
*E10	Error while duplicating object into target library
*E11	Error while moving object into work library
*E12	Error while moving object into target library
*E13	Error - Not all based-on PFs are in same libary
*E14	Error while renaming object or member
*E15	Error while merging message file
*E16	Error while deleting object
*E17	Error while retrieving based-on files
*E18	Error - File does not have any members
*E19	Error while archiving object
*E20	Error while creating movement work library
*E21	Error while creating archive library
*E22	Error - Cannot delete work library object
*E23	Error - Cannot delete work library source member
*E24	Error while moving source into work library
*E25	Error while removing target source member
*E30	Error while duplicating data members
*E31	Error while adding members
*E32	Error while copying data

Movement Completion Code	Completion status description (cntinued)
*E40	Error while delivering source
*E41	Error while archiving source
*E50	Error while clearing outq in CR library
*E59	Error while deleting CR library
*E60	Error while compiling source member
*E61	Error while changing LIBL for compile
*E62	Error while executing source embedded commands (*OMX)
*E80	Error while applying object authority
*E82	Error executing user-defined object process
*E98	Error - Object reference id not found
*E99	Error - Unspecified error encountered
*INZ	Movement initialised. Completion status unknown
*NMB	Warning - No data members in file
*OK	Movement completed OK
*PRC	Included in previous CR in the same release packet. Object bypassed
*PRV	Previous run OK. Object bypassed
*RDV	Movement backed out for re-development
*ZRO	Warning - No records in data member

All movement/promote requests end with a message indicating the completion analysis, and show the following completion status counts:

*CFG The number of movements that ended in error due to missing or incomplete configuration data.

- ***ERR** The number of movements that ended in error due to environment problems.
- *CHK The number of movements that ended normally, but the associated temporary movement library could not be deleted. This is typically the result of one or more unresolved database dependency problems within the movement work library, which can occur if CR library check warnings are ignored, and one or more dependent logical files have not been included in a CR that contains the based-on physical file.
- ***OK** The number of successful movements.

If one or more movements have completed with a status of *CFG or *ERR, the CR is updated with an error status code (*ERM, *ERA or *ERL).

If all movements have completed with a status of *OK or *CHK, the CR is updated with a status code that indicates its current location within the change management cycle (*MDL, *ACP or *LIV).

File locks during movements

There must be no active locks on files being promoted.

Before any file (object type *FILE) is processed, existing locks on the file in the originating and target libraries are checked. If one or more locks are active, inquiry message id OMI1004 is sent to QSYSOPR, informing the operator that the file cannot be promoted because it is being used by one or more jobs.

The operator can then use system function WRKOBJLCK (Work with Object Locks) to verify existing locks, ensuring the file is not used by any other job, and then respond to the message with either:

- **R=Retry** Retry allocating the file. If one or more locks still exist, the message is resent, or
- **G=Go** Attempt to continue file promotion with verifying object locks. The CR promotion might end abnormally if the required file manipulation cannot be performed.

The above applies also to the CR library itself before it is deleted in the context of CR movement to the Live/Production environment at the development centre.

The default reply to OMI1004 is **G=Go**. If you run unattended CR promote jobs, ensure the value of parameter INQMSGRPY is set to *DFT (either in the job description you use to submit the job, or by using F4 when submitting the job through the common submit job window, and changing this parameter on the SBMJOB command).

Source re-compilation

Normally, objects are:

- 1. compiled in a CR work library at the development centre
- 2. promoted at the development centre
- 3. distributed to remote systems in object form.
- When you configure an application, you can specify that all application source-based parts are recompiled (instead of duplicated or moved) when the CR is promoted. This can be specified separately for the development centre and remote sites.
- You can also use the configuration override facility to specify whether a specific part is to be recompiled at either the development centre or at any remote system. You can also override the application job description name used for re-compilations.
- The library list being used for re-compilation is the list specified under the INLLIBL parameter of the application job description (or the overridden job description name) in the target object library.
- If the source member is not found when the CR is promoted, SEE/Change attempts to duplicate the object instead. A message in the movement error log will indicate that duplication was attempted instead of re-compilation.
- Source-based database objects (PFs and LFs) are normally restored from the Live/Production environment into the Module/Integration and/or Acceptance/QA environments when the revert to development operation is executed. When re-compilation is used, these objects are re-compiled from the Live/Production source.

- When re-compilation is specified at the development centre, logical files are also re-compiled into the release packet. If the CR is in the Live/Production environment the job description used (for library list purposes) is the application job description (or the overridden job description name) in the Live/Production database library of the first site at the development centre. If the CR is not in the Live/Production environment, the job description in the target Module/Integration database library is used. The release packet library is always added at the top of the library list before compilation.
- When re-compilation is used for a logical file, you can control the logical file members created by structuring the correct library list in the job description being used. If special logical file member scope is required, you can use object level processing to create the necessary logical file members.
- Logical files with a based-on physical file residing in a library other than the library containing the logical file must be re-compiled when promoted.
- All commands used for re-compiling objects when the CR is promoted at either the development centre or remote systems can be edited locally using configuration function EDTEXCMSG, or via menu SEECFG2 option **12. Edit Compilation Commands**.

Data retention

If you do not specify otherwise, existing data members in physical and logical files and the data contained in them are retained while delivering a new version of a database file.

SEE/Change copies the existing physical file data into the new file members using the OS/400 command CPYF with CVTSRC(*MAP *DROP).

You can override this default and bypass data retention by either:

- using the application configuration to specify that all application objects are re-compiled when delivered to target environments
- using the configuration override facility to specify re-compilation for a specific file or to specify for a specific physical file that data in the development environment is duplicated into target environments.

Refer to Specifying configuration overrides on page 4-105.

Journal attributes retention

When database files are replaced, existing journal attributes are retained as follows:

If the physical file being replaced is journalled, the new physical file is journalled using the same journal name, with the same record image selection (*AFTER or *BOTH) and the same entries omitted (*OPNCLO or *NONE).

If the access path of the logical file being replaced is journalled, the new access path is journalled using the same journal name.

Message files

Message files are handled differently than most other application parts:

• Message files are maintained in a common area accessible to all CR users, not in the CR work library itself. Change management locks are not applied to message files, and concurrent access to the same message file can be obtained by all CR users. The common area is the Application Message File Library, which is specified for each application on the Work with Application Details panel in the Work with Application Configuration function. The same message file library can be shared by any number of applications, but a message file name must be unique across all applications that share a common message file library. The default application message file library is the SEE/Change Save Library, whose name is specified via parameter @SVL.

By using different message file libraries, it is possible to develop message files of the same name for different applications, within the same SEE/Change environment.

• When configuring an application, you can specify whether message files are duplicated or merged into target environments. The duplicate option results in better performance, but the merge option is useful if there are differences between the same message files in the various target environments. Refer to *Configuring applications* in *Configuration Manager User and Reference Manual*.

Object authorities

OS/400 object authorities are automatically applied after an object is installed in a target environment. You can control the object authority structure in two ways:

- You can specify default authority templates in the *Configuration Manager*. These authority templates are defined locally at each system, and are searched and applied to all objects installed at that system, regardless of the originating development centre. If a match is found, the authority specifications of the first matching template are applied.
- If an object is being superseded, and if no templates are specified or no template matches the object, the authority of the superseded object is applied to the newly installed object:
 - the object owner is changed to that of the superseded object
 - all authorities are revoked from the newly delivered object
 - all users are granted the same access as that of the superseded object
 - the newly delivered object is attached to any authorisation list to which the superseded object was attached

For further information refer to *Specifying object authority and processing templates* in *Configuration Manager User and Reference Manual.*

Object-level processing

You can configure a specific set of processes to be invoked immediately after the installation of an object.

This can be useful if, for example, your development centre is supplying printer files to multiple remote systems and at each remote system the printer file requirement is different.

You can specify object processing templates in the *Configuration Manager*. In each processing template you specify the execution string, which can contain any valid OS/400 or user written command. The string can also contain run time substitutional variables for the object name, OS/400 type and attribute, so you can directly invoke OS/400 command like CHGPRTF etc. This execution string is processed for each installed object that matches the template level.

The template level strategy for processing templates is identical to the structure used for authority templates. After an object is installed, one internal search is employed to find a matching authority template and a separate search is employed to find a matching processing template.

Processing templates are defined locally at each system, and are searched and applied to all installed objects at that system, regardless of the originating development centre.

For further information refer to *Specifying object authority and processing templates* in *Configuration Manager User and Reference Manual.*

Archiving

The archiving feature enables you to retain objects and source members that have been replaced in the Live/Production environment, and to restore these parts in the context of reverting to development CRs that have been promoted to the Live/Production environment.

The archiving feature is most useful in circumstances where you have promoted a CR into the Live/Production environment, and sometime later it has become necessary, due to problems with the new software, to re-instate the live environment as it existed before you have promoted the CR.

An important issue to note is that the *RDV (Backout and revert to development) operation does not restore data. If data has been corrupted by the new software you have promoted to Live/Production, you can re-instate the software (including physical and logical file descriptions), but the existing data, corrupted or not, is retained. You must fix the data using your own programs and procedures.

The archiving feature is optional by application. Against each application you can specify the number of archiving levels, i.e; the number of previous object/source versions you wish to retain. If you specify 0 archive levels, the feature is effectively turned off for the application. You must specify at least 1 archive level to enable reverting CRs from the Live/Production environment.

How archiving works

Whenever a changed application part is about to be promoted into the Live/Production environment, the existing part is moved temporarily into a movement work library. After successful installation of the changed part, and if the archive feature is active for the application (i.e; archiving level is not 0), the temporary movement work library is retained as an archive library, and a new archive level is registered for that part within the SEE/Change repository.

Following successful completion of the CR movement, the archive stack for the part is re-organised to contain the specified number of archiving levels, by dropping excess levels in FIFO (First in First Out) order.

After an archive level has been dropped, the archived part (on that level) is erased. When all parts archived to the same archive library have been erased, the archive library itself is erased.

When you request an *RDV operation for a live CR, SEE/Change verifies the availability of all archived parts associated with that CR, and allows the movement only if each of these archived parts are the latest in the archive stack.

Note:

The *RDV operation is driven by the information recorded on the archiving movement logs when the CR is promoted to Live/Production. Therefore, if the movement log transactions have been purged (through function PRGMVTLOG or PRGCHGDTA), you cannot revert the CR to development.

Archive and movement work libraries

The archive and movement work library names are constructed as *axxxxxxxx* where *a* is the prefix you nominate under general parameter code @ARP, and *xxxxxxxxx* is the sequentially allocated number stored in data area LASTWL in the SEE/Change database library. Refer to *Maintaining general parameters* in *Configuration Manager User and Reference Manual*.

Each library name is unique for the combination of the CR number and the movement target library. Thus, the number of archive or work libraries created while the CR is being promoted depends entirely on the current configuration, for example:

- If all the CR objects and source members are targeted at the same Live/Production library, only one archive library is created while the CR is promoted to Live/Production.
- If the CR contains both programs and database objects, and all programs are targeted at the same program library, and all database objects are targeted at three different database libraries (three different sites), and all source pools for the application are contained in one source library, five archive libraries are created while the CR is promoted to Live/Production at the development centre, with contents as follows:
 - all replaced objects in the target program library
 - all replaced objects in the 1st target database library (1st site)
 - all replaced objects in the 2nd target database library (2nd site)
 - all replaced objects in the 3rd target database library (3rd site)
 - all replaced source members in the source pool library

The archive and work libraries are created in the same ASP as the movement target library. The library description indicates the associated CR number and the target library, which is the originating library of the objects and source members contained in the archive or work library.

Program-type application parts

- When replaced in the Live/Production environment, the existing object is moved into the newly created archive library.
- When restored from the archive library, the new object is removed from the Live/Production environment, and the archived object is moved into the Live/Production environment.
- For interpretive source members, the restored member is also copied to the Acceptance/QA and Module/Integration environments.

Database-type application parts

- When replaced in the Live/Production environment, the existing object is moved into the newly created archive library. **Data is not retained**; only database relationships are retained.
- When restored from the archive library, the new object is removed from the Live/Production environment, and the archived object is moved into the Live/Production environment. The data existing in the Live/Production environment before the restore operation is retained (mapped) into the object that was restored from the archive library. The same restore operation is effected for the Acceptance/QA and Module/Integration environments.
- The exception to the above is when a logical file is restored and the application configuration indicates *Re-compile*... *YES, or when an override specification with *Re-compile*... *YES exists for the object. Then, the logical file is re-compiled from the restored source file member into the Live/Production environment, and **the existing logical file members are not re-instated**. If, for any reason, the archived source cannot be accessed, the restore operation will attempt a normal move instead of re-compile.
- The above exception for logical files caters for the situation where logical files are targeted at a Live/Production library different than the one used for the based-on physical file(s). In these circumstances, you must ensure (through either configuration or configuration overrides) that the source is distributed and the object is re-compiled.
- SEE/Change allows you to include in a CR a logical file without its based-on physical file. In this instance, the existing logical file in the Live/Production library is archived. The archived logical file would be based-on the same physical it was based-on before it was archived, i.e; the physical file in the Live/Production environment. Since all logical file members are removed in the archived version, this relationship does not have any significant impact on the physical file I/O performance.
- If you choose to ignore errors, you can promote a physical file without its dependent logical file. In this instance, after a successful promote to the Live/Production environment, the existing logical file in the Live/Production library is based-on the archived physical and not on the newly installed physical file.

Message files

- When replaced in the Live/Production environment, the existing message file object is moved into the newly created archive library.
- When restored from the archive library, the new message file object is removed from the Live/Production environment, and the archived object is moved into the Live/Production environment. This is done regardless of whether the application configuration indicates message file merge or duplication (*MRG/*DUP).
- The Acceptance/QA and Module/Integration environments are not changed, since message files may contain changes effected in any number of CRs, some of which might be in Module or Acceptance testing stages.

CRDTA files

CRDTA files are used as vehicles for data distribution (via the CR or application level *BEFORE or *AFTER processing programs); they do not participate in the change management cycle, and are therefore not archived, or reverted to development.

Source members

Source members are archived, if archive is active for the application, as follows:

- When interpretive (*INTERPRET) or copybook (*CPYREF) members are promoted to the Live/Production environment, at either the development centre or at remote production systems, the member being replaced is archived. The source file name in the archive library is same as the default source file for the object.
- When any source member is distributed to remote production systems, the member being replaced in the Live/Production object library is archived. The source file name in the archive library is the same as the default source file for the object.
- When the CR is promoted to the Live/Production environment, at the application development centre, the member being replaced in the configured source pool is archived. The source file name in the archive library is same as the source file name for the source pool.
- Note that for interpretive (*INTERPRET) and copybook (*CPYREF) source members, two separate archiving operations are executed; one for the archiving of the member replaced in the object library, and one for the member replaced in the source pool.

Pre-run checks before reverting a CR from archive

You can select a CR that is in the Live/Production environment for an *RDV (backout and revert to development) operation. In order to protect the application integrity and the development environment, a set of checks are performed to verify the following:

- Archive information for each application part registered under the CR is available in the SEE/Change repository.
- Archive details as stored in the SEE/Change repository point to existing objects and source members, and that these are available for each application part registered under the CR.
- CR work library exists for operations at the application development centre.
- Each application part registered under the CR (and its dependent objects), has not been promoted to Live/Production in the context of another CR later than the time the current CR was promoted to Live/Production.
- Each non-source based object registered under the CR is not currently under development in the context of another CR. (Concurrent development for non-source based objects is not allowed).
- If concurrent development will result after this operation, that the *other* version under development is not in a CR with a status indicating movement errors.

These checks are performed interactively: the larger the number of application parts registered under the CR the longer the checks will take to complete. Any problems found are communicated by messages in the normal way.

Most potential errors are therefore detected early, before you actually action the *RDV operation. However, in certain circumstances, errors can occur while reverting a CR to development. For example, if a source member in the archive library is being used (locked) by another job, or for some reason has been deleted since the interactive checks have been performed. All errors encountered during the *RDV operation are reported in the *Error Log* spool file generated by the movement job. Regardless of whether errors have been encountered or not, the CR status is updated to *DEV (under development).

You might be in a situation where you want to revert a CR containing a large number of parts, and one or more errors are detected for a specific part. Normally, any error detected will prevent you from actioning the CR movement operation. However, you might know the reason for the error, and after considering the consequences, you might want to ignore the errors and proceed with the *RDV operation, even if you anticipate one or more runtime errors.

You can achieve this by changing the value of general parameter MCHK, which controls whether all problems detected up-front are treated as errors, and therefore block you from executing the *RDV, or whether they are treated as warnings that you can ignore.

