software AG

Import/Export Functions

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Table of Contents

Preface

General Purpose and Backward Compatibility	Describes general import/export functionality and export migration issues.
Importing Objects	Provides information on the process of importing objects and tackles error handling.
Exporting Objects	Explains the export of objects and their key fields.
Syntax in Import/Export Files and Object Processing Rules	Explains the basic syntax used in import/export files and the rules for object processing.
Object Specification	Describes how to define the objects to be imported or exported.

1   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, z/VSE, 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.

2 Importing Objects

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

≫ To import objects

1 In the object workspace, select the **General** node and choose **Import/Export** from the context menu.

A user-specific **Import/Export** window similar to the example below opens:
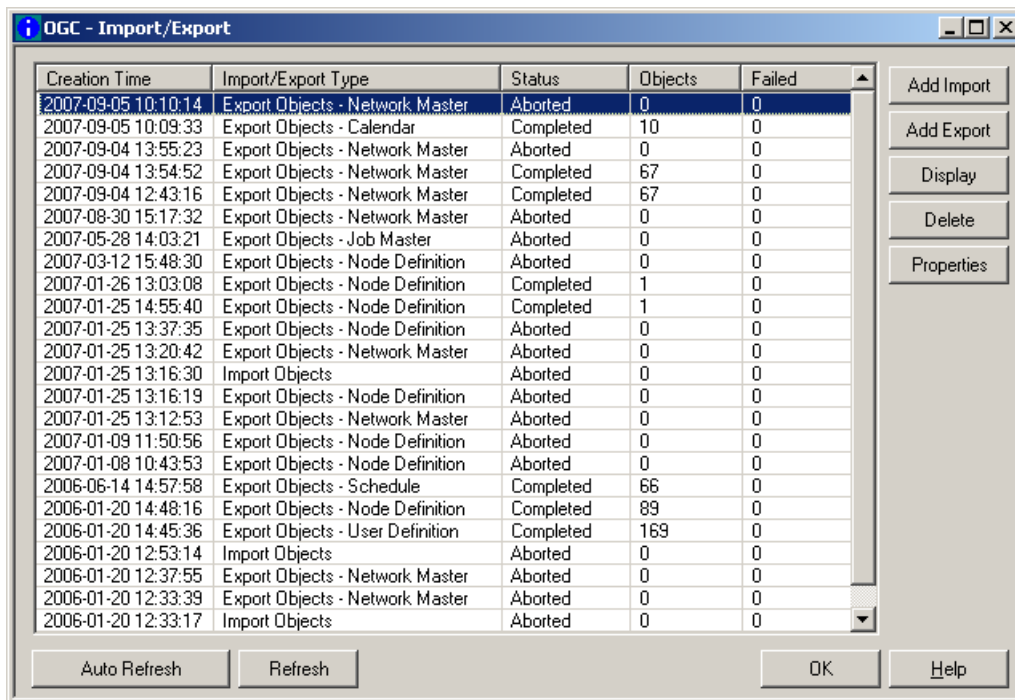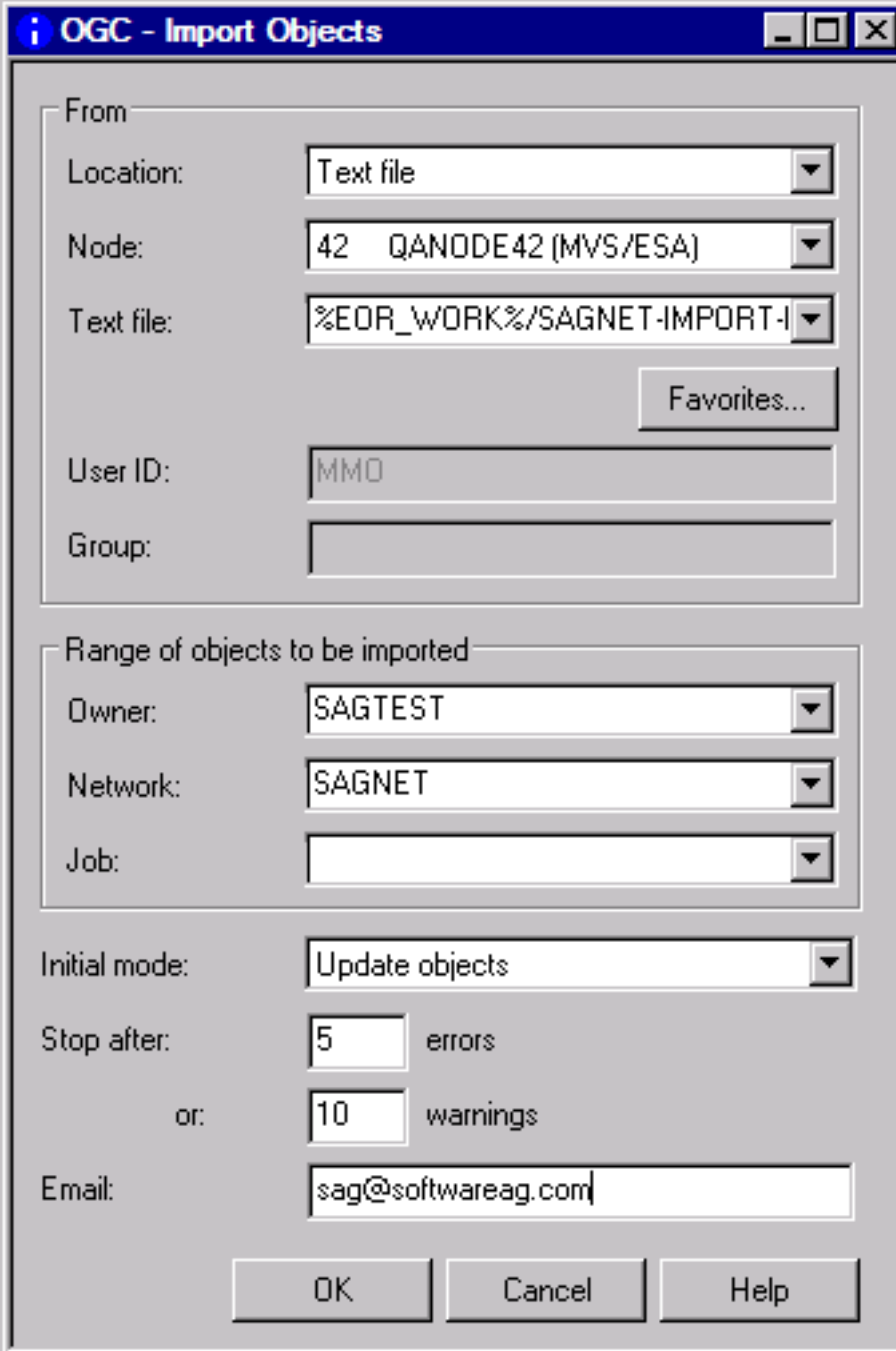
The window lists all processing requests submitted for the objects to be imported (or exported). The list is empty if no requests exist.

