

## Remote View

Precosis PTY Ltd.

# Remote View

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## 1. Introduction

Remote View is a screen viewing / controlling utility which retrieves and displays the contents of other user's screens, and optionally allows screens to be controlled remotely. Its main purpose is to provide support for remote users and to allow operators to exit users out of applications.

### Display mode Features:

- Duplicates all attributes on a user's screen, including cursor position, up to the last keystroke.
- Access a session via user / device with a single command.
- Select and sort sessions via generic (or all) user / device names.
- Manual or automatic refresh.
- Sub-second response time. (normally)
- Requires no initial programs, user responses, or PC interfaces to operate.

### Change mode Features:

- Duplicates displayable attributes on a user's screen, including input fields.
- Transmits function keys, Attention and System Request functions.
- Local copy refreshed after each change.
- Shows job details and elapsed time beside each job.
- Can control screens on a PC locked with a password-protected screen saver.

### Remote Command Features:

- Allows commands to be sent to other jobs for remote execution. This works for interactive and batch jobs.
- Allows direct access to the QTEMP and LDA of other jobs. This works for all job types, even if the jobs are held.

### Other features:

- Allows selection of jobs based on multiple criteria.
- Allows resorting of job information on selection screen.
- Flexible security options.
- Can display pop-up confirmation windows on users' screens.
- Can journal the usage activity.
- Handles group jobs and transferring between sessions (via SysReq-1).
- Handles compressed (132-column) screen.
- Handles DBCS (Double Byte Character Set) screens.
- Full help text.

## 2.1 How to Install – FTP method

Note: FTP is the easiest way to install this product. If you don't have an FTP connection with your AS/400, see the next section, 'Installing Using non-FTP methods'

1. On the AS/400, sign-on as QSECOFR or a user profile having \*ALLOBJ authority. Then create a save file, e.g. CRTSAVF QGPL/SAVF2
2. On your PC start a DOS session, then transfer RV\_R.SAV (for RISC) or RV\_C.SAV (for CISC) to the AS/400 using the following FTP commands:

<b>cd c:\temp</b>	(or the directory where rv_r.sav resides)
<b>ftp sysname</b>	(where <b>sysname</b> = your AS400 System Name – see footnote)
	(enter user id, then password, as prompted by ftp)
<b>bin</b>	(selects binary image transfer)
<b>put rv_r.sav qgpl/savf2 replace</b>	(copies file to AS400 save file)
<b>quit</b>	(exit FTP)
<b>exit</b>	(exit DOS session)

3. On the AS/400, check that the save file contains information:

```
DSPSAVF SAVF2
```

4. Restore the product library:

```
RSTLIB RMTVIEW *SAVF SAVF(SAVF2)
```

Or

```
RSTOBJ *ALL RMTVIEW *SAVF SAVF(SAVF2) RSTLIB(yourlib)
```

where *yourlib* is your utility / programming tools library

**Note for v5r1+ users:** If you are using V5R1 (or higher) of OS/400, then before restoring the objects you will need to change the system value QVFYOBJRST to '1'. This new system value can prevent programs from being restored unless they have a 'digital certificate'. This product has no certificate because it is compiled to an early target release that doesn't allow them. After restoring, you may change QVFYOBJRST back to its default value of '3', or leave as is.

5. Call the setup program. This will enable the demo mode of the product. This mode obscures part of the 80-column display in *view mode*, and only allows *change mode*, *remote commands* and *job options* when the remote user is QSECOFR:

```
CALL RMTVIEW/RVSETUP 'DEMO'  
(or yourlib/RVSETUP)
```

End of procedure. (Continue with section 'Simple examples'.)

**Footnote:** If you don't know your 'system name' you can instead use the direct TCP/IP internet address of your AS/400. Do a CFGTCP then take option 1, then select an address which has a line type \*ELAN. So the above ftp command would have the form of e.g. **ftp 192.168.10.30**

## 2.2 Installing Using non-FTP methods

Use one of these methods if you don't have an FTP connection with your AS/400.

1. On the AS/400, sign-on as QSECOFR or a user profile having \*ALLOBJ authority. Then create a physical file to receive the save file, e.g.:

```
CRTPF QGPL/SAVF1 RCDLEN(528)
```

2. Now for the tricky step. You need to download the PC document RV\_R.SAV (for RISC) or RV\_C.SAV (for CISC) into this physical file. There are many ways of doing this such as PC Support, RUMBA, Client Access, FTP, and Shared folders. You may need to have an expert on hand to help with the finer details.

If you are using something like **PC Support**, **RUMBA** or **Client Access** you will need an '.FDF' template (PC-object) to refer to. To create one, add a dummy record to the above physical file and upload it to your PC. This process will create an .FDF object that can be referred to when downloading. Remember to clear the physical file before doing the download. Specify the '*No Conversion*' option on data mapping.