This applies to most error conditions, with the exception of the following message ids, which cannot be ignored, regardless of the setting of parameter MCHK:

OME3187	This message will appear if you attempt to revert a database object, while the same object is already under development in the context of a different CR. Concurrent development for database objects is not allowed.
OME3300	This message will appear if you attempt to revert a non-source based object, while the same object is already under development in the context of a different CR. Concurrent development for non-source based objects is not allowed.
OME3186	This message will appear if you attempt to revert an object while the same object is already under development in the context of a different CR, and that CR is in an error status. You first have to resolve the error status of that other CR (by either repeating the failed movement, or reverting it to development), and then re-try the current *RDV operation.
OME3205	This message will appear if no Live/Production movement log records are found for the object. This can occur if you have executed function PRGMVTLOG (Purge Movement Logs) or function PRGCHGDTA (Purge Change Management Data) including the CR in the purge scope.

It is recommended that you set parameter MCHK as ***ERROR**. Only in certain circumstances, after the blocking errors have been analyzed, and due consideration and authorisation granted, you may want to change the parameter value to ***WARNING**, re-request the *****RDV operation, ignore errors and execute the process. After the *****RDV operation has completed (in batch or interactively), change the parameter value back to ***ERROR**. Refer to *Maintaining general parameters* in *Configuration Manager User and Reference Manual*.

Pre-run checks before promoting a CR to Live/Production

As explained previously, errors can occur while re-instating an archived version. In this case, the archived version is left in the archive library, and the version in the Live/Production environment is unchanged.

Since the CR status is changed to *DEV unconditionally, you can, regardless of whether errors have occurred, now initiate a new movement/promote cycle for the CR.

To protect the integrity of the archive stack, additional checks are performed when you select to promote a CR to the Live/Production environment, to verify that for each application part registered under the CR, all previous archive versions generated in the context of the current CR have been successfully reverted to development.

If previous archive versions have been detected, you must first resolve these before continuing with the promote to live; otherwise, your next archiving operation will replace the current archive version with the current version in the Live/Production library, which is not the true *previous* version. Typically, you would manually do the following:

- Verify the reason for the failure to re-instate the archived version.
- Re-instate the archived version into the Live/Production environment.
- Delete the archived version from the archive library.
- If the archive library is empty, delete the archive library.
- Re-request the promote operation; the message(s) will not appear.

Movement authorisations

SEE/Change automatically revokes all movement authorizations when a CR is reverted to development.

For example, if a user is required to grant authorisation for a CR to be promoted into the Acceptance/QA environment, that user will be required to grant authority for the movement after the CR has been reverted to development even if the user had previously granted this authority before the reversion.

Movement transaction logs

The following movement transaction types are generated when an object or source member is archived:

- *ARC This transaction type is generated for an archive operation of an object from the Live/Production environment, or an archive operation of a source member from the default source file name in the Live/Production environment. Typically, this transaction type is generated prior to the corresponding *LIV (promote to live) or *ILV (install to live) transaction.
- ***ARP** This transaction type is generated for an archive operation of a source member from the application source pool at the development centre. Typically, this transaction type is generated prior to the corresponding *SRC (promote source to source pool) transaction.

The following movement transaction types are generated when an object or a source member is restored:

- ***RSL** This transaction type is generated for a restore operation of an object from the archive library to the Live/Production environment, or a restore operation of a source member from the archive library to the default source file name in the Live/Production environment.
- ***RSP** This transaction type is generated for a restore operation of a source member from the archive

library to the application source pool at the development centre. For application base objects (source level *BAS), source members are always restored to source pool *BAS-1, regardless of the originating pool.

***RST** This transaction type is generated for a restore operation of a database object from the Live/Production environment to the Acceptance/QA or Module/Integration environment, or a restore of an interpretive source member from the Live/Production environment to the Acceptance/QA or Module/Integration environment.

New application parts

When a new application part is promoted to Live/Production, no archiving is performed since there is no previous version in the Live/Production environment.

When you revert the CR after it was promoted to Live/Production, the part is deleted from the Live/Production environment. Transaction types *RSL and *RSP are generated to log this deletion; the movement operation code is shown as *DLT (delete) instead of the normal operation code of *DUP (duplicate) or *MOV (move).

Viewing movement logs

You can view the movement transaction information using action option **20=Movements** from the various list panels that show the application parts contained in the CR. You can verify archiving history and determine the availability of archived objects. This is useful for audit purposes, or when you need to effect a manual operation involving an archived application part.

You should note the following:

- For transaction types *LIV and *ILV you can see the name of the work library used. If archiving was active at movement time, the same library name appears as the target library on a prior *ARC transaction.
- At the development centre, for transaction type *SRC you can see the name of the work library used. If archiving was active at movement time, the same library name appears as the target library on a prior *ARP transaction.
- For transaction types *ARC and *ARP, the transaction status also indicates whether the archived parts are **currently** available.
- For all transaction types you can see whether configuration overrides were used at the time of the movement.

Movement error handling

If one or more errors occur during any movement/promote or revert operation, all errors are logged in the **Error Log** spool file generated by the movement job, and an escape message is issued. If the job is executed in batch, it ends abnormally.

If one or more errors occur during any promote operation, including errors detected while attempting to archive existing parts, the CR status is changed to indicate an error condition (*ERM, *ERA or *ERL).

However, the revert operation unconditionally changes the CR status to *DEV, regardless of whether one or more errors occurred, and access to the CR work library at the development centre is granted.

Since you cannot repeat the revert operation before initiating a new promote cycle, you must verify each error detected while reverting a CR to development, and if required, fix the problem before initiating a new promote cycle.

If an error occurred in an archive operation, the archived version is left in the archive library, and the version in the Live/Production environment is unchanged. You must manually re-instate the archived version in the Live/Production environment and delete the archived version in the archived library.

Following are a few points that should assist you in determining errors:

Configuration:

- If configuration details or object movement overrides have been changed after the CR has been promoted to Live/Production, and before it is reverted to development, then:
 - These changes will not affect the restore operation for transaction types *RSL and *RST, i.e; the revert operation will attempt to restore each part to its originating location as recorded within SEE/Change's repository when the part was promoted to Live/Production.
 - These changes will affect the restore operation for transaction type *RSP, i.e; for application base objects (source level *BAS), the revert operation will attempt to restore the source member into the source file that is currently configured for source pool *BAS-1. For all other objects, the revert operation will attempt to restore the source member into the source file that is currently configured for the originating source pool.

*CHK warnings:

- A completion status of *CHK for *RSL, *RSP and *RST transactions has the same meaning as for any other transaction, i.e; the part in the target library cannot be erased after it has been replaced.
- For example, if an *RSL transaction attempts to restore PGMA from the archive library to the Live/Production library, the version of PGMA currently in the Live/Production library is temporarily moved into a work library; the archived version is then moved into the Live/Production library, and an attempt is made to delete the object in the temporary work library. If this attempt fails, the transaction completion status is set to *CHK. Essentially, the restore operation completed successfully, but the work library still exists on disk. You can verify the work library name by displaying the transaction details (for all restore operations, the work library name is constructed as *#xxxxxxxx* where *xxxxxxxxx* is the transaction number). You should verify the contents of the work library and delete it.

• The next time you execute any promote or revert operations for any CR, the system will attempt to delete all work libraries associated with each transaction with a completion code of *CHK. If the library is deleted successfully and cannot be found, the transaction completion status is changed to *OK (or *RDV).

*E01 - *E99 errors:

- Completion status in the range of *E01 to *E99 indicate that an error occurred while attempting to execute the transaction. The actual description of the error is shown when you display the transaction details.
- Completion status in the range of *E01 to *E99 implies that the attempted transaction has been reversed, i.e; the part is in exactly the same status as it was before the transaction was attempted.

*E00 errors:

- Completion status of *E00 indicates that an error occurred on an associated transaction, which caused this transaction to be a null transaction. Archive transactions are always coupled with promote transactions in a transaction set; if an error occurs in one of the transactions in the set, the transaction in error is updated with completion status of *Exx, and all other transactions in the set are updated with completion status of *E00.
- For example, PGMA object and source reside in the object Live/Production library at a production site. The application is configured with source distribution and archive features activated. A CR containing PGMA object and source is now installed directly to the Live/Production environment. The following transaction types are generated (in the following order):

*ARC	Archive existing PGMA source	
*ARC	Archive existing PGMA object	transaction set
*ILV	Install PGMA object	
		I

*ILV Install PGMA source

- The first 3 transactions are treated as a set. If an error occurs on one of these, the other two are updated with the completion status of *E00.
- Completion status of *E00 implies that the transaction is a null transaction, i.e; it was not executed.

SEE/Change internal releases

SEE/Change's internal changes are normally delivered as Product Enhancements (PEs) that are shipped in the form of SEE/Change releases and installed using the same release mechanism as is used for other applications. This includes internal database changes.

To avoid the complexity that would result from the install mechanism accepting changes to itself, PEs are not subject to archiving. The number of archiving levels specified for application OMS is ignored: 0 archiving levels is assumed.

Considerations when using multiple SEE/Change databases

When using multiple databases on the same system, you must ensure there are no conflicts between the archive library names/work library names used under each database.

The best way to avoid conflicts is to ensure that the value specified for parameter code @ARP is unique for each database.

Managing the size of the SEE/Change repository

The SEE/Change internal repository accumulates all change management data for all applications used at the local system. This repository is used for determining the manipulation of application parts when CRs are promoted, and to provide historical information for audit purposes.

Periodically you can purge the repository data to reduce disk usage. There are two ways you can do this:

• Function PRGMVTLOG enables you to purge the movement transaction log repository. These are the files with the fastest data accumulation rate. You can determine the current size by using command DSPFD for file name XMV in the SEE/Change database library. The function will only purge movement logs for CRs that were already promoted to the Live/Production environment. Movement logs for CRs being worked on cannot be purged, since they are required for future promote operations.

Change history is left intact. Even after you have purged the movement logs, you can inquire the full change history for any application part. All IRs and CRs and related information, like text documents, are also unchanged.

The consequence of purging movement logs is that archive information will no longer be available for the movements that were purged. The archived parts are purged when the movement log record that was created when the archive operation was executed is purged. You can use the *end date* parameter to limit the purge up to a certain date, and thereby protect your archiving information from that date onwards. You can also select to purge transactions pertaining to a specific CR, or a transaction created by a specific job. Refer to *Purging movement transaction logs* on page 4-121.

Function PRGCHGDTA enables you to purge all CR, IR and release related information. Using this command you effectively erase the change management repository, including all movement logs. After they have been purged, change history, CR/IR information and associated documents and all other related information is erased. You can use the *end date* parameter to limit the purge up to a certain date; you can also purge data for a specific application, or for a specific originating system. For example, at a production system you can purge all information relating to incoming software releases from a certain development centre system. Refer to *Purging change management data* on page 4-123.

The *RDV operation is driven by the information recorded on the archiving movement logs when the CR is promoted to Live/Production. Therefore, if the movement log transactions have been purged (through function PRGMVTLOG or PRGCHGDTA), you cannot revert the CR to development.

Backup is not automated. It is the user's responsibility to ensure all change management data is saved before executing the purge function.

Working with Investigation Requests

This function enables you to create an IR, copy, update, display or remove existing IRs.

How to get into this function

Menu/Option: SEECHG / 1 Command: WRKINVRQS

Refer to Working with Investigation Requests in Problem Manager User and Reference Manual.

Listing Investigation Requests

This function enables you to select and print IRs. You can select the format of the report you want, and which IRs are printed on that report.

How to get into this function

Menu/Option: SEECHG/2 Command: LSTINVRQS

Refer to Listing Investigation Requests in Problem Manager User and Reference Manual.

This function enables you to create a CR, maintain existing IRs and CRs, and progress CRs through the various operating environments.

How to get into this function

Menu/Option: SEECHG / 11 Command: WRKCHGRQS

List panel viewing and manipulation

SEE/Change Testing Environment Filter: RICHARD Work with Investigation Requests 2=Change 3=Copy 4=Delete 5=Display 17=Close IR 29=IS text 43=Task sched 44=Tasks 45=Location Opt IR Nbr Text Applicatn Status Txt? 100365 CR Reversion error testing Demo appli Completed ____ 100364 Dummy CR for testing Demo appli Opened CRs 100357 A working CR Environment Demo appli Opened CRs ___ 100356 kkkk Demo appli Opened CRs ____ 100355 Chris test for Release Demo appli Opened CRs 100354 EPG test send and send again Demo appli Opened CRs 100353 CH Testing Demo appli Opened CRs ____ 100352 *rls *ALC test Demo appli Opened CRs 100351 j Demo appli Opened CRs ___ 100349 ASSET IRCR Demo appli Opened CRs 100347 All the way test ! Demo appli Completed 100343 Object History Test Lansa Inte Completed More.. F1=Help F3=Exit F4=Prompt F5=Refresh F6=Create F9=Cmd F11=Chg view F12=Cancel F14=Curr flt F21=Filter F22=Status F23=More options F24=Msgs

Note that even if you do not have the required authority for the WRKCHGRQS command, you can still view the list of CRs, but you cannot select any action code that changes CR data or status.

IRs and their associated CRs (if any) are shown in descending order of IR number. A detail line for an IR shows the IR number, description, application code, site and status. A detail line for a CR shows the CR number (sequenced within previously shown IR number), description, application code and status.

Use **F6=Create** to create a new IR and its first CR at the same time. For details, see *Creating an IR and CR Simultaneously*, on page 4-77.

Use **F11=Change view** to show the user or contact reference, priority, release number, initiating user, category and type of both IRs and CRs.

2=Change 3=Copy/Crt CR 4=Dele 9=Rls distrib 10=Network Sts 11=Prom	te ote	5=1 12=1	Display Wrk CR dev	8=Display obj 13=Wrk CASE
Act IR No/CR User or Contact Reference	Pty *HIGH *VHI *VHI *VHI *VHI *VHI *VHI *VHI *VH	Rls 00010 00009 00009 00012 00012 00012 00012 00013	User MARTIN QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR QPGMR	Cat/CR Typ Task *SOFT *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG *BUG
Fl=Help F3=Exit F4=Prompt F5=Refresh F12=Cancel F14=Curr flt F21=Filter F	F6=C	reate tus F	99=Cmd F1 23=More opt	More 1=Change view ions F24=Msgs

Tx next to any IR on this panel means that a user wishes to indicate that they have entered or changed details of their request or problem in the user text document.

After you have viewed this document the notification constant Tx disappears. It reappears each time a user changes the user text document. Refer to *Text documents* on page 4-13.

Searching and selecting IRs and CRs

You can use the input fields below the column headings to specify criteria for searching and selecting IRs and CRs for display. These input fields are consolidated with any filtering specifications that might be in force against your enrolment record.

The selection criteria items can related to an IR, a CR or both. The following rules are used:

- An implicit *AND relationship exists between all IR related items.
- An implicit *AND relationship exists between all CR related items.
- If a combination of IR related and CR related items is used, an implicit *OR relationship exists between all CR related items and all IR related items.
- If an IR is selected, all its associated CRs are always shown.
- If a CR is selected, its parent IR is always shown.

The following are the selection criteria items you can specify:

Text	<i>IR summary text</i> and <i>CR summary text</i> are searched. You can enter a maximum of 5 words, and all IRs and CRs that contain one or more of these words anywhere in these fields are shown.	
Usr/Contact Ref	<i>IR User Reference</i> and <i>CR Contact Reference</i> are searched. You can enter a maximum of 5 words, and all IRs and CRs that contain one or more of these words anywhere in these fields are shown.	
Pty	<i>IR priority (user)</i> or <i>CR priority (IS)</i> are searched. If you prompt using F4 and select a priority from the shown list, that priority, whether IR or CR, is used.	
	If you enter a priority code directly, SEE/Change decides whether it is an IR or CR priority to use. Note that if the same priority exists for both IRs and CRs, SEE/Change assumes it is searching for IRs of the selected priority.	
RIs	The CR release number is searched.	
User	IR user (entered by) and CR user (allocated to) are searched.	

After a list is constructed based on the specified selection criteria, you can further position the list using the **IR Nbr** input field. The list is shown in descending IR sequence starting with the IR number you have specified.

To revert to the full list, blank out all the search items and press enter.

Filtering

If a data filter is assigned, the filter name is shown in the top right corner of the panel (next to the mnemonic **Flt:**). If no filter is assigned, *NONE is shown. Refer to *Data filtering* on page 4-16. You can:

- Use **F21=Filter** to show the filter pull-down menu, which enables you to change an active filter or select a different filter
- Use **F14=Curr flt** to bypass the pull-down menu and go directly to the *Work with Data Filters* panel, which enables you to change the currently assigned filter. Refer to *Filtering pull-down menu*.

Filtering pull-down menu

The following pull-down menu is displayed when you use **F21=Filter**.

