



# NATURAL

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**Natural**  
Installation Guide  
Version 5.1.1 for Windows



This document applies to Natural Version 5.1.1 for Windows and to all subsequent releases. Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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# Installation Guide - Overview

This document covers the following topics:

- Installing Natural Version 5.1.1 for Windows
- Installing Natural Security Version 5.1.1

For information on how to use the INPL utility to load or scan Natural modules or DDMs from Software AG datasets (for example Natural INPL tapes) from Work File 1, refer to the Natural INPL Utility documentation.

Wherever necessary, platform-specific information is identified by the following terms:

**Mainframe** Refers to the operating systems OS/390, VSE/ESA, VM/CMS and BS2000/OSD, as well as all TP monitors supported by Natural under these operating systems.

**OpenVMS** Refers to the OpenVMS operating system.

**UNIX** Refers to all UNIX systems supported by Natural.

**Windows** Refers to the following operating systems:

**In a Natural development environment:**

- Microsoft Windows NT
- Microsoft Windows 2000

**In a Natural run-time environment:**

- Microsoft Windows 98
- Microsoft Windows ME
- Microsoft Windows NT
- Microsoft Windows 2000

**OS/400** Refers to the OS/400 operating system running on AS/400 and iSeries 400 machines. See the documentation provided on the Natural for OS/400 product CD-ROM.

# Installing Natural Version 5.1.1 for Windows

This document covers the following topics:

- General Installation Information
- Installing Natural
- Installation Procedure Overview
- Installing the XRef GUI Client
- Setting Up SYSPAUL Applications
- Setting Up the Entire System Server Interface

For information on how to install Natural Security, see *Installing Natural Security*.

For information on how to use the INPL utility to load or scan Natural modules or DDMs from Software AG datasets (for example Natural INPL tapes) from Work File 1, refer to the INPL Utility documentation.

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## General Installation Information

### About Natural Version 5.1.1 for Windows

Natural Version 5.1.1 for Windows is a software product that enables you to fully integrate your personal computer (PC) into the information processing environment of your organization.



Natural Version 5.1.1 for Windows is available as

- development edition for Windows NT/2000,
- runtime edition for Windows 98/ME/NT/2000.

Natural Version 5.1.1 for Windows (in the following referred to as "Natural for Windows") provides a complete application development environment. It can be used to develop efficient user-oriented Natural applications which are source-code compatible with Natural on a mainframe computer and other platforms, for example, UNIX or OpenVMS. In addition, it can also be used in a stand-alone PC environment.

Natural for Windows also permits the use of existing Natural mainframe applications on your PC, enabling the PC to be used as an application workstation.

### NaturalX

NaturalX is part of Natural for Windows and is automatically installed with the installation of Natural for Windows.

### Natural Web Interface

Natural Web Interface is part of Natural for Windows and is automatically installed with the installation of Natural for Windows.

During the default installation of Natural only the Natural Web Server Extensions for CGI interfaces will be installed. If isapi or nsapi Natural Web Server Extensions are needed, select Custom Installation and specify the Natural Web Server Extensions you prefer.

## Natural Runtime Version

If you have purchased the Natural runtime version, only a subset of the Natural functions can be performed that enable you to execute previously created Natural applications.

## Natural Security

Natural Security is an add-on product that can be installed after the Natural for Windows installation is complete.

For information on how to install Natural Security, see

- Installing Natural Security

## Installing Natural

This section describes how to install Natural under Windows 98/NT/2000.

- Installation Prerequisites
- Installation Procedure Overview
- Starting the Installation Setup Program
- Starting Natural

## Installation Prerequisites

Before installing Natural, ensure that your PC fulfills the following requirements.

### Administrator Status

The person performing the installation must have administrator status.

## Hardware

<b>Processor</b>	500 MHz INTEL Pentium 3 processor or higher.
<b>Hard Disk Space</b>	Approximately 150 MB (NTFS recommended).
<b>RAM</b>	128 MB or higher.
<b>Display</b>	SVGA graphics adaptor and SVGA monitor.
<b>Resolution</b>	800 x 600 or higher with 256 colors or higher. 16-bit true color mode is recommended.
<b>Mouse</b>	Windows compatible mouse.
<b>CD-ROM Drive</b>	A CD-ROM drive to install the software.
<b>Communication Board</b> *	Ethernet or Token Ring.

\* only required if you want to use Natural 5.1.1 for Windows 98/ME/NT/2000 in a multi-user network environment.

## Software

### Operating System

In a Natural development environment:

- Microsoft Windows NT 4.0 SP6 or higher
- Windows 2000 Professional SP1 or higher
- Microsoft Windows 2000 Server, Advanced Server

In a Natural runtime environment:

- Microsoft Windows NT 4.0 SP6 or higher
- Windows 2000 Professional SP1 or higher
- Microsoft Windows 2000 Server, Advanced Server
- Microsoft Windows 98/ME

## Installation Procedure Overview

A setup program is provided for installing Natural. This program decompresses the files contained on the installation CD-ROM, copies them to hard disk, and creates a Natural program folder (optionally). The setup program guides you step by step through the installation procedure with explanatory text available with all dialog boxes displayed.

The installation procedure can be used for a first-time installation of Natural as well as for subsequent installations (in which case previous configuration information is used by the setup program).

The actual installation process consists of two phases:

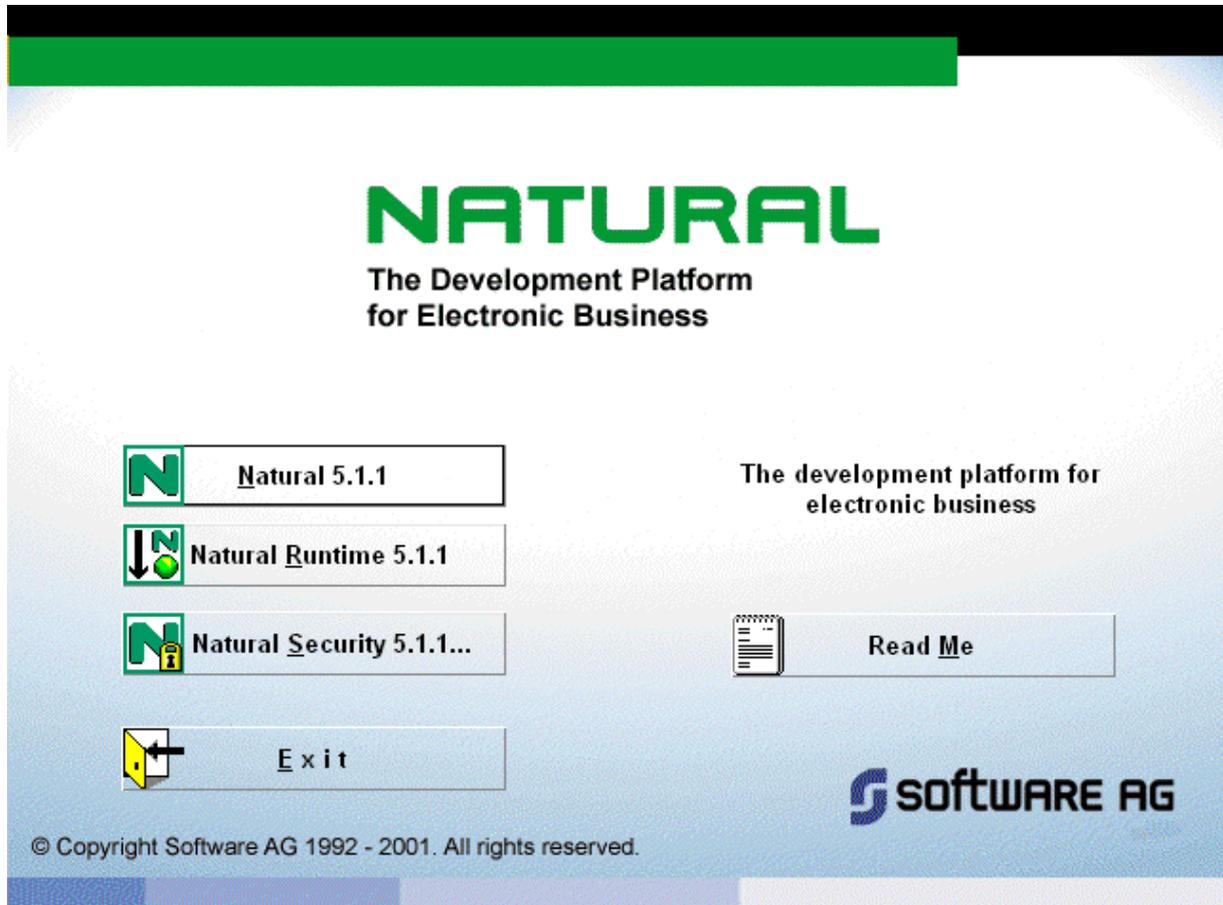
1. The configuration phase: you are prompted to enter certain installation values; other values are automatically included by the setup program. The installation parameters are displayed for confirmation prior to the actual installation. During this phase you may cancel the setup procedure at any time or step back to previous dialogs. No changes to your system will occur during this phase.
2. The installation phase: the setup program installs Natural according to the values entered during the configuration phase.

