Setting Up the Environment

This section describes how to set up the installation environment. These steps are common to all users. The following topics are covered:

- Define the NATPARM
- Link the Natural Nucleus (batch) with the New NATPARM
- Link the Natural Nucleus (online) with the New NATPARM
- Add Natural Security Definitions (Conditional)
- Create a New Natural Profile

Define the NATPARM

This section describes how to define the NATPARM for Natural Business Services.

Create a New Reentrant Natural Nucleus (Batch)

- Job I060

To create a reentrant Natural nucleus for batch:

- Update Your Parameter Module
- Make the Nucleus Reentrant

Notes:

1. A reentrant nucleus is only required for a full Natural Business Services installation; it is not required for a Natural Construct-only installation.
2. If you intend to use the Trace function, you must install Natural Business Services with printer 2 and 3 assigned to batch.

Update Your Parameter Module

The Business Service Administration subsystem uses special files that must be identified to the Natural transaction used for the subsystem. You can either use the LFILE parameter to dynamically identify the files or you can code the NTLFILE macro in the Natural parameter module to make the files part of the Natural nucleus.

To update your parameter module (NATPARM):

1. Set `ADAPRM=ON` in your NATPARM to define a reentrant batch nucleus.
2. Set `LFILE=(227,DBID,FNR)` for the Natural Construct data file (required for Natural Business Services).

Note:
If you are installing Natural Construct only, steps 3 and 4 are optional.

3. Set `LFILE=(135,DBID,FNR)` for secured data file to invoke Natural.
4. Set `LFILE=(136,DBID,FNR)` for unsecured data file to invoke Natural.

   The DBID and FNR values identify the database and file number for the Business Service Administration subsystem file.

5. This step differs, depending on whether you are an z/OS or z/VSE user. For details on how to create the module, refer to your Natural installation and operations documentation.

   Note:
   The content of the NATPARM module differs slightly, depending on your operating system.

   Note:
   Natural Business Services uses the Software AG editor. To access this editor, you must have an editor work file and buffer pool or you must specify an EDPSIZE.

The following example shows a NATPARM profile for the Business Service Administration subsystem:

```
ACMPARM  TITLE 'NATURAL 3.1 PARM-MODUL, EXAMPLE'
NTPRM FNR=XX,                  NATURAL SYSTEM FILE NUMBER     -
      DBID=XXX,                NATURAL SYSTEM FILE DB         -
      FUSER=(XXX,X),           NATURAL USER SYSTEM FILE DB    -
      FDIC=(XXX,XXX),          PREDICT SYSTEM FILE            -
      FNAT=(XX,XX),            FNAT FILE                      -
      FSEC=(XXX,XXX),          FSEC FILE                      -
      MENU=OFF,                MENU MODE OFF                  -
      IM=D,                                                   -
      INTENS=1,                                               -
      MT=0,                                                   -
      PD=50,                   SIZE OF COMPLETE PAGE DATA SET -
      ML=B,                    MESSAGE LINE ON BOTTOM         -
      FS=OFF,                                                 -
      LS=132,                  LINE SIZE (0 WOULD TAKE DEVICE)-
      PS=60,                   PAGE SIZE (0 WOULD TAKE DEVICE)-
      PC=OFF,                                                 -
      WH=OFF,                  WAIT IF RECORDS HELD           -
      USIZE=32,                SIZE OF USER AREA              -
      DATSIZE=180,             SIZE OF USER AREA              -
      ESIZE=120,               SIZE OF EXTENDED USER AREA     -
      RUNSIZE=40               SIZE OF NATURAL RUNTIME BUFFER -
      ADAPRM=ON                PASS SESSION DATA IN 7TH PARM  -
      FSIZE=40,                                               -
      SYNERR=ON,                                              -
      MAXCL=0,                                                -
      MADIO=0,                                                -
      DU=OFF,                   DUMP WILL NOT BE PRODUCED     -
      AUTO=ON,
    NTLFILE 227,ddddd,fffff     CONSTRUCT DATA
    NTLFILE 135,ddddd,fffff     BUSINESS SERVICES SECURED DATA
    NTLFILE 136,ddddd,fffff     BUSINESS SERVICES UNSECURED DATA
    END
```

where:

- *ddddd* is the physical database ID
- *fffff* is the physical file number

The recommended Natural parameter settings are:

- `ESIZE=120`
- `RUNSIZE=40`
- `ADAPRM=ON`
- `NTLFILE 227,ddddd,fffff`
- `NTLFILE 135,ddddd,fffff`
- `NTLFILE 136,ddddd,fffff`

Note:
We recommend that you use a global buffer pool. If you use a local buffer pool, changes to code are not automatically detected; new or updated modules are not updated. If you are using a local buffer pool, stop and then restart all running services to update modules.

Make the Nucleus Reentrant

To make the nucleus reentrant:

- Link the new batch nucleus with a reentrant version of the Adabas link routine.

  Because you cannot make ADAUSER reentrant, you must replace it with one of the following:

  - Link the nucleus using the reentrant version of the link routine, ADALNKR, which is supplied with Adabas

    or

  - Modify your existing ADALNK to be reentrant and then link the nucleus using the modified ADALNK

In either case, set the default SVCNR value in the ADALNK source to the Adabas SVC number used in your environment. In the multi-tasking batch nucleus, you cannot change ADARUN parameters dynamically because the DDCARD input parameters are no longer available.

Note:
For z/OS users, ensure that the RENT link option is specified.

