

# Installing Natural Connection

This chapter describes how to install Natural Connection under the operating systems z/OS, z/VSE, BS2000/OSD and VM/CMS.

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## General Information

The following topics are covered below:

- Prerequisites
- Installation Jobs
- Using System Maintenance Aid

## Prerequisites

To use Natural Connection, Entire Connection must be installed.

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

## 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 Natural installation tape; you must adapt this example job to your requirements. The job numbers on the tape are preceded by a product code (for example, NTCI080).

## 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.

## Installation Tape - z/OS

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

Dataset Name	Contents
NTC <i>nnn</i> .LOAD	Natural Connection load modules.

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

## Installation Tape - z/VSE

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

Dataset Name	Contents
NTC <i>nnn</i> .LIBR	LIBR backup file.

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

## Installation Tape - BS2000/OSD

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

Dataset Name	Contents
NTC <i>nnn</i> .MOD	Natural Connection module library.

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

## Installation Tape - VM/CMS

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

Dataset Name	Contents
NTC <i>nnn</i> .TAPE	Natural Connection TEXT file.

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

## Copying the Tape Contents to Disk

1. To position the tape for the `TAPE LOAD` command, calculate the number of tape marks as follows:

If the sequence number of `NTCnnn.TAPE`, as shown by the Report of Tape Creation, is *m*, you must position over  $3m - 2$  tape marks (that is, FSF 1 for the first dataset, FSF 4 for the second, etc.).

2. Access the disk that is to contain the Natural installation files as disk "A".
3. Ask the system operator to attach a tape drive to your virtual machine at the address X'181' and mount the Natural Connection installation tape.
4. When the tape has been attached, enter the CMS command:

```
TAPE REW
```

Position the tape by entering the CMS command:

```
TAPE FSF m
```

where *m* is the number of tape marks and is calculated as described above ( $3m - 2$ ).

5. Load the Natural Connection/CMS installation material by entering the CMS command:

```
TAPE LOAD * * A
```

Keep the tape drive attached to your virtual machine, because the tape is still needed during the installation procedure.

## Installation Procedure

This section describes step by step how to install Natural Connection under the operating systems z/OS, z/VSE, BS2000/OSD and VM/CMS.

### Step 1: Adjust Natural Parameter Module - Job I080

Specify the keyword parameter `AM=PC` for all printer files and work files you want to use for data transfer between the host and the PC. For example:

```
NTPRINT (7),AM=PC
NETWORK (7),AM=PC
```

Specify the parameter `PC=ON` either dynamically or in your Natural parameter module.

For information on using the parameters, refer to *Profile Parameter Usage* (in the *Operations* documentation).

For details on the parameters or modules, see the *Parameter Reference* or *Using Macros in a Natural Parameter Module* in the *Operations* documentation.

## Step 2: Adapt Link Steps - Job I080

Adapt the link steps for online Natural.

- **z/OS**

Add the following `INCLUDE` instruction and the corresponding DD-statements in the link instructions for the linkage editor:

```
INCLUDE NTCLIB(NTCPCAM3)
```

- **z/VSE**

Add the following `INCLUDE` instruction and the corresponding sublibrary for Natural Connection in the search chain for the linkage-editor:

```
INCLUDE NTCPCAM3
```

- **BS2000/OSD**

Add the following `INCLUDE` instruction to the element `LNATSHAR` in `JOBLIB` (see *Installing Natural under BS2000/OSD* in the *Installation* documentation for information on the naming convention for `JOBLIB`):

```
INCLUDE NTCPCAM3,NTCnnn.MOD
```

where `nnn` stands for the current version number.

Relink your Natural shared nucleus as described in *Installing Natural under BS2000/OSD* in the *Installation* documentation.

- **VM/CMS**

The list of text files to be included in the Natural module or DCSS is contained in REXX program `NAT$LOAD EXEC` (variable `LOADLIST`). To customize your Natural system, modify this `EXEC` with `XEDIT` by changing the `LOADLIST` as required.

Add the following statement to the program `NAT$LOAD EXEC` or `NATBLDS` respectively.

```
LOADLIST = LOADLIST 'NTCPCAM3'
```

Relink your Natural nucleus with the procedure NATBLDM.

## Installation Verification

### To verify the successful installation of Natural Connection

1. Invoke Entire Connection on the PC and start the terminal emulation.
2. Use the terminal emulation to invoke Natural on the mainframe.
3. Enter the terminal command %+ to activate the PC connection.
4. Use the Natural Object Handler (see the relevant documentation) to download Natural source code to the PC. For further information on transferring Natural objects, see *Data Transfer* which is part of the *Terminal Emulation* section of the Entire Connection documentation.
5. Verify that the downloaded program is now on your PC.