: Filter Options :	SEE/Change Testing Environm rk with Investigation Reques	ent Filter: ts	RICHARD
	4=Delete 5= sched 44=Tasks 45=	Display 17=Cl Location	ose IR
: 4. Use *SELECT :		Applicatn Statu	IS
Txt?			
: :			
: :	error testing	Demo appli Compl	eted
: :	testing	Demo appli Opene	d CRs
: :	Environment	Demo appli Opene	d CRs
: :		Demo appli Opene	d CRs
: :	or Release	Demo appli Opene	d CRs
: :	d and send again	Demo appli Opene	d CRs
: :		Demo appli Opene	ed CRs
: :	st	Demo appli Opene	ed CRs
: :		Demo appli Opene	ed CRs
: :		Demo appli Opene	ed CRs
: :	test !	Demo appli Compl	eted
: :	ry Test	Lansa Inte Compl	eted
: :			More
: F1=Help F12=Cancel :			
: - :	ompt F5=Refresh F6=Create	F9=Cmd F11=Chg v	riew
::	t F21=Filter F22=Status F	23=More options F	24=Msqs
		-	2

1=Maint *CURR	aintain the current filter. Subject to whether you are authorised to make filt anges, this option enables you to change the current filter specifications.	
2=Use *USRPRF	Assign a filter with the same name as your user profile to be your current filter.	
3=Use *GRPPRF	Assign a filter with the same name as your group profile to be your current filter.	
4=Use *SELECT	Select a filter name from a list of available filters to be your current filter.	

Filtering specifications

The following panel is shown when you choose to change the current filter.

Work with Data Filter Details				
Filter Name/Descriptn : RICHARD Data_Filter_created_by_User_RICHARD				
Enter the codes to which the user is restricted: IR/CR Applications (P):	_			
IR Sites/Locations (P):	_			
IR Status Codes (P):	_			
F1=Help F3=Exit F4=Prompt F5=Refresh F9=Cmd F12=Cancel F24=Messages				

You can specify lists of application codes, site codes, IR category and status codes, and CR type and status codes. The main list panel is refreshed showing only IRs and associated CRs with details matching the codes you have specified in these lists.

If you have changed the original filter assigned to you, you can use F5 to refresh the current filter with its original specifications.

The following IR entities can be used for search criteria (if more than one is specified, an implicit *AND relationship is used):

- IR Applications or Application Areas (if I or B selected for **Applications apply to**)
- IR Site or Locations
- IR Categories
- IR Status codes

The following CR entities can be used for search criteria (if more than one is specified, an implicit *AND relationship is used):

- CR Applications (if C or B selected for **Applications apply to**)
- CR Type codes
- CR Status codes

The search program joins each CR record with its associated IR record, and then the joined data is searched. The **IR/CR relationship** enables you to control whether *AND or *OR is used between all IR related search criteria and all CR related search criteria.

The following secondary panel is displayed when you press Enter on the *Work with Data Filter Details* panel.

Show secondary detail panel ?

None of the fields in the second detail panel for IR entry are mandatory. This toggle can be used to ensure that pressing Enter does not display the panel for those users who are subject to these filter specifications.

Whatever the setting of this option, users of the first detail panel for IR entry can bypass the second panel by pressing F16 instead of Enter.

Show client defined extension panels ?

This Yes/No flag determines whether the user will access the user-written exit programs supported by SEE/Change.

Show task schedule automatically?

This field is relevant only to users of SEE/Job, and determines whether the user will access the *Work with Tasks* panel when entering or amending the IR/CR.

Default IR application area code

The application area code to be used as a default when creating an IR. Use **F4=Prompt** to display a list of available location codes.

Default IR location code

The location code to be used as a default when creating an IR. Use **F4=Prompt** to display a list of available location codes.

Default IR category

The category to be used as a default when creating an IR. Use **F4=Prompt** to display a list of available categories.

Default IR user priority

The user priority code to be used as a default when creating an IR. Use **F4=Prompt** to display a list of available priority codes.

Default IR user reference

The user reference text to be used as a default when creating an IR. User reference text can be used to group IRs for searching.

Each of these fields can hold a default value that governs the creation of new Investigation Requests.

Status pull-down menu

The status pull-down menu can contain various user-defined options.

To get to the pull-down menu, use F22=Status.

: Status Options	. SEE/Change Testing Environment : Work with Change Requests	Flt: *NONE
: 69.Config opt :	· ; /Crt CR 4=Delete 5=Displa ; ork Sts 11=Promote 12=Wrk CR ;	y 8=Display obj dev 13=Wrk CASE
:	:	Applicatn Status
	<pre>on error testing on error testing on error testing II or testing IR Text changed or testing or testing CR Environment CR Environment mote LANSA window vironment environment </pre>	Demo appli Completed Demo appli Live/Prod Demo appli Q/Release Demo appli Opened CRs Demo appli Rdy/Rlease Demo appli Dopened CRs Demo appli Live/Prod Demo appli Live/Prod Demo appli Testing RC app LAN Live/Prod RC app LAN Rdy/Rlease
: : Fl=Help Fl2=Cancel :	: : : ompt F5=Refresh F6=Create F9=Cm	More d Fll=Change view
••••••	: t F21=Filter F22=Status F23=Mor	e options F24=Msgs

SEE/Change is shipped with option **69**. **Config opt**, which enables you to configure, change or remove user-defined options. For example, you can configure options that will execute commonly used AS/400 commands like WRKSBMJOB, WRKOUTQ etc.

When you select this option, command CFGBAROPT parameters are prompted.

Note that all the user-defined options you configure through this option will appear in this pull-down menu permanently and for all users.

Refer to Command CFGBAROPT on page 4-133.

Action codes

You can select one of the following action codes against a CR and/or IR. For the meaning of the various status codes refer to *IR status codes* on page 4-12, and *CR status codes* on page 4-19:

2=Change	Change the IR/CR. An IR can only be changed if the IR is in the status of *ENT or *VST. If the IR is any other status, the only detail that can be changed is the <i>IR Summary Text</i> . CR changes can be done at any time. The <i>CR application</i> cannot be changed if the CR library already exists.
	Refer to Data items shown when changing or displaying an IR/CR on page 4-79.
3=Create/Copy	Create a new CR. If an existing CR is selected, the details of that CR are used as the default for the creation of the new CR. Otherwise, the <i>IR summary text</i> is used as a default for the <i>CR summary text</i> . A CR can only be created if the IR status is either *ENT, *VST or *CRS. A maximum of 99 CRs can be created against any one IR.
	SEE/Change prompts you to specify whether to create the CR library.
	Refer to Data items for creating a CR on page 4-74.
4=Delete	Delete the selected IR or CR. A CR can only be deleted if no application parts are registered under the CR, and if the CR is in the status of *DEV. An IR can be deleted only if it has no attached CRs.
	A confirmation window will pop up showing the CR number you have selected for deletion; press Enter to confirm delete and the CR is removed; use F12 to cancel the delete operation.
5=Display	View the existing details of the selected IR or CR. Data changes are not allowed in browse mode.
	Refer to Data items shown when changing or displaying an IR/CR on page 4-79.
8=Display obj	Display the current list of CR application parts. Refer to <i>Displaying CR</i> application parts on page 4-93.
9=RIs distrib	Display the CR distribution information, i.e; the systems it was sent to, the target environment, and the date and method of delivery.
	Refer to Displaying CR distribution status on page 4-111.
10=Network sts	Display the current status of the CR at every system to which the CR has been distributed. Refer to <i>Displaying CR network status</i> on page 4-113.
11=Promote	Promote the CR. A pop-up window will prompt you with valid promote types. The types that can be selected are shown with a highlighted promote type. The text field for a promote type that cannot be selected gives a reason why it cannot be done, or identifies the processing that must be done to make that promote type available for selection. One or more of the following types are presented:

	*MDL *ACP *LIV *RDV	To Module/Integration environment To Acceptance/QA environment To Live/Production environment Backout for re-development	
	Refer to <i>Promoti</i> 4-18, through to pages 4-161 and	<i>ing CRs through the change management cycle</i> from page <i>Movement logs</i> on page 4-38. For report examples refer to 4-162.	
12=Wrk CR dev	Display the Wor Manager.	k with CR Objects panel in the SEE/Change Development	
13=Wrk CASE	Access the CAS	E tool development environment.	
14=Chg CR *RDY	Prepare the CR for release, i.e; change the CR status to *RDY. The CR must currently be in the status of *TST, *MDL or *ACP.		
	Only CRs in the installation, CRs Live/Production	status of *RDY can be allocated to a release. In a network that are not allocated to a release cannot be moved to the environment.	
	When you take t Checking the CF	his option, CR integrity checks are performed. Refer to <i>R library</i> on page 4-24.	
15=Close CR	Close the selecter no application pa Use this option t	ed CR. CR must be in the status of *DEV or *TST, there can be arts registered under the CR, and the CR library must not exist. o close a CR without any software changes.	
	The CR's status Contact Reference	is changed to *LIV, and the indicator <i>Closed</i> is placed in its ce field	
	If this CR is the *CMP.	last active CR for the IR, the IR status is also changed to	
16= Chg IR *VST	Change the select has been closed,	cted IR status to *VST. Use this option to re-open an IR that i.e; in the status of *CMP, *REF or *TXT.	
	This cannot be restatus of *VST.	equested for IRs in the status of *CRS, or for IRs already in the	
17=CIs IR *TXT	Close th being g appropr status o (*TXT)	he IR with the Text option. The IR is closed without any CRs enerated. The reported problem has been solved by an tiate explanation in the IS text. You cannot close IRs in the f *CRS or if the IR is already closed with the same option b.	
18=Cls IR *REF	Close th reference context it for re status o (*REF)	he IR with the Reference option. The IR is closed with ce to another IR. The reported problem has been solved in the of the referred IR. The referred-to IR is identified by marking ference using option <i>Mark IR Ref.</i> You cannot close IRs in the f *CRS or if the IR is already closed with the same option	

19=Mark IR ref	Use this option to mark an IR as a reference base. Any IR can be marked for reference. Only one reference base can be active at any one time. If active, the current reference base IR is shown in the top right corner of the panel. After it has been used as a reference, the current reference base IR is de-activated.
26=Notify chgs	Use this option to notify users of any text changes made to IS text. The notification is in the form of constant <i>Txt</i> appearing next to the IR in the user function WRKINVRQS. After the user displays the document, the notification constant disappears.

27=User text	Display user text. User text is entered when an IR is created. It normally contains a text description of the associated problem or request. User text can only be maintained via <i>Problem Manager</i> function WRKINVRQS (Work with Investigation Requests). Select this option against the CR or IR. Refer to <i>Text documents</i> on page 4-13.
28=Dev text	Edit development text. Development text is associated with the CR. It is an internal IS document containing technical information associated with the CR work. It can be maintained here by CR developers, and via <i>Development Manager</i> functions WRKCRDEV (Work CR Development) and WRKCROBJ (Work with CR Objects). Refer to <i>Text documents</i> on page 4-13.
29=IS text	Edit IS text. IS text is associated with the IR. It enables IS to respond to user problems, and/or provide additional information for the users regarding the fixes provided by IS. It can be maintained in this function and via <i>Development Manager</i> functions WRKCRDEV (Work CR Development) and WRKCROBJ (Work with CR Objects). Users can display this document via <i>Problem Manager</i> function WRKINVRQS (Work with Investigation Requests). Select this edit option against the CR or IR. Refer to <i>Text documents</i> on page 4-13.
31=Crt Cr lib	Use this option to create the CR library if it is not already created. After taking this option, the job control prompt is displayed, allowing execution in batch or interactively.
32=Mbr/Sch Rtv	Search source members in the Live/Production environment, and optionally retrieve a member into the CR. Refer to <i>Searching and retrieving source members</i> on page 4-89.
40=Wrk aut Ist	Maintain CR-level movement authorisation lists. This option enables you (if you are authorised to use the function WRKTAL) to:
	nominate any number of new users whose explicit authorisation is required for a specified promote type.
	grant/revoke authorizations on behalf of your user or group profile.
	You cannot remove other users from the lists or grant/revoke authorization on their behalf. The exception to this is user profile QSECOFR or members of group QSECOFR, which have full access. For a further description, refer to <i>Managing movement authorisation</i> on page 4-27, and <i>Specifying authorisation lists</i> on page 4-85.
41=Grt mvt aut	Grant authority for a specific CR movement. The movement is authorised on behalf of your user and group profile.
	You should select this option against a CR record; if you select it against an IR record, SEE/Change will assume the first found CR under the IR is selected. You are prompted to select one or more promote type, and messages will confirm your authorisation.
	You can authorise CR movement even if your user/group profiles are not required to provide authorisation. If at a later stage they are included in any authorisation list, your authorisation will take effect.
----------------	--
	When the CR is reverted to development, authorizations already granted by users remain in effect. Authorizations are granted for the CR life cycle. To explicitly revoke authorisation, you must use option 42=Rvk mvt aut or command RVKMVTAUT from command entry.
	Refer to <i>Managing movement authorisation</i> on page 4-27, and <i>Command GRTMVTAUT</i> on page 4-139.
42=Rvk mvt aut	Revoke authority from a specific CR movement. The authorisation is revoked on behalf of your user and group profile.
	You should select this option against a CR record; if you select it against an IR record, SEE/Change assumes the first found CR under the IR is selected. You are prompted to select one or more promote type, and messages will confirm your authorisation.
	Refer to <i>Managing movement authorisation</i> on page 4-27, and <i>Command RVKMVTAUT</i> on page 4-151.
43=Task sched	View and change the task schedule for the CR. For further details refer to <i>SEE/Job User and Reference Manual</i> .
44=Tasks	View all outstanding tasks for the current user. The constant <i>Tsk</i> appears under the far right column if one or more tasks are outstanding in the schedule for the CR. For further details refer to <i>Thenon/JOB User and Reference Manual</i> .
45=Location	Work with location/site details.
65=Chk CR log	Use this option to display all messages generated when you last checked the CR. Refer to <i>Checking the CR library</i> on page 4-24.

Data items for creating a CR

The following panel is shown when you use action option **3=Create CR** from the *Work with Change Requests* panel. The mode in the top right corner of the panel is *ADD.

S Wo	EE/Change Te rk with Char	esting Env Ige Reques	vironment st Details	
Change Application (P) :	AP1	Demo appi	lication 1 '	÷
Request Summary Text : MKtest_promote_LANSA_window CR Type (P): Contact Reference : IS Priority (P): CR CASE Tool (P): Estimated Hours : Assigned User/Grp Profile : Planned concurrent dev ? . : Library list level (P): Retrieval Restriction :	*BUG Martin_Kitw *VHI_ *LANSA MARTIN *NO *BAS *NO	Program H vood Very High *YES/*NO Applicat: *YES/*NO,	- Bug Fixing n n ion Base Lev /*LVL	rel
Fl=Help F3=Exit F4=Prompt	F9=Cmd F12	2=Cancel	F16=Update	(bypass)

Change Application	Enter the application code for the CR. Use F4 to prompt for a list of valid application codes. The CR application is defaulted to the IR application if the create option was specified against the IR record, or to the CR application if specified against an existing CR record. The CR application must be an application that is maintained and developed at the local development centre. It can be different to the IR application.
	After the CR library is created, the application code is protected and cannot be changed. To change the CR application code, the CR must be cleared of all parts and the CR library removed.
Req Summary Text	The Request Summary Text field is mandatory. Enter a brief description of the CR. Use keywords that can be used later for searching and selecting this CR.
CR Type	Enter the CR type. The CR type you enter here reflects the CR classification for reporting purposes. Use F4 to prompt for a list of CR types. Refer to <i>Assigning the CR type</i> on page 4-14.
Contact Reference	Enter the IS contact reference for the CR. Normally it is the person and/or group responsible for the CR work. It is an optional field.
IS Priority	Enter the IS priority for the CR. The priority you enter here should be considered in relation to the user priority specified for the IR. Use F4 to prompt for a list of IS priorities.

CASE Tool	Enter the Computer Aided Software Engineering (CASE) tool id for the CR. Use F4 to prompt for a list of valid codes. The CR CASE tool id is defaulted to the CASE tool associated with the CR application (if any). The CASE tool id you select here will determine the way application parts are manipulated under the CR. If you specify *NONE, no CASE tool is used. Development is performed within a structured environment supplied and controlled by SEE/Change. For more information regarding the way development is handled with CASE tools, refer to the separate manual entitled <i>SEE/Change Interfaces</i> .
Estimated Hours	Enter the estimated hours for the CR. Refer to <i>Recording time and costs</i> on page 4-15.
Estimated Cost	Enter the estimated cost for the CR. Refer to <i>Recording time and costs</i> on page 4-15.
User/Group Profile	Enter a user or group profile to which the CR is assigned. When creating a new CR you can leave this field blank, but a CR library can only be created and accessed when a user is assigned to the CR. When updating the CR, if the CR library already exists, an assigned user profile must be specified. The assigned user entered must be a valid user profile existing on the local system. Refer to <i>Allocating CRs to IS specialists</i> on page 4-14. When changing the assigned user, if the CR library already exists, the CR library must not be in use. SEE/Change checks for any locks on the CR library, and if any are found will not allow changes to the assigned user. When a CR library the assigned user is changed after the CR library has
	been created, the following authority processes are executed:

- All authorities are revoked from all users to all parts in the CR library, and the CR library itself.
 - All object and data rights are granted to the assigned CR user for all parts in the CR library, and the CR library itself.
 - *OBJOPR and *READ rights are granted to *PUBLIC for all parts in the CR library, and the CR library itself.
 - All object and data rights are granted to the user profile name specified under general parameter @OWN.
 - Object ownership is not changed.