If you are using **shared folders** move the RV\_R.SAV object into a shared folder then enter the command:

```
CPYFRMPCD your-folder-name QGPL/SAVF1 RV_R.SAV  
TRNTBL(*NONE) TRNFMT(*NOTEXT)
```

3. Create a save file to receive the physical file, e.g.:

```
CRTSAVF QTEMP/SAVF2
```

4. Now you must copy the physical file into the save file. To do this write the below 8-line RPG program and compile it. This program has the physical file as input and the save file as output. An array is used to hold the data because the buffer size is too large for a single field.

Source for member: CPYSAVF

```
..... 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6  
0001.00      FSAVF1   IP  F      528          DISK  
0002.00      FSAVF2   O   F      528          DISK  
0003.00      E                ARY          528  1  
0004.00      ISAVF1   AA  
0005.00      I                1  528  ARY  
0006.00      C                EXCPT  
0007.00      OSAVF2   E  
0008.00      O                ARY
```

5. Now run the program:       CALL CPYSAVF

6. Now continue with step 3 in the previous section 'How to Install – FTP method'

### 3. Simple examples

To **View** the contents of another screen, type the following command **RVV** followed by either a display device name or a user profile name. That screen or the screen assigned to that user will display. Press Enter to refresh the image or F3 to exit.

e.g. RVV DSP03

will display screen DSP03, providing there is a job running on it.

e.g. RVV JONES

will display the screen that user JONES is signed on to. If a JONES is signed on to more than one device a list of those devices will display for selection.

To **Change** the contents of another screen, type the following command **RVC** followed by either a display device name or a user profile name, (as per above RVV). A subfile selection screen will appear with a device or devices that the user has. Put a '2' beside the device and press Enter, then Enter again if a 'welcome window' appears.

A screen image will appear. Press a function key, e.g. F3. The remote screen should respond as if you had done an F3 on it. Now press F1 (not F3) to return to the selection screen.

### 4. The RVV and RVC commands

There are two commands which drive this product:

**RVV** (View Remote Terminal) and **RVC** (View & Change Remote Terminal)

They both have two parameters as follows.

```
RVV / RVC  DEVUSR      Device(s) or User(s)
           SRTSEL      Sort / Select by Device or User
```

#### **Device / User (DEVUSR)**

The name of the device or user to be selected for display. What is selected is based on the next parameter SRTSEL. A single device or user name can be entered or a generic name. If more than one active session is found, a list will be displayed for selection. If only one match is found, that session may display directly. A value of \*ALL may be used to select all users or devices. For the RVC command, a selection list will always display.

For the RVC command, a value of \*FILT will bring up the Job Filters screen as the initial display instead of the selection list. This may be useful when you don't know the user ID and need to select based on part of the user ID or the user text.

#### **Sort / Select (SRTSEL)**

Specifies whether the above parameter refers to a device or a user. If a D is specified then the DEVUSR parameter is a device (or devices if generic). If a U is specified then DEVUSR is a user (or users). This (U) is the default value. The SRTSEL parameter is also used to sort the list if more than one session is selected.

Special case: If a value of U is specified and a user profile matching the name in DEVUSR could not be found, then a device of that name will be looked for. This allows a device or user to be chosen via the first parameter only.

### 4.1 Differences between these commands

The RVV command only allows viewing actions, whereas RVC allows all functions (viewing, changing, remote commands, filtering and job options). If you have purchased the view-only version of this product then the RVC changing and remote command options will not work, so you may wish to use the RVV command instead.

So it is not necessary to use the RVV command, as the RVC command will perform all functions. It is possible to restrict authority on these commands and give the RVV command to e.g. help desk staff and RVC to operations staff, although it is better to use the security functions to do this (see section 10.4, example 2, for a better method of doing this). Other than that, the only advantage of using RVV instead of RVC is that RVV can be faster because it will not bring up the selection screen if only one matching job is found, and will display that session directly.

## 5. The View Screen display

When a remote screen is successfully copied, an image of it will appear on the local display, matching the display size of the remote display. If a remote screen is in compressed (i.e. 132 column) mode, the local display must be capable of displaying the same. A 'welcome window' will initially display giving the device name and the function-key options. The options are:

**Enter** Refresh the screen image.  
**F1** View Help text  
**F3** Exit the product  
**F5** Start/Stop auto-refresh mode.  
**F10** Display the remote job name, user and number on the bottom line in reverse image.  
**F12** Return to the list display or exit if no previous list display.  
**Print** Do a standard screen print.

