

Using the SEL (Select) Command

You may use the SEL (Select) command from the Migration List Editor to create a migration list, either alone or in conjunction with its expand options.

Use of the SEL command and its options depends on whether the event migrates objects

- into the PAC controlled environment from development, maintenance or incorporation; or
- from or within the PAC controlled environment (other migrations).

The following SEL command options apply for migration events into PAC; for other migrations, only SEL, the default, is valid:

Cmd Used to select . . .

SEL	(default) Natural and/or foreign objects.
SEL E	user error message objects from development.
SEL R	rules to be used during the compile phase of the migration event. Rules must have been previously migrated into the Predict application.
SEL V	views to be used during the compile phase of the migration event. Views must have been previously migrated into the Predict application.

This chapter covers the following topics:

- Expand Options
 - Creating the Migration List
 - Migrations into PAC
 - Other Migrations
-

Expand Options

The following expand options are available with the SEL command:

Option Include in the migration list:

C	Marked object and subordinate objects; for compile time. Valid for the default SEL command only.
E	Marked object and both subordinate and referenced objects; for both compile time and runtime (expand options C+R). Valid for the default SEL command only.
R	Marked object and referenced objects; for runtime. Valid for the default SEL command only.
S or X	Marked object only.
U	Marked object and objects used by the marked object.

The expand options C, E, R, and U use cross-reference (Xref) data from:

- Predict for migrations into PAC.
- PAC for all other migrations.

When migrating objects into PAC (that is, from development or maintenance status), the expand options are valid only if cross-reference data exists for the object as specified by the Predict location for the application status.

C includes data areas, copy code, views, rules, or maps used as subordinate objects by the marked object. These objects are required in order to properly compile the marked object.

E includes both subordinate and referenced objects in the list with the marked object.

R includes all objects referenced by the marked object. For instance, if the marked object is a program, it may reference other programs, subprograms, or subroutines. These objects are required in order to properly execute the marked object at runtime.

S or X include just the marked object. You can also select individual objects by entering the object number (from the "Nr" column) in the Mark Selection... field.

U includes the marked object and all Natural objects that use that object. For example, if the marked object is a program, other programs that use the marked program would also be included in the list.

Creating the Migration List

To create the migration list for migrations using the SEL command, do the following:

1. Display the Migration List Editor window.
2. Select the objects to be migrated.
3. Save the resulting migration list in the Migration List Editor.

Migrations into PAC

The SEL command is used differently to migrate Natural, foreign, user error message, rule and view objects into the PAC controlled environment.

Natural or Foreign Objects

To select Natural or foreign objects for the list, enter SEL on the command line of the Migration List Editor window.

The 'SEL' Origin Location window for Natural objects appears:

```

16:43:11          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR
+-----+
> SEL              > + TX: Migration List
All...+...1...+...2...+... S 1   L
+-----+
Event ..... NEWEVENT
Keys ..... /
Application .. ORDERS
From Status .. DEVELOPMEN
To Status .... USER_TEST_
Exec Mode .... MOVE Objec
Scheduled .... 2000-07-09
Notes .....
-----
-----
Maintenance Request .. _
Processing State .... Pe
Validate list ..... N
Additional Options ... Y
Command ===>
Enter-PF1---PF2---PF3---PF
Help Menu Exit Opt+
+-----+
- 'SEL' Origin Location -
Natural Library ..... NATDEV (235/101)
Object Name .....
NATURAL Object Type .....
Foreign Object Type .. ...
Date From .....
Date To .....
+-----+

```

This 'SEL' Origin Location window displays the Natural library name, database, and file number where the application origin status is located, as well as the Object Name, Natural Object Type, Foreign Object Type, and Date From/Date To fields in which you may enter your selection criteria.

For Natural Objects

Enter the desired object name and object type, and if desired, a compile date range in the Date From/Date To fields in yymmdd format. Alternatively, leave these fields blank, or specify a range of objects and/or object types to limit the selection list.