**Note:**

You must be an administrator to install Natural on Windows NT Version 4.0 and Windows 2000.

## Starting the Installation Setup Program

In the initial installation screen select the desired installation method. See screenshot below.



Natural Security can not be uninstalled without removing the whole Natural environment where Natural Security has been installed.

The following topics are covered in this section:

- Installation Steps for all Setup Types
- Setup-Specific Installation Steps
  - Standard Setup
  - Development Client for Single Point of Development (SPoD) Setup
  - Custom Setup
- Runtime Installation

Before you start the Natural setup program, ensure that your system meets the requirements outlined in section Installation Prerequisites.

**Note:**

If this is not a first-time installation of Natural, it is recommended that you back-up your current Natural files. In addition, it is recommended that you also save any previously modified files.

## Installation Steps for all Setup Types

### ▶ To run the setup program

1. Close all active Windows applications
2. From the Start menu, choose Run.
3. In the command line, enter:

**x:\Setup.exe**

where "x" is the letter of the disk drive containing the Natural CD-ROM.

**Note:**

If the operating system AUTOSTART feature is enabled, the Natural set-up program will automatically be started at the time the Natural CD-ROM is loaded.

The setup program will then be started. You will be prompted for various installation information as described in the Installation Procedure Overview.

### ▶ Step 1: License Agreement

After the initial welcoming screen the license agreement screen is shown. To proceed with the installation, you have to accept the terms in the license agreement by checking the first box.

Click "Next" to proceed.

### ▶ Step 2: Enter Customer Information

In this screen enter your customer information. The first line should contain your user name, the second line the name of your organization.

Select the path where the license file can be found. By default, your floppy disk drive (A:\) will be displayed. You can alter the path by clicking on the "Browse" button.

Select the \*.xml File that contains your license key.

**Note:**

If you have not received your license file yet, please contact your local Software AG Customer Support.

Decide whether you want Natural to be installed for anyone using the system on which you are currently installing Natural (default setting) or just for yourself.

Click "Next" to proceed.

### ▶ Step 3: Migration of the Natural Parameter Modules - optional

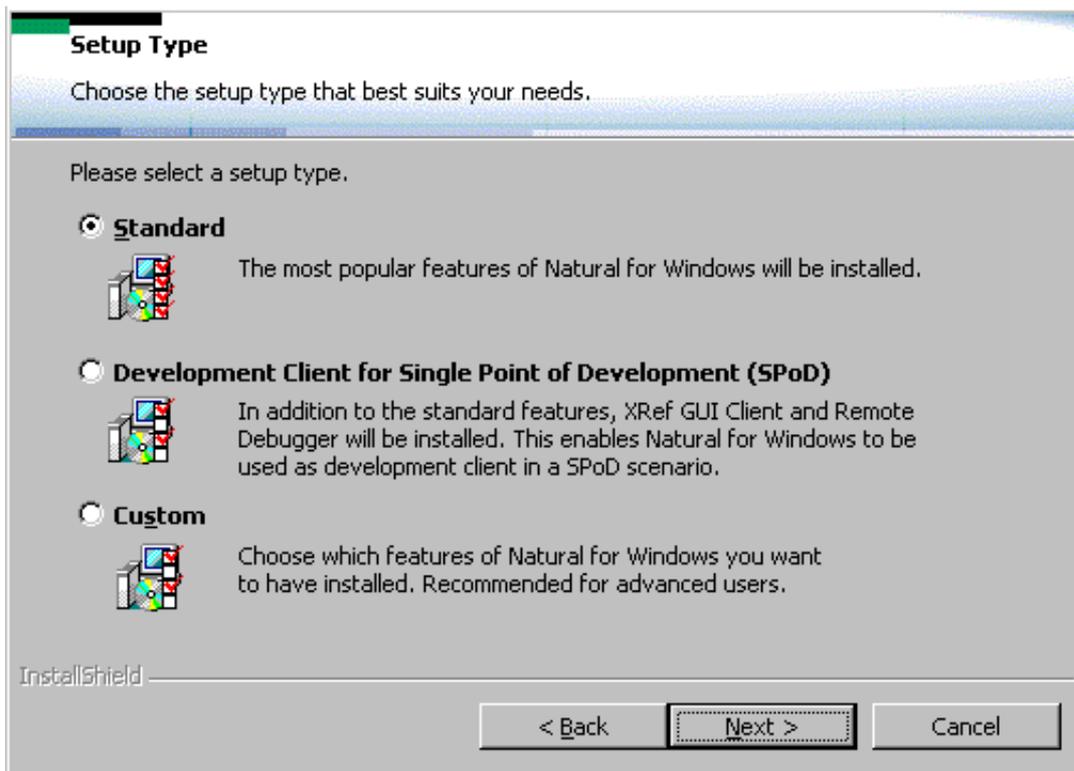
In this screen, you can specify if you want to migrate your parameter modules to Natural Version 5.1.1. This screen only appears if the installation routine detects an older version of Natural on your system.

You can specify no migration or choose a Natural version to migrate from (e.g. Natural for Windows Version 4.1.2). If you migrate your parameter modules to Natural Version 5.1.1, the FNAT, FUSER and Steplib settings of the parameter modules are transferred and changed where necessary.

Click "Next" to proceed.

### ▶ Step 4: Select the Setup Type

In this screen, you can select the setup type that best suits your needs. You can choose from "Standard", "Development Client for Single Point of Development (SPoD)" and "Custom".



If you select "Standard", the following features will be installed:

- Natural Environment
- Natural Reporter
- Help Compiler
- Samples
- Example Libraries
- NaturalX

Proceed with Standard Setup.

If you select "Development Client for Single Point of Development (SPoD)", all standard features and the following will be installed:

- XRef GUI Client
- Natural Remote Debugger

Proceed with Development Client for Single Point of Development Setup.

If you select "Custom", a new screen appears where you can choose which features you want to be installed. The standard features are preselected.

Proceed with Custom Setup.

