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Entire Operations

Import/Export Functions

Version 5.5.3

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ADABAS & NATURAL

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1 About this Documentation

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 General Purpose and Backward Compatibility

Import/export functions can be used for various purposes:

- Migration between different Entire Operations versions,

- Mass updates,

- Migration from other production control products or from user applications.

⚠️ **Caution:** Be careful when migrating networks and jobs to other operating systems.

Entire Operations uses different sets of operating system specific fields for the supported platforms z/OS, BS2000, UNIX and Windows. As a result, the external format is incompatible from one platform to another. This depends on the operating system of the JCL node and/or on the operating system of the execution node of each network and job. If you edit the external format to achieve transportability to a different operating system, you do this at your own risk. It would therefore be advisable to contact Entire Operations support at Software AG for assistance.

Record Format

The import/export functions provided by Entire Operations perform the following:

- Transform the records from the Entire Operations database into an external format, or

- Analyze an external format and transform it into the Adabas format.

The following is an example representation of Entire Operations objects within the database.

Job	Job-Type	Execution-Node	...
JOB-1	MAC	148	...
JOB-2	JOB	31	...

The same Entire Operations objects transformed into the external format would be as follows:

```
OBJECT=JOB
JOB=JOB-1
JOB-TYPE=MAC
EXECUTION-NODE=148
...
END-OBJECT
OBJECT=JOB
JOB=JOB-2
JOB-TYPE=JOB
EXECUTION-NODE=31
...
END-OBJECT
```

Export File Format

The export file format conforms to the following specifications:

- A plain file format:
  - **Natural:**
    Natural Source format
  - With Natural Security Version 8.2.4 it is possible to use Natural libraries that are defined as private libraries in Natural Security as target/source of an export/import operation.
  - **UNIX, Windows:**
    ASCII text files
- The maximum record size does not exceed 240 (limited by Natural).
- Accessibility of the above file types by Entire System Server and/or Entire Connection.
- Simple external representation of all data types.
- The export file format does not contain any non-printable character or field in internal format because of EBCDIC - ASCII conversion.
- Keywords do not consist of any internal abbreviations (e.g. Adabas short names), since they may change from one version to another.
- PC or UNIX import and export.

Backward Compatibility of Export

During all exports, you will be prompted for the export target version.

The export will then be performed in a way which is compatible to the target version.

The following reasons may cause an erroneous termination of the export:

- **A field is unknown to the earlier version**

  If the field is unknown in the target (i.e. old) version, the field will be skipped.

  If there is no useful way to export the object without meaning loss, the export will be terminated with an error.

- **A field size was increased**

  If the field's content would not fit into the field size in the target version, the export will be terminated with an error. Otherwise data corruption would occur.

Example:

You try to export 5-digit node numbers to an Entire Operations version which can handle 3-digit node numbers only.

- **An array size was increased**

  If the actual size of an array is larger than the maximum array size in the target version, the export will be terminated with an error. Otherwise data corruption would occur.

- **A value was added to the allowed value range of a field**

  The export function attempts to export the field in a compatible way. Only if this is not possible, the export will be terminated with an error. Otherwise data corruption would occur.

3 Using Import and Export Functions

Importing and exporting objects via Entire Operations is only possible if the Monitor is running. All import and export operations are executed asynchronously.

Accessing Import/Export Functions Online

≫ **To access import/export functions online**

1 From the Entire Operations **Main Menu**, select **Import/Export** .

For batch use, see *Using Import/Export Functions in Batch Mode*.

An **Import/Export Main Menu** appears:

```
08.06.18              *** Entire Operations Import/Export ***           10:47:35
                                   Main Menu                    User ID SAG
--------------------------------------------------------------------------------
Option ==> _


         1  Import Objects
         2  Export Objects
         3  Export whole environment




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

2 Select the required option by entering the corresponding option number in the **Option** field and pressing ENTER:

▪ **Import Objects**
Enables you to import definitions from a file which contains data which meet the syntax of the external format (see also *Syntax in Import/Export Files and Object Processing Rules*) to your Entire Operations database. See *Importing Objects*.

▪ **Export Objects**
Exports selected Entire Operations definitions from your database to a file. See *Exporting Objects*.

▪ **Export whole environment**
Exports all definition of jobs, networks, nodes, etc., from the Entire Operations database to a file. See *Exporting the Whole Environment*.

Importing Objects

This section provides information on the process of importing objects and handling errors.

🛑 **Caution:** You should use the import function with care. It can delete definitions from or add definitions to your database.

≫ **To import objects**

1   Enter 1 in the **Option** field of the **Import/Export Main Menu**.

An **Import Objects** window like the example below opens:

```
+-------------------------------------------------------+
|                                                       |
|            - Import Objects -                          |
|                                                       |
|     From:                                             |
|     Location      ==> NAT                             |
|     NAT Library   ==> _____                        |
|     NAT Member    ==> _____   (Prefix)             |
|     Initial Mode ==> A                                |
|                                                       |
|     Owner         ==> _____                      |
|     Network       ==> _____                      |
|     Job           ==> _____                      |
|                                                       |
|       Stop after ==> 5____   errors                   |
|              or ==> 10___   warnings                  |
|     Keyword Gap ==> 5____   lines                     |
|                                                       |
|     Display parsing information ==> N                  |
|                                                       |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---       |
|      Help         End         Imprt                   |
+-------------------------------------------------------+
```

The values you enter in this window determine the conditions for the import process.

The fields contained in the window are described in *Fields and Options: Import Objects Window*.

2   Choose PF3 (End) to cancel the import.

3   Choose PF5 (Imprt) to perform the import.

The data collected for the selected object is output in the specified import file or Natural object. For the information provided during the import process and possible error handling, see *Import Process Information* and *Handling Import Errors*.

The syntax that applies to the entries in the output file (or object) is explained in *Syntax in Import/Export Files and Object Processing Rules*.

This section covers the following topics:

- Import Process Information
- Fields and Options: Import Objects Window
- Handling Import Errors
- Repeating a Failed Import

Import Process Information

During the import, a window opens which informs you about the imported objects.

This window displays number, name and type of the imported object, the mode which was used for this object, the amount of lines the object had, the time needed to import the object, the status (accepted or failed), name of error object (if the object was rejected).

Additionally, the total elapsed time, total number of lines, total number of errors/warnings occurred is shown in the window. This window shows only least information about the last ten processed objects. The screen scrolls automatically forward.

Do not press a key while the import is running. When the import is finished, a message appears which informs you whether the import ended successfully.

The import ended successfully if all objects were processed and the error/warning limit was not exceeded. If this was not the case, the import was cancelled due to too many errors or warnings.

Fields and Options: Import Objects Window

The fields and options provided in the **Import Objects** window are described in the following table.

All values entered in this window are checked for their validity. If a Natural object is specified as import file, the file existence is also checked.

Field	Description	
Location	The location of the file to be imported. Enter one of the following values:	
	`NAT`	Import from a Natural text object. See also the fields **Library** and **NAT Member (Prefix)**.
	`PC`	Import from a PC file. Entire Connection must be installed, and the desired PC file must be assigned to Work File 7.
	`WRK`	Import from work file. Work File 1 is used.
NAT Library	Only for `NAT` locations. Leave this field blank if the location is not `NAT`. Enter the name of the library, where the Natural objects reside.	
NAT Member (Prefix)	Only for `NAT` locations. Leave this field blank if the location is not `NAT`. Enter the prefix (maximum is 5 characters) of the names of the objects to be imported or enter the name of a rejected object (`ERR-`*nnnn*, see also *Handling Import Errors*). For explanations of prefix, see the description of the **NAT Member Prefix** field used for the export operation.	
Initial Mode	The mode to be used when starting to import the object definitions contained in the file to the Entire Operations database. The mode can change during import if the file contains mode commands. Enter one of the following values:	
	`C`	Check syntax of objects.
	`A`	Add objects to the database (default).
	`U`	Update objects on the database.
	`R`	Replace objects on the database or add them if they do not exist.
	`D`	Delete object from the database.
Owner **Network** **Job**	These fields can be used to define a range of objects to be imported from the import file. Enter the required owner, network and job. If you use a wildcard (*), no selection is made, but a range is specified. For example, enter `TEST*` to specify the range `TEST` through `TESTZZZZZ`. **Note:** 1. A selection on a lower level is accepted only if exactly one object is selected on the higher level (i.e. if you have not already used a wildcard). 2. Selections cannot be verified against the target database, since they usually do not exist there. If nothing can be imported, check your selections.	

Field	Description
	3. The selection is valid for all objects in the import file which contain Owner, Network and Job within their **key fields**.
Stop after ... errors	Enter the number of errors which can occur before terminating the import process. Valid range: 1 to 99999. Default: 5.
or ... warnings	Enter number of warnings which can occur before terminating the import process. Valid range: 1 to 99999. Default: 10.
Keyword Gap	Enter the number of lines, within which the next keyword is expected.
Display parsing information	If you enter `Y` here, a window appears during the import process, which informs you about the current object type, name of object, parsed keyword, value, format, length and line. If you enter `N`, the window simply displays: `Please wait` The import process is much faster with `N`.

Handling Import Errors

If at least one error occurs within the object, the whole object is rejected. Errors and warnings are counted for single objects during the import. If the error or warning limit is reached, the whole import is cancelled.

Whenever an object is rejected, it is saved with the prefix `ERR-` and an ascending number (`ERR-0001`, `ERR-0002`, and so on) in the library specified for the import operation. These objects contain the rejected object and the errors which caused the rejection. The error text is written directly above the line which contains the error.

> **Note:** You must specify a Natural library name for storing these objects. Otherwise, errors are only protocolled in the job log.

In addition, a header is written to the object informing you about the:

- Number of errors or warnings in this object;
- User who started the import;
- Date and time when the object was rejected.

   (See also *Date and Time Formats* in the *User's Guide*.)

You can edit these error objects manually and import them again.

Possible error causes and advice about fixing errors are described in the following section.

Error Severity

There are three levels of error severity:

■ **Warnings**

Warnings are displayed, but do not cause the rejection of the object.

■ **Errors**

Errors cause rejection of the object but do not cause termination of the import. Import continues with the next object within the file, if the error/warning limit has not been reached.

■ **Fatal Errors**

Fatal errors are serious problems which cannot be ignored and cause immediate termination of the import. A fatal error occurs, for example, when it is impossible for the parser to continue at a new point.

Causes of Errors - Syntax

If errors or warnings occur during import, some of the possible causes could be syntax errors, for example:

■ A value has invalid format.

■ A character in a numeric field.

■ A keyword was invalid or non-existing.

■ The value of a field exceeds valid length.

■ A non-existing object type was specified.

These errors should not occur when importing an unchanged exported object. If you edit the exported object online or create a new object manually, these errors could occur.

Causes of Errors - Logical Errors

If errors or warnings occur during import, some of the possible causes could be logical errors, for example:

■ Value has correct syntax but does not meet the requirements of Entire Operations.

■ A Job type is specified, which is not allowed in Entire Operations.

■ The field has a special range (e.g. only Y or N).

■ Adding an object to Entire Operations which already exists.

■ Deleting a non-existing object.

Repeating a Failed Import

1   Correct all erroneous `ERR-` objects as described in the previous section.

2   If the settings from the import window are not suitable, specify the desired **import mode** in the first line of the first error object.

3   Start a new import as described in **Importing Objects** with the location `NAT` (Natural source) for all objects prefixed with `ERR-`.

Exporting Objects

This section explains the export of objects and their key fields.

Exporting an object can invoke the transformation of records from the Entire Operations database into an external format.

This section covers the following topics:

- Exporting Single Objects
- Exporting the Whole Environment
- Export Process Information
- Fields and Options: Export Objects Window
- Object Types to be Exported: Key Fields of the Objects
- Using Wildcards

Exporting Single Objects

≫ **To export single objects**

1   Enter `2` in the **Option** field of the **Import/Export Main Menu** and press ENTER.

A **Select Export Target Version** window prompts you to enter the export target version:

```
 08.06.18              *** Entire Operations Import/Export ***              10:47:35
                               Main Menu                        User ID SAG
------------------- +-------------------------------------------------+ ----
 Option ==> 2        |                                                 |
                     |            Select Export Target Version         |
                     |                                                 |
         1  Import   |   Current Version ==> 5.5.1                     |
         2  Export   |                                                 |
         3  Export   |   Target  Version ==> 5.5.1_____      |
                     |                                                 |
                     |   A + behind the current version means          |
                     |   that the current version was updated          |
                     |   by further corrections.                       |
                     |                                                 |
                     |                                                 |
                     |                                                 |
                     |                                                 |
                     | Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7--- |
                     |      Help        End         Apply               |
                     +-------------------------------------------------+


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

Enter the required target version: see *Target and Current Versions*.