The Object Selection List screen appears displaying a list of all objects that satisfy the selection criteria:

```

08:22:45          ***** PREDICT APPLICATION CONTROL *****          2000-07-01
User PACUSR          - Object Selection List -
Library .. ORD-EXAM (235,9)
C Nr Object      Object Type Ver-Lev User      Cat Date-Time      Saved Date-Time
- - - - -
_  1 NHL          Helproutine 2.3 002 XX        20000214 09:54:50 20000214 09:54:50
_  2 ORD-AHLP     Helproutine 2.3 002 PACUSR   20000203 13:26:16 20000319 11:20:37
_  3 ORD-COPY     Copycode    2.3 002 SADXX                20000607 15:42:26
_  4 ORD-CUST     Subroutine  2.3 002 PACUSR   20000319 11:19:35 20000319 11:20:51
_  5 ORD-END      Subroutine  2.3 002 PACUSR   20000319 11:19:37 20000319 11:20:55
_  6 ORD-GLOB     Global      2.3 002 SADXX                20000203 13:25:19 20000203 13:25:19
_  7 ORD-INV      Subroutine  2.3 002 PACUSR   20000319 11:19:40 20000319 11:19:40
_  8 ORD-LINE     Subroutine  2.3 002 PACUSR   20000319 11:19:46 20000319 11:19:46
_  9 ORD-LIN1     Subroutine  2.3 002 PACUSR   20000319 11:19:54 20000319 11:19:54
_ 10 ORD-MAIN     Program     2.3 002 PACUSR   20000319 11:20:08 20000319 11:20:08
_ 11 ORD-MAIL     Program     2.3 002 PACUSR   20000319 11:20:13 20000319 11:20:13
_ 12 ORD-MAP      Map         2.3 002 XX        20000214 09:55:33 20000214 09:55:33
_ 13 ORD-NHLP     Helproutine 2.3 002 XX        20000214 09:55:43 20000214 09:55:43
_ 14 ORD-RLIN     Subroutine  2.3 002 PACUSR   20000319 11:20:15 20000319 11:20:15

          Mark Selection, Enter Number or 'T' (Top) ___

Command====>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Help  Menu  Exit                                Canc
    
```

Column	Description
C	Input field for entering selection (SEL) expand options.
Library	Name, database, and file number of library where objects are physically located in development or maintenance
Nr	Number assigned to the object on the immediate screen.
Object	Names of application objects that meet the specified selection criteria.
Object Type	Type of the named object. You must update the entry using the Object List Editor to include dynamic source.
Ver-Lev	The Natural version and system maintenance level under which the object resides in development or maintenance.
User	ID of the user who saved the object.
Cat Date-Time	Date and time the object was compiled (that is, cataloged).
Saved Date-Time	Date and time the object was saved. Highlighted date-times indicate the object was saved after the object version was compiled.

Select the objects you want to include by marking them in the "C" column; or enter the object number (from the "Nr" column) for an individual object in the Mark Selection... field.

All available expand options can be used when migrating Natural objects into PAC:

Option Include in the migration list:

-
- C Marked object and subordinate objects; for compile time.
 - E Marked object and both subordinate and referenced objects; for both compile time and runtime (expand options C+R).
 - R Marked object and referenced objects; for runtime.
 - S or X Marked object only.
 - U Marked object and objects used by the marked object.

The expand options C, E, R, and U use cross-reference (Xref) data from Predict for migrations into PAC.

Foreign Object Types**Note:**

Range notation is not currently available for foreign objects.

On the 'SEL' Origin Location screen, enter the name and type of the foreign object or an asterisk (*) in the Object Type field to display a list of all defined datasets and object types. Alternatively, leave the Object Name field blank.

