

Installation and Customization Documentation

This section describes step by step how to install Entire Output Management for BS2000/OSD, OS/390 and VSE/ESA.

It covers the following topics:

- Installation Jobs
 - Using System Maintenance Aid
 - Prerequisites
 - Installation Tape
 - Storage Requirements
 - Installation Tape under VSE/ESA
 - Installation Tape under OS/390
 - Installation Tape under BS2000/OSD
 - Installation JCS / JCL
 - Adapting to Existing Environment
 - Natural Security Definitions
 - NOM in a Non-security Environment
 - Define Environment for NOM Server
 - Migrating from Previous Versions
 - New Lfile for NOM Active Data
 - Starting NOM for the First Time
 - Installation Verification
 - 3GL Interface Installation/Verification
 - SAP Interface Installation/Verification
 - Natural Advanced Facilities
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Installation Jobs

The installation of Software AG products is performed by installation **jobs**. These jobs are either created **manually** or generated by System Maintenance Aid (SMA).

For each step of the installation procedure described below, the job number of a job performing the respective task is indicated. This job number refers to an installation job generated by SMA. If you are not using SMA, an example installation job of the same number is provided in the job library on the Entire Output Management installation tape; you must adapt this example job to your requirements.

Note:

The job numbers on the tape are preceded by the product code (for example, NOMI060).

Using System Maintenance Aid

For information on using Software AG's System Maintenance Aid (SMA) for the installation process, refer to the **System Maintenance Aid Documentation**.

Prerequisites

Before you can install Entire Output Management, the following Software AG products must already be installed at your site:

- Adabas version 7.1.2 or above;
- Natural version 3.1.6 or above, including the Software AG Editor component;.
- Entire System Server Version 3.1.1 or above; to use new functionality Entire System Server 3.2.1 is required. However, if Entire System Server 3.2.1 is installed, only node numbers below 255 can be used.
- Entire System Server for Unix 2.1.1.05 and above (optional);
- System Automation Tools Version 3.1.3 or above;
- Natural Security (optional); for UTM users under BS2000/OSD Natural Security is required;
- Entire Network (optional, for multi-CPU support), and
- Con-nect Version 3.1 or above (optional).

The installation procedure for Entire System Server is described in the **Entire System Server Reference Documentation**.

The installation procedure for System Automation Tools is described in the separate SAT Installation and Customization Documentation.

Installation Tape

The installation tape contains the files listed in the table below.

The notation *nnn* in file names represents the version number of the product.

The sequence of the files is shown in the **Report of Tape Creation** which accompanies the installation tape.

- VSE/ESA
- OS/390
- BS2000/OSD

VSE/ESA

File Name	Contents
NOM <i>nnn</i> .LIBJ	Entire Output Management Installation Jobs
NOM <i>nnn</i> .LIBR	Entire Output Management Source and Load Library
NOM <i>nnn</i> .INPL	Entire Output Management System Libraries (Natural)
NOM <i>nnn</i> .ERRN	Entire Output Management Error Messages
NOM <i>nnn</i> .SYSF	Entire Output Management Data File (Adabas)
NOM <i>nnn</i> .SYS2	Entire Output Management Container File (Adabas)

OS/390

File Name	Contents
NOM nnn .JOBS	Entire Output Management Installation Jobs
NOM nnn .SRCE	Entire Output Management Source Library
NOM nnn .LOAD	Entire Output Management Load Library
NOM nnn .INPL	Entire Output Management System Libraries (Natural)
NOM nnn .SYSF	Entire Output Management Data File (Adabas)
NOM nnn .SYS2	Entire Output Management Container File
NOM nnn .ERRN	Entire Output Management Error Messages
....*	* Some files for the solution of certain SAGSIS problems maybe included on the installation tape. Please refer to the problem descriptions before applying them.

BS2000/OSD

File Name	Contents
NOM nnn .JOBS	Entire Output Management Installation Jobs
NOM nnn .SRCE	Entire Output Management Source Library
NOM nnn .PAMS	Entire Output Management Module Library
NOM nnn .INPL	Entire Output Management System Libraries (Natural)
NOM nnn .SYSF	Entire Output Management Data File (Adabas)
NOM nnn .SYS2	Entire Output Management Container File
NOM nnn .ERRN	Entire Output Management Error Messages
....*	* Some files for the solution of certain SAGSIS problems maybe included on the installation tape. Please refer to the problem descriptions before applying them.

Storage Requirements

- VSE/ESA
- OS/390
- BS2000/OSD

During installation, the following files are loaded from the installation tape:

VSE/ESA

File Name	Type	Space on 3380 Disk
NOM nnn .LIBR	SEQ	3 tracks
NOM nnn .LIBJ	SEQ	4 tracks
NOM nnn .INPL	SEQ	30 cylinders
NOM nnn .ERRN	SEQ	6 tracks
NOM nnn .SYSF	SEQ	2 tracks
NOM nnn .SYS2	SEQ	2 tracks

OS/390

File Name	Type	Space on 3390 Disk
NOM $nnnn$.JOBS	PDS	16 tracks
NOM $nnnn$.LOAD	PDS	1 track
NOM $nnnn$.SRCE	PDS	5 tracks
NOM $nnnn$.INPL	SEQ	30 cylinders
NOM $nnnn$.ERRN	SEQ	6 tracks
NOM $nnnn$.SYSF	SEQ	2 tracks
NOM $nnnn$.SYS2	SEQ	2 tracks

BS2000/OSD

File Name	Type	Space on Disk
NOM $nnnn$.JOBS	PAM	192 PAM pages
NOM $nnnn$.MOD	PAM	24 PAM pages
NOM $nnnn$.SRC	PAM	96 PAM pages
NOM $nnnn$.INPL	SAM	9168 PAM pages
NOM $nnnn$.ERRN	SAM	144 PAM pages
NOM $nnnn$.SYSF	SAM	33 PAM pages
NOM $nnnn$.SYS2	SAM	33 PAM pages

Installation Tape under VSE/ESA

Copying the Tape Contents to Disk

If you are using System Maintenance Aid (SMA), refer to the SMA documentation (included on the current edition of the Natural documentation CD).

If you are **not** using SMA, follow the instructions below.

This section explains how to:

- Copy data set COPYTAPE.JOB from tape to library.
- Modify this member to conform with your local naming conventions.

The JCL in this member is then used to copy all data sets from tape to disk.

If the datasets for more than one product are delivered on the tape, the member COPYTAPE.JOB contains the JCL to unload the datasets for all delivered products from the tape to your disk, except the datasets that you can directly install from tape, for example, Natural INPL objects.

After that, you will have to perform the individual install procedure for each component.