After this, choose PF5 to continue.

2   The **Export Objects** screen appears:

```
 08.06.18              *** Entire Operations Import/Export ***              10:53:23
                              Export Objects                    User ID SAG
 -----------------------------------------------------------------------------

               Please select object type to be exported:


     1 NETWORK-MASTER                11 MAILBOX-DEFINITION
     2 NETWORK-VERSION-USAGE         12 MAILBOX-ENTRY
     3 JOB-MASTER                    13 NODE-DEFINITION
     4 GLOBAL-EXIT                   14 RESOURCE-DEFINITION
     5 EOJ-CHECK-MASTER              15 USER-DEFINITION
     6 DESCRIPTION                   16 DEFAULTS
     7 SCHEDULE                      17 OWNER
     8 CALENDAR                      18 CONDITION-ACTIVE
     9 TO-ACTIVATE                   19 RESOURCE-PREREQ
    10 SYMBOL-MASTER                 20 SYMBOL-VERSION-USAGE
                        Your Selection ===> __



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

Select the desired object type by entering the appropriate number in the field after **Your Se-lection ===>**.

3   Press ENTER.

An **Export Objects** window like the example below opens:

```
+---------------------------------------------------------------+
|                                                               |
|                     - Export Object -                         |
|    Origin Version     ==> 5.5.1.1                             |
|    Object Type        ==> NETWORK-MASTER                      |
|    Owner              ==> _____                          |
|    Network            ==> _____                          |
|    Version            ==> _____                          |
|                                                               |
|                                                               |
|                                                               |
|    Target Version     ==> 5.5.1.1                            |
|    Location           ==> NAT                                 |
|    NAT Library        ==> _____                            |
|    NAT Member Prefix  ==> _____                               |
|    Export Mode        ==> N       (A,N,R)                     |
|    Passwords          ==> N       (Y,N)                       |
|    with Schedules     ==> N       (Y,N)                       |
|    with Calendars     ==> N       (Y,N)                       |
|    with Symbols       ==> N       (Y,N)                       |
|    with Grants        ==> N       (Y,N)                       |
|  Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8-- |
|       Help        End         Exprt                          |
|                                                               |
+---------------------------------------------------------------+
```

The data collected for the selected object is output in the specified export file or Natural object. For the information provided during the export process, see *Export Process Information.*

The syntax that applies to the entries in the output file (or object) is explained in *Syntax in Import/Export Files and Object Processing Rules*.

Exporting the Whole Environment

> **Note:** If your Entire Operations system contains a large amount of data, you should invoke the **Export whole environment** function in batch mode. For more information, see *Using Import/Export Functions in Batch Mode*.

≫ **To export the whole environment**

1   Enter 3 in the **Option** field of the **Import/Export Main Menu** and press ENTER.

A **Select Export Target Version window** described earlier prompts you for a target version.

---

2   Enter the required target version and choose PF5 to continue.

An **Export whole environment** window like the example below opens:

```
+----------------------------------------------+
|                                              |
|         - Export whole environment -         |
|                                              |
|   Origin Version    ==> 5.5.1.1              |
|                                              |
|   Target Version    ==> 5.5.1.1              |
|   Location          ==> NAT                  |
|   NAT Library       ==> _____             |
|   Nat Member Prefix ==> _____                |
|   Export Mode       ==> N      (A,N,R)       |
|   Passwords         ==> N      (Y,N)         |
|   with Schedules    ==> Y      (Y,N)         |
|   with Calendars    ==> N      (Y,N)         |
|   with Symbols      ==> N      (Y,N)         |
|   with Grants       ==> _      (Y,N)         |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---P  |
|     Help         End         Exprt           |
+----------------------------------------------+
```

3   Enter the required definitions.

The input fields are described in *Fields and Options: Export Objects Window*. The **To** fields are the same. The **From** fields are omitted.

4   When you are finished press ENTER or choose PF5 (Exprt).

The data collected for the selected environment is output in the specified export file or Natural object. For the information provided during the export process, see *Export Process Information.*

The syntax that applies to the entries in the output file (or object) is explained in the remainder of this chapter.

Export Process Information

During the export, a window opens which informs you about the currently exported object.

This window displays the name and type of the exported object, the number of lines contained in the object has and the total number of lines written during the export run.

⚠   **Important:** Do not press a key while the export is running.

When the export has finished, a message appears on the screen which informs you about the way the export ended. This information is also written to the export object, so that you can check

whether or not all specified objects were written. For some reasons, the export process could terminate abnormally. This could happen, for example, if you attempt to write more than 999 objects.

Fields and Options: Export Objects Window

The fields and options provided in the **Export Objects** or **Export whole environment** window are described in the following table.

Field/Option	Description
From:	
Origin Version	Current Entire Operations version from which the objects are exported.
Object type	Object type to be exported. See also *Object Type to be Exported: Key Fields of the Objects*.
...	The remaining **From** fields differ according to the object type selected.
To:	
Location	Location of the export file to be created. Enter one of the following values: <table><tr><td>NAT</td><td>Export to a Natural text object. See also the fields **Library** and **NAT Member Prefix**.</td></tr><tr><td>PC</td><td>Export to a PC file. Entire Connection must be installed and the desired PC file must be assigned to Work File 7.</td></tr><tr><td>WRK</td><td>Export to Natural work file. Work File 1 must be defined. **Note:** 1. The work file format must be the same as for Natural INPL utility. 2. The work file will be written using variable record format.</td></tr></table>
NAT Library	Only for NAT locations. Leave this field blank if the location is not NAT. Enter the name of the library that contains the Natural text object used for the export operation.
NAT Member Prefix	Only for NAT locations. Leave this field blank if the location is not NAT. Enter the prefix (maximum is 5 alphanumeric characters) of the Natural text object(s) that are to store the export data. The prefix is padded with hyphens (-) to its maximum length of 5 character. For example, the prefix entry PRE is converted to PRE--, PREF to PREF-. The prefix is followed by a 3-digit number, for example, PREF-001. One or more text objects with the specified prefix are created depending on the amount of data to be exported. For example: The prefix PREF can comprise text objects with the names PREF-001, PREF-002 and PREF—003.

Field/Option	Description
Export Mode	Only for NAT locations.
	Determine how to handle the export data contained in the Natural text object(s) specified with the prefix in the **NAT Member Prefix** field.
	Possible values are:

	A	Enter this value to append the data to be exported to the specified text object.
		Text object with the specified prefix must exist.
	N	Enter this value to save the data in a new text object.
		If a text object with the specified prefix already exists, an appropriate message is returned.
		This is the default setting.
	R	Enter this value to replace the data in the specified text object.

Passwords	Only for object types which contain passwords (e.g., password of a protected data set).
	Enter one of the following values:

	Y	Export passwords.
	N	Do not export passwords.

with Schedules	If you also export the schedules, the imported networks will get the same schedule definitions as the exported networks. (They can be modified after the import.)
	Enter one of the following values:

	Y	Export schedules (default).
	N	Do not export schedules.

with Calendars	If you export object(s) with calendars, all referenced calendars will be exported after objects, each calendar once.
	Enter one of the following values:

	Y	Export calendars.
	N	Do not export calendars (default).

with Symbols	If you export object(s) with symbols, all referenced symbol tables will be exported after objects, each symbol table once.
	Enter one of the following values:

	Y	Export symbols.
	N	Do not export symbols (default).

with Grants	If you export networks, you can determine whether access rights granted to users/owners in the source environment are also exported.
	Enter one of the following values:

Field/Option	Description	
	`Y`	Export granted access rights.
	`N`	Do not export granted access rights (default).

Target and Current Versions

The version in the **Target Version** and **Current Version** fields of the **Select Export Target Version window** have the format `v.r.s.pp`, where:

`v.r.s` or `v.r.s.`	Valid Entire Operations version.

`v.r.s.` is the correct format if the version is followed by a cumulative fix number (`pp`), for example: 5.5.1.1 |
| `pp` | One- to two-digit cumulative fix number (if available).

Leading zeros are suppressed. |

Valid input values for **Target Version** are from 5.1.1.14 to the current (or next) `v.r.s.pp` version. The highest allowed value is preset as default.

You can enter an asterisk (*) in the **Target Version** field to select value from the list.

The **Current Version** read-only field indicates the Entire Operations version installed in your current environment.

About the current version:

If there is a correction in export/import that brings at least one new keyword and the current Entire Operations version is `5.5.5.1`, for example, then export will show the current version as `5.5.1.1+`. This is to show that there may be problems when importing to pure version `5.5.1.1`. If you specify the target version as `5.5.5.2`, export will run with all new keywords. If you specify the target version as `5.5.5.1`, then new keywords will not appear in the export file but some data loss may occur if new definitions/settings are in use because the export will convert them to an older version.

When a service pack (cumulative fix) is completed, the plus sign (+) is eliminated, and the import/export version will be brought to the same level as the rest of Entire Operations.

Object Types to be Exported: Key Fields of the Objects

The key fields you must specify for any *object-type* you want to export are described in the following table.

The object types listed in the following table are used in an import or export file. They correspond to the object types you can select from the **Export Objects screen**.

Object Type	Key Field 1	Key Field 2	Key Field 3	Key Field 4	Remark
OWNER	Owner				This exports all objects which belong to a specific owner.
NETWORK-MASTER	Owner	Network	Version		
NETWORK-VERSION-USAGE	Owner	Network			
JOB-MASTER	Owner	Network	Version	Job	
EOJ-CHECK-MASTER	Owner	Network	Version	Job	
DESCRIPTION	Owner	Network	Version	Job	A hyphen (-) used instead of a job name exports the description of the network.
SCHEDULE	Owner	Schedule			Schedule = Network
CALENDAR	Owner	Calendar			
TO-ACTIVATE	Owner	Network	Version	Job	Job is optional.
SYMBOL-MASTER	Owner	Symbol table			
SYMBOL-VERSION-USAGE	Owner	Symbol table			
MAILBOX-DEFINITION	Mailbox				
MAILBOX-ENTRY	Mailbox				
NODE-DEFINITION	Node				
RESOURCE-DEFINITION	Resource				
RESOURCE-PREREQ	Owner	Network	Version	Job	
USER-DEFINITION	User ID				
DEFAULTS	Library				
CONDITION-ACTIVE	Owner	Network	Version		The export will be performed for all active runs of the condition.
GLOBAL-EXIT					All global exits will be exported.

Using Wildcards

Depending on the object type you have selected, you must fill in related key fields as required (see also *Object Type to be Exported: Key Fields of the Objects*). If you are going to import from a source location which was previously written by an export process of Entire Operations, these fields have been filled in correctly.

For the fields Owner, Network and Job, you can enter an asterisk (*) in one of these fields and press ENTER to open a window from which you can select an object from a supplied list.

For all other fields, you can use an asterisk (*) as a wildcard to delimit the range of objects to be exported. For example, if you enter `WILD*` in the Job field of the object type `JOB-MASTER` and press ENTER, the jobs WILD, WILDxxxx, WILD-1, and so on are exported. If you enter `*` in all selection fields, all objects of this object type are exported.

For some object types some descriptors are optional. If you do not wish to use an optional field, enter a hyphen (`-`) to ignore it. For example: a job or a network can have a `DESCRIPTION`.

≫ **To export the DESCRIPTION of a network only**

1   Enter Owner and Network name and enter a hyphen (`-`) for Job name. All values entered are checked for their validity.

2   Choose PF3 to cancel the export.

3   Choose PF5 to perform the export.

> **Note:** All objects that are related to the selected objects (see the section *Hierarchical Order for Object Processing*) are also exported.

Retention Period for Import/Export Requests from Entire Operations GUI Client

Data generated for import and export requests from Entire Operations GUI Client is retained for the number of days specified for active jobs in the **Retention Periods** of the Entire Operations default settings (see *Default Setting (1)* in the *Administration* documentation).

Older import and export requests listed in the **Reporting** window of Entire Operations GUI Client are automatically removed after this period or during the next database cleanup (see also the *Administration* documentation).

4 Syntax in Import/Export Files and Object Processing Rules

This section describes the syntax that applies to the entries in the import or export file used when importing or exporting objects. It also describes the rules, restrictions and requirements that apply when defining the objects to be processed.

Basic Syntax Rules

Each Entire Operations logical record is represented by one entry in external format. The entry is enclosed in `OBJECT=object-type` and `END-OBJECT` keywords.

Example:

