Natural

Installation

Version 9.1.4

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ADABAS & NATURAL

This document applies to Natural Version 9.1.4 and 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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Preface

This documentation describes the installation of Natural on Windows. This also includes the installation of related products such as Natural Development Server and Natural Security.

The Natural installation consists of two major steps:

- In the first step, Natural makes use of the Software AG Installer (for further information see ***Installing Natural***), which you download from the Software AG Empower website at ***https://empower.softwareag.com/***.
- In a second step, when the installation is finalized, some configuration is required which is done using the SYSPCI utility. This configuration step is mandatory. If this step is not executed, the products may start, but do not function properly. See ***Completing the Installation*** for further information.

This documentation provides product-specific instructions for installing Natural. It is intended for use with *Using the Software AG Installer*. That guide explains how to prepare your machine to use the Software AG Installer, and how to use the Software AG Installer and Software AG Uninstaller to install and uninstall your products. The most up-to-date version of *Using the Software AG Installer* is always available at ***http://documentation.softwareag.com/*** (Empower login required).

This documentation is organized under the following headings:

What Can be Installed With Natural?	General information on Natural and the components that can be installed with Natural, on Natural Security, and on the required license files.
System Requirements	Supported operating system platforms and prerequisites.
Important Information	Important information that you should be aware of before you start the installation.
Installing Natural	How to install Natural (including Natural Runtime, Natural Development Server, Entire Systems Management and the Natural Web I/O Interface server) and Natural Security with the Software AG Installer.
Completing the Installation	How to proceed after the installation.
Uninstalling Natural	How to uninstall Natural.

For important last-minute information, see the readme file that is provided with Natural. You can find it in the Natural product documentation at ***http://documentation.softwareag.com/*** (Empower login required).

1 About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Software AG Documentation Website

You can find documentation on the Software AG Documentation website at **https://documentation.softwareag.com**.

Software AG Empower Product Support Website

If you do not yet have an account for Empower, send an email to empower@softwareag.com with your name, company, and company email address and request an account.

Once you have an account, you can open Support Incidents online via the eService section of Empower at **https://empower.softwareag.com/**.

You can find product information on the Software AG Empower Product Support website at **https://empower.softwareag.com**.

To submit feature/enhancement requests, get information about product availability, and download products, go to **Products**.

To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the **Knowledge Center**.

If you have any questions, you can find a local or toll-free number for your country in our Global Support Contact Directory at **https://empower.softwareag.com/public_directory.aspx** and give us a call.

Software AG Tech Community

You can find documentation and other technical information on the Software AG Tech Community website at **https://techcommunity.softwareag.com**. You can:

- Access product documentation, if you have Tech Community credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.
- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 What Can be Installed With Natural?

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Natural and Natural Runtime

You can install one or both of the following:

- **Natural**
  This is the full version of Natural. It includes a development environment and a runtime environment. It also includes the plug-ins which can be used in a Natural Single Point of Development (SPoD) environment with Natural Development Server (NDV).
- **Natural Runtime**
  This is the runtime-only version of Natural where only a subset of the Natural features is installed. The runtime environment enables you to execute previously created Natural applications.

Natural and/or Natural Runtime versions can be installed side-by-side. The environments of side-by-side installations are entirely separate. See also ***Side-by-Side Installations***.

Natural Development Server

Natural Development Server (NDV) enables remote development using Natural Single Point of Development (SPoD). Natural Development Server needs the Natural development or runtime environment as a prerequisite.

For further information (including any limitations that may apply for your installation), see the separate Natural Single Point of Development documentation and the separate Natural Development Server documentation. See also the section *Remote Development Using SPoD* in this Natural for Windows documentation.

Entire Systems Management

Entire Systems Management needs the Natural development or runtime environment as a prerequisite. It consists of the following client products:

- Mainframe Navigation
- Output Management GUI Client
- Entire Operations GUI Client

These client products require additional software on the server. See the documentation of these products for further information.

Natural Web I/O Interface

The Natural Web I/O Interface is used to execute Natural applications in a web browser and consists of a server and a client. The server part of the Natural Web I/O Interface needs the Natural development or runtime environment as a prerequisite. On Windows, the server is implemented as a service.

The Natural Web I/O Interface server supports two types of clients: the Natural Web I/O Interface client for displaying character-based applications in the web browser, and Natural for Ajax for displaying rich internet applications in the web browser. For more information, see the *Natural Web I/O Interface* documentation.

Natural Security

Natural Security enables you to protect your Natural environment against unauthorized access and improper use. Natural Security runs either as a full version or a runtime version, depending on the running Natural version. For further information, see the *Natural Security* documentation and especially the chapter *Natural Security On Different Platforms*.