The Foreign Datasets screen appears:

```

08:22:45          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR          - Foreign Datasets -
                                     Page 1 of 1
C Dataset Type T Object Dataset Name
-----
_ AS Src & Ld S 3ASB RD.PAC200.DEV.ASM.SOURCE
_ AS Src & Ld L 3ASB RD.PAC200.DEV.ASM.SOURCE
_ NAT Nuke L 3NAT RD.COMN.NAT227.USER.LOAD
_ Cobol Source S 3CLG RD.PAC200.DEV.COBOBOL.SOURCE
_ Job Cntl Lan S 3JCL RD.PAC200.DEV.JCL.SOURCE

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit
                                     Canc

```

This screen displays a list of all datasets defined to the application that satisfy the selection criteria.

Column	Description
C	Input field for selecting a dataset with X.
Dataset Type	The type of foreign objects included in the dataset.
T	The type of dataset: L (load; that is, compiled) or S (source).
Object	The foreign object type code; all codes begin with '3'.
Dataset Name	The name of the dataset containing the foreign objects.

Select the dataset(s) that contain the objects to be included in the migration list by marking the dataset(s) with X in the "C" column.

If you mark more than one dataset, the resulting object selection list for each dataset you selected is displayed one after the other.

The Object Selection List screen appears:

```

08:22:45          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR          - Object Selection List -
Dataset .. RD.COMN.NAT227.USER.LOAD (MVS/ESA,NAT Nuke)
C Nr Object  S/C Size  Date    TTR    Attributes
-----
_  1 $NAT227O C      9096 28/09/97 000022 RENT REUS
_  2 $NCI227  C     30784 28/09/97 000308 RENT REUS
_  3 $NCI227  C     78544 28/09/97 000111 RENT REUS
_  4 $NCI227I C      3248 28/09/97 000404
_  5 $NCI227P C       136 28/09/97 00040C RENT REUS
_  6 $NCI227R C      10080 28/09/97 000429 RENT REUS
_  7 $NTI227T C       8752 28/09/97 00051A RENT REUS
_  8 CAF227RE C    16797664 28/09/97 000703 RENT REUS
_  9 NATCICS  C     30784 28/09/97 000308 RENT REUS
_ 10 NATCOMPR C     10080 28/09/97 000429 RENT REUS
_ 11 NATOS    C       9096 28/09/97 000022 RENT REUS
_ 12 NATTSO   C       8752 28/09/97 00051A RENT REUS
_ 13 NAT227BA C    1676696 28/09/97 003403 RENT REUS
_ 14 NAT227PR C     808464 28/09/97 00600C

Mark Selection, Enter Number or 'T' (Top) __

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help Menu Exit                               Canc
    
```

The information displayed on the Object Selection List screen is unique to the dataset you selected. This example screen displays the objects for an MVS/ESA Natural nucleus dataset as indicated in the Dataset field above the table on the screen.

Column	Description
C	Input field for selecting objects with X.
Nr	Number assigned the the entry for this particular screen.
Object	Name of the object within the specified dataset.
S/C	Indicates whether the object is saved (S) or cataloged (C).
Size	The size of the object in bytes.

The date listed is simply for documentation purposes and has no significance within PAC. The TTR field displays the address offset in the directory; and the Attributes field displays site-specific attributes of the object.

Select the objects to be included in the migration list by marking them with X in the "C" column.

Foreign objects cannot be expanded. However, Natural objects can be expanded to include foreign objects as subordinates.

The Object List Editor reappears listing the objects you selected. PAC automatically identifies the foreign object by affixing a 3 to the foreign object type code; for example, COBPGM,3COB.

User Error Message Objects

Note:

User error message objects cannot be included in a migration list with other object types.

To select user error message objects for a list, enter SEL E on the command line of the Migration List Editor window.