```
OBJECT=NETWORK-MASTER
...
END-OBJECT
```

Encloses a network master definition.

After `END-OBJECT`, a comment is written which repeats, like the Natural programming syntax, object type, object name and the lines that were written:

```
END-OBJECT /* JOB-MASTER JOB-XY 48 lines
```

Each field is represented by keyword and value.

Examples:

```
OWNER=EXAMPLE
SHDESC=This is an example
EST=141030
```

A keyword must be immediately followed by an equal sign (=). Everything after the equal sign (=) until the next keyword is assumed to belong to the field. The equal sign (=) should not appear in the value itself but is accepted anyway.

- Several keywords and fields may appear on one line.

- The sequence of fields within a record is meaningless.

- For numeric fields, a decimal point (.) and comma (,) are accepted as decimal separators during import.

Field Definitions

This section describes the fields, field formats and abbreviations used in the import/export file.

- Field Formats
- Multiple-Value Fields
- Periodic Groups
- Field Abbreviations
- Common Fields

Field Formats

Format		Description
A	alpha	Alphanumeric value (US-ASCII only).
		Import:
		The value can be enclosed in double quotation marks (" . . . "). Consider that double quotation marks at the beginning and end of a value are stripped from the string. Examples:
		`"ABC"` `> ABC`
		`"ABC` `> ABC`
		`""ABC"` `> "ABC`
		Export:
		If the value contains at least one blank or double quotation mark ("), the value is enclosed in double quotation marks (" . . . "). Examples:
		`AB C` `> "AB C"`
		`AB"C` `> "AB"C"`
		`"AB C` `> ""AB C"`
N,I,P	numeric	EBCDIC/ASCII digits.
		Natural Edit Mask using, e.g. `ZZZZ9.99` must be a valid input for the Natural mathematical `VAL` system function. Maximum is 2 decimal digits.
D	date	YYYYMMDD
T	time	HHIISS (Hours 0-24)
		(Natural type `T`, only time used)
DT	date and time	YYYYMMDDHHIISS (Hours 0-24)
		(Natural type `T`, complete timestamp)
L	logical value	Logical value of Y/yes/true or N/no/false (in upper or lower case).
		In the database, it is represented by A1 containing `Y` or `N`.

Multiple-Value Fields

Keywords, which correspond to multiple-value fields, may appear several times in the external format record.

Example:

```
EX-DATE=20011120 EX-DATE=20011220
```

Periodic Groups

Periodic group fields must follow each other for one entity.

A group identifier must precede a group entry.

Example:

```
IN-CONDITION COND=COND1 COND-REF=RUN COND-EXIST=Y
IN-CONDITION COND=COND2 COND-REF=DAT COND-EXIST=N
```

Defines two subsequent input conditions.

On input, the internal group counter is incremented if the group identifier appears.

For groups and multiple-value fields, it is possible that other fields are defined between them, since the import processing will keep track of the highest used index.

Field Abbreviations

The following abbreviations are used in the descriptions of the Entire Operations objects:

Value	Description
+	Required fields.
D	Contains date only.
DT	Contains date and time.
K	Key fields required for identification.
M	Multiple-value field.
PG	Periodic group identifier.
PI	Part of periodic group.
T	Contains time only.

Common Fields

The following names can be used in compound names. Their format is always the same:

Field	Format	Explanation
DBID	N5	Adabas database ID.
FNR	N5	Adabas file number.
DBENV	A10	Database environment (for future use).
OWNER	A10	
NETWORK	A10	**Caution:** Alphanumerical characters only. In addition, the first character must be a letter. Note that otherwise an import cannot be performed due to not passing a syntax check resulting in error message `EOR0060` or `EOR1032`. See also *Field Formats*
NETWORK-VERSION	A10	Network version. Field is case-sensitive.
JOB	A10	
RUN	N5	Run number.
JOB-ID	A10	Job identifier.
SCHEDULE	A10	
CALENDAR	A10	
USER	A20	**Note:** For mainframe Entire System Server nodes, the first 8 bytes are used only.
GROUP	A20	UNIX: User group. Windows: Domain.
SYMBOL-TABLE	A10	
SYMTAB-VERSION	A10	Symbol table version. Field is case-sensitive.
SYMBOL	A40	Referenced by the fields `IN-SUFFIX-SYMBOL`, `IN-SY-SYMBOL` and `MPA-SUFFIX-SYMBOL`.
CONDITION	A20	
COND-REFERENCE	A8	Condition reference.
MAILBOX	A10	
NODE	N5	If the node is defined numerically, or if the node short name does not contain a symbol.
	A5	If the node definition contains a symbol.
EXITLIB	A8	User exit library.
USEREXIT	A8	User exit name.

Object Descriptions

Text that describes an object is imported and exported as `OBJECT=DESCRIPTION`: see the section *Object Specification* for details.

Comments

A comment line begins with an asterisk (`*`) or the string `/*` followed by a blank. A comment line need not contain text, for example, if used to structure source code.

A comment added in a source-code line, begins with the string `/*` (enclosed in blanks).

Examples:

```
* This is a comment line.
/* This is a comment line as well as the empty line below.
*
KEYWORD2=value2 /* This is a comment added to a code line.
```

Reserved Keywords

Reserved keywords can appear in all objects:

Keyword	Description	
OBJECT	Beginning of an object.	
END-OBJECT	End of an object.	
MODE	Processing mode (within or outside of object). Possible values:	
	ADD	Add object (default).
	CHECK	Check syntax of object.
	DELETE	Delete object.
	UPDATE	Modify object.
	REPLACE	Replace object or add one if it does not exist.

Sub-Objects

- Modification Information
- Message Recipient
- BS2000 Job Variable Definition

These sub-objects are referenced in the description of several objects.

Just include them there with the following syntax:

Modification Information

Field	Format
MOD-USER	A8
MOD-TIME	T (DT)
CREATION-TIME	T (DT)

If not otherwise specified, the modification info is part of every object.

Message Recipient

	Field	Format	Remark
PG	MSG-RECEIVER		Message recipient (receiver). Max. occurrence = 8.
PI	MSG-RCV-TYPE	A1	U = User.
PI	MSG-RCV-NAME	A10	
	MSG-RCV-PROCESSOR	A10	
	MSG-RCV-NODE	common	

Adding single entries is allowed. Superdescriptor is unique.

BS2000 Job Variable Definition

	Field	Format	Remark
xx-	JV-NAME	A54	
xx-	JV-PASSWORD	A8	Hexadecimal printable.
xx-	JV-SUB-POSITION	N3	
xx-	JV-SUB-LENGTH	N3	
xx-	JV-SUB-FORMAT	A1	
xx-	JV-COMPARE-OP	A2	Comparison operator.
xx-	JV-COMP-VALUE	A100	

Special Considerations for Import

This section covers the following topics:

- Keyword and Field Handling
- Import File Defaults
- Common Import Restrictions

Keyword and Field Handling

- For End-of-Job checks `ADD` and `UPDATE` mode are the same. Only when an End-of-Job check with same data already exists is a warning issued.

- When updating periodic groups or multiple-value fields, all fields which build the periodic identifier of the new group are compared with all entries of the group in the database. If no entry with the same identifier exists, the new group is added; otherwise, the existing group is modified.

- No value field should contain any keyword followed by an equal sign (*keyword*=) or a periodic group identifier. This would cause an error because the parser would assume that the value is a keyword. This also applies for object description texts (`T=`) fields. For example:

```
OBJECT=JOB-MASTER
JOB=NETWORK=
....
```

would cause an error because `NETWORK` is a keyword.

- The parser also detects, if a field occurred more than once within a periodic group. For example:

```
...
PG
PGFIELD-XY=ONCE    PG-FIELD-XY=TWICE
```

would cause an error because periodic group field `PGFIELD-XY` occurred twice.

■ The fields `MOD-USER` and `MOD-TIME` are always accepted but replaced with `MOD-USER=IMPORT` and `MOD-TIME=`*time at which import was performed*.

■ The keyword `MODE` can occur anywhere in the file.

■ The keyword `OBJECT` must be immediately followed by an equal sign (=) and the name of the object type.

■ No record within the file should exceed 240 bytes.

■ Numeric values are accepted with up to 2 decimals. Using more digits is no error. For example:

```
...
NUM=1234.5678
...
```

returns `1234.56` for field `NUM`.

■ For all periodic groups or multiple-value fields the array limits of SYSEOR must be respected.

■ If a network is to be imported with `MODE=ADD` and the owner of this network is not yet included in the `GRANT` field, he/she is automatically added to the authorized persons.

■ The parser always registers, if a keyword, which does not belong to a multiple-value field or periodic group, occurred more than once within the object. If so, it is an error.

■ During an import with delete requests, the Entire Operations Monitor deletes networks and jobs in asynchronous mode during. Since network deletion includes all its jobs, deletion of the network and the jobs can therefore be delayed. As a result, jobs to be deleted can be reported as already deleted or not existing. Consider this behavior when determining the value for the message limit using the **Stop after ... errors** option.

■ If you are importing JCL without specifying a member name, a new member name is generated. The name has the prefix `JCL-` and a unique number as suffix (e.g., `JCL-0011`). (Import mode `DELETE` for object type JCL is not currently implemented.)

■ During the import process every attempt to import an object is logged in the SYSEOR log. This can be analyzed with the Entire Operations online system.

Import File Defaults

(optional)