### The RV marker

The letters '**RV**' will display on the screen in reverse image. The purpose of this is to prevent confusion between a copy of a screen and its real display. The letters will be placed in an unused (blank) area near the top right-hand corner of the display, providing such an area can be found. The letters won't appear when the welcome window or the job details (via F10) are displaying.

### 5.1 Automatic refresh mode.

The View screen may either be refreshed manually by pressing Enter when desired, or it may be refreshed automatically at specified intervals.

<p style="text-align: center;"><b>Automatic Refresh Mode</b></p> <p>Enter refresh interval in seconds: <u>  5  </u> Use <b>F5</b> to start/stop auto-refresh</p> <p style="text-align: center;">F3=Exit    F12=Cancel</p>
---

To start automatic refresh press F5. The above window will appear asking for the refresh interval in seconds. Enter the desired refresh interval from 1 to 99 seconds and press Enter. The default is 5 seconds. The screen will then refresh at that rate. Press F5 to stop auto refresh.

When in auto refresh mode, the letters '**RV-auto**' will display in reverse image near the top right-hand corner of the screen. Pressing Enter while in auto refresh mode will cause additional refreshes to occur.

## 6. The Selection List display

### 6.1 When using the RVV command

When several sessions match the selection criteria on the RVV command, i.e. more than one active session is found for the user(s) or device(s), a subfile selection screen will display listing the job details. This screen shows the job name / user / number, and the display program / library / format of that job. The 'display' program is the highest (most recent) program in the call stack that is calling a display-file or UIM processing program. If no display program is found, the highest call stack entry is shown. The 'format' is the display file format last used by that job.

Remote View						
More than one device was active for user: SMITH						
Select a device from the list below. (1 or 5 = Select)						
Option	Job	User	Number	Display Program	Library	Format
—	DSP23	SMITH	123456	INV200	TESTOBJ	SCREEN1
—	QPADEV0014	SMITH	123457	FOR100	PRODOBJ	SUMMARY
—	QPADEV0017	SMITH	123458	BIL700C	PRODPTF	PROMPT

F3=Exit   F5=Refresh   F16=Resequenece   F21=Command   Enter=Select

The above screen is a sample display from using RVV SMITH. From this screen you can put a '1' or '5' beside a job, or several jobs, to select them for display. You can also use the following function keys:

**Enter** Select job.

**F3** Exit the product.

**F5** Refresh the display.

**F12** Exit the product.

**F16** Re-sequence - sort the list via the column selected by the cursor. The list can be sorted based on any of the shown data columns. The list will be sorted: firstly by the column that was just selected; secondly by the previously selected column; thirdly by the previous-previous selected column, etc. E.g. to sort by Format then User, first sort by User then by Format. Selecting a column for sort twice in a row will cause the sort on that column to be descending.

**F21** Display a command line window.

**Page Up/Down**

## 6.2 When using the RVC command

When using the RVC command, a list of devices matching the selection criteria will display showing the job details. This screen shows the job name / user / number, the type / status / function / display program's library, and the elapsed time. Pressing F11 will show some additional columns: user group, and user description.

Remote View/Change								PRECOSIS
User.: *ALL		Job..: *ALL		Filters: OFF		26/08/03	11:03:55	
Type options, press Enter.								
2=Change 5=Display QTP=QTEMP/LDA CMD=Remote Command Jnn=Job option ...								
Opt	Job	User	Number	Type	Sts	Function	Library	Time
2:05:21	DSP21	ADAM	012345	INT	DSPW	* -CMDENT	QSYS	
7:03	DSP23	ANGELA	123456	INT	DSPW	PGM-INV100	PRODLIB	:
15:51	DSP38	BENNY	234567	INT	DSPW	PGM-DRP200	PTFLIB	
3:16:04	QPADEV0014	HELEN	345678	INT	DSPW	PGM-MENUPGM	MENULIB	
08	QPADEV0018	HELEN	345679	INT	DSPW	PGM-ORD510	PTFLIB	:
0	DSP15	QPGMR	012141	INT	RUN	CMD-RVC	RMTVIEW	: :
1:10:48	DSP01	QSYSOPR	012045	INT	DSPW	PGM-OPERMENU	QGPL	
<b>Bottom</b>								
F3/F12=Exit F5=Refresh F11=View-1/2 F13=Repeat F14=Job filters								
F16=Resequence F21=Command F23=More options								

The above screen is a sample display from using RVC \*ALL. From this screen you can put an Option code beside a job, or several jobs, to select them for display, or change. Valid options are as follows:

- 1 or 5** Select device for View
- 2** Select device for Change
- CMD** Display a command entry window that will allow commands to be sent to another job.
- QTP** Display a command entry window that will allow direct access to the QTEMP and LDA of another job.
- J2** Change job
- J3** Hold job
- J4** End job
- J5** Work with job
- J6** Release job
- J8** Work with spooled files of job
- J13** Disconnect job
- J20** Start Service job
- Wnn** Do a WRKJOB with option **nn**, where **nn** is the option on the Work With Job sub-menu. E.g. **W2** will show Job Definition Attributes; and **W14** will show Open Files. Options W1 to W40 are supported.

