

Installing NAF under BS2000/OSD

This section describes how to install Natural Advanced Facilities (NAF) in a BS2000/OSD environment in batch mode and under TIAM and UTM.

- Prerequisites
- Installation Tape
- Installation Procedure

Prerequisites

- Base Natural Version 4.1 or above must be installed.

Installation Tape

The installation tape contains the datasets listed in the table below. The sequence of the datasets is shown in the Report of Tape Creation which accompanies the installation tape.

Dataset Name	Contents
NAF nnn .PAMS	NAF modules.
NAF nnn .MACS	NAF macros.
NAF nnn .INPL	INPL file for libraries SYSPool and SYSprint.
NAF nnn .ERRN	NAF error messages.
NAF nnn .SYSF	Empty sample spool file; input to Adabas load utility.
NAF nnn .JOBS	NAF example jobs.

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

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 SRV nnn .LIB from Tape to Disk

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

The library SRV nnn .LIB is stored on the tape as the sequential file SRV nnn .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 Procedure

Naming Conventions

In the following text, the library name *JOBLIB* stands for

- the example job library (NAF*nnn*.JOBS) if you are **not** using SMA or
- the SMA job library (see SMA parameter JOBLIB in SMA Parameter Group BASIC) if you are using SMA.

Step 1: Load the Spool File - Job I050, Step 0300

You **must** generate a new spool file because the Adabas FDT used in Version 4.1 is not compatible with the one used in Version 2.3.

Load the NAF spool file contained in NAF*nnn*.SYSF using the ADALOD utility. An initial size of one cylinder for this file will be sufficient. The following parameters are mandatory

```
ISNREUSE=YES
```

to cause Adabas to reuse the ISN of a deleted record. For the file number <fspool>, you may choose any value.

Step 2: Create Parameter Module NAFB2P - Job I055, Step 0300

Assemble the source module ANAFB2P, which is contained in dataset NAF*nnn*.JOBS. If Natural Security is installed, check the LOGON command to application SYSPRINT.

The following examples illustrate how the parameters may be set.

Example 1 - Installation with Natural Security and two Spool Servers:

```

DC01      = NAFDCAM1
DC02      = NAFDCAM2
DC03      = NO
.
.
.
.
.
DC30      = NO
NAFERK1   = NAFF1
NAFERK2   = NAFF2
PA01      = 'STACK=(LOGON SYSPRINT,user1,passw;SVPBS201) '
PA02      = 'STACK=(LOGON SYSPRINT,user2,passw;SVPBS201) '
PA03      = 'NO '
.
.
.
.
.
PA30      = 'NO '

```

Example 2 - Installation without Natural Security and one Spool Server:

```

DC01      = NAFDCAM1
DC02      = NO
.
.
.
.
.
DC30      = NO
NAFERK1   = NAFF1
NAFERK2   = NAFF2
PA01      = 'STACK=(LOGON SYSPRINT;SVPBS201) '
PA02      = 'NO '
.
.
.
.
.
PA30      = 'NO '

```

Note:

If Natural Security is installed, link the library SYSPRINT to a user which is normally not active in the security environment. Moreover, link SYSPRINT to as many users as there are spool servers (1-9).

The parameters for DCAM connection (DC01 - D30) and for P1-EVENTING (NAFERK1, NAFERK2) must be different from those used for the same function in any other application for the same CPU.

Described below are the parameters that can be specified in the macro NAFB2P:

Parameter	Explanation
DC01 - DC30	7 bytes indicating the name of the corresponding DCAM application. Unused entries should be set to NO.
NAFERK1	8 bytes indicating the event ID for the communication between the online Natural and the spool server(s) and defining the name of the used common memory pool.
NAFERK2	8 bytes indicating the event ID for the automatic startup for spool server(s) using TP monitor UTM and the corresponding parameter SPOOL=(<i>name,number</i>).
PA01 - PA30	Stack data for the initialization of Natural using the following format: <pre>STACK=(LOGON <i>library, userid;</i> <i>programname</i>)</pre> <p>If Natural Security is installed the format is as follows:</p> <pre>STACK=(LOGON <i>library, userid, password;</i> <i>programname</i>)</pre> <p>Unused parameters must be set to NO.</p>
MONEVT	Name of the event ID for the BS2000/OSD monitor task (8 bytes maximum).
PAMO	LOGON command for the monitor task. The start program must always be set to SVPMON01.
CMPSIZE	Specifies the size of the NAF Common Memory Pool (in units of 64 KB).
RSOFORM	Specifies the name of a form to be used by the spool server when output is sent to an RSO printer. The information in the report is ignored. If value ' ' is used, the information from the report is used.
BS2FORM	Specifies the name of a form to be used by the spool server when output is sent to a system printer. The information in the report is ignored. If value ' ' is used, the information from the report is used.
PASEC	Determines whether at LOGON, the spool server uses the FSEC value applicable to the invoking online application. (YES/NO).
PANAT	Determines whether at LOGON, the spool server uses the FNAT value applicable to the invoking online application. (YES/NO).
ISO	Determines whether the spool server(s) use(s) a DCAM ISO application in addition to the DCAM NEA application. (YES/NO).
RSOPROT	Determines whether the RSO messages resulting from the PRINT invocation are to be written to a log if logical printers with RSO support are used. ON: log is written to SYSLST02. OFF: no log is written to SYSLST02.
MAXERR	Specifies the maximum number of acceptable Natural spool server abends (abnormal termination of Natural). If the specified limit is exceeded, the spool server terminates itself. 0: no limit. 1 to 255: limit.

