

# Installing NAF under BS2000/OSD

This chapter 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
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## Prerequisites

- Base Natural must be installed.

For further information, refer to the products and versions specified under *Natural and Other Software AG Products* and *Operating and Teleprocessing Systems Required* in the current *Natural Release Notes*.

## 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 $nnn$ .MOD	NAF modules.
NAF $nnn$ .MAC	NAF macros.
NA $nnn$ .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.

## Installation Procedure

- Naming Conventions
- Step 1: Load the Spool File
- Step 2 : Create Parameter Module NAFB2P
- Step 3: Assemble the Natural Batch Driver and the Natural Parameter Module for the NAF Server Task \*

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- Step 10: Natural Advanced Facilities and Natural Security
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## 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

When you upgrade from the previous release of Natural Advanced Facilities, skip this step.

When you upgrade from an older release, see the section relating to Natural Advanced Facilities migration in the Natural Release Notes.

Load the NAF spool file contained in NAF*nnn*.SYSF by 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 = NAFP1
NAFERK2 = NAFP2
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 = NAFP1
NAFERK2 = NAFP2
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.

Parameter	Explanation
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</i> , <i>number</i> ).
PA01 - PA30	Stack data for the initialization of Natural by using the following format:  STACK=(LOGON <i>library</i> , <i>userid</i> ; <i>programname</i> )  If Natural Security is installed the format is as follows:  STACK=(LOGON <i>library</i> , <i>userid</i> , <i>password</i> ; <i>programname</i> )  Unused parameters must be set to NO.
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 1 KB). The value is rounded up to the next higher multiple of 64 KB (64 KB = segment size = allocation unit for the common memory pools).
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.

Parameter	Explanation
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.  1-255: limit.

### Step 3: Assemble the Natural Batch Driver and the Natural Parameter Module for the NAF Server Task \*

(\*) and also for the Natural Monitor task.

Job I055, Steps 0301 to 0303

ANAFRNT	Natural BS2000/OSD front-end batch driver
ANAFRENT	Natural BS2000/OSD reentrant batch driver
ANAFPARM	Natural BS2000/OSD batch parameter module

### Step 4: Modify NATPARM

Job I060, Step 0010 and Job I080, Step 0109

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

Assemble and link the Natural parameter module NATPARM.

### Step 5: Link the Natural Nucleus

Job I060, Step 3802

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 NAFSERVR   ,NAFnnn.MOD
```

### Step 6: Load the System Programs

Job I061, Step 0300

Load the NAF system programs into the Natural system file by using the Natural INPL utility. INPL loads the maintenance programs under the application IDs SYSPPOOL 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 7: Load the Error Messages

Job I061, Step 0304

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

## Step 8: 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 <i>BS2000/OSD Monitor in Features</i> in a BS2000/OSD Environment.
LNAFMEND	Links the program that terminates the NAF monitor task.

## Step 9: 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 10: Natural Advanced Facilities and Natural Security

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

Define `SYSPOOL` to Natural Security with startup program `MENU`.

## Step 11: Start Natural

Start Natural and add the user profile, as defined in the NAFUPF parameter of NATPARM, to the SYSPPOOL file by 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 12: Create NATSPOOL Environment

Job I200, Step 0300

When upgrading from Natural Advanced Facilities Version 4.1, omit this step.

See *Migrating to Natural Advanced Facilities Version 4.2, Case 1*, in the *Natural Release Notes*.

When upgrading from a Natural Advanced Facilities version prior to Version 4.1, you must proceed as described in the section *Migrating to Natural Advanced Facilities Version 4.2, Case 2*, in the *Natural Release Notes*.