License Files

During the installation of Natural, the Software AG Installer prompts you to enter the path to one or more valid license files. The license file is an XML file which is delivered by e-mail.

Separate license files are required for the following products:

- Natural
- Natural Runtime
- Natural Development Server
- Natural Security

Notes:

1. The Software AG Installer does not check all information in the license file. All license checks are done, however, when the product itself is started.
2. Natural for Tamino is automatically installed together with the Natural development environment. It also requires a separate license file. This license file must have the name *nxt83.xml*. If you want to use Natural for Tamino, you have to copy this license file manually to the *com-*

mon/conf directory of your installation directory. The Software AG Installer does not provide a panel for this purpose.

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Supported Operating System Platforms

Natural supports the following 64-bit operating system platforms, both for the Natural development environment (Natural) and for the Natural runtime environment (Natural Runtime):

- Microsoft Windows 10 Professional and Enterprise
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019

Home Editions of Microsoft Windows are not supported.

Notes:

1. We suggest that you install all of the recommended and important Microsoft Windows updates before you start the installation.

Compiler Used to Build Natural

Natural was built and tested with the following compiler:

- Microsoft Visual Studio 2019

Memory Space Requirements

The memory space required by Natural largely depends on the number of users.

The memory space per user is determined by the settings in the parameter file, especially by the values of profile parameters such as `USIZE` and `SSIZE`. By default, Natural is invoked with the parameter file `NATPARM`. However, you can also invoke Natural with an alternative parameter file (by specifying, for example, `PARM=myparm`).

In addition to the user-specific memory, memory is required for the buffer pool, which is shared among all users.

Disk Space Requirements

Approximately 2 GB of hard-disk space is required for Natural (including all Natural and Software AG Installer packages). This value depends on the installation hardware. On some platforms, it is higher.

Another 250 MB of hard-disk space is required for Natural Security.

Software Requirements for Using Related Natural Products

The following is required if you want to use related Natural products:

- Entire Access to access SQL databases.
- EntireX when using Natural RPC.
- Entire Net-Work to access remote Adabas database systems.
- Tamino when using Natural for Tamino.
- HTTP server, like Apache or IIS when using the Natural Web Interface.

Natural includes interfaces to:

- Adabas

It is recommended that you use the latest versions of the above listed Software AG products. You can view all available Software AG product versions and check the dates when their maintenance ends by visiting Software AG's Empower web site at ***https://empower.softwareag.com/***. Go to **Products > Product Version Availability**.

Software Requirements for Natural Security

Natural Security requires:

- Natural (same version and update package or fix as that of Natural Security).
- Adabas.
- Entire Net-Work. Only required if the `FSEC` system file is located in a remote database. See also *Using Natural Security on Multiple Platforms* in the *Natural Security* documentation.

  With the runtime version of Natural Security, the Administrator Services and Maintenance parts of Natural Security are not available. For the runtime version, it is recommended that an `FSEC` database is available by remote access via Entire Net-Work.

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Administrator Status

The person performing the installation must have administrator rights.

Prepare for Installation

Install the latest version (14.12.25810.0 or later) of the Microsoft Visual C++ Redistributable for Visual Studio 2017.

Note: If you have an older version installed and did not shut down all applications that use it, you will have to reboot your machine and restart the installation process, which will then install this package for you.

Required Windows Utilities

During the installation of Natural, the WMI command-line (WMIC) utility in your Windows environment must be available.

Installation Directory

During the installation, you are asked to specify an installation directory in which you want to install your Software AG products. In general, any directory can be used.

We recommend that you use a sub-directory of the *SoftwareAG* directory as the location for Natural and its add-on products, for example *SoftwareA\suiteyyyy*, whereby *yyyy* stands for the current year. This allows future side-by-side installations. An installation in *C:\Program Files* or *C:\Program Files (x86)* is not allowed.

You can only install Natural on a local hard drive on a Windows system. You cannot install Natural on a network-mounted drive or a SUBST drive.

Important: It is recommended that you do not install into a directory which is a subdirectory of a previous installation. Such a previous installation may have been created either with the Software AG Installer or by an installation tool that was used in the past.

Installation Considerations

If you install multiple products from a suite using one installation directory, Software AG guarantees that these products are compatible. But most Software AG products cannot be installed in a directory which already contains an older version of the same product (called "over-install"). New versions of a product must therefore be installed in another directory (called "side-by-side installation").

For a new Natural version, it is in general recommended to use the side-by-side installation as described in ***Side-by-Side Installations***.