```
■ OBJECT=FILE-DEFAULTS
  OWNER=...
  NETWORK=...
  MODE=...
  EXECUTION-NODE=...
  JCL-NODE=...
  JCL-NAT-LIB=...
  ...
```

■ *keyword*=DEFAULT - resets to the default setting.

■ Options are valid until the next modification in sequential order.

■ May appear several times in one file.

■ The import file defaults are valid for one complete import file, unless something different is specified for a single object.

Common Import Restrictions

This section describes the common restrictions that apply when specifying the objects to be imported.

The following is checked during an import function to the Entire Operations system file:

■ If the object already exists in the target, it may be rejected, depending on the import mode.

■ Key fields are required in any case.

■ Required fields are necessary for ADD.

■ Only complete objects are imported.

■ All required fields must be supplied.

■ For multiple-value fields and periodic groups, SYSEOR-wide array limits must not be exceeded.

■ Invalid representations of numbers, date and time fields, etc. are rejected. This causes the whole object to be rejected.

■ Objects with invalid keywords are rejected.

■ Set the Natural profile parameter DC to a hyphen (-) in your Natural environment.

Hierarchical Order for Object Processing

All objects that are subordinate to another object (hierarchical owner) are processed when their hierarchical owner is selected for processing.

The tree below indicates the hierarchical structure of objects within a job network:
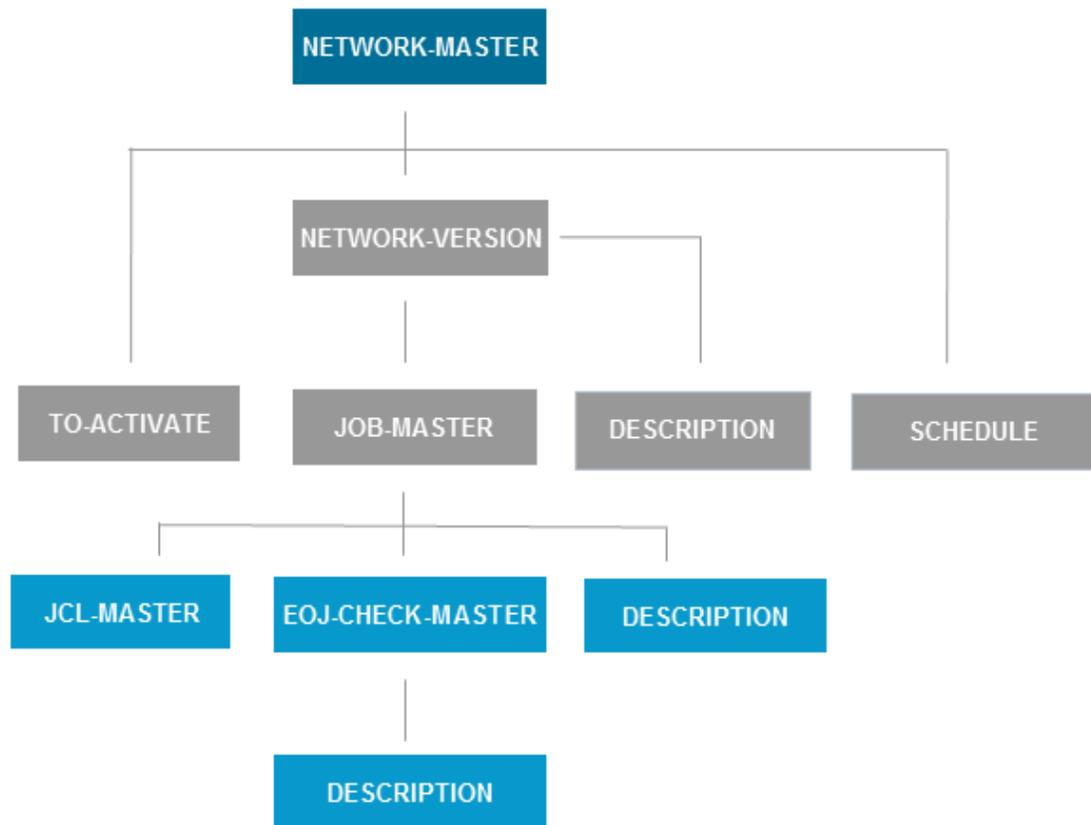
- ■ **Export**
  All objects in a hierarchical order below the object selected for export are also exported. For example: the export of an object `JOB-MASTER` results in additional export of all dependent objects: `JCL-MASTER`, `EOJ-CHECK-MASTER` and `DESCRIPTION`.

■ **Import**

Some objects can be added only if their hierarchical owner already exists in the target system file. The dependencies are listed in the individual object descriptions (`OBJECT=`) provided in this section.

If the hierarchical owner is missing, all attempts to load dependent objects will fail.

For example: an object `JOB-MASTER` can be added only if the owning `NETWORK-MASTER` already exists. This is because objects without a hierarchical owner cannot be accessed any more in the Entire Operations online system.

ImportExport/Import of standalone Objects

Exporting and importing `DEFAULTS`, `CALENDAR`, `SYMBOL-MASTER`, `MAILBOX- DEFINITION`, `MAILBOX-ENTRY`, `NODE-DEFINITION`, `RESOURCE-DEFINITION`, `USER-DEFINITION` and `CONDITON-ACTIVE` does not involve any other object. No hierarchical structure must be considered.

The following table lists export/import objects and their hierarchical owner (if any):

Object	Abbreviation	Hierarchical Owner
NETWORK-MASTER	NWM or NM	none
NETWORK-VERSION	NV	NETWORK-MASTER
JOB-MASTER	JBM or JM	NETWORK-VERSION
JCL-MASTER	JCM	JOB-MASTER
EOJ-CHECK-MASTER	EOJ or EM	JOB-MASTER
DESCRIPTION	DSC	NETWORK-VERSION or JOB-MASTER or EOJ-CHECK-MASTER
SCHEDULE	SCD or SC	none
CALENDAR	CAL or CA	none
TO-ACTIVATE	TOA or TA	NETWORK-MASTER
Symbol table version (virtual object)	n/a	none
SYMBOL-MASTER	SYM or SM	Symbol table version (virtual object)
MAILBOX-DEFINITION	MXD	none
MAILBOX-ENTRY	MXE	none
NODE-DEFINITION	NOD	none
RESOURCE-DEFINITION	RSD	none
USER-DEFINITION	USD	none
DEFAULTS	DEF	none
CONDITION-ACTIVE	COA or CO	none

Sample Network

The following is an example of an export file in the external format. It contains data definitions that demonstrate the job flow within the network E60-FLOW. It can serve as a sample for exporting a network. For further information on using sample networks, see *Import and Export of Entire Operations Data* in the *Installation and Setup* documentation.

```
*
OBJECT=NETWORK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
SHDESC=Job Flow MVS
LAST-RUN=60
LAST-ACT=20161025134522
LAST-SCH-XT=20170130000022
EXTRACTED-UNTIL=20170130235959
LAST-SUBMIT-RUN=52
DEF-EX-NODE=148
DEF-JCL-NODE=148
DEF-JCL-LOCATION=NAT
DEF-FILE=SYSEORU
DEF-SYMBOL-TABLE=EXAM-ST1
SYMTAB-ACTIVATION-MOD=X
TIMEFRAME
TF-EARLIEST-START=100000 TF-LATEST-START=150000
TF-DEADLINE=170000
SCHEDULE-RANGE SR-OWNER=EXAMPLE SR-SCHEDULE=E60-FLOW
GRANT GRANT-TYPE=O GRANT-NAME=SYSDBA GRANT-FLAGS=O
GRANT GRANT-TYPE=O GRANT-NAME=EXAMPLE GRANT-FLAGS=O
DEF-EJA-ERROR-MODE=N
MOD-USER=SYSDBA MOD-TIME=19960806135236
END-OBJECT /* NETWORK-MASTER E60-FLOW ( 41 LINES )
*
OBJECT=DESCRIPTION
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
TYPE=NETWORK
OWNER=EXAMPLE
NETWORK=E60-FLOW
NETWORK-VERSION=
MOD-USER=IMPORT
MOD-DATE=19930611171918
T=Network E60-FLOW
T=----------------
T=This Network is just an example of 'standard' job flow for
T=a bigger amount of jobs.
T=
T=The jobs are all defined with the Dynamic JCL Facility to allow
T=an easy migration to another environment.
```

```
T=No special end-of-job handling is defined, so that the ENTIRE
T=OPERATIONS global defaults will be used.
T=
T=Flow Diagram
T=------------
T=
T=JOB-01
T=+--------+--------+
T=V                 V
T=JOB-012           JOB-019
T=V                 |
T=JOB-013              |
T=V                 |
T=JOB-014              |
T=V                 |
T=JOB-015              |
T=+--------+--------+
T=JOB-02
T=V
T=JOB-03
T=V
T=JOB-04
T=V
T=JOB-05
T=V
T=JOB-06
T=a bigger amount of jobs.
T=
T=The jobs are all defined with the Dynamic JCL Facility to allow
T=an easy migration to another environment.
T=No special end-of-job handling is defined, so that the ENTIRE
T=OPERATIONS global defaults will be used.
T=
T=Flow Diagram
T=------------
T=
T=JOB-01
T=+--------+--------+
T=V                 V
T=JOB-012           JOB-019
T=V                 |
T=JOB-013              |
T=V                 |
T=JOB-014              |
T=V                 |
T=JOB-015              |
T=+-------+--------+
T=JOB-02
T=V
T=JOB-03
T=V
T=JOB-04
```

```
T=V
END-OBJECT /* DESCRIPTION E60-FLOW ( 69 LINES )
*
OBJECT=SCHEDULE
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
SCHEDULE-NAME=E60-FLOW
SHDESC=Daily Schedule for E60-FLOW network
W-DATE W-DAY=2
W-DATE W-DAY=4
W-DATE W-DAY=6
MOD-USER=NATQA5 MOD-TIME=20150328180958 CREATION-TIME=20150326122620
END-OBJECT /* SCHEDULE E60-FLOW ( 10 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
SHDESC=where it all starts
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M02
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
EARLIEST-START=131400
LATEST-START=230000
DEADLINE=233000
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
END-OBJECT /* JOB-MASTER JOB-01 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-JOB1-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-01 ( 10 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
EVENT-NAME=JOB-NOTOK
```

```
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-01 ( 8 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
EVENT-NAME=STEP01
CODE=C
VALUE=0004
OP=<=
OK=OK
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-01 ( 12 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
EVENT-NAME=ANYSTEP
CODE=C
VALUE=0008
OP=>=
OK=NO
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-01 ( 12 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-01
EVENT-NAME=INVALID RESPONSE-CODE
CODE=STR
OK=NO
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-01 ( 10 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-015
SHDESC=depending on JOB-014
JOB-TYPE=DUM
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
EXECUTION-NODE=148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
```

Import/Export Functions

```
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-J014-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-015 ( 37 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:24 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-015
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-J014-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
OUT-CONDITION-P
OUT-CONDITION="E60-J015-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-015 ( 12 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-02
SHDESC=dep. JOB-15, JOB-19
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M02
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
EARLIEST-START=100500
ELAPSED-TIME=000102
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-J015-O" IN-REFERENCE="RUN"
IN-EXIST=Y
IN-COND-DEF
IN-CONDITION="E60-J019-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-02 ( 44 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-02
EVENT-NAME=JOB-OK
OUT-CONDITION-P
```

```
OUT-CONDITION="E60-JOB2-O1" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-JOB2-O2" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-J015-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
OUT-CONDITION-P
OUT-CONDITION="E60-J019-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
OUT-CONDITION-P
OUT-CONDITION="E60-JOB1-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-02 ( 18 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-02
EVENT-NAME=JOB-NOTOK
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-02 ( 8 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-02
EVENT-NAME=STEP1
CODE=C
VALUE=0000
OP==
OK=OK
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-02 ( 12 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-012
SHDESC=depending on Job-01
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M01
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-JOB1-O" IN-REFERENCE="RUN"
```

```
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-012 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-012
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-J012-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-012 ( 10 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-012
EVENT-NAME=JOB-NOTOK
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-012 ( 8 LINES )
*
OBJECT=DESCRIPTION
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
TYPE=JOB
OWNER=EXAMPLE
NETWORK=E60-FLOW
NETWORK-VERSION=
JOB=JOB-012
MOD-USER=IMPORT
MOD-DATE=19930611171935
T=Job JOB-MAC
T=-----------
T=JCL is generated with dynamic JCL generation.
END-OBJECT /* DESCRIPTION JOB-012 ( 13 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-013
SHDESC=depending on JOB-012
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M01
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
DAT-TARGET-MEMBER-TYPE=00
```

```
LOG-SYSLST=N
BS2000-SYSOUT-SHARE=N
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=NATQA5 MOD-TIME=20141030180343
IN-COND-DEF
IN-CONDITION="E60-J012-O" IN-REFERENCE="RUN"
IN-EXIST=Y IN-EXCLUSIVE=N IN-DESTRUCTIVE=N
IN-ACTMODE=N
END-OBJECT /* JOB-MASTER JOB-013 ( 44 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-013
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-J013-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-J012-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-013 ( 12 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-03
SHDESC=depending on JOB-02
JOB-TYPE=NAT
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=NAT
JCL-FILE=SYSEORU
JCL-MEMBER=E60-P01
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-JOB2-01" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-03 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-03
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-JOB3-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
```

```
OUT-CONDITION-P
OUT-CONDITION="E60-JOB2-01" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
OUT-CONDITION-P
OUT-CONDITION="E60-JOB2-02" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-03 ( 14 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-04
SHDESC=depending on JOB-03
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M01
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-JOB3-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-04 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-04
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-JOB4-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-JOB3-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-04 ( 12 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:25 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-05
SHDESC=depending on JOB-04
JOB-TYPE=DUM
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
EXECUTION-NODE=148
SUBMIT-USERID=GFR
```

```
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-JOB4-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-05 ( 37 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-05
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-JOB3-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
OUT-CONDITION-P
OUT-CONDITION="E60-JOB5-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-JOB4-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-05 ( 14 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-06
SHDESC=where it all ends
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M02
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
EARLIEST-START=103000
LOG-SYSLST=N
BS2000-SYSOUT-SHARE=N
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=NATQA5 MOD-TIME=20151102160016
IN-COND-DEF
IN-CONDITION="E60-JOB5-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-06 ( 43 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-06
EVENT-NAME=JOB-OK
```

```
OUT-CONDITION-P
OUT-CONDITION="E60-JOB5-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-06 ( 10 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-014
SHDESC=depending on JOB-013
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M01
JCL-NODE=148 EXECUTION-NODE=148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-J013-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-014 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-014
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-J014-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-J013-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=D
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-014 ( 12 LINES )
*
OBJECT=JOB-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-019
SHDESC=depending on JOB-01
JOB-TYPE=JOB
ESC-ACTIVATION=@ ESC-SUBMIT=$
SYMBOL-TABLE=EXAM-ST1
JCL-LOCATION=MAC
JCL-FILE=SYSEORU
JCL-MEMBER=E60-M01
JCL-NODE=148 EXECUTION-NODE=148
```

