

# Natural Shared Nucleus under BS2000/OSD

This document contains the rules that apply when you use a Natural shared nucleus, which is possible in Batch mode, under TIAM and/or UTM.

The following topic is covered:

- Rules for Using a Natural Shared Nucleus

Concerning UTM, see also Several Applications with one Common Natural in the Natural Teleprocessing Monitors documentation.

## Rules for Using a Natural Shared Nucleus

With a Natural shared nucleus under BS2000/OSD, the rules given below apply.

1. The shared Natural nucleus is linked **without** the corresponding reentrant parts of the batch, TIAM and UTM drivers (these modules must be linked to the front-end part of the corresponding application).

**Example:** The name of the shared Natural nucleus is NATSHARE.

```
/EXEC $TSOSLNK
MOD NATSHARE , XREF=YES , MAP=Y , XDSEC=Y , SORT=Y
LINK-SYMBOLS *KEEP
INCLUDE NATINV , libname
.
.
INCLUDE NATURAL , libname
.
.
INCLUDE NATLAST , libname
BIND
/SETSW ON=1
LIB NATURAL . USER . MOD , BOTH
PAR O=Y
ADDR *OMF
END
/SETSW OFF=1
```

2. Batch, TIAM and UTM application-specific Natural parameter modules are also linked to the front-end part of the corresponding application. In addition, the shared Natural nucleus can contain a common Natural parameter module, e.g. for CSTATIC entries. The name chosen for the linked Natural nucleus is also identical with the name of the global common memory pool into which Natural is loaded. This name is to be used as operand for the following keyword parameters:

NUCNAME	in the macros NAMBS2, NAMTIAM and NATUTM
NAME	in CMPSTART and ADDON (BS2STUB)

**Example:**

```

NRTSTART NAMTIAM CODE=FRONT,
                NUCNAME=NATSHARE
                PARMODE=( 31 , ABOVE ) ,
                .
                .
NUTFRONT NATUTM APPLNAM=NATUTM,
                .
                .
                NUCNAME=NATSHARE
                PARMODE=( 31 , ABOVE )

```

3. The shared Natural nucleus is started by the program CMPSTART.

**Example:**

```

/EXEC (CMPSTART,NATURAL.MOD)
NAME=NATSHARE,SIZE=2MB,POSI=ABOVE,ADDR=250,SCOP=GLOBAL
PREFIX=YES,LIBR=NATURAL.USER.MOD

```

4. The link to the shared Natural nucleus is created in the batch, TIAM or UTM applications through the generation of the macro BS2STUB; refer to CMPSTART Program.

**Example:**

```

NRTSTUB BS2STUB PARMOD=31,PROGMOD=ANY
                ADDON NAME=NATSHARE,
                STAT=GLOBAL
NUTSTUB BS2STUB PARMOD=31,PROGMOD=ANY
                ADDON NAME=NATSHARE,
                STAT=GLOBAL

```

5. The front-end part of the applications must contain the reentrant part of the corresponding driver (NAMBS2 CODE=RENT, NAMTIAM CODE=RENT or NURENT).

**Example:**

```

/EXEC $TSOSLNK                /* Front-part of
NAMTIAM
PROG NATURAL,LOADPT=X'1000000',XREF=YES
TRAITS RMODE=ANY,AMODE=31
INCLUDE NRTSTART,libname      /* Front part of
NAMTIAM
INCLUDE NRTRENT,libname      /* Reentrant part of
NAMTIAM
INCLUDE NRTSTUB,libname      /* BS2STUB
INCLUDE NRTPARM,libname      /* Natural Parameter
Module

```

```

/EXEC $TSOSLNK                /* UTM Front-end
part
PROG
NUT234,FILENAM=NATUTM,LOADPT=X'1000000',XREF=YES
TRAITS RMODE=ANY,AMODE=31
INCLUDE KDCNUT,libname        /* UTM KDCROOT
INCLUDE NUTSTART,libname      /* NATUTM
INCLUDE NUTRENT,libname      /* NURENT
INCLUDE NUTSTUB,libname      /* BS2STUB
INCLUDE NUTPARM,libname      /* Natural Parameter
Module
INCLUDE SWPPARM,libname      /* Swap Pool
Parameter Module

```