Concurrent dev?	Indicates whether an application part can be registered for development under this CR if it is already under development in another CR. Possible values are:	
	*NO F	Planned concurrent development is not allowed in this CR.
	*YES F	Planned concurrent development is allowed in this CR.
	If the CR is set to * implicitly to <i>Control</i>	application does not allow planned concurrent development, this field NO, and is protected. Note that concurrent development is allowed for CR Type *EMG - regardless of the value you specify here. Refer <i>lling development characteristics</i> on page 4-15.
Library list level	The level job descri- item after to reflect working v	specified here is used in determining the CR library list created under ption CRJOBD when the CR library is created. If you change this the CR library has been created, job description CRJOBD is changed the required library list. In addition, if changing this item while with CR objects, the interactive library list is also changed.
	Use F4 to required le	prompt for a list of application source levels and then select the evel:
	*BAS *SIT _xxx *GRP_xx	For base application level. K For site specific level. X For group specific level.
	Refer to C	Controlling development characteristics on page 4-15.
Retrieval Restriction	This field indicates if any restriction applies to source member retrieval into this CR. Possible values are:	
	*YES S	Source retrieval is not allowed into this CR.
	*LVL S	Source retrieval is allowed only for members for the level specified ander <i>Library list level</i> in this panel.
	*NO S	Source retrieval is unrestricted.
	Refer to C	Controlling development characteristics on page 4-15.

Creating an IR and CR Simultaneously

The following panel is displayed when **F6=Create** is pressed on the *Work with Change Requests* panel:

SEE/Change Testing Environment
Work with Investigation Request Details
Request Summary Text :
Request Detailed Text :
1
2
5 4
5
б
More
Application
IR Category
User priority(P):
Problem originated date: 10/07/95
(P):
CR Assigned to user/group. :
Fl=Help F3=Exit F4=Prompt F6=Ins line F9=Cmd F10=Position text F11=Search
F12=Cancel F14=Dit line F16=Bypass F1/=Top F18=Bottom

This panel is essentially the same as *Work with Investigation Request Details*, except that it has the two additional fields 'CR Type' and 'CR assigned to user/group', which are required before a CR can be created. For details of these fields, see *Data Items for Creating a CR* on page 4-74.

When you complete this panel and press Enter, what you see depends on settings in the current filter. If the option 'Show secondary detail panel' option in your current filter is set to Y, you see the *Work with Investigation Requests* secondary panel, described on page 4-78. Whatever the setting in the current filter, you can bypass the secondary panel by pressing **F16=Bypass**.

You can enter up to ten characters in the field labelled 'Application'. If you enter up to three characters in this field, SEE/Change assumes you are creating the IR for an application, and searches for a matching application code; if it does not find a matching application code, it searches for a matching application area code. If it finds one, or if the field contains more than three characters, SEE/Change treats this as a non-software IR, and no CR is created.

SEE/Change does not allow an application area to be defined with the same name as an existing application.

The creation of the first CR is also governed by settings in your current filter, as described on page 4-65.

Work with Investigation Requests secondary panel

SEE/Change Testing Environment Work with Investigation Request Details
Module/Function : Menu & option : Job details : / / Dump taken ? : *NO_ *YES/*NO User reference : Notify text changes ? : *NO_ *YES/*NO
Current status / date : *ENT - Entered : IR pending investigtn 10/07/95
F1=Help F3=Exit F9=Cmd F12=Cancel F16=Bypass

When you complete this panel and press Enter, what you see depends on settings in the current filter.

If the 'Show client-defined extension panels' option in your current filter is set to Y, SEE/Change invokes the IR extension processing program as specified by the @INC general parameter. SEE/Change then invokes SEE/Job to enable you to work with the related task schedule, if :

- ! SEE/Job is installed
- the 'Show task schedule automatically (JOB)' option in the current filter is set to Y
- you have sufficient authority to work with SEE/Job scheduling.

Data items shown when changing or displaying a CR

SEE/Change Testing Environment Work with Change Request Details Change Request Number . . : 100365 / 01 Change Application . .(P): AP1 Demo application 1 * Request Summary Text . . : CR Reversion error testing CR Type(P): *BUG Program Bug Fixing Contact Reference . . . : IS Priority(P): *VHI Very High CR CASE Tool(P): *NONE Estimated Hours Estimated Cost Restimated Cost Planned concurrent dev ? . : *NO *YES/*NO Library list level . . .(P): *BAS Application Base Level Retrieval Restriction . . : *NO *YES/*NO/*LVL Current Status / Date . . : *LIV - Live/Prod : Live/Production 9/06/95 Assigned Release Number . : 33534 reversion test release I F1=Help F3=Exit F9=Cmd F12=Cancel F16=Bypass

The following additional items are shown when changing or displaying an existing CR:

CR number	The CR number allocated for the CR.
Current Status/Date	The current CR status and the last status change date.
CR Movement in	The movement-in-progress (MIP) status code. Refer to CR Status codes on page
	4-19.
Assigned Release	Shown only if the CR is already allocated to a release.

Data items shown when changing or displaying an IR

```
SEE/Change Testing Environment
                       Work with Investigation Request Details
Request number . . . . . : 100365 Entered by: MARTIN
                                                                      9/06/95 11:37:23
Request Summary Text . . . : CR Reversion error testing Request Detailed Text. . . :
       1
       2
       3
       4
       5
       б
       7
       8
                                                                                   More...
Application . . . . . . (P): AP1
                                             Demo application 1 *
Location . . . . . . (P): BEJ
IR Category . . . . . . (P): *SOFT
User priority . . . . (P): *HIGH
                                              BEJ-Bejing HQ
                                              Software
                                              Main function. No alternative.
Problem originated date. . : 9/06/95
Fix required by date . . . : 0/00/00
F1=Help F3=Exit F9=Cmd F10=Position text F11=Search F12=Cancel
F17=Top F18=Bottom
```

The following additional items are shown when changing or displaying an existing IR:

Reported date/timeThe date and time when the IR was created.Current status and dateThe current IR status code and the last status change date.IR entered by jobThe job details (number/user/name) of the job that created the IR.

Attaching development text to a CR

```
Edit
Columns . . . :
               1 71
                                                OMSDTADOC/OMSTXT
     D000005.01
SEU==>
FMT **
0001.00
        Modified messages in FOR1MSG:
0002.00
0003.00
        FOR01 Invalid maintenance code....
         FOR02 Invalid supply code....
0004.00
0005.00
         FOR03 Invalid location....
0006.00
0007.00
        New file:
0008.00
0009.00
        FORAB - Customer file
0010.00
0011.00
                    Need to CRTLF new FOR10, or is it always done
0012.00
                    automatically?
0013.00
0014.00
        CRTDUPOBJ of new FORAB from FORX lib.
0015.00
      F3=Exit F4=Prompt F5=Refresh F9=Retrieve F10=Cursor
F16=Repeat find F17=Repeat change
                                      F24=More keys
```

The word processing panel is shown when you select action option **28=Dev text** against a CR.

The word processing program used is dependent on the value specified for general parameter @WRD. It can be either AS/400 SEU (Source Entry Utility) or Office/400. The above example shows the SEU panel.

Attaching IS text to an IR

The word processing panel is shown when you select action option **29=IS text** against an IR.

The word processing program used is dependent on the value specified for general parameter @WRD. It can be either AS/400 SEU (Source Entry Utility) or Office/400.

Listing Change Requests

This function enables you to select and print CRs. You can select the format of the report you want, and which CRs are printed on that report.

How to get into this function

Menu/Option: SEECHG / 12 Command: LSTCHGRQS

Selection criteria

OMS330F1 THNDEV	CR Listing Sele	ection Crit	eria
Enter the selectio	n criteria. Then press Er	nter.	
Enter the selectio Report Type .(P): Item_Description IR Number/CR Seq : IR User Reference: CR Type(P): CR Priority .(P): CR Status Date .: CR Application(P): IR System .(P): IR Site(P): IR Mdl/Function.: CR Contact : CR Release No:	n criteria. Then press Er *SUMM (P) Exp_Value *GE / *CT *CT *GE *GE *GE *GE *EQ	<pre>htter. CR Orig *AND/*OR_ *AND *OR_ *OR_ *AND *OR_ *AND *OR_ *OR_ *OR_ *OR_ *OR_ *OR_ *OR_ *OR_</pre>	<pre>inating system .(P): SY1 (P) _Exp_Value</pre>
Fl=Help F3=Exit	F4=Prompt F9=Cmd F12=Ca	ancel	

This panel enables the entry of selection criteria for the production of CR listings. The report type and CR originating system are the only mandatory fields. A valid report type and originating system must be selected.

Report type	Valid values are:	
	*FULL	One CR is printed per page of report. Complete details are shown, including development text, IS text, and a list of all application parts registered under the CR.
	*PTXT	Three CRs are printed per page. All CR details are

shown, but only the first 19 lines of IS and development text are listed.

*SUMMOne line is printed per CR. Only summary details are shown.

CR Orig system The default value is the code of your local system, i.e; list CRs that have been lodged at the local development centre. You can use F4 to prompt for a list of other valid codes in your system, and request lists or CRs that have been transferred from other development centres.

The rest of the panel enables the specification of one or two selection criteria expressions against each of the available IR and CR data items. The relational operators *AND/*OR define the relationship between the two expressions for each item.

Each expression consists of an operator and a data constant. The table below shows valid operators for the expressions:

Operator	Description
*CT	Contain (Character string)
*EQ	Equal to
*GE	Greater than or equal to
*GT	Greater than
*LE	Less than or equal to
*LT	Less than
*NE	Not equal to
*NG	Not greater than
*NL	Not less than

After you have entered your selection criteria and pressed Enter, a job control prompt window will pop up enabling you to run the job interactively or in batch. Refer to *Submitting batch jobs* in *SEE/Change General Introduction*.

Refer to report examples on pages 4-158, 4-159, and 4-160.

Specifying authorisation lists

This function enables you to maintain CR movement authorisation lists. You can specify multiple lists of users whose authority is required before a CR movement/promote request can be executed. A separate list can be maintained for each promote type.

Refer to Managing movement authorisation on page 4-27.

How to get into this function

Menu/Option:	SEECHG / 11, then option 40=Wrk aut lst
Command:	WRKCHGRQS

Entry panels

```
SEE/Change Testing Environment
                   Work with Authorisation Lists
Use any character to select one or more of the following for CR movement
authorisation. Then press Enter.
Level . . . . : *CR
                   SY1 100364/01 Dummy CR for testing
           _____
         Sel Movement Description
               *MDL
                      Module/Integration library
               *ACP
                      Acceptance/QA library
          _
               *RDY
                      Ready for Release
               *ALC
                      Allocate CR to a release
               *RLS
                      Create Release Packet
               *LIV
                    Live/Prod library
F1=Help F3=Exit F9=Cmd F12=Cancel
```

Select the required movement/promote type, and the following panel is shown:

Enter the User/ below. Enter an	SEE/Change Te Work with Autho Group Profiles requir 'X' to authorise CR	sting Environment risation List Detai ed to authorise the movement. Press Ent	ls CR movement named er.
Level Movement Type .	: *CR SY1 100364 : *MDL Module/Inte	/01 Dummy CR for tea gration library	sting
Auth (X) User	Authorisation Li Auth (X) User 	st 1 of 1 Auth (X) User 	Auth (X) User
Fl=Help F3=Exi	t F7=Previous list	F8=Next list F9=Cm	d F12=Cancel

This panel enables the maintenance of CR level authorisation lists. You can nominate any number of user or group profiles for the selected movement/promote type. These users are required to authorise this movement/promote type for the CR.

You can maintain both the list of users and the current authorisation status for each user in the list, i.e; whether authority was granted or not granted. An *X* next to the user or group profile name indicates that authority is granted by the user/group. You can replace the *X* with a blank to revoke previously granted authority. If you remove the user/group profile name from the list, authorisation from that user/group is no longer required.

If the current user is QSECOFR, or the current user has authority to nominate users on System or Application level, then the user can manipulate the authorisation status of any name in any list, ie: the user can remove any nominated users, nominate new users, or grant or revoke authority on behalf of nominated users.

If the current user is not QSECOFR and has no authority to nominate users on System or Application level, then the user can only manipulate the authorisation status of their user/group profile names.

The commands GRTMVTAUT and RVKMVTAUT also work according to the same scheme: the above rules are used when parameter User name (USER) is specified with a user name other than *USRGRP, *USER or *GROUP.

Authorising CR movements

This function enables you to view and authorise all CRs currently requiring movement authorisation from your user or group profile, and all CRs that were previously granted authorizations by your user or group profile and have not yet been promoted to the Live/Production environment.

The requirement for movement/promote authorizations can be defined globally for all CRs in the system, for all CRs of a specific application, or for a specific CR. Refer to *Managing movement authorisation* on page 4-27.

How to get into this function

Menu/Option: SEECHG / 21 Command: WRKMVTAUT

List panel viewing and manipulation

Work w	ith Movement Authorisation Local system: SY1
Use "X" to grant, or blank to following CRs. Then press Ent	revoke movement authorisation for each of the er.
User Profile: RICHARD	Group Profile: QPGMR User Authorisation
Sys IR/CR Text	Appl Sts MDL ACP RDY ALC RLS LIV
User/Group authorisation not F1=Help F3=Exit F5=Refresh F12=Cancel F24=Messages	required for any CR movements. F9=Cmd F11=Chg to group profile authorisation

The panel shows a list of CRs that are in mid cycle and have one or more authorisation requirements from your user or group profile. For each CR you can see the CR number, description and current status. Each CR can be authorised for one or more of the following promote/movement types:

- *MDL Promote to the Module/Integration environment
- *ACP Promote to the Acceptance/QA environment
- ***RDY** Make Ready for Release
- *LIV Promote to the Live/Production environment

- *ALC Allocation of CRs to a release.
- ***RLS** Release to a Live/Production environment.

The top of the panel shows your user and group profile (if any).

If you are grouped to a group profile, you can use F11 to alternate the view between user and group profiles. When you authorise movements under the user profile view, the authorizations are made on behalf of both your user and group profiles; when you authorise movements under the group profile view, the authorizations are made on behalf of your group profile only.

If your user profile is QSECOFR, or you are a member of the QSECOFR group profile, you can authorise on behalf of any user or group profile by entering the required profile on the top of the panel.

An *X* indicates that authorisation is granted for the movement/promote type as indicated by the column header. This is equivalent to using function GRTMVTAUT. If you blank out the *X*, the previously granted authorisation is revoked. This is equivalent to using function RVKMVTAUT.

To allow for fast (emergency fix) authorisation, you can use commands GRTMVTAUT and RVKMVTAUT directly from command entry to authorise movements on behalf of another user. You must have object management rights to that other user profile.

Finding and retrieving source members

This function enables you to search all source members currently in the Live/Production environment and to optionally display, print, or retrieve them into a CR.

How to get into this function

Menu/Option:	SEECHG / 11, then option 32=Mbr/Sch Rtv
Command:	WRKCHGRQS

List panel viewing and manipulation

	SEE/Cha Work w	ange Testing Env vith Change Requ	vironment lests	Flt: *NONE
32=Mbr Sch/Rtv 44=Tasks	40=Wrk aut lst 45=Location	41=Grt mvt aut 65=Chk CR Log	42=Rvk mvt a	aut 43=Task sched
Opt IR No/CR Tex	:t		Ap	oplicatn Status
100365 CR 32 01 CR	Reversion error Reversion error	testing testing	De De	emo appli Completed emo appli Live/Prod
Live/Production Act_MemberRef	Member Search: _Id_(P)_Text	1=Retrieve	5=Display	6=Print Appl_(P)Level
@AAP1 CLP @A10000306 CLP @A10003409 CLP @A10003505 CLP @BAP1 CLP @B10003409 CLP @B10003409 CLP @LAP1 CLP @LAP1 CLP	*AFTER *AFTER *AFTER *AFTER *AFTER *BEFORE *BEFORE *LOAD *LOAD	program for CR program for CR	deliveries I 888920/06 d I 100034/09 d I 100035/05 d I deliveries I 100034/09 d I rls load fo I 100034/09 r I	Demo appli *BAS 03 Demo appli *BAS 04 Demo appli *BAS 04 +
Fl=Help F4=Prom	pt F6=Create F	9=Cmd F12=Canc	cel F24=Messa	ages

The bottom half of the panel is overlaid by the member search panel, showing a list of all application parts registered in the Live/Production environment, subject to selection criteria. New and frozen members are not shown.