Step 1 - Copy data set COPYTAPE.JOB from tape to disk

The data set COPYTAPE.JOB (file 5) contains the JCL to unload all other existing data sets from tape to disk. To unload COPYTAPE.JOB, use the following sample JCL:

```

* $$ JOB JNM=LIBRCAT,CLASS=0,                                     +
* $$ DISP=D,LDEST=(*,UID),SYSID=1
* $$ LST CLASS=A,DISP=D
// JOB LIBRCAT
* *****
*     CATALOG COPYTAPE.JOB TO LIBRARY
* *****
// ASSGN SYS004,NNN                                             <----- tape address
// MTC REW,SYS004
// MTC FSF,SYS004,4
ASSGN SYSIPT,SYS004
// TLBL IJSYSIN,'COPYTAPE.JOB'
// EXEC LIBR,PARM='MSHP; ACC S=lib.sublib'                       <----- for catalog
/*
// MTC REW,SYS004
ASSGN SYSIPT,FEC
/*
/&
* $$ EOJ

```

Where:

NNN is the tape address

lib.sublib is the library and sublibrary of the catalog

Step 2 - Modify COPYTAPE.JOB

Modify COPYTAPE.JOB to conform with your local naming conventions and set the disk space parameters before submitting this job:

Step 3 - Submit COPYTAPE.JOB

Submit COPYTAPE.JOB to unload all other data sets from the tape to your disk.

Installation Tape under OS/390

Copying the Tape Contents to Disk

If you are using System Maintenance Aid (SMA), refer to the SMA documentation (included on the current edition of the Natural documentation CD).

If you are **not** using SMA, follow the instructions below.

This section explains how to:

- Copy data set COPY.JOB from tape to disk.
- Modify this data set to conform with your local naming conventions.

The JCL in this data set is then used to copy all data sets from tape to disk.

If the datasets for more than one product are delivered on the tape, the dataset COPY.JOB contains the JCL to unload the datasets for all delivered products from the tape to your disk.

After that, you will have to perform the individual install procedure for each component.

Step 1 - Copy data set COPY.JOB from tape to disk

The data set COPY.JOB (label 2) contains the JCL to unload all other existing data sets from tape to disk. To unload COPY.JOB, use the following sample JCL:

```
//SAGTAPE JOB SAG,CLASS=1,MSGCLASS=X
//* -----
//COPY EXEC PGM=IEBGENER
//SYSUT1 DD DSN=COPY.JOB,
// DISP=(OLD,PASS),
// UNIT=(CASS,,DEFER),
// VOL=(,RETAIN,SER=<Tnnnnn>),
// LABEL=(2,SL)
//SYSUT2 DD DSN=<hilev>.COPY.JOB,
// DISP=(NEW,CATLG,DELETE),
// UNIT=3390,VOL=SER=<vvvvvvv>,
// SPACE=(TRK,(1,1),RLSE),
// DCB=*.SYSUT1
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//
```

Where:

- <hilev> is a valid high level qualifier
- <Tnnnnn> is the tape number
- <vvvvvvv> is the desired volser

Step 2 - Modify COPYTAPE.JOB

Modify the COPYTAPE.JOB to conform with your local naming conventions and set the disk space parameters before submitting this job:

- Set HILEV to a valid high level qualifier.
- Set LOCATION to a storage location.
- Set EXPDT to a valid expiration date.

Step 3 - Submit COPY.JOB

Submit COPY.JOB to unload all other data sets from the tape to your disk.

Installation Tape under BS2000/OSD

Copying the Tape Contents to Disk

If you are not using SMA, use the procedure described below. In this procedure, the values specified below must be supplied.

To copy the datasets from tape to disk, perform the following steps:

1. Copy the Library SRVnnn.LIB from Tape to Disk

This step is not necessary if you have already copied the library SRVnnn.LIB from another Software AG tape. For more information, refer to the element #READ-ME in this library.

The library SRVnnn.LIB is stored on the tape as the sequential file SRVnnn.LIBS containing LMS commands. The current version *nnn* can be obtained from the **Report of Tape Creation**. To convert this sequential file into an LMS-library, execute the following commands:

```
/IMPORT-FILE SUPPORT=*TAPE(FILE-NAME=SRVnnn.LIBS, -
/ VOLUME=<volser>, DEV-TYPE=<tape-device>)
/ADD-FILE-LINK LINK-NAME=EDTSAM, FILE-NAME=SRVnnn.LIBS, -
/ SUPPORT=*TAPE(FILE-SEQ=3), ACC-METH=*BY-CAT, -
/ BUF-LEN=*BY-CAT, REC-FORM=*BY-CAT, REC-SIZE=*BY-CAT
/START-EDT
@READ '/'
@SYSTEM 'REMOVE-FILE-LINK EDTSAM'
@SYSTEM 'EXPORT-FILE FILE-NAME=SRVnnn.LIBS'
@WRITE 'SRVnnn.LIBS'
@HALT
/ASS-SYSDTA SRVnnn.LIBS
/MOD-JOB-SW ON=1
/START-PROG $LMS
/MOD-JOB-SW OFF=1
/ASS-SYSDTA *PRIMARY
```

Where:

<tape-device> is the device-type of the tape, e.g. TAPE-C4

<volser> is the VOLSER of the tape (see **Report of Tape Creation**)

2. Copy the Procedure COPY.PROC from Tape to Disk

To copy the procedure COPY.PROC to disk, call the procedure P.COPYTAPE in the library SRVnnn.LIB:

```
/CALL-PROCEDURE (SRVnnn.LIB,P.COPYTAPE), -
/ (VSNT=<volser>, DEVT=<tape-device>)
```

If you use a TAPE-C4 device, you may omit the parameter DEVT.

3. Copy all Product Files from Tape to Disk

To copy all Software AG product files from tape to disk, enter the procedure COPY.PROC:

```
/ENTER-PROCEDURE COPY.PROC, DEVT=<tape-device>
```

If you use a TAPE-C4 device, you may omit the parameter DEVT. The result of this procedure is written to the file 'L.REPORT.SRV'.

Installation JCS / JCL

- Step 1
- Step 2
- Step 3
- Step 4

- Step 5

Step 1

NOM System File

If you are installing Entire Output Management for the first time, use the Adabas load utility (Job I050, Step 2800) to load the NOMnnn.SYSF file. The System File is in version 6 format and contains a few examples and initializations.

If you are migrating from a previous version, refer to the subsection Migrating from Previous Versions.

When working with Container Files, load one or more files using NOMnnn.SYS2 with NUMREC=0 (Job I050, Step 2801). For more information on how to use container files, see the subsection Defining Container Files in the section System Administration of the Entire Output Management System Programmer's Documentation.

Beginning with NOM 2.1.1, the location of log data is no longer System File 1. Log data are written to a log file that belongs to SAT installation. Load SATnnn.SYSF according to the subsection Installation Procedure Step 1 in the section Installing System Automation Tools / Mainframe of the System Automation Tools Documentation and migrate your log data to the new location, see the subsection Migrating from Previous Versions.

Splitting the NOM System File

To split the NOM System File into two files: one with NOM definitions and the other with active data, like report contents, we recommend renumbering and renaming your existing NOM 2.1.1 System File using ADABAS Utilities (see Job I082, Step 2802). Rename your old file to 'NOM 2.2.1 ACTIVE DATA' or similar. The migration jobs will transfer definition data from this old system file to a newly loaded file, which is given the previous system file number (see Job I050, Step 2803), and leave active data in the old file. This avoids moving active data physically, which could cause a lot of data traffic.