```
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
MOD-USER=SYSDBA MOD-TIME=20140110124841
IN-COND-DEF
IN-CONDITION="E60-JOB1-O" IN-REFERENCE="RUN"
IN-EXIST=Y
END-OBJECT /* JOB-MASTER JOB-019 ( 40 LINES )
*
OBJECT=EOJ-CHECK-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
NETWORK=E60-FLOW
JOB=JOB-019
EVENT-NAME=JOB-OK
OUT-CONDITION-P
OUT-CONDITION="E60-J019-O" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
MOD-USER=IMPORT MOD-TIME=20140110124841
END-OBJECT /* EOJ-CHECK-MASTER JOB-019 ( 10 LINES )
*
OBJECT=SYMBOL-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
SYMBOL-TABLE=EXAM-ST1
SYMBOL=CLASS
TYPE=A
VALUE=K
PROMPT=E
PT=THE CLASS FOR THE JOB CARD
MOD-USER=IMPORT MOD-TIME=20140110124854
END-OBJECT /* SYMBOL-MASTER EXAM-ST1 ( 11 LINES )
*
OBJECT=SYMBOL-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
SYMBOL-TABLE=EXAM-ST1
SYMBOL=JOBLIB
TYPE=A
VALUE=NOP.EXAMPLE.LOAD
PROMPT=E
PT=The ENTIRE OPERATIONS Installation
PT=Load Library
MOD-USER=IMPORT MOD-TIME=20140110124854
END-OBJECT /* SYMBOL-MASTER EXAM-ST1 ( 12 LINES )
*
OBJECT=SYMBOL-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
SYMBOL-TABLE=EXAM-ST1
SYMBOL=MSGCLASS
TYPE=A
VALUE=X
PROMPT=E
```