For each item the object name, reference id and description, application description and source level are shown.

Positioning the member list

The input fields that appear below the column headings are available for query selection of list items.

If one or more values are entered in the following fields they are used to search all entries, and will display only those with the corresponding fields containing the specified values. To revert to the full list, blank out all the search values and press enter.

Member	If you enter all or part of a member name here, the list will show all members containing the specified value.
Туре	If you enter a member type (Object Reference Id) here, the list will show all members that match that type. You can use F4 to prompt for valid types.
Text	If you enter text here, the list will show all members that contain that text in the summary text. You can enter a maximum of five words, and all members containing one or more of these words in the member text are shown.
Аррі	If you enter an application code here, the list will show all members matching that code. You can use F4 to prompt for valid application codes.

Action codes

You can select one of the following action codes:

1=Select	Select the item for retrieval into the CR.
5=Display	Display source member.
6=Print	Print source member.

The following panel is shown when you use **F6=Create** to create a new source member in the CR.

	SEE/Change I Retrieve (Cesting Envir CR Source Mer	ronment nber	CR: 000004 / 02 Appl: Distributio
1=Retrieve 3= 21=History 22=	=Copy for CCD 5=I =Overrides 45=(Display Compare	6=Print 46=Merge	20=Movements
Src mbr for retriev	ve or browse (P):		Abbr Type (P):
Act_Level	_Text		Sta	atus/Information
Fl=Help F3=Exit H	F4=Prompt F9=Cmd	F10=Action	F12=Cancel	F24=Messages

For further details, refer to *Retrieving source members into the CR* in *Development Manager User and Reference Manual.*

Displaying CR application parts

This function enables you to display all application parts registered under a CR.

How to get into this function

Menu/Option:	SEECHG / 11, then option 8=Display obj
Command:	WRKCHGRQS

List panel viewing and manipulation

5=Display	SEE 11=Transfe	/Change Tes Display r 20=Mc	ting Env: CR Object ovements	ironment ts 21=Hi	story	22=0ve	errides
CR : SYl 1 Appl : APl D Status: *DEV	00353 / 01 emo appli 9/06/95	RC JIS r Contact Assigned	tvsrc pas Ref: l to: QPGI	ss 1 cr MR	Pty:	*VHI Rls	: 33532
Act Object	Ref Id (P) T	ext					
BASLF BASLF2 BASPF USE_BASPF BASPFREF	LF B LF 1 PF B CLP V RPG P	AS V13 1000 f over basp AS Pf V6 10 001 100042/ gm ref"ing	03/12 f 0003/12 02 baspf				
Fl=Help F3=E	xit F4=Prmpt	F5=Rfrsh	F9=Cmd	F11=Chg	view	F12=Cance	Bottom 1
Fl=Help F3=E	xit F4=Prmpt	F5=Rfrsh	F9=Cmd	F11=Chg	view	F12=Cance	Bottom 1

The panel shows the CR details followed by the name, type (Object Reference Id) and description of the parts contained within the CR. You can use **F11=Change view** to show more details of the part(s).

The following panel is shown:

5=Display	SE 11=Transf	E/Change T Displa Eer 20=	esting En y CR Obje Movements	vironment ects 21=Hi	story	22=Overrides
CR : SY1 1 Appl : AP1 D Status: *DEV	00353 / 01 Demo appli 9/06/95	RC JIS Contac Assign	rtvsrc p t Ref: ed to: QP	eass 1 cr PGMR	Pty: *VH	I Rls: 33532
Act Object	Type (P)	Attr (P)	Level	Ver Rtv	v status	Additional Info
BASLF BASLF2 BASPF USE_BASPF BASPFREF	*FILE *FILE *FILE *PGM *PGM	LF PF CLP RPG	*BAS *BAS *BAS *BAS *BAS	014 *XRE 001 *NEV 007 *CHC 002 *XRE 001 *NEV	7/06/95 13/06/95 7/06/95 7/06/95 7/06/95	Overrides exist Dist: Obj & Src Overrides exist Dist: Obj & Src Dist: Obj & Src
Fl=Help F3=E	xit F4=Prmp	ot F5=Rfrs	h F9=Cmd	l F11=Cho	g view Fl	Bottom 2=Cancel

The part name and reference id are shown, along with the following:

Level

The part level within the application.

*BAS	Application base level.
*SIT xxx	Site specific level. <i>xxx</i> indicates the site code.
*GRP xxx	Group specific level. <i>xxx</i> indicates the group code.

Non-source based parts are always registered as base application parts, i.e; *BAS.

Ver The source version number. The source version is updated every time the member is retrieved into a CR. If the member is under concurrent development, all concurrent versions are assigned the same version number; later, when the CR is promoted to the Live/Production environment, the version number of all other versions is incremented by 1.

Rtv status The retrieval type and date. The following table shows the various retrieval type codes:

Code	Meaning
*CCD	Part registered while being concurrently developed elsewhere
*CHG	Existing part registered for change
*DEP	Part registered as a dependency of another part
*ECD	Part registered while being concurrently developed as emergency fix elsewhere
*EM G	Part registered as emergency fix
*FRZ	Part has been frozen after it was retrieved and registered
*IMP	Part has been registered as fully imported from external library
*NE W	Part has been registered as a new application part
*REG	Part has been registered as pending full import
*XRF	Part has been registered as a cross-referencing part on another part

Addit'l info Additional information, as follows:

Orig: xxxxxxxx	Original source member name of a frozen source member.
Overrides Exist	Configuration overrides may affect source distribution and re-compilation. You can use action option 22=Overrides to view these overrides.
Dist: Obj	Only object will be distributed to remote production systems.
Dist: Obj and Src	Object and source will be distributed to remote production systems.
Dist: Src	Only source will be distributed to remote production systems.
Dist: Src/Compl	Only source will be distributed and re-compiled at each remote production system.
Dist: Compile	Source will be distributed and re-compiled at each remote production system, and removed after compilation.

Action codes

You can select one of the following action codes:

5=Display	Display the source member. The member and source file are searched for in the
	following order:

- CR work library
- The target library as recorded in the last movement/promote transaction for the selected member
- The current live source pool for the selected member type

20=Movements	Display the movements of the part within the context of the current CR. All movement/promote transactions that have not been purged are displayed, showing the movement/promote characteristics and completion status. Refer to <i>Displaying application part movements</i> on page 4-101.	
21=History	Display the part's CR history. All occurrences of the part within any CR for an application are shown. Refer to <i>Displaying application part history</i> on page 4-97.	
22=Overrides	If you have authority, you can specify configuration overrides for the part. If you do not have the necessary authority, you can only display the overrides. Refer to <i>Specifying configuration overrides</i> on page 4-105.	

Displaying application part history

This function enables you to display the application part's accumulated change history. All occurrences of the part within any CR for any application are shown.

How to get into this function

Menu/Option:	SEECHG / 11, then options 8=Display obj, 21=History
Command:	WRKCHGRQS

List panel viewing and manipulation

```
SEE/Change Testing Environment
                     Display Object History
5=Display CR 8=Display IR
                         9=Rls distrib 10=Network sts 20=Movements
21=CR Auth Hist 27=User text
                        28=Dev text
                                     29=IS text
Object: BASLF_____ Type (P): *FILE_____ Attr (P): LF_____ More:
     CR Nbr App Level
                     Rtv status Src file Src lib Ver Rls
                                                         Stat
Opt
Bottom
F1=Help F3=Exit F4=Prompt F7=Prev F8=Next F9=Cmd F11=Date seq
F12=Cancel F23=More Options
```

The list shows all CR registration history records in a descending order of version number.

For each history record, the following information is provided:

CR	The development centre system code and CR number.	
Аррі	The CR application code.	
Level	The part level within the application.	
	*BAS *SIT xxx *GRP xxx	Application base level. Site specific level. <i>xxx</i> indicates the site code. Group specific level. <i>xxx</i> indicates the group code.

	All non-source based objects are registered on the *BAS level	
Rtv status	The retrieval type and date. Refer to the retrieval status code table on page 4-95.	
Src File	The originating source file, if the source member was retrieved for change (rather than initiated as a new source member in the CR).	
Src Lib	The originating source file library, if the source member was retrieved for change (rather than initiated as a new source member in the CR).	
Ver	The source version number.	
RIs	The release number, if the CR is allocated to a release.	
Stat	The current CR status.	

Action codes

You can select one of the following action codes against a history item:

5=Display CR	Show details of the selected CR as entered via function WRKCHGRQS. Refer to <i>Data items shown when changing or displaying a CR</i> on page 4-79.
8=Display IR	Show details of the selected IR as entered via function WRKINVRQS. Refer to <i>Data items shown when changing or displaying an IR</i> on page 4-80.
9=RIs distrib	Display a window showing CR distribution information, i.e; the system(s) to which it was sent, the target environment, and the date and method of delivery. Refer to <i>Displaying CR distribution status</i> on page 4-111.
10=Network sts	Display the current status (i.e; latest movement) of the CR at every system to which the CR has been distributed. Refer to <i>Displaying CR network status</i> on page 4-113.
20=Movements	Display movements of the part within the context of the selected CR. All movement/promote transactions that have not been purged are displayed, showing the movement/promote characteristics and completion status. Refer to <i>Displaying application part movements</i> on page 4-101.
21=Movements	Display the authorisation history for the part.
27=User text	Display user text. User text is entered when an IR is created. It normally contains a text description of the associated problem or request being raised. Refer to <i>Text documents</i> on page 4-13.
28=Dev text	Display development text. Development text is associated with the CR. It is an internal IS document containing technical information associated with the CR work. Refer to <i>Text documents</i> on page 4-13.
29=IS text	Display IS text. IS text is associated with the IR, and is maintained by change control coordinators. It enables IS to respond to user problems, and/or provide additional information for the users regarding the fixes provided by IS. Refer to <i>Text documents</i> on page 4-13.

Use **F11=Date seq** to show the list in retrieval date sequence.

You can position the list by specifying a source retrieval date below the column heading. All parts retrieved on or before the specified date are shown.

Use **F11=Version seq** to show the list in version number sequence.

Displaying application part movements

This function enables you to display the movement transaction logs of an application part within the context of the current CR. All movement/promote transactions that have not been purged are displayed, showing the movement/promote characteristics and completion status.

How to get into this function

Menu/Option:SEECHG / 11, then options 8=Display obj, 20=MovementsCommand:WRKCHGRQS

List panel viewing and manipulation

SEE/Change Testing Environment Display CR Object Movements					
5=Display 6=P 63=Completn cd	rint 12=W	rk job	61=Movmen	t cd 62=0	peratn cd
CR: SY1 100353 / 01	Object: BASLF	*FILE	LF		
Act Date & Time 	Type Frm Lib *SRC T#10035301 *ARP AP1SY1POOL *LIV AP1SY1DA0 *LIV AP1SY1DA0 *LIV AP1SY1DA0 *ARC AP1SY1DL0 *ACP AP1SY1MDL *ACP AP1SY1MDL *ACP AP1SY1MDL *MDL T#10035301	To Lib APISY1POOL V00000514 APISY1DL2 APISY1DL1 APISY1DL0 V00000512 APISY1DA2 APISY1DA1 APISY1DA0 APISY1MDL	Oper Comp *CPY *OK *DUP *OK *BYP *OK *DUP *OK *DUP *OK *MOV *OK *BYP *OK *BYP *OK *DUP *OK *DUP *OK	Trans Nbr 000009710 000009703 000009702 000009701 000009700 00009699 00009698 00009697 000009696	Rls Envr
Fl=Help F3=Exit F4	=Prompt F5=Refr	esh F9=Cmd	F12=Canc	el	Bottom

The list is shown in descending transaction date and time. Each movement/promote of a part into a target library is uniquely identified by a transaction number.

For each transaction, the following information is provided:

Date and Time	The date and time of the movement/promote operation.	
Туре	Movement/promote type. Refer to <i>Movement transaction types</i> on page 4-39. You can also use option 61=Movment cd to display the valid movement/promote type codes and their meaning.	
Frm Lib	The originating library.	
To Lib	The target library.	

Oper	The operation type. Refer to <i>Movement operation codes</i> on page 4-39. You can also use option 62=Operatn cd to display the valid operation codes and their meaning.	
Comp	The movement/promote completion status. Refer to <i>Movement completion codes</i> on page 4-40. You can also use option 63=Completn cd to display the completion codes and their meaning.	
Trans Nbr	The movement/promote transaction number. Each movement/promote is uniquely identifiable by its transaction number.	
RIs	The release number if the movement/promote is performed in the context of release packaging or release delivery.	
Envr	The release target environment, if release number is shown: *ACP Acceptance/QA Environment *LIV Live/Production Environment	

Action codes

You can select one of the following action codes against a transaction:

5=Display	Display full details for the transaction. All movement/promote details for the part, originating and target libraries, source files and duplication of data members are shown. Refer to <i>Movement details</i> on page 4-103.
6=Print	Print movement transaction logs for the CR. Command parameters are prompted. For details on all parameters, refer to <i>Command LSTMVTLOG</i> on page 4-143. Refer to page 4-161 for a report example.
12=Wrk job	Work with the job details (WRKJOB command) of the job that effected the part movement/promote, if the job is still in the system.
61=Movment cd	Show the movement/promote type codes and their meaning
62=Operatn cd	Show the movement/promote operation codes and their meaning.
63=Completn cd	Show the movement/promote completion codes and their meaning.

Movement details

You can use **5=Display** against a transaction to display full details of the selected movement/promote. You can see the transaction type and number, the job that processed the transaction, the application, system and site where the movement was executed, the date and time of the transaction, the CR number, the application part being manipulated, the from and to libraries being used, whether configuration overrides were in effect at the time when the transaction was executed, whether the part was replaced in the target library, and if it was - the temporary work/archive library used to store the part being replaced, the type of operation executed and the completion status of the transaction.

```
Movement Transaction Details
Type . : *SRC
Trans : 000009710
                                          Appl . . : AP1 Site: SY1
Job . : 011978/COX/DSP10
                                          Date/Time: 8/06/95 14:11:42
CR . . : SY1 10035301
                                          Src level: *BAS Use: *COMPILE
Object : BASLF
                   3.IT3*
                             LF
                                          Config overrides used ?: N
                                          Work library name . . : V000000514
Obj/mbr replaced ? . . : Y
From . : T#10035301/QDDSSRC
To . . : AP1SY1POOL/QDDSS03
Oper . : *CPY Copy Source File
Status : *OK Movement completed OK.
F1=Help F3=Exit F5=Refresh F9=Cmd F12=Cancel
```

For database files, in addition to the above, the status of the data member(s) duplication is shown on the lower part of the panel, as shown below:

Movement Transaction Details				
Type : *LIV Live/Prod library Trans : 000000921 Job : 037981/JULIE/MOVCR CR : SYD 00000401	Appl : DST Site: SYD/SYD Date/Time: 6/12/93 16:18:07			
Object : DSTMAST *FILE PF From : DSTSYDACP To : DSTSYDLIV	Src level: *BAS Use: *COMPILE Config overrides used ?: N Work library name : Y000000020 Obj/mbr replaced ? : Y			
Oper : *DUP Duplicate Object and/or Member Status : *OK Movement completed OK.				
Member_NameData_Member_duplication_completion_status DSTMAST *OK Movement completed OK.				
F1=Help F3=Exit F5=Refresh F9=Cmd F12:	-Cancel			

When a database file is being delivered to any target library, the existing members and their data are duplicated into the newly installed database file. In the case of logical files, the original member's scope is also applied to each logical file member. The completion status of each attempt to re-instate a database member is shown.

Data and members are not duplicated if re-compilation is specified for the application or is specified in the configuration overrides for the file (i.e; the operation code for the movement is *CPL), or if data inclusion is specified in the configuration override for the file.

Specifying configuration overrides

When you promote a CR, the application parts registered under the CR are moved or duplicated into the target libraries based on the application configuration details.

This function enables you to specify values that override the application configuration details for a specific application part. For more information about how configuration overrides are managed, refer to *Overriding the application configuration* on page 4-26.

How to get into this function

Menu/Option:SEECHG / 11, then options 8=Display obj, 22=OverridesCommand:WRKCHGRQS

Modes of operation

This function can execute in update (*UPD) or browse (*BRW) mode. A minimum authority level of *OPER (3) in module CFG is required to use the update mode. When you select **22=Overrides** it is assumed you are requesting update mode. If you are not authorised, browse mode is used.

Entry panels

The panel you see and the configuration items you can override depend on whether override information is distributed to remote production systems (as specified in the application configuration), and on whether the application part you select is a program-type or database-type application part.

The panel you see is for a specific system or site. For program-type application parts the panel is for a specific system; for database-type application parts the panel is for a specific site at a specific system.