## Setup-Specific Installation Steps

## Standard Setup

With this setup type the standard features are installed.

### ▶ Step 5: Select the Destination Folder

In this screen, you can select the destination folder where you want Natural to be installed.

The default path is C:\Program Files\Software AG\Natural.

You can change this path by clicking on the "Change" button.

Click "Next" to proceed.

### ▶ Step 6: Desktop Icons

In this screen, you can decide if you want desktop icons to be displayed or not.

Select "yes" if you wish to display the desktop icons or "no" if not.

Click "Next" to proceed.

### ▶ Step 7: Confirm the Installation

In this screen, you can view a summary of which features will be installed.

Confirm the installation by clicking on the "Install" button. The files are then copied to your system.

You can also review your choices by clicking the "Back" button. Select "Cancel" to exit the wizard.

### ▶ Step 8: End the Installation Process

After the files are copied to your system complete the installation process by clicking the "Finish" button in the last screen.

Natural 5.1.1 Standard Setup has been installed successfully.

## Development Client for Single Point of Development Setup

With this setup type, the standard features, the Natural Remote Debugger and the XRef GUI Client are installed.

### ▶ Step 5: Select the Destination Folder

In this screen, you can select the destination folder where you want Natural to be installed.

The default path is C:\Program Files\Software AG\Natural.

You can change this path by clicking on the "Change" button.

Click "Next" to proceed.

### ▶ Step 6: Enter Remote Debugger Port Value

In this screen, you can enter a value for the Natural Remote Debugger communication port.

Values between 0 and 9999 are valid. The default value is 2500.

Click "Next" to proceed.

### ▶ Step 7: Desktop Icons

In this screen, you can specify if you want desktop icons to be displayed or not.

Select "yes" if you wish to display the desktop icons or "no" if not.

Click "Next" to proceed.

### ▶ Step 8: Confirm the Installation

In this screen, you can view a summary of which features will be installed.

Confirm the installation by clicking on the "Install" button. The files are then copied to your system.

You can also review your choices by clicking the "Back" button. Select "Cancel" to exit the wizard.

### ▶ Step 9: End the Installation Process

After the files are copied to your system, complete the installation process by clicking the "Finish" button in the last screen.

Natural 5.1.1 Development Client for Single Point of Development Setup has been installed successfully.

## Custom Setup

With this setup type, you can customize which features or subfeatures you want to be installed. You will also be asked to confirm or change several values during the installation process.

### ▶ Step 5: Select the Features to be Installed and the Destination Folder

In this screen, you can select which features you want to be installed.

Features marked with an "X" icon  will not be installed.

Features with a hard drive icon  will be installed.

To install features marked with the "X" icon:

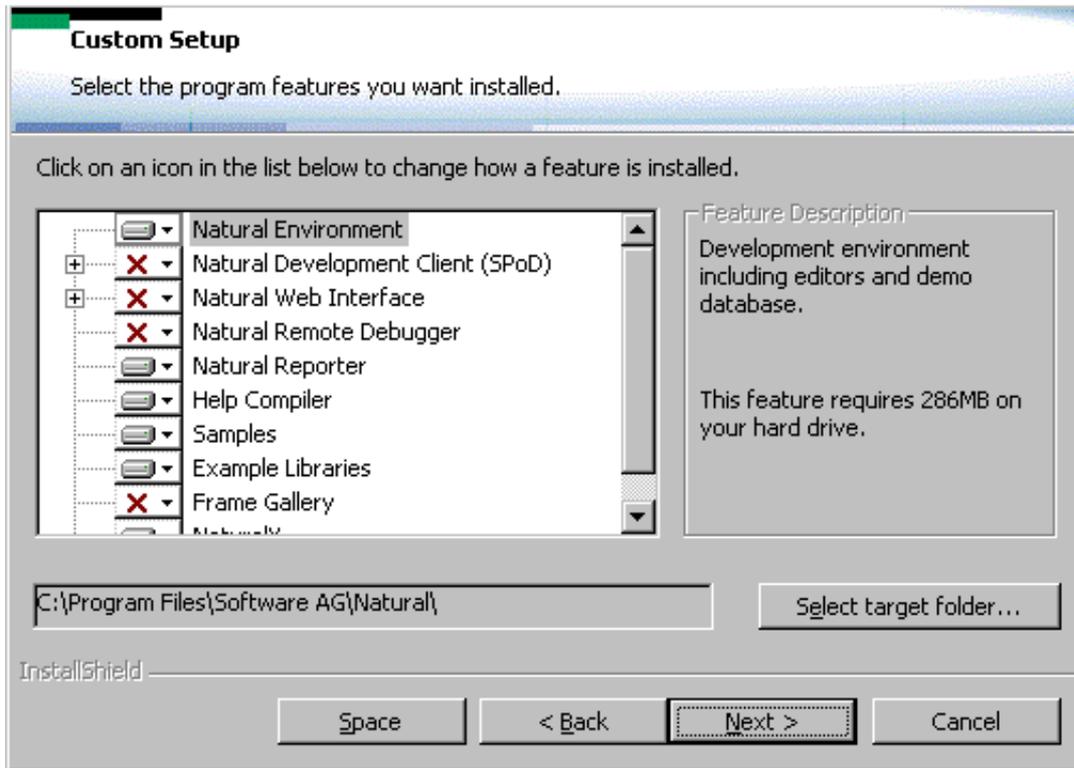
Click on the icon. A pulldown menu will appear.

Choose one of the options displayed in the menu to either:

- Install the feature on a local hard drive or
- Install the feature and all subfeatures on a local hard drive.

You can view a description of the selected feature on the right side of this screen which provides an overview of the features that will be installed.

For example, if you select "Natural Development Client (SPoD)" the description "Installs XRef GUI Client, Remote Debugger and 3270 Terminal Emulation" will be shown.

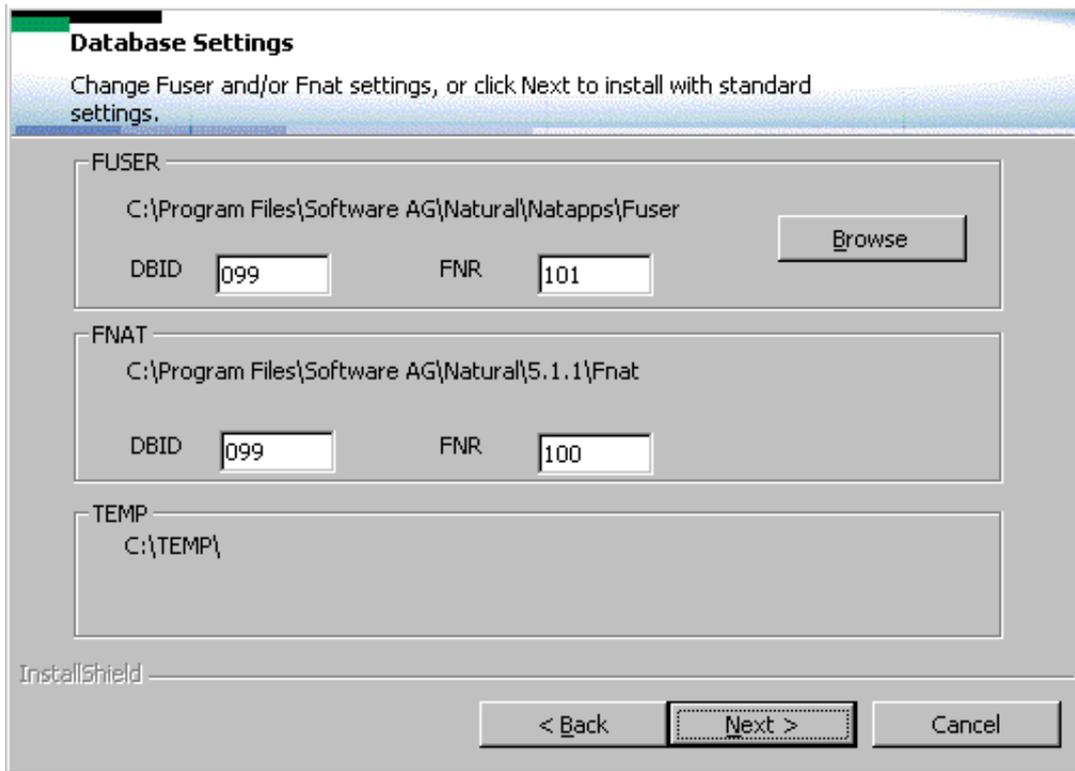


After you have chosen the desired features, select the target directory where Natural is to be installed.