In addition to the side-by-side installation, Natural offers procedures which allow replacing an installed Natural version and reusing the same installation directory. For a new major or minor version, the old version must be de-installed before the new version can be installed. A new Service Pack can be installed over the old version. The procedures are described in ***Replacing an Installed Natural Version***. Options are available which preserve most configuration settings.

Notes:

1. The first digit of the version indicates the major version, the second the minor version and the third the Service Pack (see *Glossary* > *Version*).
2. Replacing an installed Natural is only possible if the previous version has been installed with the Software AG Installer. Otherwise you must use the side-by-side installation.
3. If you are replacing an installed Natural and there are other products from previous suites installed in the same directory, it is up to you to ensure that the products are compatible.
4. If you are replacing an installed Natural version, there is no fallback if you need to reuse the previous version for any reason.

Side-by-Side Installations

If you are using a new directory for the installation rather than an existing installation directory, the installation is named "side-by-side installation". Side-by-side installation is the default procedure for Software AG products, and it is also the recommend procedure for installing a new Natural version.

A side-by-side installation enables you to install several different versions of Natural on the same machine. This may be necessary for testing a new Natural version before it is taken over into a production environment. The following should be considered:

- If the previous version was installed with the Software AG Installer in a sub-directory of the *SoftwareAG* directory, use another sub-directory as the location for Natural and its add-on products, for example *SoftwareAG\<new suite name>*.
- In the Installer page concerning the Natural configuration data, you may select "Copy configuration data from another installation directory" if you want to transfer configuration settings from a previous version. This is described in the section *Installing Natural*.
- If necessary, adjust the settings for the FUSER because the default system files (99,100 and 99,101) are adapted to the new installation directory.

You can also install the same Natural version more than once on the same machine.

Since Empower only offers the latest version of Natural and other products, it is recommended that you create and keep an image of installed Natural versions for possible later use. Installing from an image rather than downloading it from Empower will usually be faster, too. For further information, see *Using the Software AG Installer*.

There is one exception: the plug-ins and the terminal emulation which are installed together with the development environment can only be installed once on one machine. Therefore, they are installed into a common Natural directory outside of the above-mentioned installation directory. You can find them in *\Program Files\Common Files\Software AG\Natural* (32-bit machines) or *\Program Files (x86)\Common Files\Software AG\Natural* (64-bit machines). When you install a second instance of Natural, the installer checks whether the plug-ins and the terminal emulation in the common Natural directory are older than the ones to be installed. If they are older, they will be replaced with the new version.

While Natural is being installed, it is not possible for another user to install Natural on the same machine. A message with the following information will then be shown: the name of the user who is currently installing Natural, when this installation has been started, and into which directory Natural is currently being installed.

A side-by-side installation of the Natural development environment is only possible if Natural is currently not being used. This is to ensure that the plug-in and terminal emulation files in the common Natural directory can be replaced, if required. A message will be shown with the information that any active Natural sessions need to be closed first. In addition, it is not possible to do a side-by-side installation of Natural if the content of the common Natural directory is currently shown in the Windows Explorer.

Replacing an Installed Natural Version

New Major or Minor Version

With the following steps you can replace an installed Natural version with a new major or minor version and reuse the same installation directory:

1. Deinstall Natural (but do not delete the installation folder manually).
2. Install the new Natural version using the same installation directory as before.
3. In the Installer page concerning the Natural configuration data, select "Reuse configuration data from the current installation directory" which will preserve most configuration settings from the previous version as described in the section ***Installing Natural***.

New Service Pack

If you install a new Natural Service Pack and specify the same installation directory and select the same items as before, the Software AG Installer does not prompt again for license files, configuration data, and port numbers. The existing license files, configuration data, and port numbers will be used.

Special Considerations When Installing Fixes with the Update Manager

To be able to install Natural fixes with the Update Manager on Windows, you must start the Update Manager with the **Run As Administrator** option. Because the Update Manager will then start Natural there are some restrictions to take care of:

- Running Natural processes should be stopped before starting the installation of Natural fixes with the Update Manager.
- With the **Run As Administrator** option, it is not possible to use mapped drives (drive letters). Only the UNC notation can be used: `\\<server>\<sharedfolder>\...`
- Using drive letters to external drives in the path entries (e.g. NATURAL.INI or NATCONF.CFG) is not possible.
- Using user environment variables in the path entries (e.g. NATURAL.INI or NATCONF.CFG) is not possible. Only system environment variables can be used.

FNAT Usage

By default, a new `FNAT` is created in the installation directory during the installation of Natural (`<install-dir>`/*Natural/fnat*). This `FNAT` must always exist, and the global configuration file must have an entry which defines this `FNAT`.