If configuration overrides can be distributed to remote production systems, you can specify the overriding details that will take effect at each of the production systems using the application. If configuration overrides are not distributed, you can only specify the overriding details for the local system.

For program-type application parts, you initially get the panel for the local system. For database-type application parts at the development centre you initially get the panel for the development site, and at production systems you initially get the panel for the first local site.

You can use the roll up/down keys to show override details for other systems/sites. The sequence of the panel is alphabetically by system/site code. You can also use the *Locate System/Site* field on the top part of the panel to get the panel for a specific system/site. You can also use **F4=Prompt** to prompt a list of valid systems or sites.

Entry panel for program-type application parts

THNDEV SEE/Change Testing Environment Work with Object Override Details Enter the movement override specifications for object: Application: AP1 Demo application 1 * RPG Level: *BAS Object: RPG03 Type/Attr: *PGM Locate System/Site(P): ____ ------_____ System/Site SY1 SY1-Asia/P (Dev System) Configuration Overrides Live/Production Lib : APISYIPL Acceptance/QA Lib : APISYIPA Mdl/Integration Lib : AP1SY1PM Load Source to Release Packet ? : Y Re-compile? Y Job Description for re-compile : APIJOBD Source pool library AP1SY1POOL Source pool file : QRPGS01 More... F1=Help F3=Exit F4=Prompt F9=Cmd F12=Cancel F23=Dlt overrides F24=Msgs

Entry panel for database-type application parts

THNDEV SEE/Change Testing Environment Work with Object Override Details Enter the movement override specifications for object: Application: AP1 Demo application 1 * LF Level: *BAS Object: BASLF Type/Attr: *FILE Locate System/Site (P): ___ _____ System/Site SY1 SY1-Asia/P SI1 SI1-Hongko (Dev Site) Configuration Overrides Live/Production Lib AP1SY1DL0 Acceptance/QA Lib AP1SY1DA0 Mdl/Integration Lib : AP1SY1MDL Load Source to Release Packet ? : Y Re-compile? Y Job Description for re-compile : AP1JOBD Source pool library : AP1SY1POOL Source pool file : QDDSS03 More... F1=Help F3=Exit F4=Prompt F9=Cmd F12=Cancel F23=Dlt overrides F24=Msgs

The lower part of the panel shows information in two columns.

- The column on the left shows the existing configuration details for the various configuration items. You cannot alter these values.
- The column on the right shows the existing overriding values, if any. In update mode (*UPD) you can update these values.

In update mode you can also use **F23=Dlt overrides** to remove all override information for the application part. A confirmation window will pop up showing the part details; press Enter to confirm the delete and override information is removed for all systems and all sites; use F12 to cancel the delete operation.

Data items you can override

Live/Production Lib	Specify the library name to override the configured application Live/Production database or program library. It must be a valid library name existing at the target system. If this system is the local system, and the library is not found, an error will occur.			
	The specified library must contain the application job description as previously configured for the application, or as overridden in this panel.			
	Database object movements to the Live/Production environment can be bypassed by specifying the keyword *BYPASS. If specified, *BYPASS must also be specified for the Acceptance/QA library on this panel.			
	Note that at least one site at the application development centre must be configured to receive the object, i.e; at least one site must not be overridden with *BYPASS.			
Acceptance/QA Lib	This item is not shown if the Acceptance/QA environment has not been configured for the application at the shown system.			
	Specify the library name to override the configured application Acceptance/QA database or program library. It must be a valid library name existing at the target system. If this system is the local system, and the library is not found, an error will occur.			
	The specified library must contain the application job description as previously configured for the application, or as overridden in this panel.			
	Database object movements to the Acceptance/QA environment can be bypassed by specifying the keyword *BYPASS. If specified, *BYPASS must also be specified for the Live/Production library on this panel.			
	Note that at least one site at the application development centre must be configured to receive the object, i.e; at least one site must not be overridden with *BYPASS.			
Module/Intgrtn Lib	This item is shown only at the development centre system.			
	Specify the library name to override the configured application Module/Integration database or program library. It must be a valid library name existing in the target system. If this system is the local system, and the library is not found an error will occur.			
	The specified library must contain the application job description as previously configured for the application, or as overridden in this panel.			
Include data ?	This item is shown only for physical files. Valid values are:			
	N Data is not included when physical files are promoted and distributed. An attempt is made to retain existing data members in the target libraries under the new file.			
	Y	Data is included when physical files are promoted and distributed. Data members are copied into the target libraries from the CR library (or, at remote production systems, from the release packet). Existing data members are replaced.		
----------------	---	---	--	--
		This also indicates that when reverting to development, both the object and data members are restored into the Module/Integration or Acceptance/QA environment from the Live/Production environment.		
		Note that data inclusion and re-compilation are mutually exclusive.		
Load source?	This ite membe Valid v	em is shown for application parts implemented as both object and source r (source usage of *COMPILE), and only for the development centre. ralues are:		
	Ν	Source member is not loaded to the release packet.		
	Y	Source member is loaded into the release packet.		
	Note th source	at interpretive source members (*INTERPRET) and copy reference members (*CPYREF) are distributed unconditionally.		
Unload source?	This ite membe Valid v	em is shown for application parts implemented as both object and source r (source usage of *COMPILE), and only for remote production systems. values are:		
	Ν	Source member is not unloaded from the release packet.		
	Y	Source member is unloaded from the release packet and is distributed to the default source file name in the target libraries.		
	Note that interpretive source members (*INTERPRET) and copy reference source members (*CPYREF) are distributed unconditionally.			
Re-compile ?	This ite membe	em is shown for application parts implemented as both object and source r (source usage of *COMPILE). Valid values are:		
	Ν	Object is moved or duplicated into the target libraries.		
	Y	The source member is used to re-compile the object into each of the target libraries. The library list in the application job description name, or the job description name specified in this panel, in each of the target libraries is used when the compilation command is executed.		
	Note th reside i files are comma	at special consideration must be given for those logical files that do not n the same library as the based-on physical files: you must ensure these e always re-compiled. The library list used when the compilation nd is executed will determine that is the based-on physical file.		

Job Description... Specify the job description name to override the configured application job description name. Either the application job description or the override job description must reside in each of the target libraries. The library list of this job description is used when a compilation command is executed as part of the promote operation.

Displaying CR distribution status

This function enables you to view details of the distribution status of the release to which the CR is allocated. This option is particularly relevant to network installations, where the CR is distributed to selected acceptance testing sites before being moved to the Live/Production environment at each network location. Refer to *Monitoring release distribution and implementation* on page 4-29.

How to get into this function

Menu/Option:	SEECHG / 11, then option 9=Rls distrib
Command:	WRKCHGRQS

List panel viewing and manipulation

SEE/Change Testing Environment Work with Change Requests	Flt: *NONE
2=Change3=Copy/Crt CR4=Delete5=Displa9=Rls distrib10=Network Sts11=Promote12=Wrk CR	y 8=Display obj 2 dev 13=Wrk CASE
Opt IR No/CR Text	Applicatn Status
100012 IR Text tetser IR Text changed 100011 Test I	l Demo appli Entered
01 Test I : Release distribution de	etails :
02 Author : CR: SY1 100007/01 Test cr to conta	in one object :
100010 IR Tex : Release: 00008 Testing for *DMS	error :
100009	:
100008	EnvrDistribution :
100007 Test c : BEJ Bejing	*ACP Not sent :
9_ 01 Test c : CHI Chicago	*ACP Not sent :
100006 Detail : CII Cairo	*ACP Not sent :
100005 Workin : LON London	*ACP Not sent :
Ol Workin : NES Nestles Aust	*ACP Not sent :
: NYC New York City	*ACP Not sent :
	More :
Fl=Help F3=Exit F : Fl=Help 12=Cancel	:
F12=Cancel F14=Cur :	

The window shows the CR distribution history. The CR number and text, and the release number and description are shown at the top of the window.

The list of release packet history in the lower portion of the window shows:

- The target system
- The target environment
- The distribution date
- The distribution type:
 - TAPE using magnetic tape
 - COMS using the Communication Manager

Displaying CR network status

This function enables you to display the details of the latest movement/promote operation executed for the CR at every remote production system to which it has been distributed, and the current CR status at that system.

The information shown in this window is transmitted from each remote production system to the CR development centre system. Refer to Monitoring release distribution and implementation on page 4-29.

How to get into this function

Menu/Option:	SEECHG / 11,	then option	10=Network Sts
Command:	WRKCHGRQS		

List panel viewing and manipulation

```
OMS505C1 THNDEV CR Network Status Dev Centre: SY1

1=Transfer sts 2=Sys passthru

CR: SY1 100354/02 EPG test send and send again mark two

CR

Act_Target_sys_Date____Movement_type___Stat_Rls__Movement_job_details_____

_____SY2-Europe 1/05/95 Instl Acpt/QA *ACP 33521 005068/DMS2/0#ACP00194

No routing entries were found for user *CURRENT for target system SY2...

F1=Help F3=Exit F5=Refresh F9=Cmd F12=Cancel F24=Comms messages
```

This panel shows the movement status for the CR at each target (production) system to which it has been distributed.

If the CR has not been installed at the target system, only the target system and release number are shown, along with the narrative: (*Status info not received*).

If the CR has been installed at the target system, all other columns will show the details of the CR's latest movement at the target system.

For each CR network status record, the following information is provided:

- Target system code and description.
- Date of the most recent movement/promote at the target system.
- Movement/promote type of most recent movement/promote at the target system.

- The current CR status code at the target system.Release number to which the CR is allocated at the target system. If the CR has since been allocated to another release at the development centre system, this new release number will not appear on the network status panel until the CR has been installed from the new release at the target system.
- Movement/promote job details at the target system (number/user/name). •

Working with CR actuals

This function enables you to enter the actual up-to-date workload (in hours) and cost against any active CR. You can also enter or change the estimated figures that you may have entered when the CR was created or updated. This facility provides a simple recording mechanism for workloads and costs for statistical purposes.

If you have PROJECT MASTER, workload and cost can be maintained in PROJECT MASTER and posted to SEE/Change using the interface facility between the two products. Refer to *PROJECT MASTER Interface* in the separate manual entitled *SEE/Change Interfaces*.

How to get into this function

Menu/Option: SEECHG2/1 Command: WRKCRACT

List panel viewing and manipulation

Actions Exit Help	
OMS460C1 THNDEV Work with CR Actuals	Dev Centre: SY1
1=Add act 2=Amend act 3=Amend est	
	AssignedHours
Act_IR/CR_Seq_Text	_App_UserEstAct
<pre></pre>	AP1 CHRIS AP1 QPGMR AP1 QPGMR AP1 MARTIN RC1 QPGMR AP1 CHRIS AP1 QPGMR AP1 QPGMR AP1 CHRIS AP1 CHRIS AP1 CHRIS AP1 QPGMR AP1 COX AP1 QPGMR + P=Cancel F23=More options

This panel shows all non-live CRs, in descending IR number sequence.

Positioning the CR list

You can use the input fields below the column headings to change the selection of CRs shown. If one or more values are entered in the following fields they are used to search all active CRs and to display only those with the corresponding fields containing the specified values. The IR/CR number may then be entered to further position this list. To revert to the full list, blank out all the search values and press enter.

IR/CR Seq	If you enter an IR/CR number here, the list is positioned at the specified number, showing CRs in descending IR number.
Text	If you enter some text here, the list will show all CRs that contain that text in the CR <i>request summary text</i> . You can enter a maximum of 5 words, and all CRs that contain one or more of these words in the summary text are shown.
Арр	If you enter an application code here, the list will show all CRs with that application code.
Assigned User	If you enter a user or group profile here, the list will show all CRs assigned to that user or group profile.

Action codes

You can select one of the following action codes against a CR:

1=Add act	Add to actual. Add to existing actual hours/cost figures for the CR.
2=Amend act	Amend actual. Amend existing actual hours/cost figures for the CR.
3=Amend est	Amend estimate. Amend existing estimated hours/cost for the CR.

Data items for adding/amending actuals and estimates

OMS460F1 THNDEV	Work with CR Actuals
CR number	<pre>SY1 100367 / 01 Just another CR for folder testing AP1 Demo application 1 * *MOD Application Modification *DEV 20/06/95 CHRIS *LOW - Low</pre>
Type the hours and/or cost	t. Then press enter again to update.
Estimate :	HoursCost
Actual Add on to Actual :	
Fl=Help F3=Exit F6=Chan	ge estimates F9=Cmd F12=Cancel

This panel is used to enter, change or view actual/estimated hours and costs against a selected CR. Details of the CR being maintained appear on the top half of the panel. On the lower part of the panel you can maintain the figures in three ways:

- By maintaining directly the estimated figures
- By maintaining directly the actual figures
- By adding to or subtracting from the actual figures

The initial input area available is determined by the option selected from the previous list panel. Use F6 to switch between the actual and estimate input areas. A warning is displayed if the actual figures are greater than the estimated figures. An error will occur if an attempt is made to change the actual figure to a negative value.

Note that the system does not maintain any transaction based information for the maintenance activities performed from this panel.

Listing movement transaction logs

All movement/promote transactions are logged into a central repository. Refer to *Movement logs* on page 4-38.

This function enables you to list the movements of application parts registered under one or more CRs. You can select which movement/promote logs you want to print; by CR, job details, date or any combination of these. If no selection parameters are specified, the movement/promote logs for all CRs are printed.

How to get into this function

Menu/Option:SEECHG2 / 11 Command:LSTMVTLOG

Selection criteria

	List Mover	ment Logs (LS	TMVTLOG)
Type choices, press 1	Enter.		
Job Name: User Name: Job Number: Originating System: IR Number: CR Sequence Number End Date:			Name Name Character value Name 000001-999999 01-99 Date
F3=Exit F4=Prompt F24=More keys	F5=Refresh	F12=Cancel	Bottom F13=How to use this display

Job...Specifies the job details (Name/User/Number) of the job that generated the movement logs that are to be printed. If left blank, job details are not part of the print selection criteria.

Orig sys (CR)...Specifies the CR number (Originating System/IR number/CR Sequence) of the CR. Only logs generated in the context of this CR are printed. If left blank, CR details are not part of the print selection criteria.

End DateSpecifies the higher limit for the movement transaction date. Only logs for movements with date equal to or prior to this date are printed. If left blank, end date is not part of the print selection criteria.

After you have entered your selection criteria and pressed Enter, a job control prompt window will pop up enabling you to run the job either interactively or in batch. Refer to *Submitting batch jobs* in *SEE/Change General Introduction*. For details on all parameters, refer to *Command LSTMVTLOG* on page 4-143. Refer to page 4-161 for a report example.

Purging movement transaction logs

All movement/promote transactions are logged into a central repository. Refer to *Movement logs* on page 4-38.

This function enables you to purge the movement logs for one or more CRs. You can select which movement logs you want to purge; by CR, job details, date or any combination of these. If no selection parameters are specified, the movement logs for all CRs that have already been promoted to the Live/Production environment are purged.

Note that the CR whose movement transaction logs have been purged cannot be reverted to development from archive. Refer to *Managing the size of the product repository* on page 4-57.

How to get into this function

Menu/Option: SEECHG2/22 Command: PRGMVTLOG

Selection criteria

	Purge Move	ments Log (PR	GMVTLOG)
Type choices, press Ent	ter.		
Job Name: User Name: Job Number: Originating System: . IR Number: CR Sequence Number: End Date: List Purged Details: .	· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·		Name Name Character value Name 000001-999999 01-99 Date *YES, *NO
F3=Exit F4=Prompt I F24=More keys	F5=Refresh	F12=Cancel	Bottom F13=How to use this display

Job... Specifies the job details (Name/User/Number) of the job that generated the movement logs that are to be purged. If left blank, job details are not part of the purge selection criteria.

Orig sys (CR)... Specifies the CR number (Originating System/IR number/CR Sequence) of the

	CR. Only logs generated in the context of this CR are purged. If left blank, CR details are not part of the purge selection criteria.
End Date	Specifies the higher limit for the movement transaction date. Only logs for movements with a date equal to or prior to this date are purged. If left blank, the end date is not part of the print selection criteria.

List Purged Details ? Specifies whether the purged logs are printed. Valid values are *YES or *NO.

After you have entered your selection criteria and pressed Enter, a job control prompt window will pop up enabling you to run the job either interactively or in batch. Refer to *Submitting batch jobs* in *SEE/Change General Introduction*.

For details on all parameters, refer to *Command PRGMVTLOG* on page 4-149.

Purging change management data

This function enables you to purge the IR/CR information base, and optionally re-sequence existing IRs, CRs and releases.

Note that the CR whose change management data has been purged cannot be reverted to development from archive. Refer to *Managing the size of SEE/Change repository* on page 4-57.