Valid function keys for this screen are:

<b>Enter</b>	Select job.
<b>F3</b>	Exit the product.
<b>F5</b>	Refresh the display.
<b>F11</b>	Show alternate view. Additional data columns are shown: User group and User text description. Pressing F11 again will return to the original view.
<b>F12</b>	Exit the product.
<b>F13</b>	Repeat option to end of list. The first non-blank option found on the list will be duplicated through to the end of the list. This is similar to the F13 function used in PDM (Program Development Manager).
<b>F14</b>	Show filters options. A screen will display allowing the list of jobs displayed to be based on more complex selection filters. This will also allow the inclusion of non-interactive jobs and completed jobs.
<b>F16</b>	Re-sequence - sort the list via the column selected by the cursor. The list can be sorted based on any of the shown data columns. The list will be sorted: firstly by the column that was just selected; secondly by the previously selected column; thirdly by the previous-previous selected column, etc. E.g. to sort by Function then User, first sort by User then by Function. Selecting a column for sort twice in a row will cause the sort on that column to be descending.
<b>F21</b>	Display a command line window.
<b>F23</b>	Show additional job options.
<b>Page Up/Down</b>	

## 7. The Change Screen display

To enter Change mode for a session, put a '2' in the Option field next to the device name and press Enter. A 'welcome window' will initially display, giving the instructions of how to use Change mode, similar to the initial window in View mode. Press Enter to continue into change mode, or F3/F12 to exit. A Change Screen for that device will display.

The Change Screen is a copy of the remote screen, rather like the View Screen, but together with input fields. The screen should look like the screen displayed to the remote user, prior to any changes taking place – i.e. if the user has entered data into input fields or moved the cursor around, this will not be visible on your screen (unlike View mode which shows entered data (keystrokes) and the cursor position).

### How to use this screen

Once in this screen, enter data into any input fields as required, then press a Function key or Enter. The contents of the display and the key pressed will be 'transmitted' to the remote device, and that device will respond as if the input had been received from its own keyboard. The local device (your screen) will wait for the remote device to become available again (input enabled), and will then refresh its display, ready for more local input.

### How to exit this screen

To exit Change mode press F1 (not F3). F1 was chosen as an exit key, because most likely this product will be used to exit a user out of an application, plus it is unlikely that you would want to do an F1 on the remote device (and bring up a help display). If you actually do want to do an F1 against the other screen, press F2 to select the F1 action from a sub-menu (described below). Alternatively, you could press the actual Help key (which is mapped to Alt+F1 on IBM's Client Access). Pressing any function key other than F1 or F2 will cause the remote device to respond to that key.

### The 'F1=Exit' marker

The words '**F1=Exit**' will display on the Change screen in reverse image. The purpose of this is to prevent confusion between a copy of a screen and an actual display. It also helps remind the operator not to press F3 to get out, as the habit for doing this could be initially confusing (although for those with System/38 experience, pressing F1 to exit may be *deja-vu*). The letters will be placed in an unused (blank) area near the top right-hand corner of the display, providing such an area can be found, hence their position may change.

### The F2 menu

Press F2 to show a sub-menu window that will allow the System Request, Attention, and the F1 and F2 keys to be sent to the remote job (see below). Press F1 to simulate F1; F2 for F2; F7 for System-Request; F8 for Attention; and F12 to return to Change mode.

```
F1=F1 key
F2=F2 key
F7=Sys-Req
F8=Attention
F12=Resume
```

### The Input Inhibited menu

When the remote screen becomes 'input inhibited', i.e. when it is doing processing, then the local screen will also become input inhibited. During this time it will not be possible to use any function keys or type into input fields. If the remote screen is input inhibited for more than 5 seconds, a small sub-menu window will appear on the local job alerting to the problem (see below). This menu will give the option of: retrying for input (press Enter); returning to the selection list (F12); or sending a System-Request (F7) or Attention (F8) action (these are valid during input inhibited mode) to the remote screen.

```
Device DSP01
is not input enabled
Press Enter to retry or
  F7=Sys-Req
  F8=Attention
  F12=Cancel
```

### The use of other 'Function' keys

The following keys (called Aid-Generating keys) will affect the remote screen: F3 to F24, Enter, Print, Help, Page-Up, Page-Down, Home (record-backspace), and Clear. But the use of the System-Request (SysRq), Attention (Atn) and Test keys (called Signal keys) while in the Change screen, will affect only the local screen. To do a System-Request or Attention on the remote screen, press F2 and use the submenu instead. The Test key is not currently handled; it is a key that is rarely used. Conventional green-screen "dumb-terminal" keys such as Setup, Play & Record, and Jump, will affect only the local device.