The 'SEL' Origin Location window for user error messages appears:

```

11:22:01          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR      +-----+
Event ..... ANEVENT__ | > SEL E          > + TX: Migration List
Keys ..... // | All...+...1...+...2...+... S 1 L 1
Application .. ORDERS |
From Status .. DEVELOPMEN |
To Status .... CONTROL__ |
Exec Mode .... COPY Objec |
Scheduled .... 2000-05-05 |
Notes ..... |
Maintenance Request .. __ |
Processing State ..... Va |
Validate List ..... N |
Additional Options ... N |
Command ==>
Enter-PF1---PF2---PF3---PF
Help Menu Exit Op +-----+
- 'SEL' Origin Location -
From Library . ORD-EXAM
DBnr/Fnr ..... 235 / 17
Error From ... 1__
Error To ..... 9999
    
```

The 'SEL' Origin Location window for user error messages displays the library name, database, and file number where the application origin status is located, as well as the Error From/Error To fields allowing you to specify an error message number or a range of numbers to be selected.

Enter the user error message number (for example, 0078) in the Error From field, or a range in the Error From/Error To fields. Or you can leave these fields blank.

The Error Selection List screen appears:

```

11:23:05          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR              - Error Selection List -
Library .. ORDERS (235,18)
C Nr Error Error Message Text
-----
_ 1 0077 Object has been selected.
_ 2 0078 Object does not exist.
_ 3 0079 Duplicate object.

Mark Selection, Enter Number or 'T' (Top) __
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit          --          +          Canc

```

This screen displays a list of all user error messages that satisfy the selection criteria. The library name, database, and file number where the objects listed are physically located in development or maintenance is displayed above the table on the screen.

Column	Description
C	Input field for entering object expand options.
Nr	Number identifying the list item on this particular screen.
Error	The user error message number.
Error Message Text	Text of the user error message.

Select the objects you want to include by marking them in the "C" column; or enter the screen number (from the "Nr" column) for an individual error message object in the Mark Selection... field.

The following expand options can be used when migrating user error messages into PAC:

Option Include in the migration list:

- S or X Marked object only.
- U Marked object and objects used by the marked object.

Sorting the List

After you have made your selections on the above screen, PAC sorts the migration list. For migrations into PAC, the list is sorted in ascending sequence as illustrated in the following example:

1. E0001, E0002, E0003, E0006, E0007, and E0008 are selected on the Error Selection List screen.
2. When you press ENTER, you have the opportunity to select additional objects.

3. You select E0004 and E0005 and press ENTER again.
4. PAC sorts the list and the objects are selected as follows:
 E0001-E0005
 E0006-E0008

Rules and Views

To select rules or views for a list, enter SEL R or SEL V, respectively, on the command line of the Migration List Editor window.

The 'SEL' Origin Location window appears for rules or views as specified. The window shown in the following example is for rules:

```

11:24:16          ***** PREDICT APPLICATION CONTROL *****                2000-01-01
User PACUSR
+-----+
Event ..... ANEVENT__ | > SEL R                               > + TX: Migration List
Keys ..... /| All...+...1...+...2...+... S 1   L 1
Application .. ORDERS__|
From Status .. DEVELOPMEN|
To Status .... CONTROL__|
Exec Mode .... COPY Objec|
Scheduled .... 2000-05-05 |
+-----+
Notes ..... _____|
| _____| Application .. Predict
| _____| Status ..... CONTROL
| _____| Rule Name .... _____
Maintenance Request .. __|
Processing State ..... Pe| Date From .... _____
Validate List ..... Y   | Date To ..... _____
Additional Options ... N |
+-----+
PAC7254: (I) Event has bee|
Command ===>|
Enter-PF1---PF2---PF3---PF|
Help Menu Exit Op +-----+
    
```

The 'SEL' Origin Location window for rules displays the application name Predict and status name CONTROL, as well as the Rule Name, Date From/Date To fields in which you may enter your selection criteria. The window for views is identical except that a View Name field replaces the Rule Name field.

Enter the rule or view name or range notation to limit the selection list. You may optionally specify a migration date in the Date From field or a range in the Date From/Date To fields in the format yymmdd. Alternatively, leave these fields blank to display a list of all rules or views.