Modify the ADALNK Routine

- Job I055, Step 1370

To make the ADALNK routine reentrant:

1. Set the &RENT macro value to 1.

   For example, comment out the default setting for &RENT and remove the comment marker from the reentrant setting:

```
* &RENT     SETB  0          Non-reentrant ADALNK                .sg62.
 &RENT     SETB  1         Reentrant ADALNK                     .sg62.
```

2. Assemble the modified ADALNK.
3. If running under z/OS, link the modified ADALNK.

   Ensure the RENT link option is specified.

Link the Natural Nucleus (batch) with the New NATPARM

Using the Natural link job (I060) that linked the standard Natural nucleus, create an executable Natural nucleus. Include the NATPARM parameter module assembled and linked in Define the NATPARM.

Note:
Some components of Natural Construct require access to the Software AG editor. Ensure that the editor is installed and operational.

Link the Natural Nucleus (online) with the New NATPARM

Using the Natural link job (I080) that linked the standard Natural nucleus, create an executable Natural nucleus. Include the NATPARM parameter module assembled and linked in Define the NATPARM.

Note:
Some components of Natural Construct require access to the Software AG editor. Ensure that the editor is installed and operational.

Note:
To use the online job submission features of Natural Construct, ensure that the NATRJE module is installed and operational.

Add Natural Security Definitions (Conditional)

If you are using Natural Security, you must add definitions for the following libraries to Natural Security:

Library	Description
SYSBIZ	Stores the executable code for the Business Service Administration subsystem. This library is not required if you are only installing Natural Construct.
SYSCST	Contains the generator maintenance facilities for Natural Construct.
SYSCSTX	Contains sample exit routines.
SYSBIZDE	Contains the Natural Business Services demo application for Adabas. This library is not required if you are only installing Natural Construct.
SYSCSTDE	Contains the Natural Construct demo application for Adabas.
SYSCSTD2	Contains the Natural Construct demo application for DB2.
SYSCSTDV	Contains the Natural Construct demo application for VSAM.

You can restrict access to these libraries to only those users who maintain the definitions that control the generation process. Users who generate modules or maintain help text using Natural Construct do not require access to the libraries.

Adabas Demo Library

The Adabas demo library for Natural Business Services (SYSBIZDE) contains examples of how to use the supplied models. It should be accessible to all developers.

Note:
The SYSBIZDE library includes all the modules in the Natural Construct demo library (SYSCSTDE), in addition to the subprogram proxies and new modules that take advantage of the features of Natural Business Services. If you are installing Natural Construct without Natural Business Services, you must define SYSCSTDE to Natural Security.

The modules in this library access the following DDMs:

- NCST-CUSTOMER
- NCST-INS-POLICY
- NCST-ORDER-DISTRIBUTION
- NCST-ORDER-HEADER
- NCST-ORDER-LINES
- NCST-PRODUCT
- NCST-WAREHOUSE

These files should be publicly available.

To allow programs that access the Natural Construct help file to be recataloged, define the following DDMs to Natural Security:

- NCST-HELP
- NCST-HELP-LINES
- NCST-PROFILE

DB2 Demo Library

The DB2 demo library (SYSCSTD2) contains examples of how to use the supplied models. It should be accessible to all developers. The modules in this library access the following DDMs:

- NCSTDB2-CUSTOMER
- NCSTDB2-ORDER_DISTRIBUTION
- NCSTDB2-ORDER_HEADER
- NCSTDB2-ORDER_INSTRUCTIONS
- NCSTDB2-ORDER_LINES
- NCSTDB2-PRODUCT
- NCSTDB2-WAREHOUSE

VSAM Demo Library

The VSAM demo library (SYSCSTDV) contains examples of how to use the supplied models. It should be accessible to all developers. The modules in this library access the following DDMs:

- NCSTVSAM-CUSTOMER
- NCSTVSAM-ORDER-DISTRIBUTION
- NCSTVSAM-ORDER-HEADER
- NCSTVSAM-ORDER-LINES
- NCSTVSAM-PRODUCT
- NCSTVSAM-WAREHOUSE

Create a New Natural Profile

To simplify and automate the launching of the Natural Business Services environment, use the Natural SYSPARM utility to create a new profile.

To create a new Natural profile:

1. Log onto the SYSPARM library.

2. Issue the MENU command.
3. Type "A" in conjunction with the SYSBIZ profile name.
4. Add the parameters to start Natural with the required sizes and system files.

   Note:
   If suitable values are already linked to your Natural nucleus, some of these parameters may not be necessary.

If not defaulted in the Natural transaction, the following parameters are required:

Parameter	Description
ESIZE=120	Extended user area.
RUNSIZE=40	Size of the Natural runtime buffer.
LFILE=(227,DBID,FNR)	Natural Construct system file.
LFILE=(135,DBID,FNR)	Natural Business Services secured file (required for Natural Business Services installation).
LFILE=(136,DBID,FNR)	Natural Business Services unsecured file (required for Natural Business Services installation).

Set Security

To allow Natural Business Services to communicate with Natural Security:

1. Access the Natural Security main menu.
2. Access the Administration Services main menu.
3. Access the General Options menu.
4. Set the Free access to functions via interface subprograms property to “Y”.
5. Do one of the following:
   - If you are installing Natural Business Services, see Installing the Business Services Repository and Server Components.
   - If you are installing Natural Construct without Natural Business Services, see Installing Natural Construct.