```
PT=THE MESSAGE CLASS FOR THE JOB CARD
MOD-USER=IMPORT MOD-TIME=20140110124854
END-OBJECT /* SYMBOL-MASTER EXAM-ST1 ( 11 LINES )
*
OBJECT=SYMBOL-MASTER
* DATE: 20170130 TIME: 11:27:26 USER: NATQA5
OWNER=EXAMPLE
SYMBOL-TABLE=EXAM-ST1
SYMBOL=STEPLIB
TYPE=A
VALUE=NOP.EXAMPLE.LOAD
PROMPT=E
PT=The ENTIRE OPERATIONS Installation
PT=Load Library
MOD-USER=IMPORT MOD-TIME=20140110124854
END-OBJECT /* SYMBOL-MASTER EXAM-ST1 ( 12 LINES )
```

5 Object Specification

OBJECT=NETWORK-MASTER

Import

Networks which have the owner SYSTEM cannot be imported.

Defaults with a library name starting with DM or with an equal sign (=) are not accepted during import.

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	NETWORK	**common**	
K	NETWORK-VERSION	**common**	
	SHDESC	A70	Short description.
	LAST-RUN	P13	
	LAST-SUBMIT-RUN	P13	
	LAST-ACT	T (DT)	
	LAST-SCH-XT	T (DT)	Last schedule extract.
	EXTRACTED-UNTIL	T (DT)	Extracted until.
+	DEF-EX-NODE	**common**	Default execution node.
+	DEF-JCL-NODE	**common**	Default JCL node.
	DEF-FILE	A54	
	DEF-VOLSER	A6	
	DEF-FILE-PSWD	A8	Default file password.
	DEF-JCL-LOCATION	A3	Special value range.
	DEF-SUBMIT-USERID	**common**	Default submit user ID.
	DEF-SUMBIT-GROUP	**common**	Default submit group.
	DEF-SUBMIT-PSWD	A16	Default submit password.
	DEF-BS2000-USERID	A8	
	DEF-SUBMIT-JOB-CLASS	A8	
	DEF-SYSOUT-CATID	A4	
	DEF-SYSOUT-USERID	A8	
	DEF-ACCOUNT-NO	A8	
	DEF-SYMBOL-TABLE	**common**	
	DEF-SYMTAB-VERSION	**common**	Symbol table version. Field is case-sensitive.

Abbr.	Field	Format	Remark		
	DEF-JCL-USERID	common	Default JCL user ID.		
	DEF-JCL-GROUP	common	Default JCL group.		
	DEF-ESC-ACT	A1	Default escape character for replacements at activation time.		
	DEF-ESC-SUB	A1	Default escape character for replacements at submission time.		
	DEF-ESC-TABLE	A10	Table containing the default escape characters for various operating systems. Do not modify manually.		
	DEF-EJA-ERROR-MODE	A1			
	SYMTAB-ACTIVATION-MOD	A1	X after extraction (default) A during activation.		
	WAIT-FOR-NEXT	P5			
	NUMBER-OF-ACT	P3	Number of activations.		
M	ACT-TIMES	T	Activation times. Max. occurrence = 10. Adding single entries is allowed.		
	EARLIEST-START	T			
	LATEST-START	T			
	LATEST-DAYS-LATER	N3			
	DEADLINE	T			
	DEADLINE-DAYS-LATER	N3			
	Include modification information (see *Sub-Objects*).				
PG	EXPL-DATE		Max. occurrence = 28.		
PI	EXPL-DAY	D	Explicit schedule date.		
	EXPL-FLAG	A1	Exclude.		
			A	After holiday.	
			B	Before holiday.	
			Adding single entries is allowed. Superdescriptor is unique.		
M	HIST-DAY	D	History day. Adding single entries is allowed. Max. occurrence = 99.		
PG	GRANT		Max. occurrence = 30.		
PI	GRANT-TYPE	A1	0 = owner, U = user.		

Abbr.	Field	Format	Remark
PI	GRANT-NAME	A10	Who got the grant.
	GRANT-FLAGS	A6	Adding single entries is allowed. Superdescriptor is unique.
	SYMBOL-PROMPT-EXITLIB	common	
	SYMBOL-PROMPT-USEREXIT	common	
	SYMBOL-PROMPT-IN-BG	A1	
	SYMBOL-NOT-FOUND-EXIT-LIBRARY	common	
	SYMBOL-NOT-FOUND-EXIT-MEMBER	common	
PG	SCHEDULE-RANGE		
PI	SR-OWNER	common	
PI	SR-SCHEDULE	common	
PI	SR-BEGIN	DT	
PI	SR-END	DT	
	SNF-EXIT-LIBRARY	common	`Symbol not found` exit library.
	SNF-EXIT-MEMBER	common	`Symbol not found` exit library.
	JOB-PRIORITY	A3	
	RUN-PRIORITY	A3	
PG	TIMEFRAME		
PI	TF-DEPENDENCY	A16	
PI	TF-EARLIEST-START	T	
PI	TF-EARLIEST-START-DAYS-TYPE	A1	
PI	TF-LATEST-START	T	
PI	TF-LATEST-DAYS-LATER	N3	
PI	TF-LATEST-START-DAYS-TYPE	A1	
PI	TF-DEADLINE	T	
PI	TF-DEADLINE-DAYS-LATER	N3	
PI	TF-DEADLINE-DAYS-TYPE	A1	

OBJECT=JOB-MASTER

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	NETWORK	**common**	
K	NETWORK-VERSION	**common**	
K	JOB	**common**	
	SHDESC	A70	Short description.
PG	IN-COND-DEF		Max. occurrence = 20.
PI	IN-CONDITION	**common**	
	IN-REFERENCE	A8	
	Attributes:		
	IN-EXCLUSIVE	A1	**Logical value**.
	IN-DESTRUCTIVE	A1	**Logical value**.
	Input Condition Schedule Dependency:		
	IN-SD-NEGATE	A1	
	IN-SD-USAGE	A1	
	IN-SD-TEST-SET	A2	
	IN-SD-POSITION	N3	*+nnn* = from period begin.
			-nnn = from period end.
	Input Condition Specials:		
	Only one of the following input condition specials is allowed per condition, since there is a redefinition.		
	IN-EXIST	A1	**Logical value**.
	Type A - File Dependency:		
	IN-FILE	A54	
	IN-FILE-MEMBER	A10	`IN-FILE` must be defined.
	Type B: BS2000 User Switch		
	IN-USW-USERID	A8	
	IN-USW-SWITCH	N2	Range is `0` through `31`.
	Type C - Include BS2000 Job Variable: see *BS2000 Job Variable Definition*.		
	Type D - External Input Condition:		
	IN-OWNER	**common**	

Abbr.	Field	Format	Remark
	IN-NETWORK	**common**	
	Type Multiple Suffixes:		
	IN-SUFFIX-SYMBOL-TABLE	**common**	
	IN-SUFFIX-SYMTAB-VERSION	**common**	Symbol table version.
	IN-SUFFIX-SYMBOL	**common**	
	IN-SUFFIX-JOB-ST	A1	**Logical value**.
	Type F - Mailbox:		
	IN-MAILBOX-TYPE	A1	
	IN-MAILBOX	**common**	
	IN-MAILBOX-SENT	A1	
	Type G - User Exit:		
	IN-EXITLIB	**common**	
	IN-USEREXIT	**common**	Adding single entries is allowed. Superdescriptor is unique.
	Type Symbol Value:		
	IN-SY-SYMBOL	**common**	
	IN-SY-SYMBOL-TABLE	**common**	
	IN-SY-SYMTAB-VERSION	**common**	Symbol table version.
	Activation Schedule Dependency:		
	ACT-SD-NEGATE	A1	
	ACT-SD-USAGE	A1	
	ACT-SD-TEST-SET	A2	
	ACT-SD-POSITION	N3	*+nnn* = from period begin. *-nnn* = from period end.
PG	RESOURCES		Max. occurrence = 20.
PI	RES-NAME	A20	
	RES-REQUIRED	P5	Adding single entries is allowed. Superdescriptor is unique.
+	JOB-TYPE	A3	
	SPECIAL-TYPE	A1	R: Recovery job. S: Stops an STC.
	RESTARTABLE	A1	**Logical value**.
	ESC-ACTIVATION	A1	
	ESC-SUBMIT	A1	
	SYMBOL-TABLE	**common**	
	SYMTAB-VERSION	**common**	Symbol table version.

Abbr.	Field	Format	Remark
	MPA-SUFFIX-SYMBOL	**common**	Like symbol.
	JCL-LOCATION	A3	
	JCL-NODE	**common**	
	JCL-FILE	A54	
	JCL-MEMBER	A64	
	JCL-MEMBER-TYPE	A8	
	JCL-MEMBER-VERSION	A24	
	JCL-VOLSER	A6	
	JCL-FILE-PASSWORD	A8	
	SYSOUT-CATID	A4	
	SYSOUT-USERID	A8	
	SYSOUT-NODE	**common**	
	JCL-USERID	**common**	
	JCL-GROUP	**common**	
+	EXECUTION-NODE	**common**	
	SUBMIT-USERID	**common**	
	SUBMIT-GROUP	**common**	
	SUBMIT-PASSWORD	A16	
	SUBMIT-JOB-CLASS	A8	
	EARLIEST-START	T	
	EARLIEST-START-DAYS-TYPE	A1	
	LATEST-START	T	
	LATEST-DAYS-AFTER	N3	
	LATEST-START-DAYS-TYPE	A1	
	DEADLINE	T	
	DEADLINE-DAYS-AFTER	N3	
	DEADLINE-DAYS-TYPE	A1	
	CYCLIC-INTERVAL	T	Relative time.
	EJA-ERROR-MODE	A1	
	Include message recipient (see *Sub-Objects*).		
	ESTIMATED-ELAPSED-TIME	T	Relative time. Exported for downward compatibility only. Replaced by `ESTIMATED-ELAPSED-SECONDS`.

Abbr.	Field	Format	Remark
	ESTIMATED-ELAPSED-SECOND	N10	On import, this field has precedence before `ESTIMATED-ELAPSED-TIME`.
M	ELAPSED-TIME	T	Relative time. Max. occurrence = 20. Adding single entries is allowed.
	TAPES	N3	
PG	LOG-SM		Max. occurrence = 10.
PI	LOG-SM-MESSAGE	A7	
M	LOG-SM-SELECT	A40	Max. occurrence = 10. Adding single entries is allowed. Superdescriptor is unique.
	LOG-SO	A1	Log SYSOUT logic.
PG	LOG-SO-SELECT		Max. occurrence = 1.
PI	LOG-SO-TYPE	A2	
M	LOG-SO-DATASET	N3	Max. occurrence = 10. Adding single entries is allowed. Superdescriptor is unique.
	LOG-JCL	A1	Log JCL logic.
	LOG-SYSLST	A1	Log SYSLST logic.
	BS2000-USERID	A8	
	BS2000-ACCOUNT	A8	
	BS2000-MONJV	A54	
	BS2000-MONJV-PASSWORD	A8	Hexadecimal printable.
	BS2000-SYSOUT-SHARE	A1	**Logical value**.
	SUB-NETWORK-OWNER	**common**	
	SUB-NETWORK	**common**	
	SUB-NETWORK-VERSION	**common**	
	SUBNET-ACT-MODE	A1	Subnetwork activation mode.
	IN-ACTMODE	A1	
	DAT-TARGET-LOCATION	A3	Job type `DAT`: target location.
	DAT-TARGET-FILE	A54	Job type `DAT`: target file.
	DAT-TARGET-MEMBER	A64	Job type `DAT`: target member.
	DAT-TARGET-MEMBER-TYPE	A8	Job type `DAT`: target member type.

Abbr.	Field	Format	Remark
	DAT-TARGET-OVERWRITE	A1	Job type DAT: allow overwrite of target file. **Logical value**.
	SNF-EXIT-LIBRARY	**common**	Symbol not found exit: exit library.
	SNF-EXIT-MEMBER	**common**	Symbol not found exit: exit member.
	EARLIEST-DAYS-AFTER	N3	
	JCL-LOAD-MODE	A1	
	JOB-PRIORITY	A3	
	RUN-PRIORITY	A3	
	CMDLINE-MODE	A1	
	SRV-WIN-SERVICE	A128	
	SUBNET-TIME-MODE	N5	
	IN-JV-COMP-VALUE-2	A128	
	FTP-USERID	**common**	
	FTP-GROUP	**common**	
	FTP-ACCOUNT	A8	
	FTP-CIPHER-PASSWORD	A32	
	FTP-REMOTE-HOST	A50	
	FTP-REMOTE-DIR	A128	
	FTP-LOCAL-DIR	A128	
	FTP-FILE	A128	
	FTP-FILE-2	A128	
	FTP-FILE-TYPE	A1	
	FTP-FUNCTION	A8	
	FTP-TYPE	A1	

OBJECT=JCL-MASTER

- Currently for import only.

- JCL can be in different locations.

- Should be imported only into Natural first.

Abbr.	Field	Format	Remark
K	OWNER	common	
K	NETWORK	common	
K	NETWORK-VERSION	common	Network version. Field is case-sensitive.
K	JOB	common	
	TARGET-LOCATION	A3	Currently NAT only.
	JCL-NODE	common	
+	LIBRARY	A8	For NAT.
	MEMBER	A8	For NAT.
M	T	A78	JCL text line. Adding single entries is not allowed. Max. occurrence = 1.

OBJECT=EOJ-CHECK-MASTER

This section covers the following topics:

OBJECT=EOJ-CHECK-MASTER

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	common	
K	NETWORK	common	
K	NETWORK-VERSION	common	
K	JOB	common	
	EVENT-NAME	A30	
	CODE	A4	
	VALUE	A5	
	OP	A2	
	OK	A2	Values: OK, NO.

Abbr.	Field	Format	Remark
M	FIND-IN	A8	Max. occurrence = 10. Adding single entries is allowed.
	ACTION-FILE	A54	
	SPOOL-CLASS-AFTER	A8	
	SYSOUT-ACTION	A1	
PG	OUT-CONDITION-P		Max. occurrence = 20.
PI	OUT-CONDITION	**common**	
	OUT-COND-REFERENCE	**common**	
	OUT-COND-DELETE-ADD	A1	A = Add. D = Delete.
	EJA-TMP-DUM-ACTION	A20	
	EJA-ERROR-MODE	A1	
	EJA-EXIT-MODE	A1	
	EJC-EXIT-MODE	A1	
	BS2000 Job Variable Check:		
	EJC-JOB-VARIABLE	A54	
	EJC-JV-SUB-POSITION	N3	
	EJC-JV-SUB-LENGTH	N3	
	EJC-JV-SUB-FORMAT	A1	
	EJC-JV-COMP-OP	A2	
	EJC-JV-VALUE	A128	
	EJC-JV-VALUE-2	A128	
	EOJ-Action - Activation:		
	ACT-OWNER	**common**	
	ACT-NETWORK	**common**	
	ACT-NETWORK-VERSION	**common**	
	ACT-JOB	**common**	
	ACT-EXITLIB	**common**	
	ACT-USEREXIT	**common**	
	ACT-DATE-TIME-DEPENDENT	A1	
	ACT-SCHEDULE-USAGE	A1	
	ACT-SCHEDULE-OWNER	A10	
	ACT-SCHEDULE	A10	
	EOJ-Action - Set Symbol:		
	EJA-SYMBOL-OWNER	**common**	
	EJA-SYMBOL-TABLE	**common**	
	EJA-SYMTAB-VERSION	**common**	Set symbol: symbol table version.

Abbr.	Field	Format	Remark
	EJA-SYMBOL	**common**	
	EJA-SYMBOL-SUB-POSITION	N3	Set symbol: substring position.
	EJA-SYMBOL-SUB-LENGTH	N3	Set symbol: substring length.
	EJA-SYMBOL-SUB-FORMAT	A1	Set symbol: substring format.
	EJA-SYMBOL-VALUE	A100	Set symbol: value.
	EOJ-Action - Recovery:		
	RCV-OWNER	**common**	
	RCV-NETWORK	**common**	
	RCV-NETWORK-VERSION	**common**	
	RCV-JOB	**common**	
	RCV-LIMIT	N2	
	RCV-RESCHEDULE	A3	
	RCV-WAIT-TIME	N3	
	RCV-SAME-RUN	A1	**Logical value**.
	RCV-SYMBOL-OWNER	A10	
	RCV-SYMBOL-TABLE	A10	
	EOJ-Action - Message Sending:		
	MSG	A42	
PG	Include **message recipient** (see *Sub-Objects*).	**common**	
	EOJ-Check - BS2000 Specials:		
	BS2000-USERID	A8	
	BS2000-PASSWORD	A8	Contains printable hex value.
	USER-SWITCH	N2	
	ACCEPT-NOT-OK	A1	**Logical value**.
	EOJ-Action - BS2000 Job Variable Setting:		
	EJA-JOB-VARIABLE	A54	
	EJA-JV-SUB-POSITION	N3	
	EJA-JV-SUB-LENGTH	N3	
	EJA-JV-SUB-FORMAT	A1	
	EJA-JV-VALUE	A128	
	EJA-JV-VALUE-2	A128	
	EOJ-Action - Release Resource:		
	EJA-REL-K-RESOURCE	A20	
	EOJ-Action - Entire Output Management:		
PG	EJA-NOM-ACTION		Max. occurrence = 10.

Abbr.	Field	Format	Remark
PI	EJA-NOM-SOURCE-TYPE	A4	
PI	EJA-NOM-SPOOL-FILE-TYPE	A2	These parameters describe a SPOOL file for z/OS operating systems.
PI	EJA-NOM-SPOOL-FILE-NUMBER	N5	
PI	EJA-NOM-SPOOL-PROCNAME	A8	
PI	EJA-NOM-SPOOL-STEPNAME	A8	
PI	EJA-NOM-SPOOL-DDNAME	A8	
PI	EJA-NOM-FILE-NAME	A54	These parameters describe a sequential file for BS2000 and z/OS operating systems.
	EJA-NOM-FILE-CCTYPE	A4	
PI	EJA-NOM-FILE-VOLSER	A6	
PI	EJA-NOM-FILE-RECFM	A2	
PI	EJA-NOM-FILE-LRECL	N5	
PI	EJA-NOM-FILE-BLKSIZE	N5	
	EJA-NOM-FILE-PNAME	A8	
	EJA-NOM-FILE-TMP-DUMMY	A1	
Object Description:			
M	T	A80	Description text line. Max. occurrence = 1000. Lines containing at least one blank must be enclosed in apostrophes (' ').
	DESC-MOD-USER	A8	Like common `MOD-USER`, but for object description.
	DESC-MOD-DATE	DT	Like common `MOD-TIME`, but for object description.
	DESC-CREATION-DATE	DT	Like common `CREATION-TIME`, but for object description.

EOJ-Action: Entire Output Management

The identification of SPOOL files and sequential files to be sent to Entire Output Management functions as described in the following tables.

SPOOL Files

File	Source Type	File Type	File No.	PROCNAME	STEPNAME	DDNAME
z/OS	JES 2, JES 3	X	X			
	JES 2, JES 3			X	X	X

Sequential Files

File	Source Type	File Name	Volser	RECFM	LRECL	BLKSIZE
BS2000	SEQB	X				
z/OS	SEQM	X				
UNIX	SEQX	X				
Windows	SEQW	X				

X means "must exist".

OBJECT=DESCRIPTION

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
+	TYPE		`NETWORK`, `JOB`, `EVENT`
K	OWNER	**common**	
K	NETWORK	**common**	
K	JOB	**common**	For `TYPE=NETWORK`, this is not a key field.
M	T	A80	Description text line. Description texts begin with `T=`. Lines longer than 70 are split. Description records should be contiguous. Max. occurrence = 1000.

OBJECT=SCHEDULE

Import

When importing a schedule, the current date is entered as an explicit exclusion date in the network schedule. This prevents unwanted activations.

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	SCHEDULE	**common**	
	CALENDAR	**common**	
	CALENDAR-OWNER	**common**	
	SHDESC	A70	Short description.
M	M-MONTH	N2	Month for monthly dates. Adding single entries is allowed.
PG	M-DATE		Max. occurrence = 31.
PI	M-DAY	A2	Just day of month.
	M-FLAG	A1	A: After holiday. B: Before holiday. W: Workday of month. V: Workday of month, counted from end of month. Adding single entries is allowed. Superdescriptor is unique.
M	W-MONTH	N2	Month for weekly dates. Adding single entries is allowed. Max. occurrence = 12.
PG	W-DATE		Max. occurrence = 7.
PI	W-DAY	N1	1 = Sunday, 2 = Monday, 3 = Tuesday, etc.
	W-FLAG	A1	A: After holiday. B: Before holiday. W: Workday of week. V: Workday of week, counted from end of week.
PG	EXPL-DATE		Max. occurrence = 28.
PI	EXPL-DAY	D	Explicit schedule date.
	EXPL-FLAG	A1	Exclude. A: After holiday.

Abbr.	Field	Format	Remark
			B: Before holiday. Adding single entries is allowed. Superdescriptor is unique.

OBJECT=CALENDAR

Import

Empty calendars are added for the current year.

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	CALENDAR	**common**	
M	HDAY	D	Holiday/Workday. Adding single entries is allowed. Max. occurrence = 99.
M	WDAY	D	Dates must be grouped in year tables. Adding single entries is allowed. Max. occurrence = 99.
PG	PERIODIC		Not yet implemented. Max. occurrence = 99.
	P-START-DATE	D	Start of validity range.
	P-END-DATE	D	End of validity range.
	P-PERIOD	A1	Y =year M =month W =week
M	P-POSITION	N3	+*nnn* = from period begin. -*nnn* = from period end. Adding single entries is allowed. No superdescriptor. All entries are used in conjunction (logical OR). Max. occurrence = 1.

Abbr.	Field	Format	Remark
M	YEAR-DEFINED	N4	This field is written for each year the calendar is defined for, even if the calendar is empty for that year. Max. occurrence = 20.
	SHDESC	A70	Short description.

OBJECT=TO-ACTIVATE

Import

Planned activations before or at the current date are rejected. This prevents unwanted activations.

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark		
K	OWNER	common			
K	NETWORK	common			
	JOB	common	Not defined: network activation. Enter a hyphen (-) here.		
	RUN	common	For MODE=ADD: If the run number already exists in target, a new one is to be used, and a warning message must be issued. If not specified, a new run number must be used too.		
+	AT	DT			
	SYMBOL-MOD-BKGR	A1	**Logical value**.		
	SYMBOL-TABLE	common			
	ORIGIN	A1	A	By API.	
			E	By EOJ action.	
			M	Manual activation.	
			R	Recovery.	
			S	By schedule extraction.	
			U	By API, as subnetwork.	
	EARLIEST-OFFSET	P13	In 1/10 sec.		
	PLAN-EARLIEST-START	T (DT)			
	DATE-TIME-DEPENDENT	A1			

OBJECT=SYMBOL-MASTER

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	SYMBOL-TABLE	**common**	
K	SYMTAB-VERSION	**common**	
K	SYMBOL	**common**	
	TYPE	A1	
	LENGTH	N2	
	VALUE	A120	For the handling of blank values and double quotation marks, see *Alphanumeric value*.
M	MULT-VALUE	A120	Max. occurrence = 150. `VALUE` and `MULT-VALUE` are mutually exclusive. Adding single entries is allowed. For the handling of blank values and double quotation marks, see *Alphanumeric value*.
	PROMPT	A1	
M	PT	A70	Prompt text. Max. occurrence = 5. Adding single entries is not allowed.
	USEREXIT	**common**	
	EXITLIB	**common**	
	CV-FROM	A10	
	CV-TO	A10	
	UPDATE-MODE	A1	

OBJECT=MAILBOX-DEFINITION

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format
K	MAILBOX	**common**
	DESCRIPTION	A70

OBJECT=MAILBOX-ENTRY

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	MAILBOX	**common**	
K	RECEIVER-TYPE	A1	Message receiver (recipient) type: A, U, G, O, N or C.
K	NEXT-ACTION-TIME	DT	
	MESSAGE-CODE	N4	
	MESSAGE	A70	
	STATUS	N4	
	SENDER	A8	
	SEND-TIME	DT	
	MESSAGE-TYPE	A3	To be analyzed.
	READ-TIME	DT	
	READ-COUNT	P5	
	REPLY	A70	
	OWNER	**common**	
	NETWORK	**common**	
	JOB	**common**	
	RUN	**common**	
	ACTIVATION-TIME	DT	
	EARLIEST-START	DT	
	JOB-ID	**common**	

Abbr.	Field	Format	Remark
	CONDITION	**common**	
	COND-REFERENCE	**common**	
	SYMBOL	**common**	
	SYMBOL-TABLE	**common**	

OBJECT=NODE-DEFINITION

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	NODE	**common**	
	NODE-A	A5	Short (mnemonic) name.
+	NAME	A32	Long name.
	ACCESS-MODE	A1	B = node is accessed via the EntireX Broker. L = local node (UNIX and Windows only). N = node is accessed via Net-Work.
	TIME-DIFFERENCE	T	Explanation: 12:00 = 0 h, 16:00 +4 h, 04:00 = - 8h.
	NPR-VERSION	A10	Version of Entire System Server, which was in effect at the last successful access to the node.
	CYGWIN-DIRECTORY	A200	
	OPSYS-CLASS	A1	Operating system class.
	OS-RELEASE	A64	Operating system release, which was in effect at the last successful access to the node. Example: `openSUSE 11.4 (x86_64)`
	OPERATING-SYSTEM	A8	Operating system, in Entire Operations internal format.
	VALID	A1	**Logical value**.
	WAIT-AFTER-ERROR	T	Format: relative time.
	PRINT-COMMAND	A64	UNIX print command.
	DEF-USERID	**common**	
	DEF-GROUP	**common**	
	MESSAGE-COMMAND	A70	
	MAIL-SENDER	A128	

Abbr.	Field	Format	Remark
	MAIL-SENDER-NAME	A128	
	MAIL-REPLY-TO	A128	
	MAIL-REPLY-TO-NAME	A128	
	MAIL-DESTINATION	A8	
	MAIL-SYSOUT-CLASS	A1	
	SUBMIT-SEC-USER-TYPE	A1	Submit security user type.
	SPOOL-CLASS-AFTER	A8	

OBJECT=RESOURCE-DEFINITION

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	RESOURCE	A20	
+	TYPE	A1	
	QUANTITY	P7.2	
	INITIAL-QUANTITY	P7.2	
	EXIT-LIBRARY	A8	For Resource Master Determination exit.
	EXIT-MEMBER	A8	For Resource Master Determination exit.
	EXIT-TYPE	A1	**Logical value**.
	EXIT-CALL-TIME	DT	
	EXIT-CALL-INTERVAL	N10	
	EXIT-CALL-STATUS	N8	
	EXIT-PARAMETER	A36	

OBJECT=RESOURCE-PREREQ

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	DBENV	**common**	Database environment (for future use).
K	OWNER	**common**	
K	NETWORK	**common**	
K	JOB	**common**	
	RESOURCE	A20	
	QUANTITY	P7.2	
	DEALLOCATION	A1	
	DEALLOCATE-NOT-OK	A1	**Logical value**.

OBJECT=USER-DEFINITION

Abbr.	Field	Format	Remark
K	USERID	A8	
	PASSWORD	A8	
	LANGUAGE	N3	
+	MAIN-OWNER	A10	
M	OWNER	A10	An unlimited number of owners may be defined for a user. Adding single entries is allowed.
PG	MAILBOX		Max. occurrence = 10.
PI	MAILBOX-TYPE	A1	
PI	MAILBOX-NAME	A10	Adding single entries is allowed. Superdescriptor is unique.
+	PROF-TYPE	A1	
	PROF-USERS	A1	
	PROF-RESOURCES	A1	
	PROF-RESOURCE-USAGE	A1	
	PROF-NODES	A1	
	PROF-DEFAULTS	A1	
	PROF-MAILBOX-DEFINITION	A1	
	PROF-MONITOR	A1	Prof-Startup/Prof-Shutdown. **Logical value**.
	PROF-NETWORKS	A1	
	PROF-JOB-MASTER	A1	Prof-Jobs.

Abbr.	Field	Format	Remark
	PROF-IN	A1	
	PROF-OUT	A1	
	PROF-JCL-MASTER	A1	Prof-JCLs.
	PROF-PROSE-MASTER	A1	Prof-Description.
	PROF-SYMBOLS	A1	
	PROF-JOB-ACTIVE	A1	Prof-Ajobs.
	PROF-AIN	A1	
	PROF-AOUT	A1	
	PROF-JCL-ACTIVE	A1	Prof-AJCLs.
	PROF-PROSE-ACTIVE	A1	Prod-Aprose.
	PROF-COND-ACTIVE	A1	Prof-Acond.
	PROF-REP1	A1	Logical value (obsolete).
	PROF-REP2	A1	Logical value (obsolete).
	PROF-REP3	A1	Logical value (obsolete).
	PROF-REP4	A1	Logical value (obsolete).
	PROF-REP5	A1	Logical value (obsolete).
	PROF-REP6	A1	Logical value (obsolete).
	PROF-REP7	A1	Logical value (obsolete).
	PROF-REP8	A1	Logical value (obsolete).
	PROF-LOG	A1	**Logical value.**
	PROF-SCHEDULE	A1	**Logical value.**
	PROF-CALENDARS	A1	
	PROF-ACTIVATION	A1	**Logical value.**
	PROF-RESUBMIT	A1	**Logical value.**
	PROF-HOLD-RELEASE	A1	**Logical value.**
	PROF-JCL-GENERATE	A1	Prof-Gen.JCL. **Logical value.**
	PROF-SYSOUT	A1	**Logical value.**
	PROF-GLOB-COND	A1	
	PROF-JOB-CANCEL	A1	Prof-Canjob. **Logical value.**
	PROF-MAILBOX-READ	A1	**Logical value.**
	PROF-NETWORK-ACCESS	A1	
	PROF-NETWORK-ACTIVATION	A1	**Logical value.**
	PROF-SYMBOL-PRINT	A1	**Logical value.**

Abbr.	Field	Format	Remark
	PROF-SYSTEM-OTHER	A1	**Logical value**.
	PROF-XREF	A1	**Logical value**.
	PROF-IMPORT-EXPORT	A1	**Logical value**.
	PROF-PROSE-MASTER	A1	
	PROF-EDITOR-AUTOSAVE	A1	**Logical value**.
	PROF-EXIT-DIRECTORY	A1	**Logical value**.
	PROF-SPECIAL-FUNCTIONS	A1	**Logical value**.
	PROF-MAIL-SORT-ORDER	A1	
	PROF-REP-SEL-WILDCARD	A1	**Logical value**.
	PROF-SYM-LIST-LONG	A1	**Logical value**.
	PROF-LAST-RUN-MODE	A1	
	PROF-USE-LAST-LOGON	A1	**Logical value**.
	PROF-GUI-PROFILE	A1	**Logical value**.
	PROF-LAJ-SORT-ORDER	A1	
	PROF-LAJ-SORT-KEY	A1	
	PROF-NON-SEC-SETTINGS	A1	**Logical value**.
	PROF-PREFIX-LOG-MSG	A1	**Logical value**.
	PROF-NAMED-FILTER	A1	
	EDITOR-LINE-LIMIT	N7	
	SELECT-NETWORK-LIST	A10	
	GUI-PROFILE	A50	
	GUI-REFRESH-INTERVAL	N10	
	EMAIL-ADDRESS	A100	The @ is replaced by (at) in this field.
	WP-SORT-ORDER	A1	
	WP-SORT-COLUMN	A1	
	NODE-REPRESENTATION	A1	
	Include modification information (see *Sub-Objects*).		
+ PG	LOGON		
	LOGON-NODE	A16	
	LOGON-USERID	A20	
	LOGON-GROUP	A20	

OBJECT=DEFAULTS

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format	Remark
K	LIBRARY	A8	
	MONITOR-MODULE	A8	
	DATE-FORMAT	A1	
	MONITOR-USERID	A8	
	MONITOR-WAIT-TIME	N8	In seconds.
	MONITOR-EXEC-TYPE	A1	
	MONITOR-SUBTASK-USER	A16	
	MONITOR-TASK-PREFIX	A3	
	SAT-DBID	**common**	
	SAT-FNR	**common**	
	SAT-LIBRARY	A8	
	BS2000-MON-JCL	A54	
	BS2000-MON-JCL-MEMBER	A64	
	BS2000-MON-JCL-VERSION	A24	
	DEFAULT-NODE	**common**	
	MONITOR-NODE	**common**	
	JCL-HEADER	A1	**Logical value**.
	JCL-SYMBOL-LOG	A1	**Logical value**.
	ACTIVE-JOB-AGE	N4	
	ACTIVE-NETWORK-AGE	N4	
	CONDITION-AGE	N4	
	LOGGING-AGE	N4	
	LONG-LOG-AGE	N4	
	ACCOUNTING-AGE	N4	
	LATEST-START-AFTER	P13	In 1/10 sec.
	DEADLINE-AFTER	P13	Unit 1/10 sec.
	EXTRACTION-BEFORE-DAYS	P5	
	PREVIOUS-DATE-END-TIME	T	
	ACTIVATION-BEFORE	N3	Unit: minutes.
	LOGON-SCREEN	A1	**Logical value**.

Abbr.	Field	Format	Remark
	LOGOFF-RETURN	A1	**Logical value**.
	CALENDAR-DISPLAY	A1	
	SYMBOL-UPDATE-MASTER	A1	**Logical value**.
	ESCAPE-ACTIVATION	A1	
	ESCAPE-SUBMIT	A1	
	SYSTEMFILE-2-DBID	**common**	Data-2-DBID.
	SYSTEMFILE-2-FNR	**common**	Data-2-FNR.
	LANGUAGE	N3	
	USER-APPLICATION	A8	
	USER-MENU-LINE	A50	
	SUBMIT-SEC-USER-TYPE	A1	
	SUBMIT-EXIT-TYPE	A1	
	SUBMIT-USEREXIT	**common**	
	ACTIVATION-JCL-USEREXIT	**common**	
	OS-DEF-MSGCLASS	A8	
	OS-DEF-MSGLEVEL	A8	
	OS-DEF-CODE-VALUE	A4	
	OS-DEF-USER-VALUE	A4	
	OS-SPOOL-CLASS	A8	
	SPOOL-CLASS-AFTER	A8	
	MVS-ACCEPT-TERM-CC	A1	**Logical value**.
	BS2000-ACCOUNT	A8	
	BS2000-JOB-CLASS	A1	
	BS2000-SYSOUT-SHARE	A1	**Logical value**.
	BS2000-COLLECT-SYSLST	A1	**Logical value**.
	BS2000-MONJV-KILL	A1	**Logical value**.
	AUTO-CLEANUP	A1	
	AUTO-CLEANUP-TIME	T	
	USE-SCHEDULE-TIME	A1	**Logical value**.
	MONITOR-NODE-TYPE	A1	
	ESC-TABLE	A10	
	SYMBOL-USEREXIT	A8	
	EXITCODE-MAX-UNIX	A8	
	EXITCODE-MAX-WNT	A8	
	BS2000-SEVERITY	A4	
	FILE-PASSWORD-AT-EDIT	A1	

Abbr.	Field	Format	Remark
	BS2000-MSG-NOT-OK	A7	
	USERID-DEFINITION	A1	
	NOM-SYSOUT-COPY	A1	**Logical value**.
PG	MESSAGE-CODES		Max. occurrence = 10.
PI	MESSAGE-CODE	A10	
	MESSAGE-SEVERITY	A4	
	MESSAGE-OPSYS	A8	Adding single entries is not allowed. Superdescriptor is unique.
	RUN-MAXIMUM	N5	Run number maximum (limit).
	SYSOUT-MAX-LINES	N10	
	SUBNET-ACT-MODE	A1	Subnetwork activation mode.
	LOG-ACTIVE-JCL-MOD	A1	Log modifications of active JCL. **Logical value**.
PG	DEF-MSG-RECEIVER		Message recipient (receiver). Max. occurrence = 8.
PI	DEF-MSG-RCV-NAME	A8	
PI	DEF-MSG-RCV-TYPE	A1	
PI	DEF-MSG-RCV-PROCESSOR	A10	
PI	DEF-MSG-RCV-NODE	**common**	
	DEF-MSG-PROFILE	A20	
	DEF-MSG-SYMBOL-OWNER	**common**	
	DEF-MSG-SYMBOL-TABLE	**common**	
	DEF-MSG-SYMTAB-VERSION	**common**	
PG	MONITOR-TASK-TABLE		Max. occurrence = 99.
PI	TASK-NUMBER	N3	

PI	TASK-FUNCTION	A59	Contains up to 15 task functions, as 3-letter codes, separated by commas. Example:
			
			```v```
			```TASK-FUNCTION=SCE,ACT,JCL,SUB,JEX,SU3```
			
			Recommendation: Do not modify the Monitor task table definitions in the export file.

PI	TASK-WAIT-TIME	N6	Specific task wait time. Unit: seconds.
	DEF-NAT-TASK-MAX	N3	Maximum number of dedicated Natural tasks.
	DEF-NAT-IDLE-MAX	N3	Maximum idle time of a Natural task. Unit: minutes.

Abbr.	Field	Format	Remark
	DEF-JCL-REGEN-SYMBOL-PROMPT	A1	
	TA-KEEP-TIMEFRAMES	A1	
	LOG-ESY-LOGON	A1	
	DEACT-JOBS-AT-ONCE	N10	
	NOM-RETRY-LIMIT	N7	
	RE-SUBMIT-SYMBOL	A1	
	LOG-API	A1	
	CONFIRM-PROFILE	A32	
	ENCODING	A8	
	STEP-ACCOUNTING	A1	
	NOM-EMPTY-FILE	A1	
	SYMTAB-ACT-MODE	A1	
	NETWORK-VERSION-LIMIT	N7	

OBJECT=GLOBAL-EXIT

Modification Information

You can include **modification information** as described in the section *Sub-Objects*.

Abbr.	Field	Format
K	TYPE	A8
	LIBRARY	**common**
	MEMBER	**common**
	SUBMIT-EXIT-TYPE	A1

OBJECT=CONDITION-ACTIVE

Abbr.	Field	Format	Remark
K	OWNER	**common**	
K	NETWORK	**common**	
K	RUN	**common**	
K	CONDITION	**common**	
	STATE	N4	0 = free in use. 1 = currently in use.

Abbr.	Field	Format	Remark
			2 = exclusive use.
			3 = use then delete.
	ACTIVATION-TIME	DT	Activation date and time of the active job network.
			This timestamp is used for time range comparisons.

6 Using Import/Export Functions in Batch Mode

Required JCL Specifications

For mass import or export, you are recommended to use import/export functions in batch mode and consider the following for your JCL:

- The `LFILE` parameters must be set as described in *Mandatory Parameter Blocks/Parameters* in the *Installation and Setup* documentation.

- The JCL must contain a `LOGON SYSEOR` statement followed by an `IE` program call and the parameters required to specify the objects to be imported or exported.

- Whenever a parameter is not required in the JCL (for example, no library if the location is `WRK`), enter a hyphen (`-`) for this parameter.

- During import or export, information about the process is written to the SYSOUT. When the import or export operation terminates, it writes a last message to the SYSOUT, to inform you that the function ended successfully.

This section covers the following topics:

- Example of JCL for Export
- Example of JCL for Import

Example of JCL for Export

