

# Migration Utility

The PAC Migration utility may be used in conjunction with PAC migration events, using the command MIGLOAD.

MIGLOAD is used to load Natural cataloged objects (including cross-reference data if desired), saved objects, and views into the Natural system files.

**Note:**

MIGLOAD is used to load objects into PAC that have been previously created in a PAC migration event (using workfile).

This chapter covers the following topics:

- MIGLOAD
  - User Exit for the Migration Utility
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  - User Exit for the Migration Utility
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## MIGLOAD

MIGLOAD is used to load Natural cataloged objects (and associated cross-reference data if available), saved objects, views, and Natural user error messages into the Natural system files.

MIGLOAD loads

- views into the Predict system file (FDIC);
- Natural programming objects and user error messages into the PAC system / Natural system files (FNAT and FUSER).
- Foreign objects.

Objects unloaded with either the NATUNLD or the TRANSFER utility are incompatible with the format supported by MIGLOAD and cannot be used.

The input for MIGLOAD is read from Natural Work File 1.

This section covers the following topics:

- Accessing MIGLOAD
- Attributes of MIGLOAD
- Executing MIGLOAD Using Direct Commands
- Executing MIGLOAD in Batch Mode
- The MIGLOAD Report

## Accessing MIGLOAD

To access MIGLOAD, enter the command MIGLOAD at the NEXT prompt in Natural.

The Migrate Load Utility screen appears:

```

08:25:55          ***** PREDICT APPLICATION CONTROL *****          2001-04-25
User DBA          - Migrate Load Utility -          Library SYSPAC

Processing type ..... L      ( 'L' to load or 'S' to scan )
File security exit .. N      ( User exit MIGEX003 must be used ? )

=====
Load file ( NATURAL work file 1 ) must be created by PAC transfer event
=====
                PAC migrate load utility does not support
                load files created by NATUNLD utility
=====

Command ==>

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

The following section describes the functions available on this screen. These may be used individually or in any combination.

## Attributes of MIGLOAD

The attributes of MIGLOAD displayed on the Migrate Load Utility screen are discussed in the following sections:

### Processing Type

The types of processing to be performed.

- L Load objects for a library / libraries.
- S Scan the MIGLOAD file without performing the load. The exact contents of the load file may be verified through the MIGLOAD report. By default, all objects on the load file are scanned.

### File Security Exit

Whether or not the MIGEX003 security exit is to be used.

- Y use MIGEX003 security exit.
- N do not use MIGEX003 security exit.

## Executing MIGLOAD Using Direct Commands

Under the control of PAC, MIGLOAD is used specifically for loading Natural objects from a work file into and between statuses within PAC, and for loading objects into the PAA production environment. Outside the control of PAC, MIGLOAD may also be used for general migration.

Normally, objects unloaded from PAC are loaded using the following direct command:

**MIGLOAD,LOAD**

This section describes the variations of this command that can also be used.

The MIGLOAD direct command may be issued from most PAC screens, from Natural NEXT mode, or from the Natural Main Menu. The direct command syntax for loading Natural objects is as follows:

### Syntax 1

**MIGLOAD {LOAD | SCAN}**

### Syntax 2

**MIGLOAD LOAD, {Y | N}**

#### Keywords Explanation

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LOAD	Instructs PAC to load the contents of the work file depending on the selection criteria.
SCAN	Instructs PAC to scan, but not load, the contents of the work file.

## Executing MIGLOAD in Batch Mode

Use a direct command to execute MIGLOAD in batch mode.

### Using Parameters

When executing MIGLOAD in batch mode using parameters, individual parameter values must be separated by the delimiter character (the default is ",").

It is recommended that the input-mode parameter (IM) be set to delimiter mode (IM=D).

### Using Direct Commands

Using direct commands, MIGLOAD is invoked in batch mode in the same way as online (see above); however, a direct command string must follow the MIGLOAD command.

You may enter direct commands in either of the following ways:

- The direct command string follows the MIGLOAD command on the same input line; each parameter in the command string may be delimited by a blank instead of the delimiter character.
- The direct command string follows the MIGLOAD command on the next input line; each parameter in the command string must be delimited by the delimiter character and not by a blank. If the direct command string is longer than one line, you must place the CF character at the end of the current line to be able to continue on the next line.

### Condition Codes in Batch Mode

If an error occurs during MIGLOAD execution, an error message appears and MIGLOAD terminates with a condition code.

### The MIGLOAD Report

MIGLOAD provides an audit report, which is a list of the objects that were loaded by MIGLOAD, including where they were loaded to. Additionally, after all MIGLOAD commands have been processed, a summary report is printed (displayed) giving totals for program objects loaded. The following screens are examples of the MIGLOAD report:

The following output (1-3) is an example of loading Natural objects.

Output 1

```

09:25:35          ***** PREDICT APPLICATION CONTROL *****          2001-04-25
User PACBAT              - Migrate Load Utility -              Library SYSPAC
                               Page 1
Processing load file created on 2001-04-25 at 09:22
System files used for load:  NATURAL ... (00164,00247)
                             PREDICT ... (00164,00235)
    