The list indicates the current processing status and whether a request has been completed successfully.

The functions available in the **Import/Export** window are described in *Functions: Import/Export Window*.

2 Choose **Add Import**.

An **Import Objects** window similar to the example below opens:

The input fields available are described in *Fields and Options: Import Objects Window*.

3   If required, specify the range of objects to be imported from the specified import file and change the import option.

Choose **OK** when you are finished.

The window closes and the new import request is listed in the **Import/Export window**.

If the import operation is successful, the objects are added, modified or deleted in the appropriate object node(s) of the object workspace.

The syntax that applies to the entries in the import file is explained in *Syntax in Import/Export Files and Object Processing Rules*.

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. Select either of the following options:	
	Natural source	Import from a Natural text object. See also the fields **Library** and **Member**.
	Text file	Import from a text file.
Library	Only for **Natural source** locations. Enter the name of the library, where the Natural objects reside.	
Member	Only for **Natural source** locations. Enter the prefix of the Natural object you want to import.	
Node	Only for **Text file** locations. Enter the name of the node through which the specified text file can be accessed. The text file must exist.	
Text file	Only for **Text file** locations. Enter the name of the text file to be used for the import.	
Favorites	This option button is only available if **Text file** is selected: see *Using Favorites for Text Files*.	
User ID	Only for **Text file** locations. Enter the default user ID if defined for the specified node.	
Group	Only for **Text file** locations. Enter the UNIX group or Windows domain (optional) if defined for the specified node.	

