

# Installation for VSE/ESA

We recommend reading this section from beginning to end before starting the installation process.

This document covers the following topics:

- Installation Tape
- Storage Requirements
- Installation Tape under VSE/ESA
- Installation Procedure

## 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.

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

Dataset Name	Contents
NPR <i>nnn</i> .LIBR	VSE/ESA Library for Entire System Server
NPR <i>nnn</i> .INPL	Entire System Server System Libraries
NPR <i>nnn</i> .ERRN	Entire System Server Error Messages
NPR <i>nnn</i> .DATA	Predict View Descriptions

## Storage Requirements

During installation, the following files are loaded from the installation tape:

File Name	Type	Cylinders	Disk Type
NPR <i>nnn</i> .LIBR	SUBLIB	3	3380 / 3390
NPR <i>nnn</i> .INPL	SEQ	7	3380 / 3390
NPR <i>nnn</i> .ERRN	SEQ	1	3380 / 3390
NPR <i>nnn</i> .DATA	SEQ	6	3380 / 3390

## Installation Tape under VSE/ESA

### Copying the Tape Contents to Disk

If you are using System Maintenance Aid (SMA), refer to the SMA documentation (included on the current edition of the Natural documentation CD).

If you are **not** using SMA, follow the instructions below.

This section explains how to:

- Copy data set COPYTAPE.JOB from tape to library.
- Modify this member to conform with your local naming conventions.

The JCL in this member is then used to copy all data sets from tape to disk.

If the datasets for more than one product are delivered on the tape, the member COPYTAPE.JOB contains the JCL to unload the datasets for all delivered products from the tape to your disk, except the datasets that you can directly install from tape, for example, Natural INPL objects.

After that, you will have to perform the individual install procedure for each component.

### Step 1 - Copy data set COPYTAPE.JOB from tape to disk

The data set COPYTAPE.JOB (file 5) contains the JCL to unload all other existing data sets from tape to disk. To unload COPYTAPE.JOB, use the following sample JCL:

```

* $$ JOB JNM=LIBRCAT,CLASS=0,                                     +
* $$ DISP=D,LDEST=(*,UID),SYSID=1
* $$ LST CLASS=A,DISP=D
// JOB LIBRCAT
* *****
*       CATALOG COPYTAPE.JOB TO LIBRARY
* *****
// ASSGN SYS004,NNN                                             <----- tape address
// MTC REW,SYS004
// MTC FSF,SYS004,4
ASSGN SYSIPT,SYS004
// TLBL IJSYSIN,'COPYTAPE.JOB'
// EXEC LIBR,PARM='MSHP; ACC S=lib.sublib'                       <----- for catalog
/*
// MTC REW,SYS004
ASSGN SYSIPT,FEC
/*
/&
* $$ EOJ

```

Where:

*NNN* is the tape address

*lib.sublib* is the library and sublibrary of the catalog

### Step 2 - Modify COPYTAPE.JOB

Modify COPYTAPE.JOB to conform with your local naming conventions and set the disk space parameters before submitting this job:

### Step 3 - Submit COPYTAPE.JOB

Submit COPYTAPE.JOB to unload all other data sets from the tape to your disk.

## Installation Procedure

## Step 1: Scratch libraries SYSNPE and SYSNPR

(Job I051, Step 1100)

If you are upgrading from a previous version of the Entire System Server, scratch libraries SYSNPE and SYSNPR from your existing installation. Otherwise, skip this step.

## Step 2: Load the INPL File and the ERRN File

(Job I061, Steps 1100 and 1102)

1. Use the Natural system command INPL (which is described in the Natural System Command Reference documentation) in order to load the Entire System Server system objects (dataset *NPRmmm.INPL*).

This loads the following libraries:

Library	File	Contents
SYSNPR	FNAT	Installation aid (define DBIDs and define views to Natural Security)
SYSNPE	FNAT	Online tutorial
SYSNPEH1	FNAT	Help texts (English)
SYSNPEH2	FNAT	Help texts (German)

2. Load the Entire System Server error messages file (dataset *NPRmmm.ERRN*) using the ERRLODUS utility. The ERRLODUS utility is described in the Natural Utilities documentation.