Step 2

Scratch NOM Libraries

(Job I051, Step 2800)

If Entire Output Management has been installed before, scratch all objects from the SYSNOM, SYSNOMS, SYSNOMH1 and SYSNOMH2 libraries.

Step 3

Adapt Parameter Modules and Link Jobs for Subtask, Batch and Online Natural

Monitors of the SAT product family can run as either a Natural subtask or a Natural batch job. For further information, see the separate System Automation Tools Documentation, the section Installing System Automation Tools.

Note:

In online and in batch modules, AESFPRIV (OS/390 with CMA-SPOOL), EOMVOLID, EOMSPL, EOMTFT (for Siemens OSD) can be linked with the shared nucleus. If AESFPRIV is linked to the shared nucleus, the NATPARAM with CSTATIC=(ESF..) must be linked with the shared and dependent parts. For 3GL programs, NOMPUT, NOMADA and NOMCOMPR have to be linked with the 3GL program itself.

In addition to the specifications described in the separate System Automation Tools Installation Documentation, you must also adapt the following:

1. Adapt the Subtask Natural Parameter Module (Job I060)

Add or change the following parameters in your NATPARAM module, the NTFILE definitions can also be overridden by the dynamic parameter LFILE:

CSTATIC=(...,	ESFCLOS, ESFOPEN, ESFPURG, ESFREAD, ESFROUT, ESFSTAT, ESFWRIT, ...)	1 1 1 1 1 1 1	
NTFILE ID=91,DBID=<dbid>,FNR=<fnr>		The data base ID and file number of the Entire Output Management Active Data File (optional, only if NOM system file is to be split).	
NTFILE ID=206,DBID=<dbid>,FNR=<fnr>		The data base ID and file number of the Entire Output Management System File.	
NTFILE ID=251,DBID=<dbid>,FNR=<fnr>		(optional; needed only if Con-nect is installed).	
NTFILE ID=131,DBID=<dbid>,FNR=<fnr>		The data base ID and file number of the SAT System file (mandatory).	
NTSORT WRKSIZE=30,STORAGE=MAIN,EXT=OFF		NTSORT is a NATPARAM module macro.	

¹ Optional - needed only if CMA-SPOOL is installed.

2. Link Natural Subtask Module

VSE/ESA:

Take the link job as described in the separate SAT Installation Documentation and adapt the following:

- Include the library definitions for NOMLIB in your LNKEDT procedure: (LIBDEF chain).

```

...
INCLUDE NOMCOMPR
INCLUDE NOMPUT1
INCLUDE NOMADA1
...
    
```

¹ Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

Note:

The Natural SORT statement may optionally invoke an external SORT program that carries out the actual sorting. An external SORT program is used if the Natural profile parameter EXT of the macro NTSORT is set to **on**. Natural supports all external SORT programs that comply with the SORT interface documented in relevant IBM manuals (for VSE/ESA).

For further information, refer to the **Natural Operations Documentation**, the section **Operating Natural - General Information**, subsection **Support of External SORT - Special Considerations for VSE/ESA**.

OS/390:

Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

//NOMLIB DD DISP=SHR,DSN=SAGLIB.NOM nnn .LOAD	Supplied Entire Output Management Load Library.
//CMALIB DD DISP=SHR,DSN=CMASPOOL.LOAD (optional)	Supplied CMA-SPOOL Load Library.

The notation nnn in file names represents the version number of the product.

INCLUDE	NOMLIB(NOMCOMPR)	Compression	1
INCLUDE	NOMLIB(NOMPUT)	Install NAF printer type 'NOM'	2
INCLUDE	NOMLIB(NOMADA)	Install NAF printer type 'NOM'	2
INCLUDE	CMALIB(AESFPRIV)	(optional - only if CMA-SPOOL installed)	

¹ If you have a shared nucleus, omit this statement here and add it to the link job of your shared nucleus.

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

BS2000/OSD:

Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

- Use the library NOM nnn .MOD for the linkage.

INCLUDE NOMCOMPR INCLUDE NOMPUT ¹ INCLUDE NOMADA ¹
--

¹ Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

3. Adapt the Batch Natural Parameter Module (Job I060)

Add or change the following parameters in your NATPARM module:

CSTATIC=(...,	ESFCLOS, ¹ ESFOPEN, ¹ ESFPURG, ¹ ESFREAD, ¹ ESFROUT, ¹ ESFSTAT, ¹ ESFWRIT, ¹ ...)	
NTFILE ID=206,DBID=<dbid>,FNR=<fnr>		The data base ID and file number of the Entire Output Management System File.
NTFILE ID=251,DBID=<dbid>,FNR=<fnr>		(optional; needed only if Connect is installed).
NTSORT WRKSIZE=30,STORAGE=MAIN,EXT=OFF		NTSORT is a NATPARM module macro.

¹ Optional - needed only if CMA-SPOOL is installed.

4. Link the Natural Batch Module

Take the link job as described in the separate SAT Installation Documentation and adapt the following:

VSE/ESA:

- Include the library definitions for NOMLIB in your LNKEDT procedure: (LIBDEF chain).

```

...
INCLUDE NOMCOMPR1
INCLUDE EOMVOLID
INCLUDE EOMSPL
INCLUDE NOMPUT1
INCLUDE NOMADA1
...
    
```

¹ Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

OS/390:

- Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

//NOMLIB DD DISP=SHR,DSN=SAGLIB.NOM mmm .LOAD	Supplied Entire Output Management Load Library.
--	---

The notation mmm in file names represents the version number of the product.

INCLUDE NOMLIB(NOMPUT)	Install NAF printer type 'NOM'	2
INCLUDE NOMLIB(NOMADA)	Install NAF printer type 'NOM'	2
INCLUDE NOMLIB(NOMCOMPR)	Compression	1

¹ If you have a shared nucleus, omit this statement here and add it to the link job of your shared nucleus.

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

BS2000/OSD:

Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

- Use the library NOMnnn.MOD for the linkage.

```
INCLUDE NOMCOMPR
INCLUDE EOMTFT
INCLUDE NOMPOT2
INCLUDE NOMADA2
```

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPOT.

5. Adapt the Online Natural Parameter Module (Job I080)

Add or change the following parameters in your NATPARM module, the NTFILE definitions can also be overridden by dynamic parameter LFILE:

NTFILE ID=206,DBID=<dbid>,FNR=<fnr>	The data base ID and file number of the Entire Output Management System File.
NTFILE ID=251,DBID=<dbid>,FNR=<fnr>	(optional; needed only if Connect is installed).
NTFILE ID=131,DBID=<dbid>,FNR=<fnr>	The data base ID and file number of the SAT System file (mandatory)
NTSORT WRKSIZE=30,STORAGE=MAIN,EXT=OFF	NTSORT is a NATPARM module macro.
NTFILE ID=91,DBID=<dbid>,FNR=<fnr>	The data base ID and file number of the Entire Output Management Active Data File.