Field	Description	
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.	
	Select one of the following options:	
	Check Objects	Check syntax of objects.
	Add objects	Add objects to the database (default).
	Update objects	Update objects on the database.
	Replace objects	Replace objects on the database, or add them if they do not exist.
	Delete objects	Delete object from the database.
Owner	These fields can be used to define a range of objects to be imported from the import file.	
Network	Enter the required owner, network and job.	
Job	**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.	
	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 is 1 through 99999. Default is 5.	
or ... warnings	Enter number of warnings which can occur before terminating the import process. Valid range is 1 through 99999. Default is 10.	

Using Favorites for Text Files

You can define favorite text files to be used by default for both the import operation and the export operation.

≫ To select, add and delete favorite text files

1   In the **Import Object** or **Export Objects** window, select **Text file** for **Location** and enter a name (or name range) in the **Text file** field, select a name from the drop-down list box, or leave the field blank.

2   Choose **Favorites**.

A **Text File Favorites** dialog similar to the example below opens:
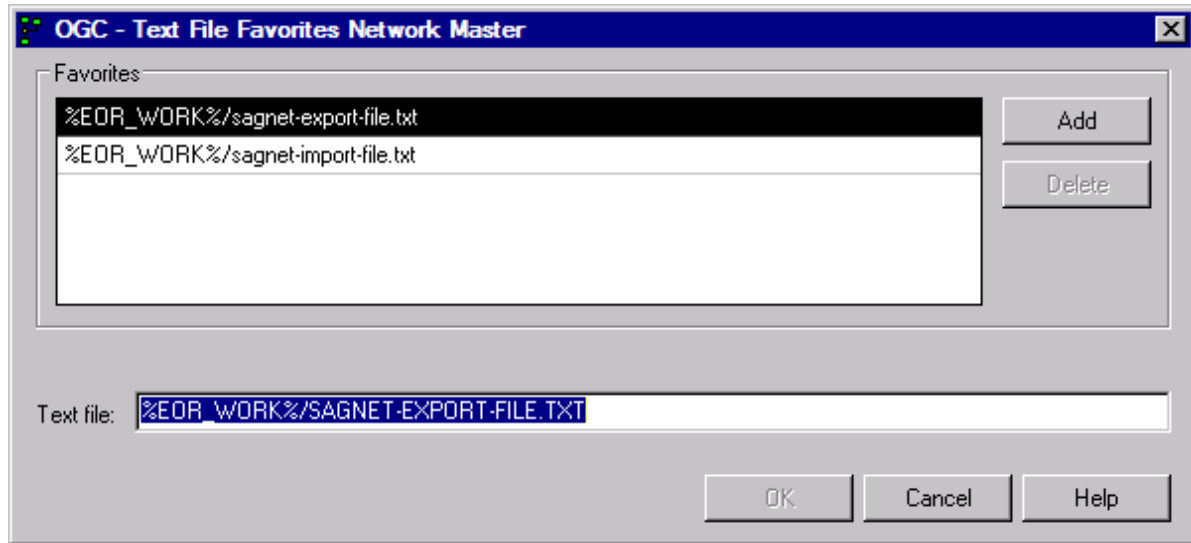
The name (if entered) in the **Text file** field of the **Import/Export Objects** is contained in the **Text file** field of the dialog.

3   To add a favorite file:

In the **Text file** field, enter the name of a text file (maximum is 250 characters) or change the name already entered in the field.

Choose **Add**.

The new file is added to the **Favorites** list.

The **Add** button is deactivated if the maximum of five file names is reached or if the specified name is already contained in the **Favorites** list.

If the maximum number of file names is reached, you have to a delete an existing file before you can add a new one.