The Natural add-ons (such as Predict or Natural Business Services) can only be installed into this `FNAT`.

Note: If you want to check or edit the settings in the global configuration file, use the Configuration Utility.

The Software AG Installer maintains an internal list of installed products, which must coincide with the add-ons that are currently installed in the `FNAT`. This is important for updates and uninstallations to work correctly.

For this reason:

- Do not install products into the `FNAT` without the use of the Software AG Installer.
- Do not replace the default `FNAT` (`<install-dir>`/*Natural/fnat*) with another `FNAT`.
- Make sure to complete the installation of an add-on by using the SYSPCI utility.

If an error occurs due to the above-mentioned scenarios, the only way to solve the problem is a new installation. In some situations, one of the following workarounds may help:

- Workaround 1: Complete the previous installation by using the SYSPCI utility.
- Workaround 2: Uninstall the product and then start the installation once more.

FUSER Usage

By default, a new `FUSER` is created in the installation directory during the installation. If you want to use an existing `FUSER` of Natural Version 6.3, you have to adjust the system file settings in the global configuration file after the installation. See also *Overview of Configuration File Parameters* in the *Configuration Utility* documentation.

Natural Security

You can install both Natural and Natural Security at the same time, or you can install Natural Security after having installed Natural.

To become operable, Natural Security requires a post-installation configuration and initialization step. This includes:

- setting or loading the Natural Security log file,
- setting or loading the Natural Security file `FSEC`,
- adjusting the Natural parameter files,
- adjusting the global configuration file.

See also ***Setting Up Your Products Using the SYSPCI Utility*** in the section *Completing the Installation*. This step is not necessary after an update installation.

The following restrictions apply if you install Natural Security together with Natural Runtime:

- It is only possible to use an existing Natural Security `FSEC` file.
- Once you have installed Natural Security, it is not possible to access the `SYSSEC` application, even if you are a Natural Security administrator.

Important: Once you have installed and configured Natural Security, 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 can only be removed if you uninstall the whole Natural environment in which Natural Security has been installed.

5 Installing Natural

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You can install Natural in one of the following two ways:

1. ***Using the GUI to Install Natural*** for an easy user-based installation.
2. Via a command line interface that is available for automated installation. It is described in ***Using Software Distribution Tools to Install Natural***.

Using the GUI to Install Natural

This installation documentation provides just a brief description on how to install Natural directly on the target machine using the Software AG Installer GUI. For detailed information on the Software AG Installer, see *Using the Software AG Installer*.

Important: Make sure all ports you specify on panels or in response to prompts are not already being used by other products on your machine. The installer cannot detect whether ports are in use when products are shut down, and the shutting down of products is a requirement for running the installer. For a list of default ports used by Software AG products, see "List of Used TCP/IP Ports" in **Empower** (go to **Products > Download Components > TCP/IP Ports**).

To install Natural

Software AG provides one or more license files for Natural; the installer requires them during a first-time installation. Copy the license files to the machine on which you want to install Natural. You can copy the license files to any temporary location. The installer will ask for the location of your license files and will then copy them to the *common/conf* directory of your installation directory.