## Step 3: Change the NATPARM Module

Add the ASIZE parameter and the following macro to the NATPARM module; then assemble and link it. For information on how to activate this NATPARM module for your Natural environment, refer to the Natural Installation Guide for Mainframes.

```
ASIZE=48
NTDB PROCESS,148
```

ASIZE specifies the size of the auxiliary buffer. The minimum value is 36K and the maximum value is 64K. A value of at least 48 is recommended.

**148** is the database ID with which the Entire System Server DDMs are cataloged. This does not affect the use of additional Entire System Server nodes with different node IDs, since these can be addressed via the *NODE* field in each Entire System Server view. See also the subsection Multiple Entire System Server Node Support in the Section Using the Entire System Server of the Entire System Server Administration Documentation.

**Note:** If you are upgrading from a previous version of Entire System Server, use the startup parameter *NODE* to assign different node IDs to different versions of Entire System Server running on the same system. You may, for instance, have an Entire System Server Version 3.1.2 running in production using node ID 148, and specify *NODE=168* in the startup parameter for Version 3.2.1 during installation and test.

Ensure the Natural session parameter *LE* is set to *OFF*, otherwise you may experience problems with the Online Tutorial.

## Step 4: Change Defaults

### Note:

If you are using Natural under CMS and wish to access an Entire System Server node under VSE/ESA, you must install the Entire System Server Interface as described in the section Installing the Entire System Server Interface in the Natural Installation Guide for Mainframes.

#### 1. Modules NATPNIP and ESYNODTB:

- If you want to change defaults in parameter module NATPNIP, edit source member NATPNIP.A.

Assemble it as described in the section Installing the Entire System Server Interface in the Natural Installation Guide for Mainframes.

NATPNIP contains the following parameters and defaults:

Parameter	Explanation
BUFLEN=8192	Length of <b>all</b> Adabas buffers.
NUMREQ=5	Number of parallel requests.
MAXCBL=3000	Complex FIND buffer length.
MAXEDL=3000	Editor session buffer length.
EXTUSER=INIT-USER	When running under CICS, which user ID should be fetched to be shipped to Entire System Server (*INIT-USER or *USER in Natural).

- If you want to use field NODE-NAME instead of NODE to address an Entire System Server via logical names, edit the source member ESYNODTB.A.

Assemble it as described in the section Installing the Entire System Server Interface in the Natural Installation Guide for Mainframes.

Module ESYNODTB contains mnemonic names for Entire System Server nodes. In the DDMs, there are fields called NODE and NODE-NAME. The field NODE directs a call directly to this Entire System Server. The field NODE-NAME is translated into a node number depending of the contents of this table. We recommend, that you use your system ID as name.

The macro NAMXNOD generates table entries. The last macro call must be used with parameter LAST=Y to set end-of-table identifier.

### Example:

```
NAMXNOD ID=198 ,NAME=PRODUCTION-1
NAMXNOD ID=199 ,NAME=PRODUCTION-2 ,LAST=Y
```

2. The module must also be linked to view processor XCOMV026 (in NPR $nnn$ .LIBR) with job LNKV026 (SMA Job I055, Step 1108).
3. If you have changed any defaults, relink Natural as described in the section Installing the Entire System Server Interface in the Natural Installation Guide for Mainframes.

## Step 5: Load the DATA File

(Job I200, Step 1100)

All Entire System Server views have been documented in Software AG's repository Predict. The NPR $nnn$ .DATA dataset on the installation tape contains these Predict view descriptions that can be loaded with the MIGRATE / COORDINATOR utility in Predict (Job I200, Step 1100). This is optional and applies to Predict Version 3.4.2 or above.

The MIGRATE / COORDINATOR utility is described in the Predict Reference documentation.

If, however, you have already loaded these descriptions from Version 1.2 of Entire System Server (or Natural Process), you must also logon to Predict's online system to check the database name of DBID **148**, to which the views are linked. Its name must be ENTIRE-SYSTEM-SERVER. If it is not, change the database name before running Job I200, Step 1100 to load the dataset NPR $nnn$ .DATA.