Click "Next" to proceed.

### ▶ Step 6: Enter the Database Settings

In this screen, you can insert the DBID and FNR for FUSER and FNAT and select the path for the FUSER directory.



Click "Next" to proceed.

### ▶ **Step 7: Enter Remote Debugger Port Value - optional**

This screen only applies if you have chosen the "Natural Remote Debugger" or "Natural Development Client" feature.

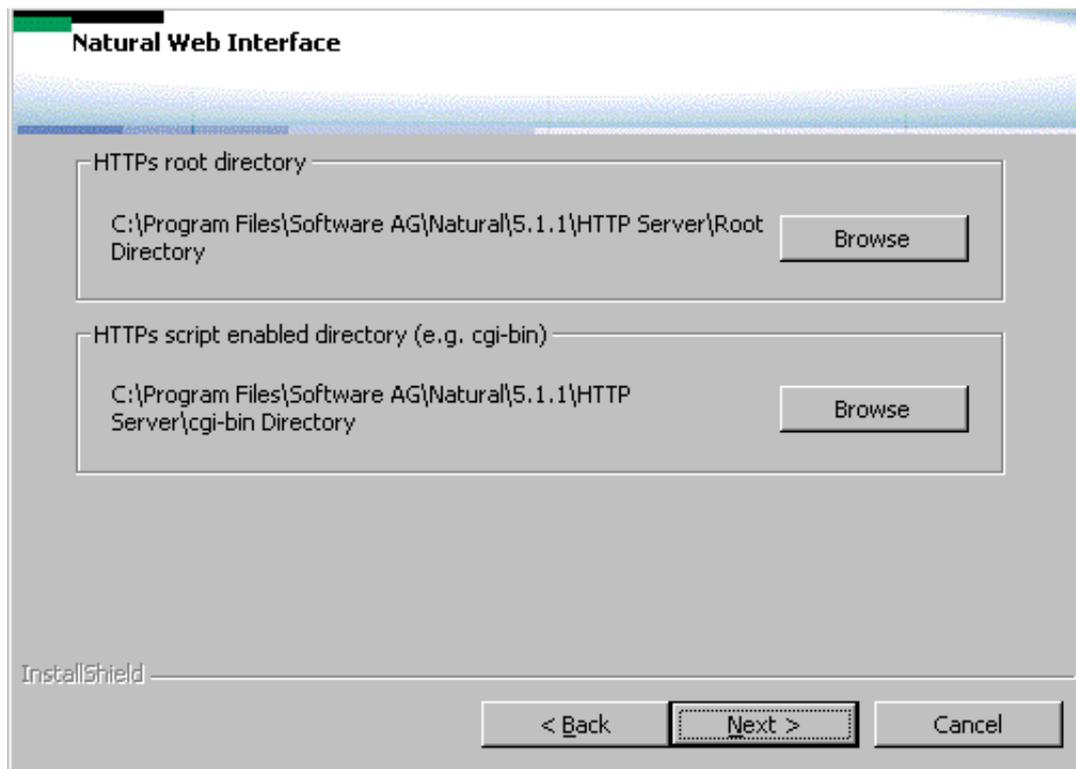
In this screen, you can enter a value for the Natural Remote Debugger communication port. Values between 0 and 9999 are valid. The default value is 2500.

Click "Next" to proceed.

### ▶ **Step 8: Enter Natural Web Interface Directories - optional**

This screen only applies if you have chosen the "Natural Web Interface" feature.

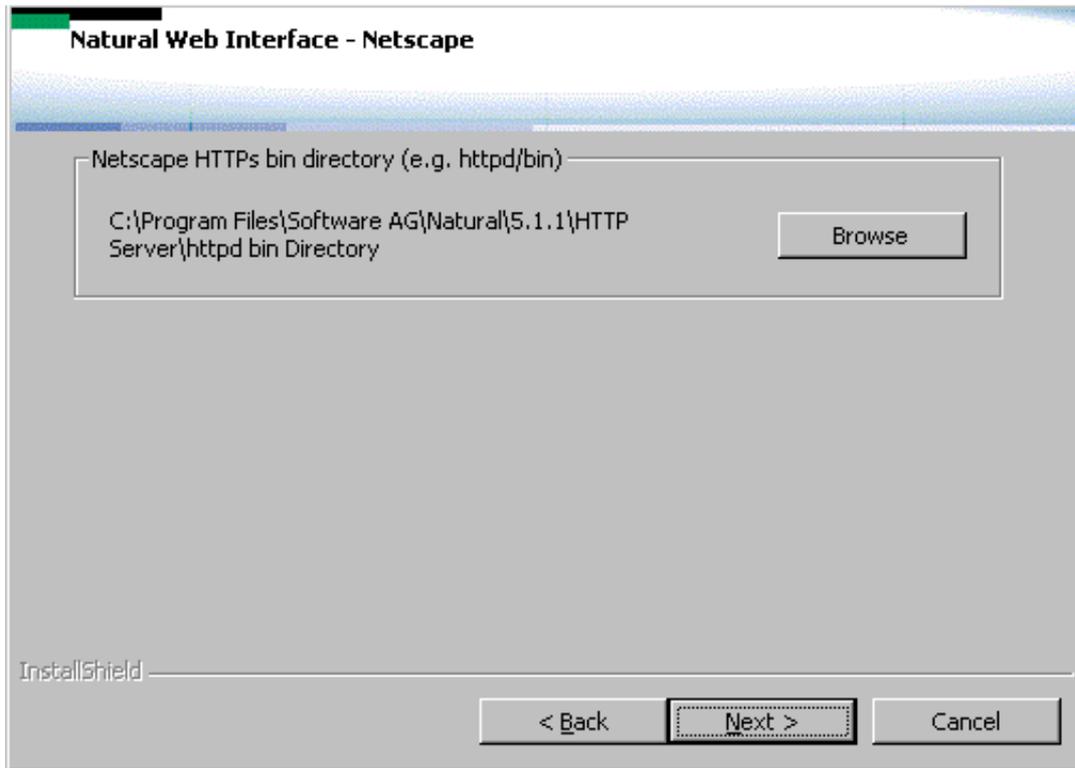
In this screen, you can verify the HTTP server root directory and the HTTP server script enabled directory for the Natural Web Interface. The paths shown in the screen below are the default paths. Click the "Browse" button to change the paths.



### ▶ **Step 9: Enter Natural Web Interface Netscape Directories - optional**

This screen only applies if you have chosen the "Natural Web Interface" feature.

In this screen, you can verify the Netscape HTTP server bin directory for the Natural Web Interface. The path shown in the screen below is the default path. Click the "Browse" button to change the path.