How to get into this function

Menu/Option: SEECHG2/21 Command: PRGCHGDTA

Backups

When you select option **21=Purge Change Management Data** from menu SEECHG2, a warning window will pop up, as shown below:

SEECHG2	SEE/Change Change Manager	
Select one of the fo	: PURGE CHANGE MANAGEMENT DATA - W A R N I N G:	:
1. Work with Ch	Before executing this function you must save:	:
11. List Object	1. THENON Data Library(s)2. All CR libraries	:
21. Purge Change 22. Purge Object	<pre>: (*)3. Application source files : (*)4. Application program libraries : (*)optional: Read the recovery section below</pre>	::
50. Change Batch	: Help for PRGCHGDTA (Purge Change Management Data)	:
	: It is the user responsibility to ensure backups are : taken prior to executing this function, and that : PRGCHGDTA is executed at all network sites. :	::
Selection or command ===> 21	: Before starting execution of this command make sure : that the user profile executing PRGCHGDTA command has : full authority to all objects (such as *BEFORE/*AFTER	: : :
F3=Exit F4=Prompt F13=User support	: More : F2=Ext help F9=Keys F10=Move to top F11=Index F12=Cnl :	::

It is the user's responsibility to ensure backups are taken prior to executing this function, and that PRGCHGDTA is executed at all network sites.

Before executing this function you must save:

- SEE/Change data library (as specified under general parameter @DTL)
- All CR libraries

If you make extensive use of *BEFORE, *AFTER and *LOAD processes within the applications you are

about to select for purge, you must also save:

- •
- Application source files of all applications selected for purge. Application program libraries of all application selected for purge. •

User authorities and object locks

Before executing this command, you must ensure the user profile executing the (PRGCHGDTA) command has full authority to all objects (such as *BEFORE/*AFTER/*LOAD programs and live application source files).

Ensure that no SEE/Change related object is locked by any job; such as development in a CR environment or editing source via STRSEU.

Specifying purge selection criteria

Purge Change Ma	anagement Data	(PRGCHGDTA)
Type choices, press Enter.		
System code, or *ALL Application code, or *ALL End Date, or *CURRENT Resequence IR's starting with . Resequence Rls's starting with List Purged IRs and CRs ?	*NONE_ *NONE *YES	Name, *ALL Name, *ALL Date, *CURRENT 000001-999000, *NONE 00001-98000, *NONE *YES, *NO
F3=Exit F4=Prompt F5=Refresh F24=More keys	F12=Cancel	Bottom F13=How to use this display

System code	The system c (developmen	The system code is mandatory. Specify the IR/CR originating system code (development centre) for which IR/CRs are purged. Valid values are:		
	Name	Enter the code of a single development centre to be purged.		
	*ALL	Specifies that all development centres are purged.		
Application code	The applicati are purged. V	The application is mandatory. Specify the CR application code for which CR are purged. Valid values are:		
	Name	Enter the code of a single application to be purged.		
	*ALL	Specifies that all application codes are purged. You must specify *ALL if you request re-sequencing.		

End Date	The end date field is mandatory. Only selected CRs that have been promoted to the Live/Production environment on or before this specified date are purged. Valid values are:			
	Date	Enter the final date for which purging will occur. The date must be specified in the job date format.		
	*CURRENT	The current system date is used as the final date for which purging will occur.		
Resequence IRs	This field is mandatory. Specify the starting number to be used if IRs remaining after the purge are to be re-sequenced. Valid values are:			
	Number Enter the number to be used as the new IR number for the first of the remaining IRs to be re-sequenced. This entry is only used if *ALL is specified for the Application code parameter.			
	* <u>NONE</u> Specifie	s that no IR re-sequencing is to be done.		
Resequence RIs	 This field is mandatory. Specify the starting number to be used if releases remaining after the purge are to be re-sequenced. Valid values are: Number Enter the number to be used as the new release number for the first of the remaining releases to be re-sequenced. This entry is only used if *ALL is specified for the Application code parameter. 			
	* <u>NONE</u> Specify	that no release re-sequencing is to be done.		
List Purged IR/CRs	This is mandatory. Specify whether the details of all purged IRs and CRs are be printed. Valid values are:			
	* <u>YES</u>	Specifies that purged items are to be printed. IRs are printed by the LSTINVRQS function, CRs are printed by the LSTCHGRQS function.		
	*NO	Specifies that purge items will not be printed.		

For further details on all parameters, refer to *Command PRGCHGDTA* on page 4-145.

What is purged ?

An IR is purged if it meets the following criteria:

- The IR originating system is the same as the selected system, or the selected system is *ALL.
- The IR has no active CRs.

If the IR has originated from the local system, the following additional rules apply:

- The IR status date is equal or prior to the selected date.
- The IR status indicates that it is closed, i.e; it is in the status of *REF, *TXT or *CMP.

A CR is purged if it meets the following criteria:

- The CR originating system is the same as the selected system, or the selected system is *ALL.
- The CR application is the same as the selected application, or the selected application is *ALL.
- The CR status date is equal or prior to the selected date.
- The CR status indicates that the CR is in the Live/Production environment (*LIV).

A release is purged if it meets the following criteria:

- The release originating system is the same as the selected system, or the selected system is *ALL.
- The release has no allocated CRs.

When an IR is purged, the following are also purged:

- The IR extension file information (if IR extension is used).
- Any task schedules generated for the CR by SEE/Job.

When a CR is purged, the following are also purged:

- The CR extension file information (if CR extension is used).
- The CR development text document.
- All application part history information associated with the CR.
- All application part movement information associated with the CR, including archive details.
- The CR work library (if it has been retained).
- Any *BEFORE/*AFTER/*LOAD program objects and source members associated with the CR. (Objects and source members are removed from the application program libraries).
- Any execution requests generated for the CR by the SEE/One Compare and Merge Manager product.
- Any task schedules generated for the CR by the SEE/Job Task Manager product.

What is re-sequenced ?

You can re-sequence IRs, CRs and releases that were not purged.

CR re-sequencing includes the renaming of related CR libraries, documents and programs, *SEE/One Compare and Merge Manager* requests and *SEE/Job Task Manager* schedule details. CR *BEFORE/*AFTER/*LOAD program objects and source members are renamed in the application libraries.

Re-sequencing is done only for IRs, CRs and releases that were generated at the local system, i.e; IRs, CRs and releases that were received at a remote production system from the application development centre are not re-sequenced.

What is reported ?

A report of purged IRs/CRs can be explicitly requested. If requested, all purged IRs and CRs are listed, via function LSTINVRQS and LSTCHGRQS respectively, using report type *FULL.

If re-sequencing of IRs is selected, the *List Purge Table - IR/CR Re-sequencing Table* report is generated. If re-sequencing of releases is selected, the *List Purge Table - Release Re-sequencing Table* report is generated. These reports provide audit trails for the re-sequencing process, showing the old numbers against the new numbers.

Recovery

To verify the success of PRGCHGDTA processing, check the joblog following completion. Special messages outline critical processing steps. This will make it easier to pinpoint any object locks or errors that may have occurred during processing.

PRGCHGDTA **must** be submitted to batch execution. Make sure the job is submitted with LOG(4 00 *MSG or *SECLVL) to force the creation of a joblog.

SEE/Change validates the parameters and verifies object locks; if an error occurs at this point the job ends abnormally, and you must re-submit the job.

If IR and/or release re-sequencing is requested, PRGCHGDTA will determine if the IR and/or release numbers will reach their maximum limits of 999999. If the maximum limit is reached, the following message is sent to the job log and to the requesting user:

Message id: OME2239:

Re-sequencing of (IRs/Releases) has reached the maximum limit. PRGCHGDTA cannot be performed...

The job ends abnormally, and you must re-submit the job. Data manipulation has not started and recovery is not required.

Recovery is necessary only if the abnormal termination has occurred after data has been partially manipulated. The following message is sent to the job log and to the requesting user to indicate that data manipulation has started:

Message id: OME2221:

PRGCHGDTA starting data manipulation. If abnormal termination occurs recovery procedures will be required...

If abnormal termination occurs after this message has been logged, the change management environment might not be synchronised with SEE/Change's database.

Recovery when re-sequencing is NOT selected

- 1. Restore SEE/Change data library(s).
- 2. Restore all CR libraries.

If you extensively use the *BEFORE/*AFTER/*LOAD program facility, and you want to ensure their source members and objects are fully recovered:

- 3. Restore all application source files.
- 4. Restore all application program libraries.

Recovery when re-sequencing IS selected

- 1. Delete all CR libraries that have been renamed with the new IR sequence numbers.
- 2. Delete all CR libraries that have been renamed with the intermediate prefix ## or #\$.
- 3. Restore SEE/Change data library(s).
- 4. Restore all CR libraries.

If you extensively use the *BEFORE/*AFTER/*LOAD program facility, and you want to ensure their source members and objects are fully recovered:

- 5. Restore all application source files.
- 6. Restore all application program libraries.

The Configure Bar Option (CFGBAROPT) command allows you to configure user-defined action and status options to be integrated into certain SEE/Change functions.

You can use this command to create a new user-defined option, replace or remove an existing user-defined option.

Note:

User-defined options are not supported by SEE/Change. It is the user's responsibility to ensure these options are configured correctly. User-defined options will be retained when subsequent upgrades to SEE/Change are installed.

Function or Panel Id (PANEL)

Specifies the SEE/Change function containing the user-defined option. Possible values are:

WRKCROBJ

Work with CR Objects (Action or Status option)

WRKCRDEV

Work with CR Development (Status option)

WRKINVRQS Work with Investigation Requests (Status option)

WRKCHGRQS Work with Change Requests (Status option)

WRKRLS

Work with Releases (CR Allocation panel Status option)

Mnemonic (MNEMONIC)

Specifies the type of user-defined option. Possible values are:

*ACTION

Action option. The user-defined option will appear in the action pull-down menu when F4 is pressed, and when action codes are displayed on the top of the panel. The Action option can be specified only if PANEL(WRKCROBJ) is specified.

*STATUS

Status option. The user-defined option will appear in the status pull-down menu (when F22 is pressed).

Option Number (OPTION)

Specifies the user-defined option number. You can specify any option number in the range of 70-99 (option numbers in the range of 01-69 are reserved for SEE/Change internal options).

This is a required parameter.

Option Text (TEXT)

Specifies the text associated with the user-defined option. Possible values are:

Text

Specify text string not longer than 12 characters.

*NOCHG

No change to existing text, when adding or changing the execution string.

*RMV

Remove user-defined option. Remove text and all associated execution strings.

Object Reference Id (OBJREF)

Specifies the SEE/Change object reference id if MNEMONIC(*ACTION) is specified. Possible values are:

Object Ref (id)

The execution string you specify under parameter EXEC will be executed when the option specified under parameter OPTION is used against any object with this reference id.

*ALL

The execution string you specify under parameter EXEC will be executed when the option specified under parameter OPTION is used against any object.

Execution String (EXEC)

Specifies the command string executed when the option is selected. Possible values are:

CL command

Specify any valid CL command. The command will be validated; if invalid, a message will be returned indicating the error, and the execution string will not be made operational. When specifying the execution string for PANEL(WRKCROBJ) MNEMONIC(*ACTION) you can embed the following run-time substitutional variables in the execution string:

Variable	Description
&1	Object name.
&2	CR library name. For application message files it is the common work library as specified under general parameter @SVL.
&3	Default source file name.
&7	SEE/Change object reference id.
&8	SEE/Change object type.
&9	SEE/Change object attributes.
&10	CR application mode.
&11	Local system code.
&13	IR number.
&14	CR sequence number.

*NOCHG

No change to existing string when changing the option text.

*RMV

Remove execution string.

Submit Execution ? (SBM)

Specifies whether the string is executed interactively or in batch. Possible values are:

*NO

Do not submit execution. Execute interactively.

*YES

Force batch execution.

*<u>OPT</u>

Optional. Allow run-time selection.

Submit Job Name (SBMJOB)

Specifies job name for submitted jobs. This parameter is prompted only for MNEMONIC(*STATUS), and when an execution string is specified against parameter EXEC. Jobs submitted from a MNEMONIC(*ACTION) option will always be assigned a job name that is the same as the selected object name.

Possible values are:

Job name

Specify the job name to be assigned to submitted jobs.

*DEFAULT

The job name will be constructed automatically.

Command CHGSBMDFT: Change Submit Defaults

The Change Submit Defaults (CHGSBMDFT) command enables you to specify the default job description being used for submitted jobs. The default job description name is stored in QTEMP. This function enables you to change the current session default as stored in QTEMP.

There are no parameters for this command.

A subsequent window is shown, allowing you to change the current default job description name, or to change its attributes. You can nominate any existing job description name, or value *CURRENT, which indicates that job description associated with the user profile and the current interactive library list are used.

Special considerations:

- When you initially sign-on to SEE/Change, the default is set to OMSJOBD in the SEE/Change database library.
- When you enter function WRKCROBJ (Work with CR Objects) the default job description is changed to either *CURRENT or CRJOBD in the CR library, depending on the value you specify for general parameter @SBM. Refer to *Maintaining general parameters* in *Configuration Manager User and Reference Manual*. When you exit WRKROBJ, the default in force before you have entered the function is re-instated.

Command GRTMVTAUT: Grant Movement Authorisation

The Grant Movement Authorisation (GRTMVTAUT) command allows you to grant the authorisation of a specified user/group profile to a specified CR movement.

You can grant movement authorisation for your user profile and/or your associated group profile, or on behalf of any other user profile to which you have object management rights.

Movement authorisation requirements are stored in a Thenon authorisation list for each CR. Any number of user/group profiles may be required to grant authorisation for a specific movement of a single CR.

IR Development System (SYSM)

Specifies the CR originating system code (development centre) of the CR for which movement authorisation is being granted.

This is a required parameter.

IR Number (IRNBR)

Specifies the IR Number of the CR for which movement authorisation is being granted.

This is a required parameter.

CR Sequence (CRSEQ)

Specifies the CR Sequence of the CR for which movement authorisation is being granted.

This is a required parameter.

Movement Type (MOVTYP)

Specifies the type of movement being authorised.

This is a required parameter. Possible values are:

*SELECT

Select the movement type being authorised from a window showing all valid movements for the CR.

*ALL

Grant authorisation for all movements.

*MDL

Grant authorisation for the movement of the CR to the Module/Integration environment.

*ACP

Grant authorisation for the movement of the CR to the Acceptance/QA environment.

*RDY

Grant authorisation for the change of CR status to *Ready for Release* so the CR can be allocated to a release.

*LIV

Grant authorisation for the movement of the CR to the Live/Production environment.

User Name (USER)

Specify the user and/or group profile for whom movement authorisation is being granted.

This is a required parameter. Possible values are:

*USRGRP

Grant authorisation on behalf of the current user and the associated group profile (if assigned).

*USER

Grant authorisation on behalf of the current user only.

*GROUP

Grant authorisation on behalf of the group profile associated with the current user.

name

Grant authorisation on behalf of the specified user profile. You must have object management rights to that other user profile.

Command LSTCHGRQS: List Change Requests

The List Change Requests (LSTCHGRQS) command allows you to list CRs that have originated at the local development centre system, or have been delivered from a remote development centre.

There are no parameters for this command.

When this command is executed, you will be shown a report selection criteria panel. On this panel you specify the format of the report you require, and the criteria by which CRs will be selected for inclusion in the report.

Command LSTMVTLOG: List Movement Log

The List Movement Log (LSTMVTLOG) command allows you to print the details of movements of objects registered under CRs.

Specify values in any combination for the Job Name, Change Request and End Date parameters to print the details of selected movements. If no selection parameters are specified, the movement logs for all CR objects will be printed.

Job Name (JOB)

To print movement logs by JOB, specify the job details (Name/User/Number) of the job that generated the movements to be printed. If left blank, Job Name is not part of the print selection criteria.

job-name

Specify the name of the job that performed the movements whose details are to be printed.

user-name

Specify the name of the user profile of the job whose movement log details are to be printed.

number

Specify the job number assigned by the system.

Change Request (CR)

To print movement logs for a specific CR, specify the CR number (System/IR/CR Sequence) of the CR. If left blank, Change Request is not part of the print selection criteria.

originating-system

Specify the originating system code of the CR whose movement logs are to be printed.

IR-number

Specify the IR number of the CR whose movement logs are to be printed.

CR-sequence-number

Specify the CR sequence of the CR whose movement logs are to be printed.

End Date (ENDATE)

If specified, only movements with a movement date equal or prior to this date will be printed. If left blank, End Date is not part of the print selection criteria.
Command PRGCHGDTA: Purge Change Management Data

The Purge Change Management Data (PRGCHGDTA) command allows you to purge from the IR/CR information database all details of selected IRs and CRs that have been promoted to the Live/Production environment before a specified date. Releases that have no existing CRs allocated to them are also purged. You can optionally request to have all remaining IRs, CRs and Releases re-sequenced.

Before using this function, please read all relevant documentation in the *Change Manager User and Reference Manual*.

It is the user's responsibility to ensure backups are taken prior to executing this function, and that PRGCHGDTA is executed at all network sites.