The Object Selection List screen for rules or views appears displaying a list of all objects that satisfy the selection criteria. The example screen shown below is for views:

```

11:25:56          ***** PREDICT APPLICATION CONTROL *****          2000-05-06
User PACUSR          - Object Selection List -

C Nr Object Name          Object Type Ver Migration Date-Time
-----
_  1 ARTICLE              View      0001 2000-03-21 17:46:55
_  2 AUTOMOBILES          View      0001 1998-03-21 17:46:49
_  3 AUTOMOBILES-ADA      View      0001 1998-03-21 17:46:49
_  4 CUSTOMER-1          View      0001 2000-03-21 17:46:55
_  5 EMPLOYEES            View      0001 1998-04-12 11:51:38
_  6 EMPLOYEES-FILE      View      0001 2000-04-12 11:51:35
_  7 FINAN                View      0003 1998-04-29 09:18:10
_  8 FINAN                View      0002 1998-04-29 09:13:44
_  9 FINAN                View      0001 2000-04-29 09:09:08
_ 10 FIN-PAC-1           View      0001 2000-04-15 03:19:50
_ 11 FIN-PAC-1           View      0001 2000-04-15 03:19:51
_ 12 INVOICE              View      0001 2000-05-04 12:27:17
_ 13 INVOICE-LINE        View      0001 1998-05-04 12:27:17
_ 14 SAGNAS-EMPLOYEES    View      0002 2000-04-22 13:30:25

                Mark Selection, Enter Number or 'T' (Top) ___

Command====>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit          --          +          Canc
    
```

Column	Description
C	Input field for entering object expand options.
Nr	Number identifying the list item on this particular screen.
Object Name	Name of the rule or view.
Object Type	Type of the object: rule or view
Ver(sion)	The version number assigned to the object if it has previously entered the PAC controlled environment.
Migration Date-Time	Date and time the object was migrated into PAC.

Select the objects you want to include by marking them in the "C" column; or enter the screen number (from the "Nr" column) for an individual object in the Mark Selection... field.

The following expand options are valid when migrating rules and views into PAC:

Option Include in the migration list:

- S or X marked object only.
- U marked object and objects used by the marked object. This option uses cross-reference (Xref) data from Predict for migrations into PAC.

Other Migrations

The migration lists created using the procedure in this section apply to migrations from any origin status other than development, maintenance, or incorporation.

```

16:47:35          ***** PREDICT APPLICATION CONTROL *****          2000-01-01
User PACUSR
Event ..... NEWEVENT | > SEL | > + TX: Migration List
Keys ..... / / / / / / / / | All...+...1...+...2...+... S 1 L
Application .. ORDERS_____ |
From Status .. CONTROL_____ |
To Status .... DEVELOPMEN |
Exec Mode .... COPY O+-----+
Scheduled .... Date | - 'SEL' Origin Location -
Replace ..... N |
Notes ..... _____ | From Status ..... CONTROL _____
_____ | Object Name ..... _____
_____ | Object Type(s).... _____
Maintenance Request . |
Processing State .. | Select only Objects with no Application Status ... N
Validate list .....+-----+
Additional Options ..... |

Command ==>
Enter-PF1---PF2---PF3---PF|
Help Menu Exit Op+-----+

```

1. Enter SEL on the command line of the Object List Editor window. The 'SEL' Origin Location window appears.

This window displays the status from which the objects are to be selected; that is, the From Status specified on the Add/Modify Event screen.

2. Enter the object name and/or object type in the relevant fields, or enter range notation to limit the list.

If the From Status (origin) is "CONTROL", you can specify whether you want the list to contain objects that exist in Control and other statuses as well (N, the default) or objects that exist only in the Control status.