1 Start the Software AG Installer GUI as described in *Using the Software AG Installer*.

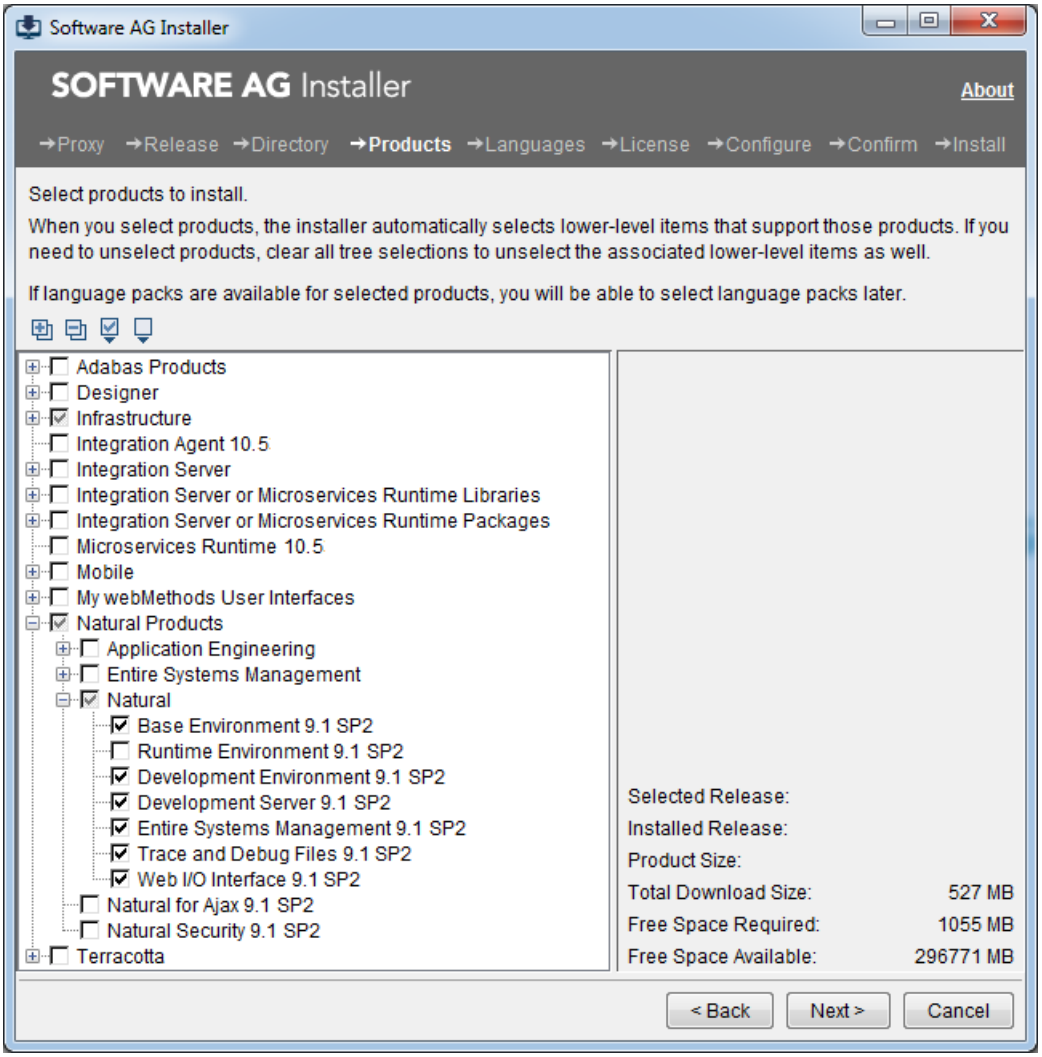
2 When the first page of the Software AG Installer GUI (the so-called Welcome panel) is shown, choose the **Next** button repeatedly (and specify all required information on the shown panels as described in *Using the Software AG Installer*) until the panel containing the product selection tree appears. This tree lists the products you have licensed and which can be installed on the operating system of the machine on which you are installing.

3 To install Natural with all of its product components, expand the **Natural Products** node and select **Natural**.

Or:

Expand **Natural Products > Natural** and select the product components that you want to install.

If you select a single Natural product component, the installer automatically selects any additional components which are also required.



Note: Products or product versions which are already installed in the selected installation directory are shown as disabled.

The following product components are available:

- **Base Environment**
  Installs the base environment and the local runtime environment for Natural Runtime, Natural and Natural Development Server.
- **Runtime Environment**
  You will be prompted to provide the license file later during the installation (first-time installation only).

  Note: **Runtime Environment** or **Development Environment** must be selected.

- **Development Environment**
  Installs the local development environment for Natural. This also includes the Natural Studio plug-ins for remote development using Natural Single Point of Development (SPoD). You can install this if you have a license file for Natural.

  You will be prompted to provide the license file later during the installation (first-time installation only).

  Note: **Runtime Environment** or **Development Environment** must be selected.

- **Development Server**
  Installs Natural Development Server (NDV) which enables remote development using Natural Single Point of Development (SPoD). This component requires an additional license file. You will be prompted to provide the license file later during the installation (first-time installation only).
- **Entire Systems Management**
  Installs the following clients:
  - Mainframe Navigation
  - Output Management GUI Client
  - Entire Operations GUI Client
- **Trace and Debug Files**
  Installs the Natural binaries for tracing and debugging.
- **Web I/O Interface**
  Installs the server part of the Natural Web I/O Interface. This enables you to use a browser as the I/O device for Natural applications.

4 If you want to install Natural Security, select **Natural Products > Natural Security 9.1 SP***n* in the product selection tree. Natural Security can only be installed together with Natural (either with the development environment or the runtime environment) or after the Natural installation is complete.

  Note: If user authentication via an LDAP server is to be used, it is required that the SSX security libraries (**Infrastructure > Libraries > Security Libraries**) are installed as part of the Natural Security installation procedure. By default, if you select Natural Security in the installation tree, the SSX security libraries are automatically selected also. Refer to *Authentication Options* in the section *Administrator Services* of the *Natural Security* documentation for further details.