6. Link the Online Natural Module

Take the link job as described in the separate SAT Installation Documentation and adapt the following:

VSE/ESA:

- Include the library definitions for NOMLIB in your LNKEDT procedure: (LIBDEF chain).

```
...
INCLUDE NOMCOMPR
INCLUDE NOMPOT2
INCLUDE NOMADA2
...
```

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPOT.

OS/390:

- Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

//NOMLIB DD DISP=SHR,DSN=SAGLIB.NOMnnn.LOAD	Supplied Entire Output Management Load Library.
--	---

The notation *nnn* in file names represents the version number of the product.

INCLUDE NOMLIB(NOMPUT)	Install NAF printer type 'NOM'	2
INCLUDE NOMLIB(NOMADA)	Install NAF printer type 'NOM'	2
INCLUDE NOMLIB(NOMCOMR)	Compression	1

¹ If you have a shared nucleus, omit this statement here and add it to the link job of your shared nucleus.

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

Note:

The Natural SORT Statement may optionally invoke an external SORT program that carries out the actual sorting.

An external SORT program is used if the Natural profile parameter EXT of the macro NTSORT is set to **on**.

Natural supports all external SORT programs that comply with the SORT interface documented in relevant IBM manuals (for OS/390).

For further information, refer to the **Natural Operations Documentation**, the section **Operating Natural - General Information**, subsection **Support of External SORT - Special Considerations for OS/390**.

BS2000/OSD:

Take the link job as described in the separate SAT Installation Documentation and adapt the following libraries for the linkage:

- Use the library NOM*nnn*.MOD for the linkage (reentrant part of Natural).

INCLUDE NOMLIB(NOMPUT)	Install NAF printer type 'NOM'	2
INCLUDE NOMLIB(NOMADA)	Install NAF printer type 'NOM'	2
INCLUDE NOMCOMPR	-	-

Note:

The Natural SORT statement may optionally invoke an external SORT program that carries out the actual sorting. An external SORT program is used if the Natural profile parameter EXT of the macro NTSORT is set to **on**. Natural supports all external SORT programs that comply with the SORT interface documented in relevant Siemens manuals (for BS2000/OSD).

For further information, refer to the **Natural Operations Documentation**, the section **Operating Natural - General Information**, subsection **Support of External SORT - Special Considerations for BS2000/OSD**.

² Only if printing from Natural Advanced Facilities to a printer of type NOM is desired. Assemble NOMADA to meet your requirements first. See Using NOMPUT.

Step 4

Load the INPL File and ERRN Files

(Job I061, Steps 2800 and 2802)

1. Load the INPL file. The following libraries are loaded:

Library	File	Contents
SYSNOM	FNAT	Entire Output Management application
SYSNOMH1	FNAT	Entire Output Management help system (English)
SYSNOMH2	FNAT	Entire Output Management help system (German)
SYSNOMS	FNAT	JCL skeletons and separator examples

2. Load the Entire Output Management error messages file (file NOMnnn.ERRN) using the ERRLODUS utility in Step 2802.

Step 5

Using Unix or Windows Platforms as External Spooling System Source

If Unix or Windows platforms are to be used as external spooling system source, Entire System Server for Unix has to be installed on each Unix/Windows system. For further details, see the section Installation and Operations of Entire System Server / UNIX and Windows in the System Automation Tools Documentation.

Adapting to Existing Environment

- Step 1
- Step 2
- Step 3
- Step 4

Step 1

Create a User Library

The SYSNOMS library contains examples of Separator Pages for Reports and Bundles. It also contains job skeletons which must be modified to reflect the site's special requirements. Since this library will be replaced with future versions, the SYSNOMS library must be copied to SYSNOMU where the changes can be made.

Note:

Parameter areas UEX----P (for separation exits) and P-UEXIT (for printing exits). **Always copy these two members with REPLACE option to the SYSNOMU library.**

Step 2

Modify the Job Skeletons

The following tasks require job skeletons which must be adapted to your site's requirements. You should adapt the sources in the SYSNOMU library which are specified in the Source column and make them available under the Target name:

Task	Environment	Source	Target
ARCHIVE	VSE/ESA Tape	JARCVTAP	JARCSKEL
ARCHIVE	VSE/ESA with DYNAM-T	JARCVCAT	JARCSKEL
ARCHIVE	OS/390 Tape	JARCMTAP	JARCSKEL
ARCHIVE	OS/390 GDG or predefined Disk VOLSERS	JARCMSDK	JARCSKEL
ARCHIVE	OS/390, SMS	JARCMSMS	JARCSKEL
ARCHIVE	BS2000/OSD Tape	JARCBTAP	JARCSKEL
ARCHIVE	BS2000/OSD with job variables	JARCBTJV	JARCSKEL
REVIVE	VSE/ESA Tape	JREVVTAP	JREVSKEK
REVIVE	VSE/ESA with DYNAM-T	JREVVCAT	JREVSKEK
REVIVE	OS/390 Tape	JREVMTAP	JREVSKEK
REVIVE	OS/390 GDG or predefined Disk VOLSERS or SMS	JREVMDSK	JREVSKEK
REVIVE	BS2000/OSD Tape	JREVB TAP	JREVSKEK
REVIVE	BS2000/OSD with job variables	JREVB T JV	JREVSKEK
CONDENSE	VSE/ESA Tape	JCDNVTAP	JCDNSKEL
CONDENSE	VSE/ESA with DYNAM-T	JCDNVCAT	JCDNSKEL
CONDENSE	OS/390 Tape	JCDNMTAP	JCDNSKEL
CONDENSE	OS/390 GDG or predefined Disk VOLSERS	JCDNMDSK	JCDNSKEL
CONDENSE	OS/390, SMS	JCDNMSMS	JCDNSKEL
CONDENSE	BS2000/OSD Tape	JCDNBTAP	JCDNSKEL
CONDENSE	BS2000/OSD with job variables	JCDNB T JV	JCDNSKEL
PRINT	POWER	SYSRPWR	SYSRPWR or user-defined
PRINT	VSE/ESA Tape	TAPEVSE	TAPEVSE or user-defined
PRINT	JES	SYSRJES	SYSRJES or user-defined
PRINT	OS/390 Disk	DISKMVS	DISKMVS or user-defined
PRINT	OS/390 Tape	TAPEMVS	TAPEMVS or user-defined
PRINT	BS2000/OSD	SYSRBS2	SYSRBS2 or user-defined
PRINT	BS2000/OSD with job variables	SYSRBJV	SYSRBJV or user-defined

Step 3

VTAM Definitions

To enable Entire Output Management to print to VTAM printers, add the definition from the member NOMVTAM in the Entire Output Management source library to your SYS1.VTAMLST library and activate it.

If your SYS1.VTAMLST already contains a definition for Entire System Server, include only the definition for Entire Output Management in it.

In the Entire System Server parameters assign the value for SPOOLACB as defined in your SYS1.VTAMLST.

Step 4

Entire System Server Parameters

To activate the common data pool, assign a value to the CDATALEN parameter of at least 1.