Step 3: Modify NATPARAM - Job I060, Step 0010 and Job I080, Step 0109

Modify the parameters FSPOOL, NTPRINT, NAFUPF and NAFSIZE in NATPARAM according to your site requirements. For more information on these parameters, see Natural Profile Parameters for NATSPOOL.

Assemble and link the Natural parameter module NATPARAM.

Step 4: Link the Natural Nucleus - Job I060, Step 3801

Add the following INCLUDE statements to the sources LNATSHAR in the library NAFnnn.JOBS:

```
INCLUDE  NAFNUC      ,NAFnnn.MOD
INCLUDE  NAFREENT   ,NAFnnn.MOD
INCLUDE  NAFB2RSO   ,NAFnnn.MOD
INCLUDE  NAFSEVR    ,NAFnnn.MOD
```

Step 5: Load the System Programs - Job I061, Step 0300

Load the NAF system programs into the Natural system file using the Natural INPL utility. INPL loads the maintenance programs under the application IDs SYSPool and SYSPRINT.

Ensure that INPL finishes with the message "Natural Advanced Facilities initialized by INPL". If this initialization fails, various problems will be encountered at execution time.

This INPL file contains the source for all maps used in the NAF system.

These maps are provided in source form to enable users to customize the system (for example, to translate the maps from English to another language).

If these maps are modified, ensure that all fields have the same format/length/relative position in the map. Failure to abide by this restriction will result in an invalid system.

Step 6: Load the Error Messages - Job I061, Step 0302

Load the NAF error messages file (dataset NAFnnn.ERRN) using the ERRLODUS program as described in the Natural SYSERR Utility documentation.

Step 7: Link the Spool Server - Job I065, Steps 0100, 0110, 0111, 0201

Link source members LNAFSERV, LNAFSEND, LNAFMON and LNAFMEND in the library NAFnnn.JOBS.

Source	Function
LNAFSERV	Links the program that starts the NAF server task.
LNAFSEND	Links the program that terminates the NAF server task.
LNAFMON	Links the program that starts the NAF monitor task. See also the section BS2000/OSD Monitor in Features in a BS2000/OSD Environment.
LNAFMEND	Links the program that terminates the NAF monitor task.

Step 8: Relink Natural Front-End Parts - Job I080, Steps 0100, 0200

Add the following INCLUDE statements to the sources LNUTFRNT, LNRTFRNT and/or LNATFRNT in the library JOBLIB:

```
INCLUDE  NAFB2P     ,JOBLIB
INCLUDE  NAFFRONT   ,NAFnnn.MOD
```

Step 9: Natural Advanced Facilities and Natural Security

This step must only be performed, if NAF is being installed in a Natural Security environment.

Define SYSPPOOL to Natural Security with startup program MENU.

Step 10: Start Natural

Start Natural and add the user profile, as defined in the NAFUPF parameter of NATPARM, to the SYSPPOOL file using Function 31.1.

Note:

A NAT7201 message is issued at the start of the session indicating that the profile has not yet been added to the SYSPPOOL file.

Step 11: Create NATSPOOL Environment - Job I200, Step 3800

If you already have a Natural Advanced Facilities Version 2.3 spool file and you want to use it under Version 4.1, its contents must be converted to the newly generated Version 4.1 spool file. This is done using the CONVERT command in the library SYSPPOOL, see Conversion from Version 2.2.

Note:

A Version 2.2 spool file cannot be converted directly to Version 4.1. It must first be converted to Version 2.3.

After conversion, you must specify the general spool file options and the system-specific options for the spool server. See Function 30.5.

To initialize a new NATSPOOL environment, see NATSPOOL Initialization.