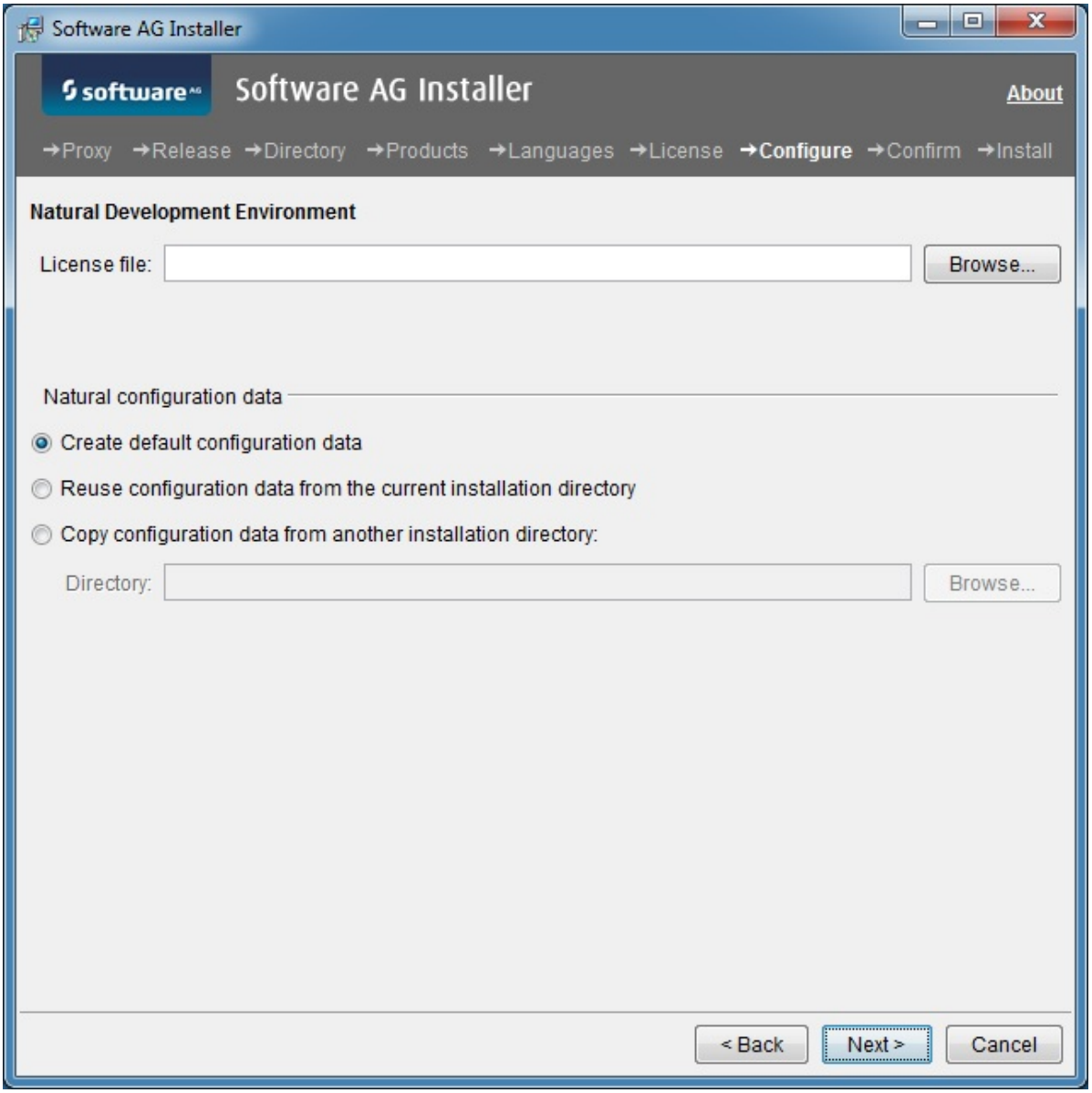
5 Choose the **Next** button.

6 Read the license agreement, select the check box to agree to the terms of the license agreement, and choose the **Next** button.

7 First-time installation only.

Enter the full path to the Natural license file or to the Natural Runtime license file (or use the **Browse** button to select it from a dialog box).

For example, the following is shown when you install the full version of Natural.



It is only possible to reuse or copy configuration data from a Natural installation which has been installed with the Software AG Installer.

Create default configuration data

Default. All required configuration files are created. These files contain default values.

Reuse configuration data from the current installation directory
This option is helpful, if you want to reuse the configuration files from a previous uninstallation in the same directory.