Natural Security Definitions

- Applications
- User

If Natural Security is installed at your site, you must create the following definitions:

Applications



Warning:

The order of the STEPLIBs has changed. SYSSAT must precede SYSEXT. If this is not the case, the program menu will not be found.

Application	Description	with STEPLIBs
SYSNOM	Entire Output Management online application.	SYSSAT SYSEXT SYSLIBS SYSNOMU SYSNOMS SYSSEC (optional) SYSCNT2 + any other library containing User Routines (optional)
SYSNOMH1	Entire Output Management help system (English)	-
SYSNOMH2	Entire Output Management help system (German)	-
SYSNOMS	JCL skeletons and separator examples.	-
SYSNOMU	User copy of SYSNOMS library.	-

User

Define the Natural Security user representing the Entire Output Management Server as **person** with user ID and password identical to <NSCUSER> and <NSCPSWD> parameters taken from the main member SATP nnn .

You can use one user ID for all or different user IDs for each server type. For more information, see the example for SAT parameters.

Note:

Natural Security requires a change of password, if a newly defined user logs on. Use this user ID to log on online to the system and change the password once.

NOM in a Non-security Environment

- Online
- Subtask/Batch

Online

NOM's start program 'MENU' is executed from SYSSAT. This means that in a non-security environment MENU will not be found as start program. You must perform one of the following actions:

- Rename program MENUNOM of library SYSNOM to MENU, or
- Copy program MENU of library SYSSAT into library SYSTEM.

Warning:

The second solution may have the disadvantage of causing other applications to erroneously find the program MENU in the library SYSTEM and this could produce unwanted results.

If Natural Security is not installed at your site, the following STEPLIBs are automatically assigned to SYSNOM:

SYSSAT	-
SYSEXT	-
SYSNOMU	-
SYSNOMS	-
SYSLIB	-
SYSLIBS	-
SYSCNT2	optional

Subtask/Batch

If Natural Security is not installed at your site, the following STEPLIBs are automatically assigned to SYSNOM:

SYSSAT	-
SYSEXT	-
SYSNOMU	-
SYSNOMS	-
SYSLIB	-
SYSLIBS	-
SYSCNT2	optional

Define Environment for NOM Server

- General Layout of a Parameter Block
- Parameter Blocks and Parameters for NOM
- Subtask/Batch

See also the subsection Defining SAT, Natural and Product Parameters in the separate SAT Installation Documentation.

For each Entire Output Management Server you must define the run-time environment in one or more Natural members in the SAT user library SYSSATU.

If you want to run various Entire Output Management Servers under different Entire System Server nodes *nnn*, you must provide startup parameters at least in the related 'main' members. These must conform to the following naming convention: SATP*nnn*. In addition, you can provide further Entire Output Management-specific parameters in a second member, whose name must not match the naming convention for the 'main' members.

General Layout of a Parameter Block

<Prefix> <block-identifier> [<keyword>=<value>,...]

where:

Parameter	Description
<Prefix>	SAT or compressed product code + prefix as specified in the SATSTART instruction.
<block-identifier>	SATENV/NATENV/SATSTART or product block identifier.
[<keyword>=<value>,...]	Block-specific parameter.

Parameter Blocks and Parameters for NOM

- Mandatory
- Optional

Mandatory

Parameter Block	Parameter	Description
SATENV	NSC=YES/NO	Indicates whether Natural Security is installed or not.
	NSCUSER=	If Natural Security is installed, this is the user ID for logging on to it.
	NSCPSWD=	Password for logging on to Natural Security.
	ESYUSER=	User ID for logging on to Entire System Server, if it is installed and an interface to an external security system is activated.
	NATTASK=	Name of the Natural subtask module for starting a server as a subtask.
SATSTART	SATVERS=31	Entire Output Management Server startup program requires SAT version 3.1.
	PRODUCT=NOM	3-byte product code.
	PREFIX=	PRODUCT and PREFIX are compressed into a prefix which identifies the Server-specific parameters.
	TYPE=SUBTASK/BATCH	Entire Output Management Servers are always started as subtasks.
	APPLIB=SYSNOM	Name of the Natural library where Entire Output Management Server is installed.
	SERVSYSF=	Pointer to the Entire Output Management System File (must be unique within all SATSTART instructions of this node).
NOMENV	BS2USER=	BS2000/OSD user ID under which the Monitor, Archive, Revive and Condense jobs are submitted. Default: ESYUSER
	ETID=*	Generate unique ETIDs for tasks.
	ETIDPREF=	6-byte prefix for ETIDs.
NATENV	LFILE=(206,<NOMSYSF1-DBID>,<NOMSYSF1-FNR>) ^{1,2,3} or LFILE=(131,<SATSYSF-DBID>,<SATSYSF-FNR>) LFILE=(91,<NOMACTDATA-DBID>,<NOMACTDATA-FNR>)	

¹ Pointer to Entire Output Management System File 1.

² These pointers can be set either in the common NATPARAM module created for the SAT products or in a Natural parameter profile indicated by the Natural parameter PROFILE.

³ Make sure that this pointer coincides with the pointer to the Entire Output Management System File 1 provided with the SERVSYSF parameter in the SATSTART block.

Optional

- Example

Furthermore, you can overwrite the SATENV and NATENV parameters with Entire Output Management-specific or even Entire Output Management-subtask-specific assignments. The naming convention for the prefix which identifies the parameter block is:

<Prefix> = NOM + <PREFIX> + (PRT for Print Task)
 (ARC for Archive Task)
 (REV for Revive Task)

Parameter Block	Parameter
SATSTART	MEMBER= ¹

¹ You can specify a member where Entire Output Management-specific parameters are located.

Example

Contents of the 'Main' Member for Node 148 - SATP148 in SYSSATU

The member SATP148 in SYSSAT provides an example of a 'main' member. You can take this as the basis for your own member: just copy it to SYSSATU and adapt it.

In the example below it is assumed that you are running three products of the SAT product family (Entire Event Management, Entire Output Management and Entire Operations) as subtasks on Node 148.

SAT	SATENV	NATTASK=SAT3ST, NSC=YES, NSCUSER=SATMON, NSCPSWD=SATMON	1
NOM221PRT	SATENV	NSCUSER=NOMPRT NSCPSWD=NOMPRT	2
NOM221ARC	SATENV	NSCUSER=NOMARC NSCPSWD=NOMARC	2
NOM221REV	SATENV	NSCUSER=NOMREV NSCPSWD=NOMREV	2
SAT	NATENV	DU=OFF,PROFILE=SATMON	3
SAT	SATSTART	SATVERS=31, PRODUCT=NOM, PREFIX=221, TYPE=SUBTASK, APPLIB=SYSNOM, SERVSYSF=(88,51)	4
SAT	SATSTART	SATVERS=23, PRODUCT=NOP, PREFIX=411, TYPE=SUBTASK, APPLIB=SYSEOR, SERVSYSF=(88,52)	5
SAT	SATSTART	SATVERS=23, PRODUCT=NCL, PREFIX=212, TYPE=SUBTASK, APPLIB=SYSNCLSV, SERVSYSF=(88,54)	6

¹ Sets the SAT defaults for all SAT products, here: Entire Event Management, Entire Operations and Entire Output Management.