## Step 6: Natural Security Considerations

If Natural Security is installed, define libraries SYSNPE, SYSNPR, SYSNPEH1 and SYSNPEH2 to Natural Security. If these applications are to be people-protected, link those user IDs to them that require authorization. Define libraries without "XREF = YES" to load all objects.

- SYSNPE contains the online tutorial;
- the installation aid in library SYSNPR can be used to apply initial security definitions for the Entire System Server views.

## Step 7: Create / Modify Entire System Server JCS Procedure

```
* $$ JOB JNM=ESY21x,CLASS=6,DISP=D
* $$ LST CLASS=A,DISP=H,RBS=500
// JOB ESY221
// OPTION LOG,DUMP
* *****
* Entire System Server 2.2.x *
* *****
// LIBDEF *,SEARCH=(SAGLIB.ADA62x,SAGLIB.NPR22x)
// EXEC NPRINIT,SIZE=3072K
ADAVERS=5
ADA5SVC=45                <- INSTALLATION DEPENDENT
AUTOLOG=YES
FORCE=NO                  <- CAN ALSO BE 'YES'
SPOOL=POWR
LOCAL=NO                  <- CAN ALSO BE 'YES' IF ENTIRE NET-WORK
NABS=10
NODE=148                  <- INSTALLATION DEPENDENT
NONACT=30
NUMLIBS=300               <- # LIBRARIES TO BE ACCESSED
NUMTASK=5                 <- # WORKER TASKS TO BE STARTED
VTAMACB=ESYACB1          <- 'NONE' IF NET-OPER VIEW NOT USED
VSAMLABELS=YES           <- PROCESS VSAMLABELS (DEFAULT)
CONSTAB=1000              <- SIZE OF CONSOLE TABLE (VSE/ESA2.1)
/*
// EXEC LISTLOG
/*
/&
* $$ EOJ
```

As Entire System Server uses VSE Librarian services, do not use SIZE=parameters in the EXEC statement that calculates size (such as AUTO), as this may lead to errors when accessing library members. Please see the discussion of the LIBR program in the **IBM VSE/ESA System Control Statements Manual** for more details. 3072K is an arbitrary number; it may need to be higher or may be reduced depending on your system.

If CA-Dynam/D is installed, the LIBDEF SEARCH,PHASE= statement should include a library where the DYNACC API module is located. DYNACC.PHASE is usually found in the library CALIB1.DYN2PROD, however, it may be in a different location on your system.

See the section Startup Parameters of the Entire System Server Administration Documentation for a list of all available startup parameters.

## Step 8: Create the JCS for the Entire System Server Trace Program

### Example:

```
* $$ JOB JNM=jobname,CLASS=8,DISP=D,LDEST=(,id),PDEST=(,id)
* $$ LST CLASS=A,DISP=D
* $$ PUN CLASS=A,DISP=D
// JOB jobname comment
// LIBDEF PHASE,SEARCH=(NPRSYS.NPR311)
// OPTION LOG,LOGSRC,DUMP,NOSYSDUMP
// EXEC ESYTRACE,PARM='199 --DISPL --NTROUT --POLL'
// EXEC LISTLOG
/*
/&
* $$ EOJ
```

Create the JCS to execute the program ESYTRACE. It analyzes the TRACE data of Entire System Server, if the startup parameter "TRACE=YES" is defined.

In order to start ESYTRACE in Monitor mode, the parameter "199 --POLL" is specified, and the module NPRSTUB2 must be loaded into the SVA (see Step 9). The assignment of DLBL TRACIN/SYS001 is not needed here, because all data are read from the memory pool only. The analyzed and edited TRACE data will be written to SYSLST due to the --DISPL parameter. It may also optionally be written to a file identified by DLBL TRACOUT/SYS002, however, in the above example this is suppressed by the --NTROUT parameter.

This task must be stopped explicitly with the operator command

```
MSG xx,DATA=QUIT
```

due to the argument "--POLL".

For more information, see the subsection Creating Trace Data in the Entire System Server in the section Common Entire System Server Features of the Entire System Server Administration Documentation.