## 8. The Job Filters screen

Press F14 from the RVC selection list to see the Job Filters screen (below). The Job Filters screen allows jobs to be filtered by a number of selection criteria which can reduce the number of jobs listed. It can also be used to include jobs that would not normally be selected by default, e.g. batch jobs and jobs which have ended (in OUTQ status). Although these additional jobs cannot be accessed with the View or Change options, they can still be used with the regular job 'Jnn' options and the active ones can be accessed for remote commands.

```
Job Filters

Job . . . . . *ALL      *generic* or name
User . . . . . *ALL      *generic* or name
Number . . . . . *ALL      *ALL, number, or From number
To number . . . . .        To number or blank

User text contains: _____ case insensitive

Include all interactive jobs . . . . . N   Y=Yes  N=No
Include all job types . . . . . N   Y=Yes  N=No
Include jobs in JOBQ/OUTQ status . . . N   Y=Yes  N=No

F3=Exit  F12=Previous
```

There are many selection fields on this screen. Rather than list them all here, you can refer to the help text for each of them for an explanation of what they do. Press F1 to see the help text for each field.

## 9. The Remote Command window

This product allows commands to be sent to other jobs for remote execution. The purpose of this is to allow an operator to do things to that job which could only be done via that job. There are two remote command methods available: (1) remote command execution and (2) QTEMP/LDA access.

### 9.1 Running Remote Commands (type 'CMD')

To run a command on another job, type 'CMD' against the job on the selection list and press Enter. A command line window will appear (see below). Type the command you want to run and press Enter. The command should then begin to run on the other job. A status messages will display while the command is running and another message will show when the command is complete, notifying if errors occurred. For long running commands which take more than 10 seconds to complete, the status message will stop displaying but the command will continue to run on the remote job.

```
Send remote command to job . . . . : 123456/SMITH/QPADEV0001

===>
F4=Prompt  F9=Retrieve  F8=WRKJOB  F10=Joblog  F12=Cancel
```

Valid function keys for this window are:

- Enter** Run command.
- F4** Prompt the command.
- F8** Work with remote job.
- F9** Retrieve the previous command.
- F10** Display job log. For CMD it displays the remote job and for QTP it shows the local job log.
- F12** Return to selection list.

## 9.2 Getting QTEMP/LDA access (type 'QTP')

To get access to another job's QTEMP library and Local Data Area (LDA), type 'QTP' against the job on the selection list and press Enter. A similar command line window will appear. Type the command you want to run and press Enter. The command should then run on the local job (your job) but it will access the QTEMP and LDA of the other job. I.e. while the command is running, any attempts to address QTEMP or LDA of the local job will instead address QTEMP and LDA of the remote job.

E.g. If you were to type DSPLIB QTEMP it would display the library of the other job instead. Or if you were to type CHGDTAARA (\*LDA (5 1)) 'Y', it would change the LDA of the other job.

Valid function keys for this window are the same as for the remote command window.

## 9.3 Differences and advantages between 'CMD' and 'QTP'

The main difference between these two modes is that 'CMD' runs on the remote job whereas 'QTP' runs on your job. So if you wanted to look at something in the remote QTEMP or LDA then 'QTP' is the better choice because it will display directly to your screen. Whereas using 'CMD' to do this would require sending the output to a print or database file then viewing that file. Below is a summary of the benefits and differences between the two modes.

### Benefits of 'QTP' mode:

- Better for working with remote QTEMP or LDA because results can display on local screen
- Can access jobs which are held and disconnected.
- Does not interrupt the other job.

### Benefits of 'CMD' mode:

- Can be used to alter the library list of another job.
- Can be used to access the Group Data Area (GDA) of another job.
- Could be used to start an application for a user who does not have that option available on their menu.

## 10. Setting security rules

This product allows for rules to be defined, determining who may use the product, how it may be used, and what remote jobs may be accessed. To see and edit these rules use the RVEDTSEC (Edit Remote View Security Options) command. From a command line type:

RVEDTSEC

And press Enter (there are no parameters on this command). This will display the security editing program. There are two sections to this program: the Header Options and the Detail Options.