Click "Next" to proceed.

### ▶ **Step 10: Desktop Icons**

In this screen, you can specify if you want desktop icons to be displayed or not.

Select "yes" if you wish to display the desktop icons or "no" if not.

Click "Next" to proceed.

### ▶ **Step 11: Confirm the Installation**

In this screen, you can view a summary of which features will be installed.

Confirm the installation by clicking on the "Install" button. The files are then copied to your system.

You can also review your choices by clicking the "Back" button. Select "Cancel" to exit the wizard.

### ▶ **Step 12: End the Installation Process**

After the files are copied to your system, complete the installation process by clicking the "Finish" button in the last screen.

Natural 5.1.1 Custom Setup has been installed successfully.

## **Runtime Installation**

Natural Runtime and Natural are two entirely separate environments with Version 5.1.1.

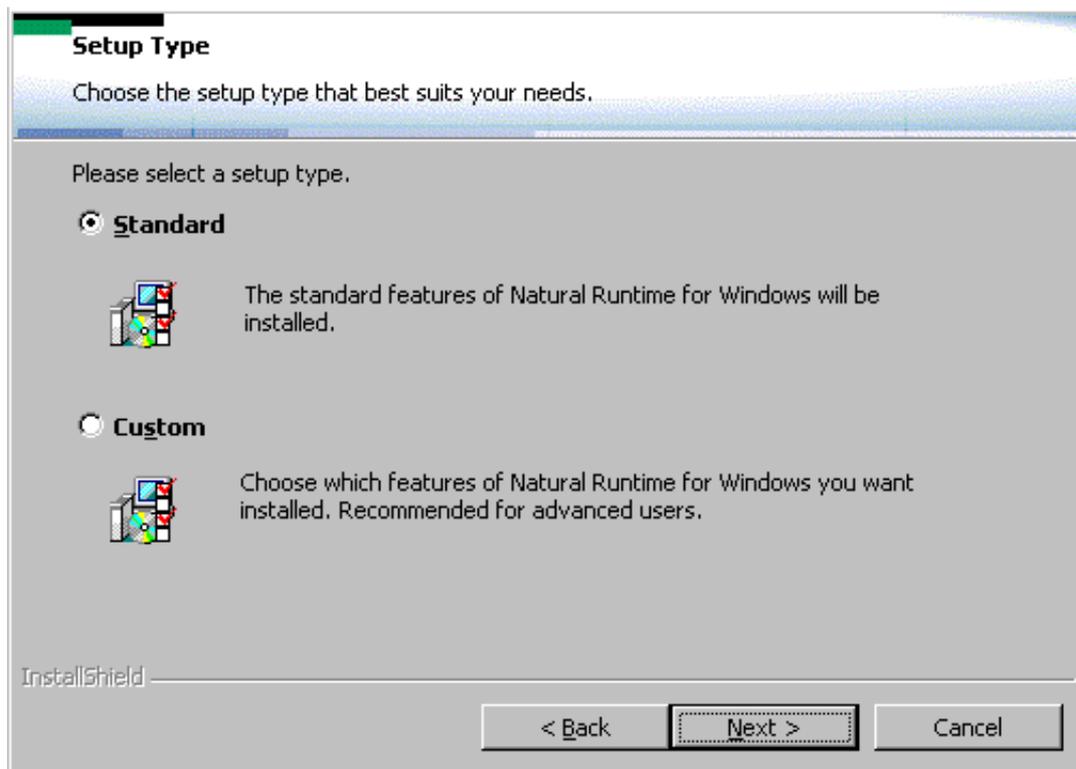
With Natural Runtime, only a subset of the Natural functions can be performed.

The installation procedures of the Natural Runtime 5.1.1 installation are almost identical with those of the Natural 5.1.1 installation. However there are some exceptions that are described in this section.

## Installation Steps

The steps 1, 2 and 3 of the Natural installation also apply to the Natural Runtime installation. Step 4 in the Natural Runtime installation differs from the Natural installation, since the "Development Client for Single Point of Development (SPoD)" setup option is not available in the Natural Runtime installation.

You can only select "Standard" or "Custom" setup. See screenshot below.

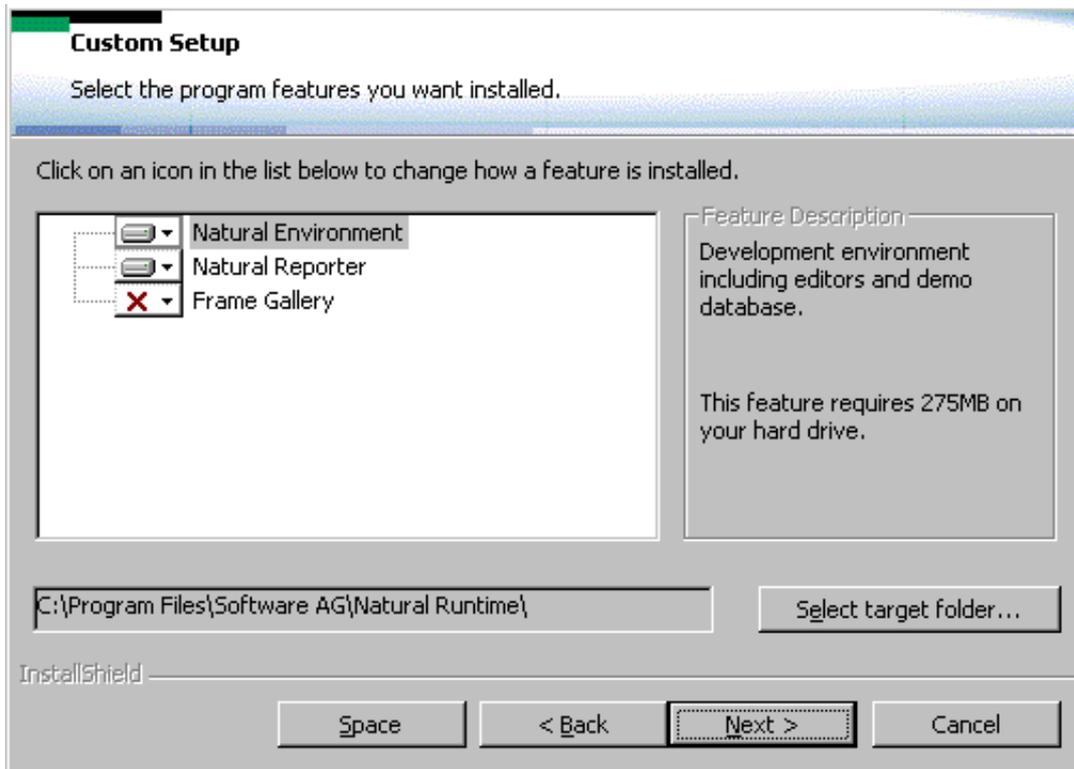


If you select "Standard", the following features will be installed:

- Natural Environment
- Natural Reporter

All further installation steps are identical to the Standard setup of the Natural installation. See Standard Setup for further information.

If you select "Custom", you can choose which features you want to be installed. The following screen is displayed:



The following installation steps are identical to the Custom setup of the Natural installation. The steps 7, 8 and 9 are omitted since the features connected to these steps are not available in the Natural Runtime installation. See Custom Setup for further information.

## Starting Natural

Once the Natural installation process is completed, you can start a Natural session.

Before using Natural, however, you may need to set up parameters and individual settings depending on your environment. If you wish to do so, see Operations Environment and Profile Parameters. For information on transferring Natural objects from another platform (for example, UNIX), see Transferring Natural Objects.