```

Output 2

```

09:25:35          ***** PREDICT APPLICATION CONTROL *****          2001-04-25
User PACBAT              - Migrate Load Utility -              Library SYSPAC
                               Page 2
Object      Object  Obj  Action          Date-Time      User          Dest.      NAT.  Xrf
Name.Version  Type  Frm  Save or Cat     Save or Cat   ID           Library    Level Ind
GLOB1.0004   Global Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
GLOB2.0004   Global Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
GLOB3.0004   Global Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
GLOB4.0004   Global Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
GLOB5.0004   Global Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP1.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP10.0004   Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP2.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP3.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP4.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP5.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP6.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP7.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP8.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
MAP9.0004    Map    Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB1.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB2.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB3.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB4.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB5.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
SUB6.0004    Subpgm Cat Replacing  2001-04-04 10:42 DBA      DBA T23    3.1.4 S
    
```

Output 3

```

*** MIGRATE Load has terminated successfully ***
09:25:36          ***** PREDICT APPLICATION CONTROL *****          2001-04-25
User PACBAT          - Migrate Load Utility -          Library SYSPAC
                                          Page 3

          Statistical Report of Objects Processed
                                Saved      Cataloged
                                -----      -----
Global Data Area .....          0          5
Local/Param Data Area ..          0          0
Maps .....          0          10
Help routines .....          0          0
Subroutines .....          0          0
Subprograms .....          0          8
Programs .....          0          24
Copycode .....          0
Text .....          0
Process .....          0          0
Miscellaneous Objects ..          0          0
Views .....          0
Short Errors .....          0
Extended Errors .....          0
Total programming obj ..          0          47
Total objects Read .....          0          47
Total Objects Loaded ...          0          47 ***

NEXT FIN
NAT9995 NATURAL SESSION TERMINATED NORMALLY
    
```

The following output (1-3) is an example of loading foreign objects.

Output 1

```

DATA LOAD
10:49:20          ***** PREDICT APPLICATION CONTROL *****          2001-04-26
User PACBAT          - Migrate Load Utility -          Library SYSPAC
                                          Page 1

          Processing load file created on 2001-04-26 at 10:47
          System files used for load:  NATURAL ... (00164,00247)
                                          PREDICT ... (00164,00235)
    
```

Output 2

Object Name.Version	Object Type	Obj Frm	Action	Date-Time Save or Cat	User ID	Dest. Library	NAT. Level	Xrf Ind
10:49:20	***** PREDICT APPLICATION CONTROL *****				2001-04-26			
User PACBAT	- Migrate Load Utility -				Library SYSPAC			
						Page 2		
BPPURG.0007	Module	Cat	Adding	2098-09-25 12:12	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
BR14.0007	Module	Cat	Replacing	2098-05-24 14:52	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
DEF164.0007	Module	Cat	Replacing	2098-05-25 15:38	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
FRM164.0007	Module	Cat	Replacing	2098-05-25 15:39	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPERR.0007	Module	Cat	Replacing	2099-04-04 20:39	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPL.0007	Module	Cat	Replacing	2098-05-20 16:01	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPLF23.0007	Module	Cat	Adding	2099-03-09 13:01	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPLN22.0007	Module	Cat	Adding	2098-05-20 10:52	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPL22.0007	Module	Cat	Adding	2099-04-08 10:22	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPL23.0007	Module	Cat	Adding	2098-06-17 23:19	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
INPL31.0007	Module	Cat	Adding	2099-03-09 16:54	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
LOADF.0007	Module	Cat	Adding	2099-04-08 10:08	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
NATLOAD.0007	Module	Cat	Adding	2098-08-19 15:17	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				
NATUNLD.0007	Module	Cat	Adding	2098-08-20 09:14	N/A			
			Destination Dataset ...	DBA .PACDEMO.TST.JCL				

## Output 3

```

10:49:46          ***** PREDICT APPLICATION CONTROL *****          2001-04-26
User PACBAT          - Migrate Load Utility -          Library SYSPAC
                                          Page 3

          Statistical Report of Objects Processed
                                Saved      Cataloged
                                -----      -----
Global Data Area .....          0          0
Local/Param Data Area ..          0          0
Maps .....          0          0
Help routines .....          0          0
Subroutines .....          0          0
Subprograms .....          0          0
Programs .....          0          0
Copycode .....          0
Text .....          0
Process .....          0          0
Miscellaneous Objects ..          0          33
Views .....          0
Short Errors .....          0
Extended Errors .....          0
Total programming obj ..          0          33
Total objects Read .....          0          33
Total Objects Loaded ...          0          33 ***

NEXT FIN
NAT9995 NATURAL SESSION TERMINATED NORMALLY
    
```

The attributes of the MIGLOAD report screens are described in the following table:

Attribute	Indicates . . .
Action	whether an existing object with the indicated name was replaced or not, or whether the object was added or deleted.
Date/Time of Save or Cat	the date and time the loaded object was saved or cataloged.
Destination Dataset	the name of the foreign object dataset to which the objects are being / were loaded.
Dest Library	the name of the library to which the object was loaded.
Object format	whether the loaded object is a saved or a cataloged object, or Xref data.
Object Name / Version	the name and version number of the object that was loaded.
Object Type	the type of the object that was loaded.
User ID	the user who saved or cataloged the loaded object.
Natural Level	the Natural system maintenance level of the loaded object.
Xref Ind	option specified in the load parameters for the disposition and conditions to be honored based on the presence of Xref data.

## User Exit for the Migration Utility

PAC provides the MIGEX003 user exit for the migration utility.

The MIGEX003 user exit is an alias for PACEX003 and is invoked whenever PAC needs to access a Natural or Predict file to retrieve or store Natural or Predict objects.

Refer to the section User Exits for detailed information.