Copy configuration data from another installation directory
This option is helpful if you have side-by-side installations. In this case, you can copy the configuration files from an existing Natural installation directory into the current directory. The existing Natural installation remains unchanged. Enter the full path to the existing root directory (or use the **Browse** button to select the root directory from a dialog box). At least the *NATURAL.INI* file is expected in this case.

The following configuration files are reused or copied:

`<install-dir>`/*Natural/etc/NATURAL.INI* [1]
`<install-dir>`/*Natural/etc/NATCONV.INI*
`<install-dir>`/*Natural/etc/NATCONF.CFG* [2]
`<install-dir>`/*Natural/prof/* [3]
All Natural text members INST-`<productcode>` within the library SYSPCI

Notes:

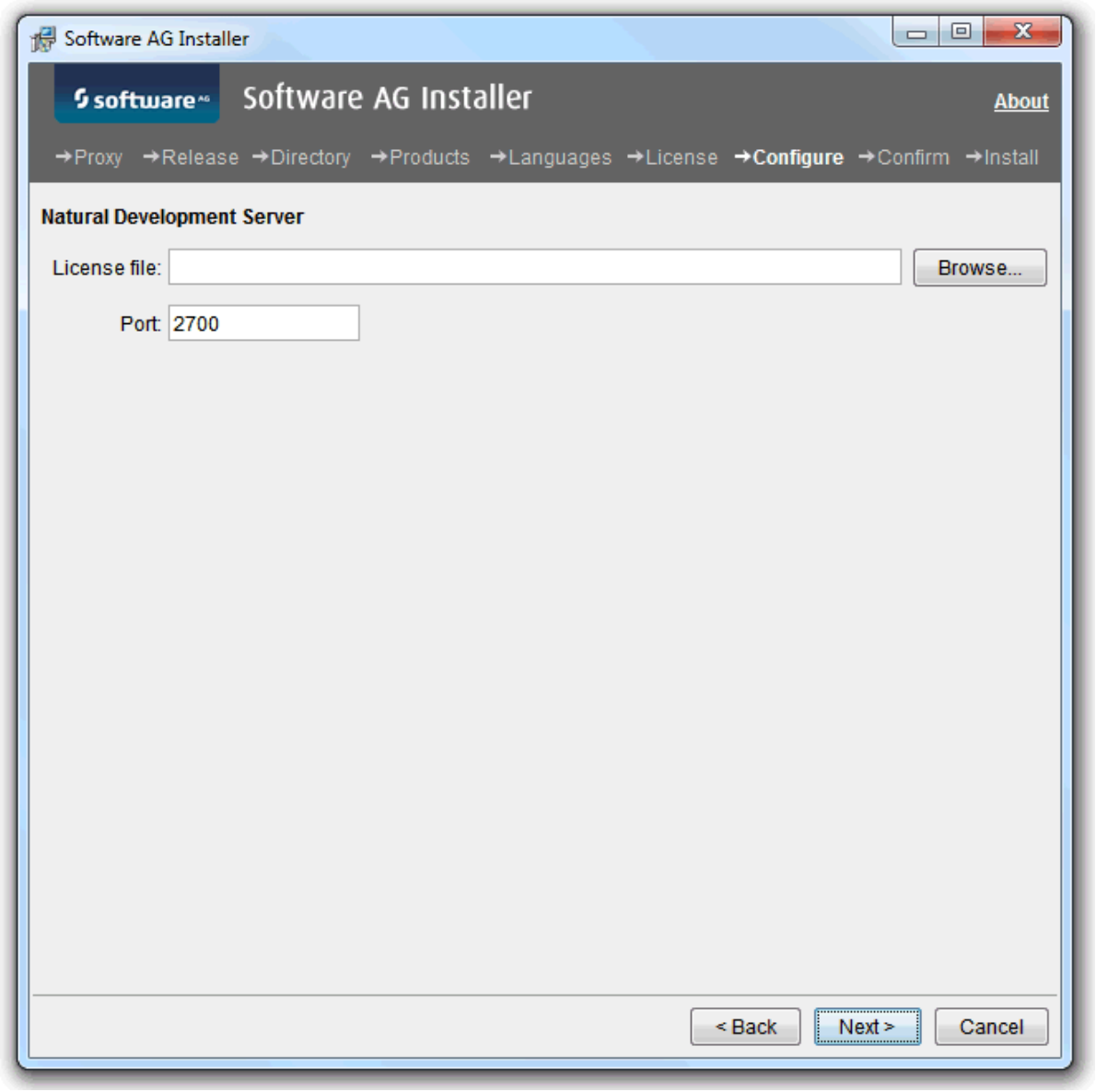
[1] A new default buffer pool `NATBP` is created, and the buffer pool parameter `READONLY` is set to `NO`. Other buffer pool parameters are kept.