² Indicates that a separate user ID/password can be used for Entire Output Management's PRINT, ARCHIVE or REVIVE task.

³ Sets the Natural defaults for all SAT products: the Natural profile parameters are provided in the profile SATMON.

⁴ Specifies that the server for Entire Output Management 2.2.1 should be started as a subtask.

⁵ Specifies that the server for Entire Operations 4.1.1 should be started as a subtask.

⁶ Specifies that the server for Entire Event Management 2.1.2 should be started as a subtask.

Migrating from Previous Versions

Migrations from versions earlier than 1.4.1 are not supported.

Important:

Before attempting to migrate, restart the Entire System Server node and ensure that the Entire Output Management Monitor is inactive. Use the job examples in your job library file as templates.

- Migrating from 141 to 221
- Migrating from 211 to 221

Migrating from 141 to 221

- One system file
- Two system files

One system file

 To keep all data in one NOM 221 system file, when migrating from 141 to 221, execute the following jobs:

Job	Step(s)	Action
NOMI0821	2802 - 2812	Migration 141/211/221
NOMI2001	2800	Migration 141/211 (MIG141)
	2812	Set current System File version (MIGEND)

Two system files

 To split the NOM 221 system file into a file containing definition data and a file containing active data, when migrating from 141 to 221, execute the following jobs:

Job	Step(s)	Action
SPYI050	2802	ADADBS Rename/Renumber NOM System File to 'Active Data File'
	2803	ADALOD new NOM System File
SPYI0821	2822 - 2832	Migration 141/211/221
SPYI2001	2802	Migration 141/211 (MIG141)
	2810	Migration Active Data File (MIGDEF22 MIGRATE)
	2812	Set current System File version (MIGEND)

Migrating from 211 to 221

- One system file
- Two system files

One system file

 To keep all data in one NOM 211 system file, when migrating from 211 to 221, execute the following jobs:

Job	Step(s)	Action
NOMI0822	2800 + 2812	Migration 211/221
NOMI2002	2812	Set current System File version (MIGEND)

Two system files

 To split the NOM system file into a file containing definition data and a file containing active data, when migrating from 211 to 221, execute the following jobs:

Job	Step(s)	Action
SPYI050	2802	ADADBS Rename/Renumber NOM System File to 'Active Data File'
	2803	ADALOD new NOM System File
SPYI0822	2830 + 2832	Migration 211/221
SPYI2002	2810	Migration Active Data File (MIGDEF22 MIGRATE)
	2812	Set current System File version (MIGEND)

New Lfile for NOM Active Data

- MIGDEF22
- Notes

It is now possible to separate master definitions and active data into 2 Adabas files. The lfiles used are: 206, master definitions and 91, active data.

This is optional and if lfile 91 is not set by the user, NOM internally sets it to point to the same database and file number as lfile 206, thus operating compatibly with previous versions.

MIGDEF22

To separate an existing NOM system file, a routine MIGDEF22 is provided (SMA job I200, step 2810). MIGDEF22 moves the master definitions to a new file (which must have the same FDT as the old system file). The master definitions are moved, because there will usually be far fewer master definitions than active data records.

Before running MIGDEF22, the old system file must be backed up. If the new system file has previously been used, it too must be backed up. Load a second system file using job I050, step 2803.

MIGDEF22 should run in a batch Natural with LFILE 206 pointing to the new system file and LFILE 91 pointing to the old system file. After completion of MIGDEF22, all Natural environments must be updated to reference the new lfile 206 and lfile 91. (Alternatively, to avoid having to change Natural parameters and SYSSATU text members, the files using Adabas utilities can be renumbered.)

MIGDEF22 requires one input parameter:

- MIGRATE to separate the data, or
- BACKOUT to merge the data back into one file .

Important:

For BACKOUT mode, lfile 206 must point to the "from" file, that is, the output of a previous Migrate run - and 91 must point to the "to" file, that is, the input to a previous Migrate run.

Notes

- Processing Sequence
- Logic
- ADABAS NISNHQ

Processing Sequence

MIGDEF22 processes object types in this sequence:

- System Definitions
- Unix Defaults
- Calendars
- Users
- Physical Printers
- Folders
- Reports
- Bundles
- Distribution Lists
- Logical Printers
- Grants

Logic

For each object the logic is:

- Delete object from target environment, if already there
- Store object in target environment
- Delete object from source environment

ADABAS NISNHQ

The Adabas parameter NISNHQ must be set to at least 150.

If MIGDEF22 fails, it may be rerun (it will continue the migration from the point at which the previous failure occurred) - but the 2 Adabas files must be in exactly the same state as at the time of failure. This means they do not need to be restored before rerunning MIGDEF22. MIGDEF22 must run to successful completion otherwise the 2 files will be unuseable.

Starting NOM for the First Time

Before you start the subtask Monitor for the first time, log on to the SYSNOM library:

Then restart the Entire Output Management Monitor.

1. Execute the INSTALL Program

Be certain that the Entire System Server node under which the Monitor runs is active.

The INSTALL program adds the first user ID, modifies some example definitions and asks you to specify various Entire Output Management parameters. When you have successfully completed this installation procedure, the Entire Output Management Main Menu appears on your screen.

2. Online Start of Entire Output Management Monitor

Enter START MONITOR in the Entire Output Management command line and press Enter.

3. Automatic Start of Entire Output Management Monitor

For information on how to automatically start the Entire Output Management Monitor when bringing up Entire System Server, see the subsection AUTO-START in the separate SAT Installation Documentation.

Installation Verification

To verify that Entire Output Management has been installed correctly, proceed as follows:

1. Check the environment defined for Entire Output Management:
 - Verify the startup parameters defined in the library SYSSATU.
 - Logon to the library SYSSATU where you keep your master definitions for all servers of the SAT family.
 - Check that the SAT nnn entry in the member SATDIR points to the correct FNAT for the application SYSSAT.
 - Check member SATP nnn for the SATSTART entry with PRODUCT=NOM. The TYPE parameter should have the value SUBTASK; the APPLLIB parameter must have the value SYSNOM, and the SERVSYSF parameter must point to the correct Entire Output Management System File where the object definitions are kept.
 - Check member SATP nnn for the SATENV parameter NATTASK. The value in effect for Entire Output Management must indicate the correct Natural subtask module.
This Natural module must be correctly linked and accessible in the run-time environment of the Entire System Server node nnn .
 - Check the member SATP nnn for the SATENV parameters NSCUSER, NSCPSWD and ESYUSER. If you use Natural Security, <NSCUSER> must be defined as user and must have access to the libraries SYSNOM and SYSNOMU.
If Entire System Server is running with security, (i.e.: SECURITY<>NONE), the user ID indicated by <ESYUSER> must be defined in the external security system and have sufficient authorization.