4   To select a favorite file:

From the **Favorites** list, select the file you want to use for the current import/export operation.

The file name is copied into the **Text file** field of the dialog.

5   To remove favorite files:

In the **Favorites** list, select one or more file names and choose **Delete**.

The selected file is removed from the **Favorites** list.

6   Choose **OK** to save your changes or double-click on a file in the **Favorites** list.

(**Cancel** cancels any changes. A confirmation window asks you to save the changes if the **Show confirmation dialog** option is selected in your user profile.)

The changes are saved and the **Text File Favorites** dialog closes.

The file entered in the **Text file** field of the **Text File Favorites** dialog is copied into the **Text file** field of the **Import/Export Objects** and is used for the current import/export operation.

Functions: Import/Export Window

The **Import/Export** window provides the following functions to add import and export requests, obtain information on a selected request or remove a request from the list.

Function	Description
Add Import	Opens the **Import Objects** window to specify the object you want to import.
Add Export	Opens the **Export Objects** window to specify the object you want to export.
Display	Displays a log file for a completed or aborted import or export request listed in the window to view information and error messages (if any) on the import or export process.
Delete	Deletes a request (not the resulting output!) from the list to clear the queue after a request has been processed.
Properties	Displays the properties of a request which correspond to the information shown in the **Import Objects** or **Export Objects** window.

Error Handling during Import

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 prefix `ERR-` and an ascending number (`ERR-0001`, `ERR-0002`, ...). 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 have to 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 reimport them again.

This section covers the following topics:

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

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

Syntax Errors

   ▪ 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.

Logical Errors

   ▪ 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.

3   **Exporting Objects**

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

Exporting objects via Entire Operations is only possible if your monitor is running. The execution of all imports and exports is performed asynchronously.

You can export objects with the **Export** function provided for a node or node item. Alternatively, you can use the **Import/Export** function of the **General** node. This section provides instruction for both functions.

≫ **To export single or multiple node items**

1   In the object workspace, select a node or a node instance and choose **Export** from the context menu.

    An **Export Objects** window similar to the example below opens:

OGC – Export Objects

Object type: Network Master

From

Owner: SAGTEST

Network: SAGNET

Version:

Export options

- ☐ Passwords
- ☑ With schedule
- ☐ With calendars
- ☑ With symbols
- ☐ With grants

To

Target version: 050403   0007   **Current version:** 0504030007

Location: Text file

Node: 42   QANODE42 (MVS/ESA)

Text file: %EOR_WORK%/SAGNET-EXPORT-FILE.TXT

Favorites...

User ID: MMO

Group:

Email: sag@softwareag.com

OK   Cancel   Help

Depending on the node or node instance selected, the **From** section contains different output fields that indicate the source objects used for the export.

All input fields and options that can be available in this window section are described in *Fields and Options: Export Objects Window*.

2　Select the location where you want to export the object(s). Depending on the location selected, additional fields appear in the **To** section of the window.

All input fields and options that can be available in this window section are described in *Fields and Options: Export Objects Window*.

3　When you are finished, choose **OK**.

A user-specific **Import/Export window** opens.

The window contains a list of all processing requests submitted for the objects to be exported (or imported). If you selected a node in Step 1, requests for all objects contained in this node are listed.

The list indicates the current processing status and whether a request has been completed successfully.

The functions available in the **Import/Export** window are described in *Functions: Import/Export Window*.

4　When you are finished, choose **OK**.

All objects listed in the **Import/Export** window are exported in the previously specified format.

If the export process is successful, the data collected for the listed objects is output in the specified export file.

The syntax that applies to the entries in the export file is explained in *Syntax in Import/Export Files and Object Processing Rules*.

≫ **To export objects from the General node**

1　In the object workspace, select the **General** node and choose **Import/Export** from the context menu.

2　In the **Import/Export** window, choose **Add Export**.

(All functions available in the window are described in *Functions: Import/Export Window*.)