Natural can be started from the desktop using desktop icons, with the Start button or from the Windows Explorer.

### ▶ To start Natural from the desktop

Double click the Natural icon.



### ▶ To start Natural from the Start menu

Click the Start button, then select "Programs", then the Program Folder you selected during installation, then "Natural 5.1.1".

### ▶ To start Natural from the Explorer

1. Open the directory, for example:  
**C:\Program Files\Software AG\Natural\5.1.1\bin**
2. Then choose:

## Natural

**Note:**

Dynamic parameters cannot be issued if Natural is started from the Explorer.

## Installing the XRef GUI Client

The XRef GUI Client installation is part of the Natural for Windows installation. You can either install it with the Development Client for Single Point of Development Setup or with the Custom Setup.

If you choose "Development Client for Single Point of Development (SPoD)" in the Setup Type screen, the XRef GUI Client is installed automatically along with other features.

If you choose "Custom" in the Setup Type screen, the "Natural Server Development (SPoD)" feature or the "XRef GUI Client" subfeature have to be selected manually in the following screen. See Step 5 of the Custom Setup procedure for further details on how to select features.

**Note:**

You have to activate the XRef GUI Client plug-in using the Plug-In Manager before you can actually use it. See Invoking XRef GUI Client for further information.

## Setting Up SYSPAUL Applications

This section describes the setup procedure which can be used to install SYSPAUL applications. The following topics are included:

- Starting the Setup Procedure
- Selecting the Required Natural Environment
- Installation Log

When you start the setup procedure, an initial welcome screen informs you of the name of the application to be installed, of the required Natural version, and whether the application requires additional databases.

### Starting the Setup Procedure

#### To run the setup program

1. From the Start menu, choose Run.
2. In the command line, enter:  
**x:\disk1\Setup.exe**  
where "x" is the letter of the disk drive containing the CD-ROM or the first disk of the application.

### Selecting the Required Natural Environment

After having displayed the initial welcome screen, the setup procedure lets you select the Natural environment in which your application is to run. The following options are provided in the sequence indicated:

1. Selection of an already installed Natural version.
2. Selection of an appropriate parameter file.
3. Assignment of Natural system files.
4. Preparation of Natural INPL.

#### Step 1: Natural Version Selection

After having scanned your hard disk for the installed Natural versions, the setup procedure displays a dialog box that lists in the Installed Versions list box all Natural versions found.

Select the version appropriate to the application to be installed and click the OK command button.

To exit the setup procedure, click the Cancel button; you will be asked for confirmation.

If there is no Natural version installed with which your application can be run, the setup procedure terminates.

## ▶ Step 2: Parameter File Selection

After you have selected the appropriate Natural version, the setup procedure displays the Select Parameter Module dialog box which lets you select one of the parameter files currently available in your environment.

The selected parameter file provides the default settings for the database identification (DBID) and file number (FNR) of the system files to be assigned in the following step.

**Note:**

The selected default settings for FNAT cannot be changed.

Select one of the listed parameter files and click the OK command button.

To exit the setup procedure, click the Cancel button; you will be asked for confirmation.

## ▶ Step 3: System File Assignment

After you have selected an appropriate parameter file, the setup procedure displays the System File Assignment dialog box, which lets you modify the values of your system files FUSER, FSEC and FDIC.

**Note:**

FSEC must be empty, if Natural Security is not to be installed.

Since the FNAT system file cannot be modified, you have to select another parameter file if you want to use a different FNAT file. For this purpose, click the Back button to return to the Select Parameter Module box.

For all other system files, you can modify the database identification (DBID) and file number (FNR), select a database type, and specify the appropriate path name for databases of type System File.

**Note:**

You must specify existing path names and you cannot change the path and type of existing DBIDs and FNRs.

Make the necessary modifications and click the OK command button. To exit the setup procedure, click the Cancel button; you will be asked for confirmation.

## ▶ Step 4: Preparing for Natural INPL / LOAD

After you have selected your Natural environment, the Natural files are copied to disk. A bar showing percentage completion appears while copying/decompressing files.

Once the files have been copied, Natural is started and an INPL/LOAD is performed.

## Installation Log

If you should encounter any problem during the installation procedure, consult the log file INPLAPP.LOG, which is written to your Natural installation root directory.

## Setting Up the Entire System Server Interface

The Entire System Server Interface (ESX) is required if the product Entire System Server (ESY) is to be used. The Entire System Server Interface is part of Natural Version 5.1.1 and no extra installation is needed.

Additionally, Natural Version 5.1.1 provides the libraries SYSNPE and SYSNPR.

SYSNPE is the Entire System Server online tutorial as startup help for Entire System Server users. For more information about Entire System Server, see Entire System Server Overview.

The library SYSNPR contains the utility CHANGEDB which is used to change the database ID of the Entire System Server DDMs.

This section covers the following topics:

- Prerequisites
- Activation

## Prerequisites

The Entire System Server Interface provides access to Entire System Server on OS/390, VSE/ESA and BS2000/OSD via Entire Net-Work. For full support of the Entire System Server Interface, WCP 581 or above is required on the mainframe platforms.

## Activation

The Entire System Server Interface is not active if you use the standard Natural configuration settings. The value of the Entire System Server Interface database (Natural profile parameter ESXDB) is set to 0 by default. To use the Entire System Server Interface you need to run the Natural Configuration Utility and must set the value of the parameter ESXDB to 148. The parameter can be found in the Natural Configuration Utility > Natural Parameter Files > Product Configuration > Entire System Server.

ESXDB specifies the database ID used for the DDMs of Entire System Server. This DBID does not specify the target DBID of Entire System Server requests but tells Natural which DBID is used for the catalogued Entire System Server DDMs. The effective Entire System Server target DBID will be specified with the NODE field which is part of all Entire System Server DDMs.

Please change the value of ESXDB to 148 to run Natural with Entire System Server Interface support. All Entire System Server DDMs are catalogued with DBID 148.

After starting Natural again, you may access Entire System Server nodes running on the mainframes via Entire Net-Work.

Currently, the customization of Entire System Server Interface supports the modification of the Entire System Server DDMs only.

### How to use a different DBID for the Entire System Server DDMs:

Library SYSNPR contains the CHANGEDB program which is used to modify the database ID of all Entire System Server DDMs. You will find all Entire System Server DDMs in the library SYSNPE.

The database ID entered as a new DBID value in the CHANGEDB program must also be specified as the value of the Entire System Server Interface database parameter (ESXDB) in the Natural Configuration Utility.

# Installing Natural Security Version 5.1

This section describes how to install Natural Security under Windows 98/ME/NT/2000. It covers the following topics:

- General Installation Information
  - Installation under Windows 98/ME/NT/2000
  - Natural Security in a Heterogeneous Environment
- 

## General Installation Information

It is recommended that you install Natural Security *after* having installed all other subproducts of Natural, as this makes defining the subproducts' system libraries to Natural Security easier.

Once Natural Security is installed, Natural on the assigned system file (FNAT) can only be accessed under the control of Natural Security. Natural Security cannot be removed once it has been installed. It is therefore recommended that you make a backup copy of your FNAT system file before you install Natural Security.

## Shared Natural Security System File FSEC

As of Natural Security Version 2.2, it is no longer necessary to create a new Natural Security system file (FSEC) for a new Natural Security version. This means that you do not need separate FSEC files for different Natural Security versions.

Instead you can keep an existing (Version 2.2 or above) FSEC file and share it between different Natural Security versions. This also means that you do not have to transfer or migrate your existing Natural Security data to another FSEC file.

If you use an FSEC file shared by different Natural Security versions, always use the highest of these versions for the maintenance of your Natural Security data in order to ensure the consistency of your data.