- Verify the Monitor Defaults:
 - Log on to the library SYSNOM and invoke the MENU program.
 - Enter the direct command 8.1. On the Default Definition Menu select option 1 to verify that System Default parameters DBID and FNR parameters point to the correct Entire Output Management System File.
 - Return to the menu by pressing PF3, and then selecting Option 2 to verify Monitor Defaults:
 - node, batch module and system server jobname should be correct;
 - at least 1 printer task should be specified;
 - at least 1 output class reserved for Entire Output Management is specified (OS/390/VSE/ESA); (**Note:** For JES3 these classes must be defined as HOLD=EXTWTR)
 - temporary class is specified;
 - a reserved virtual printer must be specified (BS2000/OSD).
2. Start the Entire Output Management Server automatically with Entire System Server.

If the Entire System Server is active, proceed with step 3, below, to start the Entire Output Management Server online.

If the SATSTART block for the Entire Output Management Server in the SYSSATU member SATP nnn is provided correctly, the Server is started automatically with the Entire System Server node nnn .

- Start Entire System Server node nnn .
 - The successful start of the Entire System Server is indicated by the console message:
Entire System ServerIS READY - X-COM NODE nnn IS INITIALIZED
 - The successful start of the Entire Output Management Server is indicated in the NOM log (direct command DLOG MON):

```
NOM1522 Monitor logged on to NPR UserId = NOMMON.
NOM1510 Monitor initialization completed successfully.
NOM1524 Number of Printer Tasks 2.
NOM1525 Printer task Type ..... SUBTASK.
NOM1503 Monitor minimum wait .. 30.
NOM1504 Monitor maximum wait .. 30 .
NOM1505 Monitor increment ..... 5.
NOM1506 Monitor node ..... 144.
NOM1507 Monitor DBID ..... 9.
NOM1508 Monitor FNR ..... 141.
NOM1527 Operating System Type . MVS/ESA.
NOM1528 Spool Type ..... JES2.
NOM1509 Start monitor initialization.
NOM1511 Monitor startup.
```

- If this sequence does not appear after a while:
 - Check the SYSOUT data sets of the Entire System Server node, if it is running under the MVS/XA or MVS/ESA or OS/390 operating systems. Check the LST data set of the Entire System Server node, if it is running under a VSE/ESA operating system.
 - If the Entire Output Management Server is running under BS2000/OSD, check the SYSLST protocol files matching the following naming convention - the file name must contain the substring:

```
L . NOMxx $nnn$ 
```

where xx stands for the Entire Output Management subtask and nnn for the server number.
 $xx = XT$ for the Main Task and 02-05 for subtasks

- Proceed with Step 4.
3. Start the Entire Output Management Server online.
- In the Entire Output Management online system, type the direct command START MON and press Enter.

The Monitor Management screen appears:

```

15:42:43          **** Entire Output Management ****          10/06/1999
User ID GHH          - Monitor Management -

                                Status  Closed
                                at 15:42:29 10.06.1999

S Start Monitor
C Close Monitor
L Display Monitor Log

P Purge Monitor Buffer Pool
E Purge a single Buffer Pool Entry

+-----+
! Monitor Node ..... 144 !
! Minimum Wait ..... 30_ (in seconds) !
! Maximum Wait ..... 300_ (in seconds) !
! Wait Increment ..... 5_ (in seconds) !
! Current Wait ..... 135 (in seconds) !
+-----+
NOM1520 Monitor start initiated Subtask = NOMSTART-009141 .
Command => _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit Flip                               Wake      Menu

```

The status should change from Closed to Initializing.

4. Produce sample output in one of Entire Output Management's reserved classes:

- Run any job which produces output in one of the classes defined as reserved for Entire Output Management.
- When the job has finished, go to the Monitor Management Screen to wake up the monitor by pressing PF10.

The Monitor should now start creating reports derived from the Report definition UEX-DEFAULT.

- Issue the direct command LIST AREP and then enter the line command LI for the Folder #Inbasket to list the Active Reports contained in it. Issue the line command BR to browse the arrived Reports.

3GL Interface Installation/Verification

- 3GL Interface Defaults (1)
- 3GL Interface Defaults (2)
- SYSERR - Display Short Messages
- Report Definition - General Attributes
- Report Definition - 3GL ID (3)
- Using NOMPUT

The following subsection describes how to define a 3GL interface and how to test it with the supplied sample programs.

1. Load a Container File (SYS2) with no records. The output will be stored in this file.
2. Define the 3GL interface defaults. Do this as described in the subsection 3GL Interface Maintenance in the section System Administration of the System Programmer's Documentation:

3GL Interface Defaults (1)

```

11:40:31          **** Entire Output Management ****          08/08/1999
UserId GHH              - 3GL Interface Defaults -

3GL Interface 104
  active ..... Y
  Time Limit ..... _
  Description ..... User-defined Spool (3GL Interface 104)_____

NOM container file
  DBID ..... 9__
  FNR ..... 212

Identifying Attributes
  Prompt          Offset  Length  Order  Generic (*)
  1040_____      1__   8__   1__   Y
  1041_____      9__   8__   2__   N
  1042_____     17__  8__   3__   N
  _____       ___   ___   ___   -

File identification
  1043_____     33__  8__

Command => _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit  Flip  Do    Undo          Attrb          Menu
    
```

3GL Interface Defaults (2)

```

11:45:54          **** Entire Output Management ****          08/08/1999
UserId GHH              - 3GL Interface Defaults -

3GL Interface 104
  active ..... Y
  Description ..... User-defined Spool (3GL Interface 104)_____

Attributes
  Prompt          Offset  Length
  1045_____     25__  8__
  1044_____     41__  50__
  _____       ___   ___
  _____       ___   ___
  _____       ___   ___
  _____       ___   ___
  _____       ___   ___
  _____       ___   ___
  _____       ___   ___

Command => _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit  Flip  Do    Undo          Ident          Menu
    
```

3. In SYSERR, enter the prompt texts under the defined numbers (SYSNOMU library). If both the English and the German version of Entire Output Management are being used, you must enter the text for both languages.

SYSERR - Display Short Messages

```

11:55:13          ***** NATURAL SYSERR Utility *****          08/08/1999
                    - Display Short Messages -

Number           Short Message (English)
-----
SYSNOMU0001     User Id
SYSNOMU0002     Name
SYSNOMU0003     First Name
SYSNOMU0004     Birth date
SYSNOMU1040     User ID
SYSNOMU1041     Terminal ID
SYSNOMU1042     Program
SYSNOMU1043     List-Name
SYSNOMU1044     Description
SYSNOMU1045     List ID
SYSNOMU1234     testprompt

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

4. Create a default Report for your 3GL interface. Enter an asterisk * for the identifying attribute that you defined with Generic=Y in the definition. For further information see the subsection Report Identification for 3GL Interface in the section Defining a Report of the Entire Output Management Reference Documentation.

Report Definition - General Attributes

```

12:12:40          **** Entire Output Management ****          08/08/1999
User ID GHH      - Report Definition >General Attributes -

Report
Name ..... USR104-DEFAULT___
Description ..... Default definition for 3GL interface 104_____
Type ..... D

Keywords ..... _____

Master Owner ..... MRS_____
Store in NOM DB ..... N

Archive directly ..... N

Retention           Report       Archive   Revive
Number ..... 1___         _____
Unit ..... A             -         -
Calendar ..... _____
Action ..... P

Command => _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
    Help  Add  Exit  Flip  Do    Undo  Ident Print Dist  Separ  Menu
    
```

Report Definition - 3GL ID (3)

```

15:13:43          **** Entire Output Management ****          14/06/1999
User ID GHH      - Report Definition >3GL Identification -

Report
  Name ..... USR100-DEFAULT___

3GL Interface 100 Attributes

and

_____
_____
_____
_____
_____
_____
_____
_____

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

5. Enter the database ID and file number of your Container File in the module NOMADA. These are simply defaults that can be overwritten in the 3GL program.
6. SHUTDOWN and START the Monitor.
7. Modify the supplied member ASMNOM and assemble the module NOMADA.