3　In the **Export Objects** window, define the object you want to export.

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

Fields and Options: Export Objects Window

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

Field/Option	Description
From:	
	Depending on the **Object type** selected, owner, network, network version and job used for the export are displays as output fields in the **From** section.
Object type	An output field that displays the object type previously specified. See also *Object Type to be Exported: Key Fields of the Objects*.
...	The remaining **From** fields differ according to the object type selected. See also *Object Type to be Exported: Key Fields of the Objects*.
To:	
Location	The location of the file that contains the export data. Select either of the following options: <table><tr><td>**Natural source**</td><td>Export to a Natural text object. See also the fields **Library** and **Member**.</td></tr><tr><td>**Text file**</td><td>Export to a text file. See also *Using Favorites for Text Files*.</td></tr></table>
Node	Only for **Text file** locations. Enter the name of the node through which the specified text file can be accessed. The text file must exist.
Text file	Only for **Text file** locations. Enter the name of the text file to be used for the export. See also *Using Favorites for Text Files*.
Favorites	This option button is only available if **Text file** is selected: see *Using Favorites for Text Files*.
User ID	Only for **Text file** locations. Enter the default user ID if defined for the specified node.
Group	Only for **Text file** locations. Enter the UNIX group or Windows domain (optional) if defined for the specified node.
Library	Only for **Natural source** locations. Enter the name of the library that contains the Natural text object used for export.

Field/Option	Description	
Member	Only for **Natural source** locations. Enter the prefix (maximum is 5 alphanumeric characters) of the Natural text object that contains the export data. Single or multiple text objects with the specified prefix can exist depending on the amount of data to be exported. For example: The prefix PREF can comprise text objects with names that begin with PREF--001, PREF--002, PREF—003, and so on.	
Append/New/Replace	Only for **Natural source** locations. Determine how to handle the export data contained in the Natural text object(s) specified with the prefix in the **Member** field. Possible option settings are:	
	Append	Select this option to append the data to be exported to the specified text object. Text object with the specified prefix must exist.
	New	Select this option 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.
	Replace	Select this option 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). Possible radio button settings:	
	selected	Export passwords.
	not selected	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.) Possible radio button settings:	
	selected	Export schedules (default).
	not selected	Do not export schedules.
with Calendars	If you export object(s) with calendars, all referenced calendars will be exported after objects, each calendar once. Possible radio button settings:	
	selected	Export calendars.
	not selected	Do not export calendars (default).

Field/Option	Description	
with Symbols	If you export object(s) with symbols, all referenced symbol tables will be exported after objects, each symbol table once. Possible radio button settings:	
	selected	Export symbols.
	not selected	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. Possible radio button settings:	
	selected	Export granted access rights.
	not selected	Do not export granted access rights (default).

Object Type to be Exported: Key Fields of the Objects

The key fields you have to specify for any **Object name** you want to export are described in the following table.

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	
JCL-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				

Object Type	Key Field 1	Key Field 2	Key Field 3	Key Field 4	Remark
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.

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, similar to 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	Unchanged; sometimes enclosed in quotation marks (" . . . ")
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	A10
NETWORK	A10	

Field	Format	Explanation
NETWORK-VERSION	A10	Network version. Field is case-sensitive.
JOB	A10	
RUN	P13	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	
EXITLIB	A8	User exit library
USEREXIT	A8	User exit name

Object Descriptions

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

Comments

Lines starting with an asterisk (*) are treated as comments.

Furthermore, line comments can be appended or inserted starting and ending with (/*) (if inserted).

The comment start (/*) is accepted only at line begin, or if it follows at least one blank.

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 Receiver
- 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 Receiver

	Field	Format	Remark
PG	MSG-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 when 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.

- Deleting networks or jobs might take a while because deletion is performed by the Entire Operations Monitor.