## Differences under Windows 98/ME

Under Windows 98 and Windows ME, the Administrator and Maintenance Services of Natural Security are not available. A runtime-only version of Natural Security will be installed. An FSEC Database must be available by remote access via Entire Net-Work. Note that in the installation procedure certain steps are not applicable under Windows 98/ME. These steps are marked accordingly.

## Installation under Windows 98/ME/NT/2000

### The Installation Package

The Natural Security installation package is available on CD-ROM only.

### Prerequisites

Before you begin to install Natural Security under Windows NT, ensure that your computer meets the hardware and software system requirements as indicated in the booklet accompanying the CD-ROM.

Also, ensure that the following software has been installed on your computer:

- Microsoft Windows 98/ME, Windows NT Version 4.0 SP6, or Windows 2000 Professional SP1, Microsoft Windows 2000 Server, Advanced Server
- Natural Version 5.1
- Adabas Version 3.1 (with Windows NT 4.0 SP6 and Windows 2000 Professional SP1, Microsoft Windows 2000 Server, Advanced Server). For Windows 98/ME, ensure that access to a remote FSEC is provided.
- Entire Net-Work Version 2.4.1 or higher must be installed (only required if FSEC is loaded remotely).

Also, make sure that the environment variables for the above products have been set correctly.

## Installation Procedure

### Step 1 - Load the Natural Security System File - FSEC

This step is not applicable under Windows 98/ME.

Under Windows NT/2000, this step must only be performed if you wish to use a new FSEC system file for Natural Security Version 5.1. If you wish to use an existing FSEC system file, omit this step.

This step creates an empty system file for Natural Security, as well as a log file to be used by the Natural Security function "Logging of Maintenance Functions" (see Logging of Maintenance Functions).

- Create a folder for the batch files which will be used to create the FSEC system file.
- Copy the following files from the Natural Security product CD, **WINDOWS\NSC\AdaUtils** to this folder:  
SYSNSC3.BAT  
SYSNSC3.FDT  
SYSNSC3.FDU  
SYSNSCL3.BAT  
SYSNSCL3.FDT  
SYSNSCL3.FDU
- Specify the system file assignments (DBID, FNR) for the system file FSEC in files SYSNSC3.FDU and SYSNSC3.BAT, and adjust the sizes in SYSNSC3.FDU if desired.  
Before executing ".BAT" files, make sure that your Adabas C/vnnn/BIN path is set in your search path.
- Adjust the sizes of your Adabas database according to the sizes in the .FDU file.
- Start Adabas and execute the file SYSNSC3.BAT.
- If you wish to use the function "Logging of Maintenance Functions", specify the file assignments (DBID, FNR) for the log file in files SYSNSCL3.FDU and SYSNSCL3.BAT, and adjust the sizes in SYSNSCL3.FDU if desired. Then execute the file SYSNSCL3.BAT.

### Step 2 - Adjust Natural Parameter Modules

Use the Natural Configuration Utility to adjust all Natural parameter modules.

- In **System Files**, select **NSC System File** and enter the DBID (database ID) and FNR (file number) of the FSEC loaded in Step 1, or the remote FSEC you wish to access.
- The Natural Security system file FSEC must reside on an Adabas database. In **Global Configuration File, DBMS Assignments**, enter the DBID of the FSEC, and select TYPE=ADA.

#### Note:

The Natural Security setup program will modify the NATPARM module you select for the necessary security entries (only that one module will be modified). If you omit this step, you may enter the FSEC specifications during the installation.

### Step 3 - Set up Natural Security

**Note:**

Before you perform this step, make sure that the database containing the FSEC file is active.

For Windows 98/ME, no entries to the FSEC will be made. It is not necessary to have access to the remote FSEC during the installation.

To run the setup program

1. Close all active Windows applications, except Adabas or Entire Net-work.
2. From the Start menu, choose Run.
3. In the command line, enter:

**x:\Setup.exe**

where "x" is the letter of the disk drive containing the Natural CD-ROM.

**Note:**

If the operating system AUTOSTART feature is enabled, the Setup program will automatically be started at the time the Natural CD-ROM is loaded.

The setup program will then be started. Follow the instructions displayed on screen.

You are recommended to install Natural Security in the same folder where Natural has been installed, as Natural Security is an add-on product and does not exist on its own. Please, note that the icon to start Natural will be replaced by the icon for Natural Security.

When the Setup program has verified that all components necessary for the installation are available, it will load the Natural Security modules. This process may take some time. Setup will display the status of the installation once complete.

The initial installation of Natural Security results in the creation of the following security profiles and relationships:

- A library security profile with library ID "**SYSSEC**". The library is people-protected ("People-protected" set to "Y" and "Terminal-protected" set to "N").
- A user security profile with user ID "**DBA**", user type "ADMINISTRATOR", and password set to "DBA".
- User "DBA" is linked to library "SYSSEC" (ordinary link, no special link).

If there is a previously installed version of Natural Security, these two profiles will not be modified by a subsequent installation nor will any objects or relationships already defined be affected.

### Step 4 - Change the Password of User "DBA"

This step is not applicable under Windows 98/ME.

Under Windows NT/2000, this step must only be performed if Version 5.1 is your first version of Natural Security; that is, if you have not used any previous version of Natural Security. Otherwise, omit this step.

Under Windows NT/2000, invoke Natural.

In the Natural Security logon dialog box, type in library ID "SYSSEC", user ID "DBA", password "DBA", and a new password, and press ENTER.

Type in the new password again and press ENTER to confirm the password change.

## Step 5 - Define Administrators

This step is not applicable under Windows 98/ME.

Under Windows NT/2000, this step must only be performed if Version 5.1 is your first version of Natural Security; that is, if you have not used any previous version of Natural Security. Otherwise, omit this step.

Create a user security profile for each person who is to be a Natural Security administrator; then link each Natural Security administrator to the library SYSSEC. The following is an *example* of how to do this.

- In the logon dialog box, type in library ID "SYSSEC", user ID "DBA" and the password as established in Step 4.
- The Natural Security Main Menu will be displayed. On this, enter code "M".
- A window will be displayed. In this window, mark object type "User" with a character or with the cursor.
- The User Maintenance selection list will be displayed. In the command line of the User Maintenance selection list, enter the command "ADD".
- A window will be displayed. Choose a user ID for your Natural Security administrator (for example, if the administrator's name were Arthur Dent, you may choose "AD" as his user ID; the following steps will take this as an example). In the window, enter user ID "AD" and user type "A".
- The Add User dialog box will be displayed. Enter the user name "Arthur Dent" and set Private Library to "N" (and press ENTER).
- Press PF3. User Arthur Dent is now defined to Natural Security under the user ID "AD".
- The User Maintenance selection list will be displayed again. In the "Co" column of the selection list, mark user "AD" with function code "LL".
- A window will be displayed. In the window, enter library ID "SYSSEC".
- The Link User To Libraries selection list will be displayed. In the "Co" column of the selection list, mark library SYSSEC with function code "LK". User Arthur Dent is now linked to library SYSSEC.
- In the command line, enter the direct command "LOGOFF". The Natural Security logon dialog box will be displayed.

Now you can log on to SYSSEC with user ID "AD" and password "AD". When you log on with the new user ID for the first time, you must change the password (by typing in a new password in addition to the user ID and password).

### Note:

Once you have successfully defined administrators, it may be advisable to delete user DBA to make sure that the user ID "DBA" cannot be used by unauthorized users to gain access to SYSSEC. To delete the user DBA, log on to SYSSEC with user ID "AD". Invoke the User Maintenance selection list as described above; on the list, mark user "DBA" with function code "DE". A window will be displayed, in which you enter the user ID "DBA". The user DBA is now deleted.