## Step 9 (Optional): Load NPRSTUB2 for ESYTRACE MONITOR-MODE

If you wish to use the MONITOR-MODE of the ESYTRACE program, you must first install the NPRSTUB2 module in the SVA. This may be done at IPL time, or before you bring up the Entire System Server session that will be monitored. **You cannot monitor a running ESY session if the NPRSTUB2 module has not been previously loaded.** The following is a sample job to load the NPRSTUB2 module in the SVA; it must be run in the BG partition:

```

* $$ JOB JNM=NPRSTUB2,CLASS=0,DISP=D,LDEST=(,USER)
* $$ LST DISP=D,CLASS=A
// JOB NPRSTUB2
// LIBDEF *,SEARCH=(SAGLIB.NPR311)
SET SDL
NPRSTUB2,SVA
/*
/&
* $$ EOJ

```

Alternatively, you may add the NPRSTUB2,SVA statement to the ADASIP job that runs at IPL.

The module is slightly over 2K in length and is loaded above the 16M line.

## Step 10: Activating the VTAM Interface

To enable the Entire System Server view NET-OPER to function correctly, the application name specified in the VTAMACB system parameter must be defined to VTAM and activated:

```

VTMAPPL VBUILD TYPE=APPL
VESYACB1 APPL AUTH=(SPO,CNM),EAS=1,ACBNAME=ESYACB1

```

This definition can also be found in the member VTAMNATP.B of the Entire System Server sublibrary.

## Step 11: Com-plete Considerations

1. If you intend to use the Entire System Server under Com-plete, you may have to adjust the setting of the ADAROLL and ADACALLS parameters, and also specify the NODE in the ADASVC5 parameters (see **Com-plete System Programmer's Documentation**).
2. In order to use the SEND-MESSAGE function to users of Com-plete, the Entire System Server must be treated as a batch job from Com-plete's point of view. The subsection Batch in the section Software Interfaces of the **Com-plete System Programmer's Documentation** applies here.

Note the following:

- The COMPBTCH module must be linked to the module XCOMV019 to create a new phase XCOMV019. See the sample job LNKMV019.OBJ to create a new phase XCOMV019.
- The following DD card must be added to the Entire System Server JCS:

```
// DLBL COMBTCH, 'NODEnnn.SVCsss'
```

where *nnn* is the Com-plete node number given by the (Com-plete) ACCESS-IDsysparm, and *sss* is the Adabas SVC number given by the ACCESS-SVC sysparm.

Entire System Server logs on to Com-plete with the name of its started task and sends the message(s).

### Note:

One Entire System Server can send to only one Com-plete.

## Step 12: E-Mail Client Requirements

SEND-EMAIL view requires Domain Naming Services to resolve the local host name and the E-Mail target host. In addition, the EZASMI interface used requires that a DEFINE NAME parameter be specified in the startup parameters for CSI's (and IBM's) TCP/IP stack.

For more information about E-Mail administration, see the subsection Run E-Mail Client in Common Entire System Server Features in the Entire System Server Administration Documentation.

## Step 13: Dataspace Requirements

The following information is required only if CA-Dynam/D is active.

To minimize VTOC resource conflict, Entire System Server will now use a dataspace for every VTOC view request. This may require updating to the VSIZE and SYSDEF statements.

For each active VTOC user, a minimum of 256KB per data space is required, which allows for approximately 1820 VTOC entries per disk volume. If this number is exceeded, then another 256KB is obtained. Use these figures to modify the VSIZE and SYSDEF statements as needed.

## Step 14: Additional Notes

1. An installation aid is contained in library SYSNPR. This installation aid can be used to change the DBIDs (node numbers) of Entire System Server views, and to define views to Natural Security (see also Step 6).
2. For sites running Software AG's data center products: for all users running as subtask in Entire System Server address space who logon to Adabas, ETID=<blank> must be set in the Natural Security profile. This also applies to standard users NOPMON, NOMMON, NCLMON, NOMARC, NOMREV, NOMPRT.
3. During initialization, after message ESYI0020 INITIALIZATION STARTED FOR FILEID TABLE has been issued, message 4228I may be issued against VSAM files defined in labels, with various reason texts. This behavior is normal, and is caused by a VSE Librarian test. These messages may be safely ignored.