### 10.1 Security Header options

The first screen displayed is the Header Options (below).

```
                                Edit Remote View Security Options

Update header options, press enter.  Press F10 for detail options.

Check special authorities . . . . Y  Y/N
Check file authorities . . . . . N  Y/N
Journal View actions . . . . . N  Y/N
Journal Change actions . . . . . N  Y/N

F3/F12=Exit   F10=Edit details
```

This screen has flags that control the overall testing and auditing. There are four flags:

#### Check special authorities (Y/N)?

When this flag is set to Y (=Yes), the product will test the special authorities of the remote user profile before allowing the local user to use Change mode on that remote user. Special authorities are properties of a user profile specified in the SPCAUT parameter of the Change User Profile (CHGUSRPRF) command which allows a user to perform certain functions on the system. In order for a local user to enter Change mode on a remote user, the local user's user profile must have all the special authorities held by the remote user's profile. This checking effectively prevents users taking control of devices signed on with powerful profiles like QSECOFR. This flag is also tested for Remote commands and QTEMP/LDA access.

E.g. if the remote user has special authorities of \*ALLOBJ and \*SAVSYS, then you must also have these authorities as a minimum to use options '2', 'CMD' or 'QTP' against that user. However you can still use options '5' (view) and the job (Jnn) options.

#### Check file authorities (Y/N)?

When this flag is set to Y (=Yes), the product will ensure that the local user has authority to access all the open files of the remote job. A list of database files open by the remote job is searched. For each physical and logical file open, this product will check that the local user has the appropriate amount of authority for the current mode.

For View mode the local user must have read rights to any file opened for input. For Change mode the local user must have read rights to any file open for input, update rights to any file open for update, and add rights for any file open for output. Remote command and QTEMP/LDA access mode requires the same level of authority as Change mode.

This benefit of this flag is that it allows you to take advantage of an existing security setup which means there is less need to setup individual authorities.

A limitation of this flag is that it will not check the authorities of the physical files that logical files refer to. E.g. suppose a logical file is open for input, and you were authorized to that logical file but not to its physical file. This product will only look at that logical file which will pass the test and allow you to View the job. So in order for this flag to work properly, the logical and physical file authorities will need to be set-up consistently. One way to do this is to put 'public exclusion' on the libraries that they are in or base the file authorities on Authorization Lists.

Valid function keys for this screen are:

- Enter** Update header details.
- F3** Exit the product.
- F10** Display the Edit Details Screen.
- F12** Exit the product.

## 10.2 Security Detail options list

The next screen displayed is the Detail Options list (below). Press F10 to see this screen. This screen contains a list of rules that determine whether an operator is able to access another job and in what modes they may access it in.

Edit Remote View Security Options (Details)										
Select: 1=Add 2=Change 3=Copy 4=Delete 5=Display										
Opt	Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
—	10	U	*ALL	U	*ALL		Y	A	N	N
—	20	U	QSECOFR	U	*ALL		Y	Y	Y	Y

Bottom

F3=Exit F12=Previous F7=Regenerate Sequences

The list is sorted by a sequence number, which is the first data column. This sequence number is important because it determines the order in which the list of rules will be processed. When attempting to access another job, this product will read the detail records in this sequence order. The highest sequence which matches the local user and remote job will determine whether permission is given for the local user to access the remote job in the mode desired. This allows higher sequence records to act as exceptions to rules set by lower sequence records.

The Option field on the left-hand side of the list allows detail records to be displayed and edited. The following options are available:

- 1** Add new record
- 2** Change record
- 3** Copy record
- 4** Delete record
- 5** Display record

Valid function keys for this screen are:

- Enter** Select entry(s) for display, update etc.
- F3** Exit the product.
- F7** Regenerate sequences. The existing sequences will be renumbered: starting at 10 and going in steps of 10.
- F12** Return to header screen.

## 10.3 Security Detail options window

This window displays a set of security details that determine which users can access which jobs and in what modes they can be accessed (see below).

Change details		
Sequence . . . .	<u>10</u>	1-99999 blank=next
Local type . . .	<u>U</u>	U=User G=Group
Local User/Group	<u>*ALL</u>	name, generic*, *ALL
Remote type . .	<u>U</u>	User/Group/Device/Program
Remote u/g/d/p .	<u>*ALL</u>	name, generic*, *ALL
Remote Pgm lib .		name, generic*, *ALL
Allow View . . .	<u>Y</u>	Y=Yes N=No A=Ask
Allow Change . .	<u>A</u>	Y=Yes N=No A=Ask
Allow Command .	<u>N</u>	Y=Yes N=No
Allow QTEMP/LDA	<u>N</u>	Y=Yes N=No
Time out on View confirm .	<u>10</u>	seconds
Default View reply . . . .	<u>Y</u>	Y=Grant N=Deny
Time out on Change confirm	<u>10</u>	seconds
Default Change reply . . .	<u>Y</u>	Y=Grant N=Deny
F12=Previous		

There are several data fields present:

### **Sequence**

The sort order of the record on the details list. This product will read the detail records in this sequence order. The highest sequence that matches the local user and remote job will determine whether permission is given for the local user to access the remote job in the mode desired. This allows higher sequence records to act as exceptions to rules set by lower sequence records.