## Step 6 - Define System Libraries

This step is not applicable under Windows 98/ME.

Under Windows NT/2000, this step must only be performed if Version 5.1 is your first version of Natural Security; that is, if you have not used any previous version of Natural Security. Otherwise, omit this step.

Create security profiles for all system libraries of Natural and Natural subproducts installed at your site (as described in section Library Maintenance under Adding a new Library). Refer to the installation instructions for other Software AG products for the corresponding security definitions to be performed.

To automatically create security profiles for system libraries (that is, all libraries whose IDs begin with "SYS"), you may use the function "Definition of System Libraries". Log on to library "SYSSEC"; on the Natural Security Main Menu, select "Administrator Services"; on the Administrator Services Menu, select the function "Definition of System Libraries"; when you invoke the function, a list of the system libraries of Natural and all Natural subproducts installed at your site will be displayed. For each system library, a library-specific security profile is provided in which all the necessary components are already defined appropriately. On the list, you can either mark with "AD" individual libraries to which you wish their pre-defined profiles to be applied one by one, or you can choose to have the pre-defined profiles applied to all product system libraries simultaneously by marking the corresponding product with "AD".

### Note:

This step should **not** be performed for SYS libraries containing Natural utilities, as it is recommended that these utilities be protected as described in the section Protecting Natural Utilities.

If you use the function "Definition of System Libraries" in an initial installation, you have to set the Natural profile parameter MADIO to a value of at least "2000".

## Installation Verification

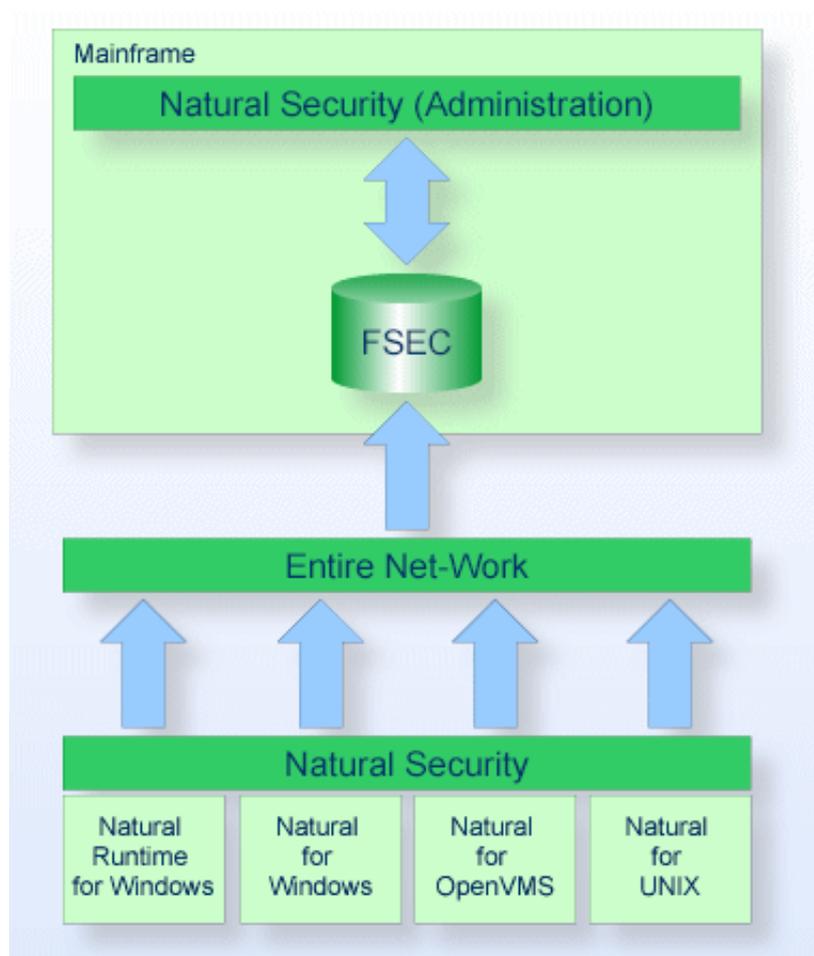
After Step 4 of the installation procedure has been completed successfully, Natural Security is operational. No further verification of its successful installation is required.

Your Natural subfolder now contains an icon for Natural Security in place of the Natural icon, and additional Readme files for Natural Security. You must start Natural Security in the same way you start Natural. Please ensure that you are using a parameter module which contains the entries for your FSEC to start Natural Security.

## Natural Security in a Heterogeneous Environment

With Natural Security Version 3.1 and above for mainframes, all enterprise security profile data can be stored and administrated centrally in a mainframe system file, which is accessible to a heterogeneous environment, thus simplifying and standardizing security maintenance on a company-wide basis. The security data in the mainframe Natural Security system file (FSEC) can be retrieved via remote database calls, managed by Entire Net-Work, from the following Natural Security installations:

- Natural Runtime for Windows
- Natural for OpenVMS
- Natural for UNIX
- Natural for Windows



From the non-mainframe Natural Security installations, you can log on to the Natural Security mainframe environment and retrieve security data.

However, in the non-mainframe Natural Security installations, the security data maintenance application SYSSEC is disabled, as are the following Natural Security interface subprograms for modifying security profiles:

- NSCLI
- NSCOB
- NSCMA
- NSCUS

If these interface subprograms are invoked, error NAT0828 is returned.

For further information on setting up Natural Security in a heterogeneous environment, see below.

## Setting Up Natural Security in a Heterogeneous Environment

### Configuring Entire Net-Work

Entire Net-Work's translation process is based on the format and length of each field specified in the search and format buffers that are passed with each Adabas call, along with special translation definition parameters. When a request goes through the network conversion routines, each individual field is translated according to the format and length defined for it in the associated search or format buffer.

To avoid the errors NAT0824 and NAT0825, add translation definitions for the following fields for the DBID and FNR of the mainframe system file FSEC with format "X":

- LW
- LC
- LQ
- LV
- LS

This prevents values being either translated or swapped.

For further information, see the section **Special Handling of Field Format "X"** in the section **Heterogeneous Platform Considerations** in the Entire Net-Work Installation and Operations for Mainframes documentation.

### Customizing the Natural I/O Conversion Table on Non-Mainframe Platforms

If you want to use special characters not contained in the default Natural character set (ISO08859), for example in passwords, you have to customize the Natural I/O conversion table in the following sections of the file NATCONV.INI:

```
ISO8859_1->EBCDIC  
EBCDIC->ISO8859_1
```

You can use the call CMCNV provided in the module SULCONV in the library SYSTRANS to check the settings.

For further information on the file NATCONV.INI, see the section Support of Language-Specific Characters in the **Natural Operations** documentation.

### **Setting Up Module Access**

When you are using Natural Security across platforms, security profiles held in the mainframe FSEC system file will usually apply to data held in libraries on another platform.

If you use the Allow/Disallow Modules definition, it is recommended that you use the "Module names held in the user buffer" fields of the library maintenance function Disallow/Allow Modules screen. For modules which are not on the mainframe FUSER, use the Free List.

For further information, see the section on disallowing/allowing modules in the Natural Security for Mainframes documentation.

### **Setting Up Natural DDM Security**

If you want to use a non-mainframe platform as your Natural development environment, you have to move any DDMs required by Natural modules to the library SYSTEM (FUSER). This is necessary because Natural Security runtime only checks DDMs located in the library SYSTEM.