```
//EXPOBAT  JOB  BSP,CLASS=L,MSGCLASS=X,MSGLEVEL=1
//*********************************************************
//** IE-EX--P OWNER,WRK,-,-,N,N,N,N,N,REQUEST
//**  -> EXPORT ALL FROM OWNER REQUEST WITHOUT RELATED OBJECTS
//** IE-EX--P NETWORK-MASTER,WRK,-,-,N,N,Y,NATQA,P205753*,*
//** IE-EXA-P WRK,-,-,N,N,N,N,N
//** -> EXPORT ALL
//**
//*********************************************************
//EXPORT   EXEC PGM=NATBATvr,REGION=3000K,
//  PARM=('PROFILE=NOPvrJOB')
//STEPLIB  DD   DSN=NATURAL.QA.LOAD,DISP=SHR
//SYSPRINT DD  SYSOUT=*
//SYSUDUMP DD  SYSOUT=*
//CMPRINT  DD  SYSOUT=*
//CMWKF01  DD  DISP=SHR,DSN=EXPOBAT.TEMP(NOPOBJ1)
//CMSYNIN  DD *
LOGON SYSEOR
IE-EX--P OWNER,WRK,-,-,N,N,N,N,N,OWNER
FIN
//
```

In the example above, *vr* is a two-digit product version.

Example of JCL for Import