- 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:
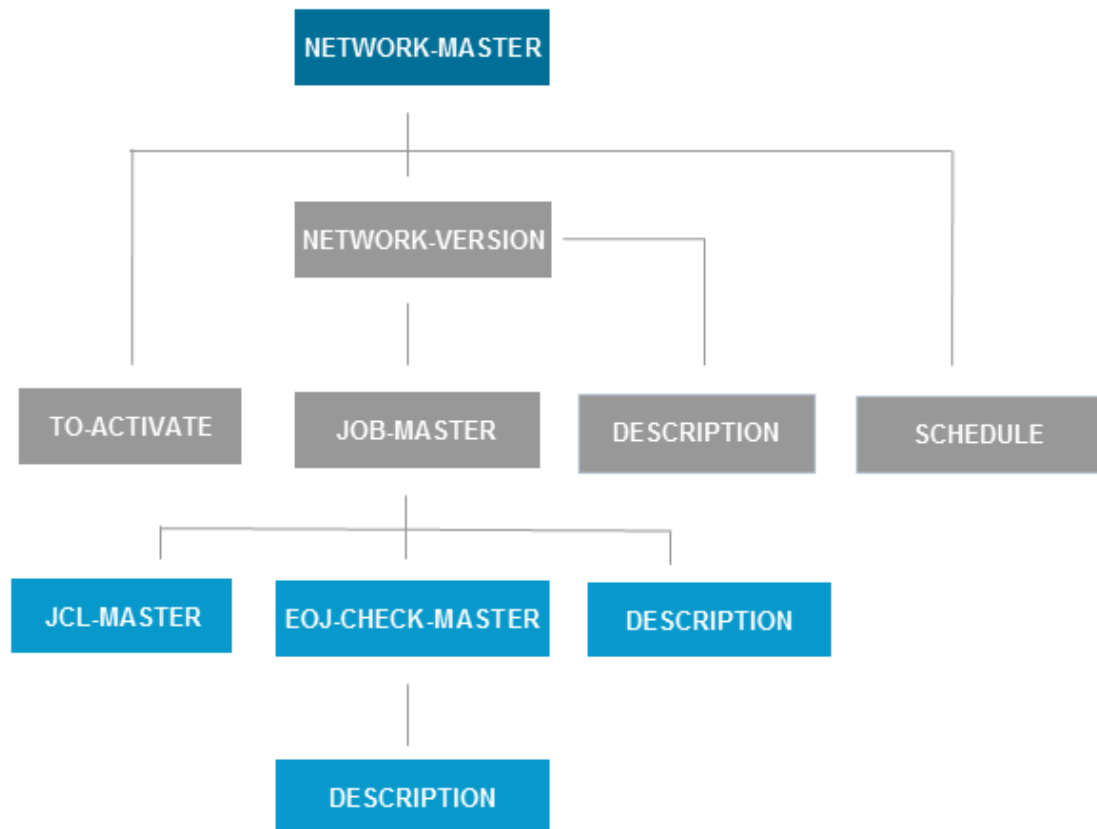
- **Export**