3. If you want to limit the list to objects that exist only in Control, overtype the default with Y in the "Select only objects with no application status" field. For the origin status Control, the Version History screen appears displaying a list of object versions in the Control status and any other statuses current for the application.

```

12:11:12          ***** PREDICT APPLICATION CONTROL *****          2000-10-10
User PACUSR          - Version History -
SELECT Object * Status *
C Nr Object Name          Object Type          Ver Migration Date-Time
- - - - -
_ 1 AHLP          Helproutine          0006 2000-06-17 07:33:11
   USER_TEST          2000-06-17 07:33:53
_ 2 AHLP          Helproutine          0005 2000-06-15 07:58:00
_ 3 AHLP          Helproutine          0004 2000-06-14 20:00:02
   PRODUCTION          2000-06-15 07:56:11
_ 4 AHLP          Helproutine          0003 2000-06-14 19:55:31
_ 5 AHLP          Helproutine          0002 2000-06-13 14:24:01
   SYSTEMS_TEST          2000-06-13 16:04:59
_ 6 AHLP          Helproutine          0001 2000-06-21 17:53:10
_ 7 ARTICLE          View          0001 2000-06-14 19:27:47
   USER_TEST          2000-06-17 07:33:58
   SYSTEMS_TEST          2000-06-13 16:05:02
   PRODUCTION          2000-06-15 07:56:14

          Mark Selection, Enter Number or 'T' (Top) ___
PAC2003: (E) Select one or more lines.
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Help Menu Exit          --          +          Canc
    
```

For an origin status other than Control, the following Object Version Selection List screen appears displaying a list of objects currently in the specified origin status:

```

14:12:08          ***** PREDICT APPLICATION CONTROL *****          2000-10-26
User PACUSR          - Object Version Selection List -
SELECT Object * Status MAINTENANCE
C Nr Object Name          Object Type          Ver Migration Date-Time
- - - - -
_ 1 AHLP          Helproutine          0004 2000-08-14 20:00:02
_ 2 CUSTOMER-1          View          0001 2000-08-14 19:27:48
_ 3 DEL-INV          Program          0004 2000-08-14 20:00:03
_ 4 L-ARTICL          Local          0003 2000-08-14 20:00:04
_ 5 L-CUSTOM          Local          0003 2000-08-14 20:00:04
_ 6 L-INV-LN          Local          0003 2000-08-14 20:00:04
_ 7 L-INVOIC          Local          0003 2000-08-14 20:00:04
_ 8 LI-CUST          Program          0003 2000-08-14 20:00:04
_ 9 MENU          Program          0004 2000-08-14 20:00:05
_ 10 NHL          Helproutine          0004 2000-08-14 20:00:05
_ 11 ORD-AHLP          Helproutine          0004 2000-08-14 20:00:05
_ 12 ORD-COPY          Copycode          0004 2000-08-14 20:00:06
_ 13 ORD-CUST          Subroutine          0004 2000-08-14 20:00:06
_ 14 ORD-END          Subroutine          0003 2000-08-14 20:00:06

          Mark Selection, Enter Number or 'T' (Top) ___
PAC2003: (E) Select one or more lines.
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Help Menu Exit          --          +          Canc
    
```

Column	Description
C	Input field for entering object expand options.
Nr	Number identifying the list item on this particular screen.
Object Name	Name of the object and other statuses in which the object version also exists.
Object Type	Type of the object.
Ver(sion)	The version number assigned to the object when it entered the PAC controlled environment.
Migration Date-Time	Date and time the object was migrated into PAC.

The specified origin status is displayed on the line below the User field.

4. Select the objects you want to include by marking them in the "C" column; or enter the object number (from the "Nr" column) for an individual object in the Mark Selection... field.

All available expand options can be used for "other" migrations:

Option Include in the migration list the marked object . . .

C	and subordinate objects; for compile time.
E	and both subordinate and referenced objects; for both compile time and runtime (expand options C+R).
R	and referenced objects; for runtime.
S or X	only.
U	and objects used by the marked object.

For "other" migrations, the expand options C, E, R, and U use cross-reference (Xref) data from PAC.

The Migration List Editor window now displays the objects you selected.

5. Enter SAVE on the editor command line to save the migration list.
6. Enter a period (.) on the editor command line to exit the Migration List Editor window.

If you attempt to exit the Migration List Editor before you save your modifications, a warning window appears requesting that you save or abandon changes, or return to the editor.