System code (SYSM)

Specifies the CR originating system code (development centre) for which CRs will be purged.

This is a required parameter. Possible values are:

Name

Enter the code of a single development centre to be purged.

*ALL

Specifies that all development centres will be purged.

Application code (APPL)

Specifies the CR application code for which CRs will be purged.

This is a required parameter. Possible values are:

Name

Enter the code of a single application to be purged.

*ALL

Specifies that all application codes will be purged. You must specify *ALL if you request re-sequencing.

End date (ENDT)

Only selected CRs that have been promoted to the Live/Production environment on or before this specified date will be purged.

This is a required parameter. Possible values are:

Date

Enter the final date for which purging will occur. The date must be specified in the job date format.

*CURRENT

The current system date will be used as the final date for which purging will occur.

Resequence IRs starting with (ISEQ)

Specifies the starting number to be used if IRs that remain after the purge are to be re-sequenced.

This is a required parameter. Possible values are:

Number

Enter the number to be used as the new IR number for the first of the remaining IRs to be re-sequenced. This entry is only used if *ALL is specified for the Application code parameter.

*NONE

Specifies that no IR re-sequencing is to be done.

Resequence RIs starting with (RSEQ)

Specifies the starting number to be used if Releases that remain after the purge are to be re-sequenced.

This is a required parameter. Possible values are:

Number

Enter the number to be used as the new Release number for the first of the remaining Releases to be re-sequenced. This entry is only used if *ALL is specified for the Application code parameter.

*NONE

Specifies that no Release re-sequencing is to be done.

List purged IRs and CRs (LIST)

Specifies whether the details of all purged IRs and CRs are to be printed.

This is a required parameter. Possible values are:

*YES

Specifies that purged items are to be printed. IRs are printed by the LSTINVRQS function, CRs are printed by the LSTCHGRQS function.

*NO

Specifies that purge items will not be printed.

Command PRGARCLVL: Purge application archive levels

The Purge Archive Levels (PRGARCLVL) command enables you to force SEE/Change to remove excess archive levels.

When you configure an application, you can specify the number of archiving levels that are retained for each application. When a new version of an object is promoted to the Live/Production environment, the previous version is retained at a new archive level. After the promote operations complete successfully, the program checks the number of archiving levels for the object (or source member) and drops, in first in first out (FIFO) order, all instances of the object at archive levels in excess of the number specified for the application.

Normally, if you change the number of retained archiving levels for the application, excess archiving levels are dropped only when the next version of the object is promoted to the Live/Production environment, that is: n archive levels are retained for each object until the object is processed in the next change cycle (where n is the **original** number of archive levels specified for the application).

The PRGARCLVL command forces SEE/Change to drop all excess archiving levels for all objects of an application, immediately. For example: if your application is currently configured to retain three archiving levels and you decide you need to retain only two levels, you can:

- 1. reconfigure the application for two levels
- run PRGARCLVL as a one-shot exercise to immediately drop all but the two latest archive levels for each object in the application. The level you specify in the command temporarily overrides whatever level you have configured for the application.

If any object, member or library could not be deleted ,PRGARCLVL continues to process the next item, but the job ends abnormally.

Report spool file name PRGARCLVL (User Data: 'Error log') is always generated for the job. It lists all objects and source members that were purged, and the objects, members or libraries that could not be deleted.

Command parameter are:

Application Code (APPL)

Specifies the application code(s) for which excess archiving levels are purged. This is a required parameter. The possible values are:

- *ALL Purge excess archiving levels for all applications.
- Name Specify the code of the application code for which excess archiving levels are purged.

Number of levels to retain (RTNLVL)

Specifies the number of archiving levels to retain.

This is a required parameter. The possible values are:

*CFG The number of archiving levels as specified for the application (through function WRKAPPCFG) is used.

0-99 Specify a number in the range of 0 to 99. If 0 is specified, no archiving levels are retained, that is, all existing archive levels are purged. The number you specify here does not affect the number of archiving levels associated with the application. The number you specify here is used for this execution run only. The automatic dropping of excess levels when an object is promoted, is always driven by the number of levels associated with the application.

Command PRGMVTLOG: Purge Movement Log

The Purge Movement Log (PRGMVTLOG) command allows you to purge the details of all movements registered under CRs that have been promoted into the Live/Production environment.

Specify values in any combination for the Job Name, Change Request and End Date parameters to purge the details of selected movements. If no selection parameters are specified, the movement logs for all Live/Production CRs will be purged.

The List Purged Details parameter allows you, optionally, to list the movement log details of all purged movements.

Job Name (JOB)

Specifies the job details (Name/User/Number) of the job that generated the movements that are to be purged. If left blank, Job Name is not part of the purge selection criteria. Possible values are:

job-name

Specify the name of the job that performed the movements whose log records are to be purged.

user-name

Specify the name of the user profile of the job whose movement log records are to be purged.

number

Specify the job number assigned by the system.

Change Request (CR)

Specifies the CR number (System/IR/CR Sequence) of the CR. If left blank, Change Request is not part of the purge selection criteria. Possible values are:

Originating-system

Specify the originating system code of the CR whose movement logs are to be purged.

IR-number

Specify the IR number of the CR whose movement logs are to be purged.

CR-sequence-number

Specify the CR sequence of the CR whose movement logs are to be purged.

End Date (ENDATE)

Specifies only movements with a movement date equal or prior to this date for purging. If left blank, End Date is not part of the purge selection criteria.

List Purged Details (LIST)

Specifies whether the purged movement logs will be printed.

This is a required parameter. Possible values are:

*YES

The purged movement logs will be printed.

*NO

The purged movement logs will not be printed.

Command RVKMVTAUT: Revoke Movement Authorisation

The Revoke Movement Authorisation (RVKMVTAUT) command allows you to revoke previously granted CR movement authorisation.

You can revoke movement authorisation for your user profile and/or your associated group profile, or on behalf of any other user profile to which you have object management rights.

Movement authorisation requirements are stored in a Thenon authorisation list for each CR. Any number of user/group profiles may be required to grant authorisation for a specific movement of a single CR.

IR Development System (SYSM)

Specifies the CR originating system code (development centre) of the CR for which movement authorisation is being revoked.

This is a required parameter.

IR Number (IRNBR)

Specifies the IR Number of the CR for which movement authorisation is being revoked.

This is a required parameter.

CR Sequence (CRSEQ)

Specifies the CR Sequence of the CR for which movement authorisation is being revoked.

This is a required parameter.

Movement Type (MOVTYP)

Specify the type of movement to have authorisation revoked.

This is a required parameter. Possible values are:

*SELECT

Select the movement type to have authorisation revoked, from a window showing all valid movements for the CR.

*ALL

Revoke authorisation for all movements.

*MDL

Revoke authorisation for the movement of the CR to the Module/Integration environment.

*ACP

Revoke authorisation for the movement of the CR to the Acceptance/QA environment.

*RDY

Revoke authorisation for the change of CR status to *Ready for Release* so the CR can not be allocated to a release.

*LIV

Revoke authorisation for the movement of the CR to the Live/Production environment.

User Name (USER)

Specify the user and/or group profile whose movement authorizations are being revoked.

This is a required parameter. Possible values are:

*USRGRP

Revoke authorisation on behalf of the current user and the associated group profile (if assigned).

*USER

Revoke authorisation on behalf of the current user only.

*GROUP

Revoke authorisation on behalf of the group profile associated with the current user only.

name

Revoke authorisation on behalf of the specified user profile. You must have object management rights to that other user profile.

Command WRKCHGRQS: Work with Change Requests

The Work with Change Requests (WRKCHGRQS) command allows you to create and maintain Change Request details.

Mode of operation (MODE)

Specifies which function is allowed. Possible values are:

*SEL

Select from a list of CRs. All CRs are shown, subject to the users current filtering options. A CR can be selected for update or browse.

*BRW

Browse a specific CR. The CR number must be specified under parameters SYSM, IRNBR and CRSEQ. Update is not allowed.

*UPD

Update a specific CR. The CR number must be specified under parameters SYSM, IRNBR and CRSEQ.

Originating System (SYSM)

Specifies the originating system code of the CR you wish to update or browse. This parameter must be specified if MODE is *UPD or *BRW.

IR Number (IRNBR)

Specifies the IR number of the CR you wish to update or browse. This parameter must be specified if MODE is *UPD or *BRW.

CR Sequence (CRSEQ)

Specifies the CR sequence of the CR you wish to update or browse. This parameter must be specified if MODE is *UPD or *BRW.

Command WRKMVTAUT: Work with Movement Authorisation

The Work with Movement Authorisation (WRKMVTAUT) command allows you to grant or revoke authorisation for CR movements requiring authorisation by you or your group profile.

The security officer or a member of the security officer group can authorise movements on behalf of any user or group profile.

Movement types for which user authorisation may be required are:

Type Description

- ***MDL** Promote to Module/Integration environment
- *ACP Promote to Acceptance/QA environment
- ***RDY** Change CR status to Ready for Release
- *LIV Promote to Live/Production environment
- *ALC Allocation of CRs to a release.
- ***RLS** Release to a Live/Production environment.

There are no parameters for this command.

LSTCHGRQS: List Change Requests: report type *FULL

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LSTCHGRQS: List Change Requests: report type *PTXT

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LSTCHGRQS: List Change Requests: report type *SUMM

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<pre>S))))))))) IR No. CR Seq S)))))))) 000008 01 02</pre>	Text D))))))))))))))))))))))))))))))))))))))))) App))))) DST DST DST))))) Sys)))))) NYC))))) sit))))) MID	Type User)))))))))))))) *BUG *MOD QPGMR)))))))) Rel No.)))))))))) *N/A 00002))))))))))))))))))))))))))))))))))))))	Org date Estd))))))))) 26/09/93))))))))) Rpt Date . Cost Es))))))))))) 06/10/93))))))))) Req Date td. Hours))))))))))))) 11/12/93	*URGT *LOW
000005	Program FOR1A3 had errors during EOM Pgm FOR1A3 modifications to msgqs	DST DST	LAX	PCF	*PRC QPGMR	00001	See Mark	01/10/93	01/10/93	29/10/93	*HIGH
000004 01 02	Problem with new stocktake reports New distribution logic Bug in report	DST DST DST DST	NYC	MID	*MOD QPGMR *PRC QPGMR	00001 00002	IS/Mark Smith	06/09/93	06/09/93	29/10/93	*MEDM *HIGH
000003 01	Problem with new distribution target codes. Refresh target codes after maintenance.	DST DST	NYC	WST	*MOD QPGMR	00001	Ref/002 IS/Jim Manoly	24/08/93	24/08/93	29/10/93	*LOW
END	OF REPORT 05/11/93 10:32:45										

Γ

Object movement log

LSTMVTLOG	TSPLSYD		I	HENON Soft	ware Environment Eng	ineering	30/12	L/93	I	Page : 1
			P A Job CR End Lis Pur	A R A M E T details, o details, or date, or t details. ge details	E R S pr *ALL r *ALL *ALL	:: : (*YES/*NO): (*YES/*NO):	037438/JUI SYD/000004 *ALL *YES *NO	LIE/MOVCR 4/01		
Trn.No. Sys	IR No. Sq Obj Name	Obj Type Obj Atr	. Org Lib	Org Src	Target Lib Tgt Src	Sys Apl Sit	Date	Time	Movt	Mopr
000000873 SYD	000004 01 DST004	*PGM RPG	DSTOBJLIV		Y00000010	SYD DST	30/11/93	8:54:55	*ARC	*MOV
000000874 SYD	000004 01 DST004	*PGM RPG	0#00000401		DSTOBJLIV	SYD DST	30/11/93	8:54:55	*LIV	*DUP
000000875 SYD	000004 01 DST004	*PGM RPG	DSTSRC	QRPGSRC	Y00000011	SYD DST	30/11/93	8:54:55	*ARP	*DUP
000000876 SYD	000004 01 DST004	*PGM RPG	0#00000401	QRPGSRC	DSTSRC	SYD DST	30/11/93	8:55:15	*SRC	*CPY
ENDOF 4 move	REPORT 30	/11/93 8:55 Completion analys	:35 is:	4 *OK Move	ement completed OK.					

Error Log

Appendix C: Customising the IR and CR database

In some instances the information recorded against IRs and CRs is insufficient to meet specific local requirements for help desk management. You can define extension files and record any additional information on these files. After you have defined these files, you must develop your own maintenance programs to deal with adding, updating, and browsing the records in these files. These programs can then be integrated into the standard SEE/Change functions, namely WRKINVRQS (Work with Investigation Requests) and WRKCHGRQS (Work with Change Requests).

Like the basic IR/CR information, the extension data is included in the release packet and distributed to remote production systems.

Limitations

The extension data cannot be incorporated into the existing SEE/Change reports generated by functions LSTINVRQS (List Investigation Requests) and LSTCHGRQS (List Change Requests).

The extension data cannot be included in the current selection criteria for the display of IRs and CRs.

Panel flow

Your programs will be invoked after processing of the standard data panel. For IRs it is panel OMS300F1; for CRs it is panel OMS400F1. On return, the standard process will continue for the IR/CR.

Extension file standards

The following naming conventions must be used:

	File name	Record format name
IR Extension Physical file	XIREXT	XIRE
CR Extension Physical file	XCREXT	XCRE
IR Extension logical file	XIRELxx	
CR Extension logical file	XCRELxx	

The following DDS field names must be the first fields in the file, and included as the key fields:

File name	Field Name	Attrib	Description
XIREXT	IRSYSM	3A	IR Originating System Code
	IRIRNO 6A	IR Num	ber
XCREXT	CRSYSM CRIRNO	3A 6A	IR Originating System Code IR Number
	CRSEQN	2A	CR Sequence Number

You can add any number of user-defined data fields, but the key structure must stay as specified above. Both files must be single member data files.

Extension programs standards

The following naming conventions must be used:

	Program name	Display file name
IR extension maintenance	O#IEXTO	#IEXTFM
CR extension maintenance	O#CEXT	O#CEXTFM

The following input/output parameter structure must be used:

Program	Parameter	Туре	Attrib	Description
O#IEXTSYSM		Ι	3A	IR Originating System Code
	IRNO	Ι	6A	IR Number
	OPER	Ι	4A	Operation Code
	IRNX	Ι	6A	Reference IR Number
	CKEY	0	2A	Cmd key pressed on return
O#CEXT	SYSM	Ι	3A	IR Originating System Code
	IRNO	Ι	6A	IR Number
	SEQN	Ι	2A	CR Sequence
	OPER	Ι	4A	Operation Code
	IRNX	Ι	6A	Reference IR Number
	SEQX	Ι	2A	Reference CR Sequence
	CKEY	0	2A	Cmd key pressed on return

The OPER input parameter is used to communicate to your program the type of operation that should be invoked:

- *ADD Add an extension record for a given IR/CR.
- *CPY Add an extention record for a given IR/CR, with data defaulting to the reference IR/CR; for this operation fields IRNX/SEQX are supplied with the based-on IR/CR. For all other operations these fields should be ignored.
- *BRW Show extension data for a given IR/CR.
- *UPD Update extension data for a given IR/CR.

Record deletion is handled by SEE/Change

The CKEY output parameter is used to communicate to SEE/Change programs the command key that was last used while your program was active. This enables consistency of panel flow and seamless interface between your programs and the base package. The following values are recognised:

- 03 Exit function (go to menu)
- 12 Cancel panel, go to IR/CR subfile selection panel
- 15 Exit SEE/Change
- 16 Bypass any further panels

Extension library standards

You must create a separate library to contain all the extension objects (physical files, logical files, display files and programs). This library must be included in the INLLIBL parameter of job description OMSJOBD in the SEE/Change database library, above SEE/Change object and data libraries.

When introducing the extension library for the first time, ensure you sign-off and sign-on again so that the new INLLIBL contents (of OMSJOBD) will be used to initialise the interactive library list.

SEE/Change object and data libraries contain sample extension objects. These are replaced each time you install a new release of SEE/Change. The location of your code and objects in the designated extension library ensures that your code and objects are not replaced when you install a new release.

You can also configure within SEE/Change a special application for these extension related objects, so you can use the standard change management cycle to maintain these extension parts.

Controlling parameters

The general parameters that control whether extension data is maintained are:

(a) INC for IR extension data(a) IND for CR extension data

If extension data is used, @INC and/or @IND should be set to *YES via function WRKPRMDTA (Work with Parameter Data); then you must execute function UPDPRMDTA.

Examples

Sample files XIREXT and XCREXT, programs O#IEXT and O#CEXT and display files O#IEXTFM and O#CEXTFM are provided with the SEE/Change standard libraries. The source code for these programs can be found in file O#SRCEXT in the package object library. You can use this code as a base for your development by copying it into your development (CR) library, but do not change the code in O#SRCEXT - the members in this file might be replaced when installing a new SEE/Change release.

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