  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.

```
*
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=N0148
DEF-JCL-NODE=N0148
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 NATURAL
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 NATURAL
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=N0148 EXECUTION-NODE=N0148
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=N0148
SUBMIT-USERID=GFR
SUBNET-ACT-MODE= SUBNET-TIME-MODE=0
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=N0148 EXECUTION-NODE=N0148
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-JOB2-01" OUT-COND-REFERENCE="RUN" OUT-COND-DELETE-ADD=A
OUT-CONDITION-P
OUT-CONDITION="E60-JOB2-02" 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=N0148 EXECUTION-NODE=N0148
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=N0148 EXECUTION-NODE=N0148
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=N0148 EXECUTION-NODE=N0148
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=N0148 EXECUTION-NODE=N0148
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=N0148
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=N0148 EXECUTION-NODE=N0148
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=N0148 EXECUTION-NODE=N0148
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=N0148 EXECUTION-NODE=N0148
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	A50	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
PG	GRANT		Max. occurrence = 30.
PI	GRANT-TYPE	A1	0 = owner, U = user.
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	

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	A30	Short description.
PG	IN-COND-DEF		Max. occurrence = 20.
PI	IN-CONDITION	common	
	IN-REFERENCE	A8	
	Attributes:		

Abbr.	Field	Format	Remark
	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**	
	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.

Abbr.	Field	Format	Remark
	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.
	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-VSE-LIBRARY	A8	
	JCL-VSE-SUBLIB	A8	
	JCL-VSE-VSAM-CATALOG	A8	
	JCL-FILE-PASSWORD	A8	
	SYSOUT-CATID	A4	
	SYSOUT-USERID	A8	

Abbr.	Field	Format	Remark
	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	
	LATEST-START	T	
	LATEST-DAYS-AFTER	N3	
	DEADLINE	T	
	DEADLINE-DAYS-AFTER	N3	
	CYCLIC-INTERVAL	T	Relative time.
	EJA-ERROR-MODE	A1	
	Include Message Receiver (see *Sub-Objects*).		
	ESTIMATED-ELAPSED-TIME	T	Relative time. Exported for downward compatibility only. Replaced by `ESTIMATED-ELAPSED-SECONDS.`
	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	

Abbr.	Field	Format	Remark
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	
	SAP-DESTINATION	A32	
	SAP-SYSTEM-NUMBER	A2	
	SAP-CLIENT	A3	
	SAP-TARGET-SERVER	A20	
	SAP-EXTERNAL-USER	A24	
	SAP-JOB-NAME	A32	
	SAP-USERID	A12	
	SAP-PASSWD	A32	
	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.
	DAT-TARGET-VSE-LIBRARY	A8	Job type `DAT`: z/VSE library.
	DAT-TARGET-VSE-SUBLIB	A8	Job type `DAT`: z/VSE sublibrary.
	DAT-TARGET-VSE-VSAMCAT	A8	Job type `DAT`: z/VSE VSAMCAT.
	DAT-TARGET-OVERWRITE	A1	Job type `DAT`: allow overwrite of target file. **Logical value**.
	SNF-EXIT-LIBRARY	**common**	`Symbol not found` exit: exit library.

Abbr.	Field	Format	Remark
	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 located 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**	

Abbr.	Field	Format	Remark
	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
- EOJ-Action: Entire Output Management

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.
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.

Abbr.	Field	Format	Remark
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.
	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:		

Abbr.	Field	Format	Remark
	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 receiver (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.
PI	EJA-NOM-SOURCE-TYPE	A4	
PI	EJA-NOM-SPOOL-FILE-TYPE	A2	These parameters describe a SPOOL file for z/OS and z/VSE 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	

Abbr.	Field	Format	Remark
PI	EJA-NOM-FILE-NAME	A54	These parameters describe a sequential file for BS2000, z/OS and z/VSE 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
z/VSE	POWR	X				
	POWR			X	X	X

Sequential Files

File	Source Type	File Name	Volser	RECFM	LRECL	BLKSIZE
BS2000	SEQB	X				
z/OS	SEQM	X				
z/VSE	SEQV	X	X	X	X	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	Same as network name.
	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. 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.
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 sub-network.	
	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	A80	
M	MULT-VALUE	A40	Max. occurrence = 60. `VALUE` and `MULT-VALUE` are mutually exclusive. Adding single entries is allowed.
	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	`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**	
	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.
	OPO-PARAMETER-BLOCK	A8	
	CYGWIN-DIRECTORY	A200	
	SAP-JEXA4S-EXE	A200	
	SAP-JEXA4S	A200	
	SAP-RFC-INI	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	
	VSE-SYSID	N3	
	MESSAGE-COMMAND	A70	
	MAIL-SENDER	A128	
	MAIL-SENDER-NAME	A128	

Abbr.	Field	Format	Remark
	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-SAP	A1	**Logical value**.
	PROF-R3	A1	**Logical value**.
	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.**
	VSE-MEMBER-TYPE	A8	
	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	

Abbr.	Field	Format	Remark
	FILE-PASSWORD-AT-EDIT	A1	
	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	Sub-network activation mode.
	LOG-ACTIVE-JCL-MOD	A1	Log modifications of active JCL. **Logical value**.
PG	DEF-MSG-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.
	DEF-JCL-REGEN-SYMBOL-PROMPT	A1	

Abbr.	Field	Format	Remark
	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 2 = exclusive use 3 = use then destroy

Abbr.	Field	Format	Remark
	ACTIVATION-TIME	DT	Activation date and time of the active job network. This time stamp is used for time range comparisons.