In modes other than display or delete this number may be overridden with a value between 1 and 999999. If left blank while in add or copy mode, a new sequence number will be generated which is 10 greater than the current highest sequence.

### **Local type**

The Local Type field determines whether the Local User/Group field (below) refers to a User profile (U) or a User profile Group (G).

### **Local User/Group**

This determines how the record should be matched against the local job. If the Local Type field (above) is a 'U' then this field will be compared with the local job user. If the Local Type is a 'G' then this field will be compared with the group profile that the local job user belongs to.

This field has a default value of \*ALL which will match all local jobs. A generic name may also be specified.

### **Remote type**

The Remote Type field determines whether the Remote U/G/D/P field (below) refers to a User profile (U), a User profile Group (G), a Device (D) or a Program (P).

### **Remote User/Group/Dev/Pgm**

This determines how the record will be matched against the remote job. If the Remote Type field (above) is a 'U' then this field will be compared with the remote job user. If the Remote Type is a 'G' then this field will be compared with the group profile that the remote job user belongs to. If the Remote Type is a 'D' then this field will be compared with the device name (which is the job name) of the remote job. If the Remote Type is a 'P' then this field will be compared with each program and library in the call stack of the remote job to see if a match is found. The Remote Program Library field (below) will also be used in this comparison.

This field has a default value of \*ALL which will match all remote jobs. A generic name may also be specified.

### **Remote Program Library**

This field is only referred to if the Remote Type is 'P'. When the Remote Type is 'P' this field will be compared with each program library in the call stack of the remote job to see if a match is found. Both the program and library will be compared together.

This field will be ignored when the Remote Type is not 'P' and has a default blank value. A value of \*ALL will match all libraries. A generic name may also be specified.

### **Allow View**

This field determines whether a View action is allowed against a job. When this record is the highest sequence that matches a local and remote job, the following applies:

'Y' - Grant access. 'N' - Deny access. 'A' - Ask permission - a pop-up window will appear on the user's screen asking permission for their screen to be Viewed.

### **Allow Change**

This field determines whether a Change action is allowed against a job. When this record is the highest sequence that matches a local and remote job, the following applies:

'Y' - Grant access. 'N' - Deny access. 'A' - Ask permission - a pop-up window will appear on the user's screen asking permission for their screen to be Changed.

### **Allow Remote Command**

This field determines whether a Remote Command is allowed against a job. When this record is the highest sequence that matches a local and remote job, the following applies:

'Y' - Will allow the command to run. 'N' - Will disallow the command from being run.

### **Allow QTEMP/LDA Access**

This field determines whether commands can be run which allow access to the QTEMP/LDA of another job. When this record is the highest sequence that matches a local and remote job, the following applies:

'Y' - Will allow the command to run. 'N' - Will disallow the command from being run.

### **Time out on View Confirm**

This field determines the amount of time a pop-up window is displayed on a user's screen, asking permission to have their screen Viewed. The time is in seconds from 1 to 999. After this time has elapsed the window disappears, and a default reply is returned from the Default View Reply field (below).

### **Default View Reply**

This field determines the reply that will be returned if the pop-up permission window for View mode times out. 'Y' will grant access and 'N' will deny access.

### **Time out on Change Confirm**

This field determines the amount of time a pop-up window is displayed on a user's screen, asking permission to have their screen Changed. The time is in seconds from 1 to 999. After this time has elapsed the window disappears, and a default reply is returned from the Default Change Reply field (below).

### **Default Change Reply**

This field determines the reply that will be returned if the pop-up permission window for Change mode times out. 'Y' will grant access and 'N' will deny access.

Valid function keys for this screen are:

- Enter** Process action and return to detail list.
- F11** Delete record if in delete mode.
- F12** Return to detail list without updating.

## 10.4 Security Detail options examples

This section gives examples of how detail records can be defined to achieve desired levels of access.

**Example 1: All access.** Allow all users to access all jobs in all modes (View, Change and Remote commands). This requires only one detail record with all flags set to 'Y'. Both local and remote types are 'U' with \*ALL to signify all users.

Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Usr/ Pgm Lib	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
10	U	*ALL	U	*ALL			Y	Y	Y	Y

**Example 2: View only access but don't restrict QSYSOPR.** Allow all users to access all jobs in but only in View modes. Allow user QSYSOPR access to the other modes also. This requires two detail records. The first one gives all users access to View mode. The second one gives all access to QSYSOPR in all modes. The second record at sequence 20 overrides sequence 10.

Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Usr/ Pgm Lib	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
10	U	*ALL	U	*ALL			Y	N	N	N
20	U	QSYSOPR	U	*ALL			Y	Y	Y	Y

**Example 3: All access but only with user permission.** Allow all users to access all jobs in all modes, but only when the user gives permission. This requires only one detail record with the View/Change flags set to 'A'. On the detail window you will need to set a time-out value and a default reply for each of these. It is not possible to request permission for the Remote Command flags because these can operate on batch jobs which have no screen to show a permission window.

Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Usr/ Pgm Lib	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
10	U	*ALL	U	*ALL			A	A	Y	Y

**Example 4: Allow only specific users and groups.** Allow full access but only to users belonging to the group profile QPGMR, as well as the three users: QSYSOPR, JSMITH and HELEN. This will require four records. The first one refers to a group profile (local type G), and the others by local type 'U'. The default \*ALL-local-user sequence 10 record has been deleted because we are limiting access to specific users.

Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Usr/ Pgm Lib	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
10	G	QPGMR	U	*ALL			Y	Y	Y	Y
20	U	QSYSOPR	U	*ALL			Y	Y	Y	Y
30	U	JSMITH	U	*ALL			Y	Y	Y	Y
40	U	HELEN	U	*ALL			Y	Y	Y	Y

**Example 5: Exclude access to payroll programs and device DSP01, except for QSYSOPR.** Allow all users to access all jobs but do not allow it if the end user is running a program in a library called PAYROLL or the device is DSP01 (the console device). Allow user QSYSOPR access regardless. This requires four detail records. The first one gives all users access to all users. The second one prevents this if the end user is running a program in their call stack that is in the PAYROLL library. The third one further prevents access if the remote job is on device DSP01. The fourth one overrides all the above for QSYSOPR. The sequence order is important here because higher sequence records override the rules set by lower sequences.

Seq	Typ U/G	Local User/Group	Typ UGDP	Remote Grp/Dev/Pgm	Usr/ Pgm Lib	Remote Pgm Lib	View Yes/No/Ask	Chng	Cmd	QTEMP /LDA
10	U	*ALL	U	*ALL			Y	Y	Y	Y
20	U	*ALL	P	*ALL		PAYROLL	N	N	N	N
30	U	*ALL	D	DSP01			N	N	N	N
40	U	QSYSOPR	U	*ALL			Y	Y	Y	Y

## 11. Other considerations

### 11.1 Times when View mode may not work

There are a few situations where this package may be unable to fully copy a screen. They are:

- (a) When the remote job is held. This is rare.
- (b) When the remote job is in a System Request message state. This is when the Sys-Req line is showing at the bottom of the display and the user has yet to type an option and press Enter.
- (c) When the remote device is in an error state. This happens when e.g. the user tries to enter input in a non-input field.
- (d) When the remote job is in 'masked mode'. This normally happens when a job is performing an important function and cannot be interrupted (e.g. from Sys-Req 2). Such moments are usually of short duration.

Under these situations the screen should still be copied, however certain sections may be missing, such as the cursor position and user input data. A highlighted message will appear on the bottom row, alerting of the problems.

### 11.2 Times when Change mode may not work

There are a few situations where this product may be unable to enter Change mode on another screen. They are:

- (a) When the remote job is held.
- (b) When the remote job is in a System Request message state. See above section 11.1.
- (c) When the remote job is in 'masked mode'. See above section 11.1.
- (d) When the remote screen is Input Inhibited, i.e. it is running a program. Under this situation it is still possible to do Sys-Req and Attention key functions. After 5 seconds a window menu will appear allowing Sys-Req and Attention do be done with F7 and F8 respectively. So a SysReq/2 – End Request (ENDRQS) – to abort a remotely running program could still be done, by pressing F7 on the window menu, then putting option 2 on the System Request menu.

### 11.3 Times when Remote commands may not work

Provided that the remote job is still active, the QTEMP/LDA mode (option QTP) should always work, apart from items (c) and (d) below. But there are a few situations when the Remote command mode (option CMD) will not work. They are:

- (a) When the remote job is held, disconnected, an inactive secondary job (via Sys-Req + option 1), or is an inactive group job.
- (b) When the remote job is in 'masked mode'. See above section 11.1.
- (c) When the remote job is a system job.
- (d) When the remote job is running this product also. This restriction is imposed to prevent the possibility of conflicts, if the remote job was also currently using remote commands or the QTEMP/LDA mode on another job.

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## 12. Conditions of use

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