```
//IMPOBAT  JOB  CLASS=L,MSGCLASS=X
//* ****************************************
//IMPORT   EXEC PGM=NATBATvr,REGION=3000K,
//  PARM=('PROFILE=NOPvrJOB')
//STEPLIB  DD   DSN=NATURAL.QA.LOAD,DISP=SHR
//SYSPRINT DD   SYSOUT=*
//SYSUDUMP DD   SYSOUT=*
//CMPRINT  DD   SYSOUT=*
//CMWKF01  DD   DISP=SHR,DSN=TST.NOPvrs.TMP.EXPORT
//CMSYNIN  DD *
LOGON SYSEOR
IE-IM--P WRK - - A 9999 9999
FIN
//
```

In the example above, *vr* is a two-digit and *vrs* a three-digit product version.

Export Commands for Batch Processing

This section describes the commands available to export individual or all objects of your Entire Operations environment in batch mode.

Export of Individual Objects

You can export individual objects by using the `IE-EX--P` command. The following syntax applies:

```
IE-EX--P object-type,location,library,natural-object-prefix,
       export-mode,export-passwords,export-schedules,
       export-calendars,export-symbols,export-grants,
       key-field-1,key-field-2,key-field-3,key-field-4
```

Export of All Objects

You can export all objects by using the `IE-EXA-P` command. The following syntax applies:

```
IE-EXA-P location,library,natural-object-prefix,
       export-mode,export-passwords,export-schedules,
       export-calendars,export-symbols,export-grants,[owner]
```

This section covers the following topics:

- Parameter Description
- Target Entire Operations Version Setting

- Examples of Export

Parameter Description

The parameters of the `IE-EX--P` and `IE-EXA-P` export commands are described in the following section.

Syntax Element	Format	Description	
object-type	A20	A valid object type (see ***Object Type to be Exported: Key Fields of the Objects***).	
location	A3	The location of the file that should be created.	
		NAT	Export to Natural text object. See also *library* and *natural-object-prefix*.
		WRK	Export to work file. Work File 1 must be defined. The work file format must be the same as for Natural INPL utility.
		Note: The location `PC` is not available in batch mode since it requires Entire Connection as a transport medium.	
library	A8	Only for `NAT` locations. Enter a blank character if the location is not `NAT`. Enter the name of the library, where the Natural object should be created.	
natural-object-prefix	A8	Only for `NAT` locations. Enter a blank character if the location is not `NAT`. Enter the prefix (maximum is 5 characters) of the Natural object you want to create or to which you want to append the data. For explanations of prefix, see the description of the **NAT Member Prefix** field used for the export operation.	
export-mode	A1	A	Append to existing output file. This output file must be defined with `OP=EXTEND` in the /FILE statement (for BS2000) or the DD statement (for z/OS).
		N	Create new output file.
export-passwords	A1	Y	Export passwords.
		N	Do not export passwords.
export-schedules	A1	Y	Export schedules.
		N	Do not export schedules.

Syntax Element	Format	Description	
export-calendars	A1	Y	Export calendars which are used in the network.
		N	Do not export calendars.
export-symbols	A1	Y	Export symbol tables which are used in the network.
		N	Do not export symbol tables.
export-grants	A1	Y	Export granted access rights defined for the network.
		N	Do not export granted access rights defined for the network.
key-field-1 *key-field-2* *key-field-3* *key-field-4*	A20	`IE-EX-P:` Required key fields, specific to objects (see ***Object Type to be Exported: Key Fields of the Objects***).	
owner	A10	`IE-EXA-P:` The owner (optional) whose objects are to be exported. If specified, only objects that belong to the owner are exported. Related items or objects such as passwords, schedules, calendars, symbols and grants can be excluded from the export operation as shown in the **export example**.	

Target Entire Operations Version Setting

Export program invocations can be prefix by a target Entire Operations version definition as shown in the following examples:

```
IE-TVS-P -
```

Target version is the current Entire Operations version.

```
IE-TVS-P 0504030006
```

Target version is Entire Operations Version 5.4.3 CF 6 (or above).

If no target version is specified, the exported file will be importable to the Entire Operations version in which it was created, or in a higher Entire Operations version.

Examples of Export

Example of Exporting a Network

This example deals with the export of network E60-FLOW of owner EXAMPLE to Work File 1 including schedules, calendars, and symbol tables.

The export will be compatible to the Entire Operations version, in which the export file is being created. See *Target Entire Operations Version Setting*.

```
IE-TVS-P 0504030006
IE-EX--P NETWORK-MASTER WRK - - N N Y Y Y Y EXAMPLE E60-FLOW
```

For an example of how the network E60-FLOW appears in external format after it has been exported, see the section *Sample Network*.

Example of Exporting all Objects

This example deals with the export of the whole environment to Natural library PROD objects starting with EXP--001. Schedules, calendars, and symbol tables will be exported with the networks.

```
IE-TVS-P 0504030006
IE-EXA-P NAT PROD EXP N Y Y Y Y Y
```

Import Command for Batch Processing

You can use the IE-IM--P command to import Entire Operations objects in batch mode. The following syntax applies:

```
IE-IM--P location,library,natural-object-prefix,initial-mode,
         error-limit,warning-limit,
         owner,network,network-version,job
```

This section covers the following topics:

- Syntax Description
- Specifying Object Ranges

■ Examples of Import

Syntax Description

The syntax of the `IE-IM--P` import command is described in the following table.

Field	Format	Description	
location	A3	The location of the import file. Possible values:	
		`NAT`	Import from Natural text object. See also *library* and *natural-object-prefix*.
		`WRK`	Import from work file. Work File 1 must be assigned.
		Note: The `PC` location is not available in batch mode since it requires Entire Connection as a transport medium.	
library	A8	Only for `NAT` locations. Enter a blank character if the location is not `NAT`. Enter the name of the library, where the Natural object(s) is/are located.	
natural-object-prefix	A8	Only for `NAT` locations. Enter a blank character if the location is not `NAT`. Enter the prefix of the Natural objects you want to read.	
initial-mode	A1	`A`	Add
		`C`	Check
		`D`	Delete
		`U`	Update
error-limit	I4	The number of errors, after which the import is interrupted.	
warning-limit	I4	The number of warnings, after which the import is interrupted.	
owner	A10	Owner selection for import. See also *Specifying Object Ranges for Import*.	
network	A10	Network selection for import. See also *Specifying Object Ranges for Import*.	
network-version	A10	Network version selection for import. See also *Specifying Object Ranges for Import*.	
job	A10	Job selection for import. See also *Specifying Object Ranges for Import*.	

Specifying Object Ranges

You can use an asterisk (*) as a wildcard to delimit the range of objects to be imported for *owner*, *network* and *job*. For example: if you specify TEST* for the *job*, all jobs with names that begin with TEST are exported.

If you specify an asterisk (*), all objects of the specified object type are imported.

See also *Notes* in the section *Fields: Import Objects Window*.

Examples of Import

Example 1

Import from Work File 1, check only; any number of errors and warnings.

```
IE-IM--P WRK - - C 99999 99999
```

Example 2

Import from NAT; Add Object; Owner EXAMPLE, Network E01* only.

```
IE-IM--P NAT - - A 99999 99999 EXAMPLE E01*   *
```

Natural Batch Condition Codes

Depending on warnings and / or errors during a batch import or export, the Natural batch execution will return one of the following condition codes:

Code	Description
0	Import/Export ended OK.
4	Warnings were issued.
8	At least one error occurred.
16	A fatal error occurred (e.g., a parameter error).