To execute the COBOL example, continue with number 13 below.

8. Modify the supplied module NOMEX3GL. O\$ATTR must contain the spool attributes (identifying attributes, file identification and other attributes) as defined in the interface. N\$SRCTYP must contain the interface number at OPEN. N\$DBID and N\$FNR must contain the database ID and file number respectively.
9. Assemble the module NOMEX3GL.
10. Modify the member LNKEX3GL and link the sample program.
11. Modify the member RUNEX3GL and run the sample program.
12. Check the 'Monitor Log' to see whether a Report has been created.
13. Modify the supplied module NOMEX3CO. NOMPUT-ATTRIBUTES must contain the spool attributes as defined in the interface. In the subsection BA-INITIALISE, the interface number must be assigned to the field NOMPUT-CB-SOURCE-TYPE, the database number to the field NOMPUT-CB-CONT-DBID and the file number of the Container File to field NOMPUT-CB-CONT-FNR.
14. Modify the member COBNOM and compile the module NOMEX3CO.
15. Modify the member LNKEX3CO and link the sample program.
16. Modify the member RUNEX3CO and run the sample program.
17. Check the 'Monitor Log' to see whether a Report has been created.

Using NOMPUT

Installing Logical NOM Printer in NAF

1. Assemble NOMADA using the following parameters (down to the line MEND):

Parameter	Explanation
AUTOET=1,	ET after nn records
CICS=NO,	CICS environment not required
NATURAL=YES,	NATURAL/ADABAS not required
NATVERS=23, 31	Version of Natural (22/23/31)
NOMDBID=nnnnn,	DBID of NOM system file
NOMFNR=nnnnn	FNR of NOM system file

Note:

NOMADA is the interface between NOMPUT and Adabas and it can be used by:

- batch 3GL programs, in which case CICS=NO and NATURAL=NO must be set;
 - 3GL programs running under CICS, in which case CICS=YES and NATURAL=NO must be set;
 - Natural Advanced Facilities running in any environment, in which case CICS=NO and NATURAL=YES must be set (so even if NAF is running under CICS you must still set CICS=NO; see Note 2 in the NOMADA description).
2. INCLUDE the following modules to the nucleus where NAFNUC is included (usually the shared nucleus):
 - NOMPUT
 - NOMADA
 3. For printing from NAF, define the NAF printers as follows:

```
NTPRINT(m-n),AM=NAF
```

4. Define a logical printer in NAF with type 'NOM'.
5. Edit the NAF defaults in NOM to link NAF spool file and NOM container file and activate the NAF interface with 'Y'.
6. Direct the output of your NATURAL program to NOM using

```
DEFINE PRINTER (n) OUTPUT 'logical NAF printer name'
```

Outputs of this type are stored in the specified NOM container file.

SAP Interface Installation/Verification

- SAP-Spool Defaults Screen
- Report Definition - SAP-Spool ID Screen

The following subsection describes how to define and test the SAP interface.

1. Load a Container File (SYS2) with no records. The output will be stored in this file.
2. Define the SAP-Spool interface defaults. Do this as described in the subsection SAP-Spool Defaults in the section System Administration of the System Programmer's Documentation:

SAP-Spool Defaults Screen

```

14:56:26          **** Entire Output Management ****          08/08/1999
UserId GHH          - SAP-Spool Defaults -

SAP-Spool interface
active ..... Y
Time Limit ..... 1_

NOM container file
DBID ..... 9__
FNR ..... 212

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

3. Create a default Report for your SAP interface. Enter an asterisk * for the identifying attribute Destination. For further information see the subsection Report Identification for SAP Spool in the section Defining a Report of the Reference Documentation:

Report Definition - SAP-Spool ID Screen

```

15:02:29          **** Entire Output Management ****          08/08/1999
User ID GHH          - Report Definition >SAP-Spool Identification -

Report
Name ..... A-SAP-DEFAULT____

SAP-Spool Attributes
Destination ..... *__ or
User ID ..... *__

and List IDs ..... _____
                    _____
                    _____
                    _____
                    _____
                    _____
                    _____
                    _____
                    _____

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

4. SHUTDOWN and START the Monitor.
5. Enter the database ID and file number of your Container File in the module NOMADA.
6. Assemble the modules NOMADA and NOMSPEI with the appropriate SAP procedure (SAPASML).
7. Assemble the module NOMSPEX with the appropriate SAP procedure (SAPEXAL)
8. Link the programs NOMSPEX, NOMPUT, NOMADA and NOMCOMPR to the program SAPSPWR. For more detailed information, see the SAP documentation.
9. Create a printout in SAP.
10. Check the 'Monitor Log' to see whether a Report has been created.

Natural Advanced Facilities

- Printing from NAF to NOM
- Printing from NOM to NAF

Printing from NAF to NOM

Instead of printing output from Natural programs in the NAF spool file (FSPOOL), you can route it to a NOM file (SYS2), from which it can be distributed, bundled or separated.

Here you can define whether the NAF/NOM interface is active and from which NAF environments output is to be processed. A separate NOM file can be assigned to each FSPOOL file. However, you can also assign the same NOM file to all FSPOOL files.

To define default parameters for Natural Advanced Facilities for printing from NAF to NOM:

- see Natural Advanced Facilities Defaults in the section System Administration of the System Programmer's Documentation for further information.

```

NOMADA and NOMPUT :
* -----
1. Assemble NOMADA with the appropriate parameters set: :
  NOMADA , X
      AUTOET=1, ET after nn records X
      CICS=NO, CICS environment not required X
      NATURAL=YES, Natural/Adabas not required X
      NATVERS=23, 31 Version of Natural (22/23/31) X
      NOMDBID=nnnnn, DBID of NOM file X
      NOMFNR=nnnnn FNR of NOM file
2. Then link NOMPUT, NOMADA and NOMCOMPR into the NAF nucleus
*

```

Printing from NOM to NAF

To print from NOM to NAF:

1. Natural Advanced Facilities must be installed in the Natural nuclei used by the monitor and for batch printing.
2. The necessary NAF modules must be linked.
3. The parameter modules must define printers 3 and 4 as type NAF, as well as specifying any site-specific parameters such as NAFSIZE, NAFUPF and FSPOOL.

For further information, refer to the Natural Advanced Facilities documentation.