[2] The paths of the default system files (99,100 and 99,101) are adapted to the current installation directory.

[3] All files except *NDVSERVER.PRU*.

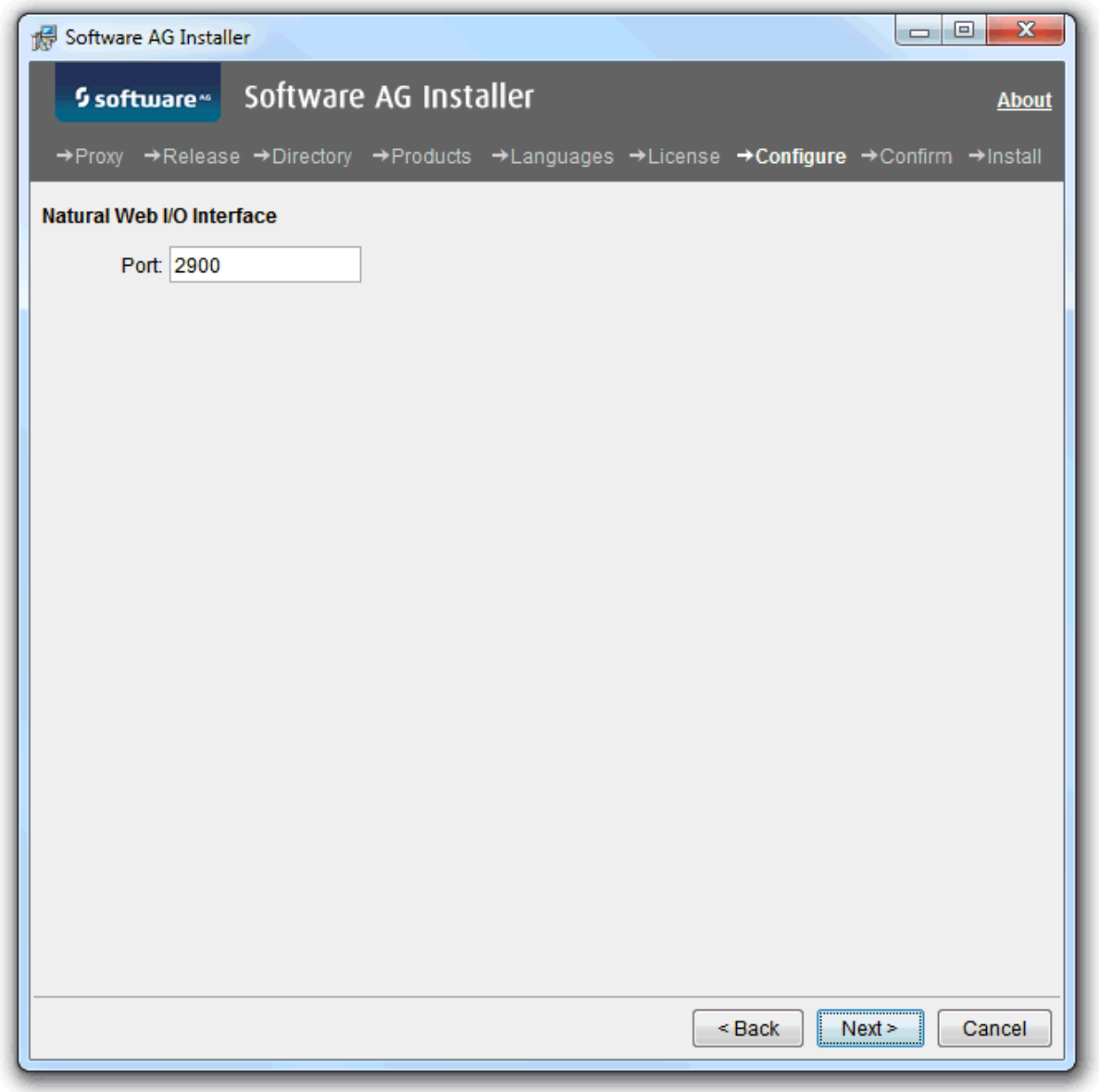
8 Choose the **Next** button.

9 First-time installation only: When **Development Server** was selected in the product selection tree, enter the full path to the Natural Development Server license file (or use the **Browse** button to select it from a dialog box). You can enter a different value for the Natural Development Server port. Values between 1023 and 65536 are valid. The default value is 2700. If this port is already used, the number of the next free port will be shown.



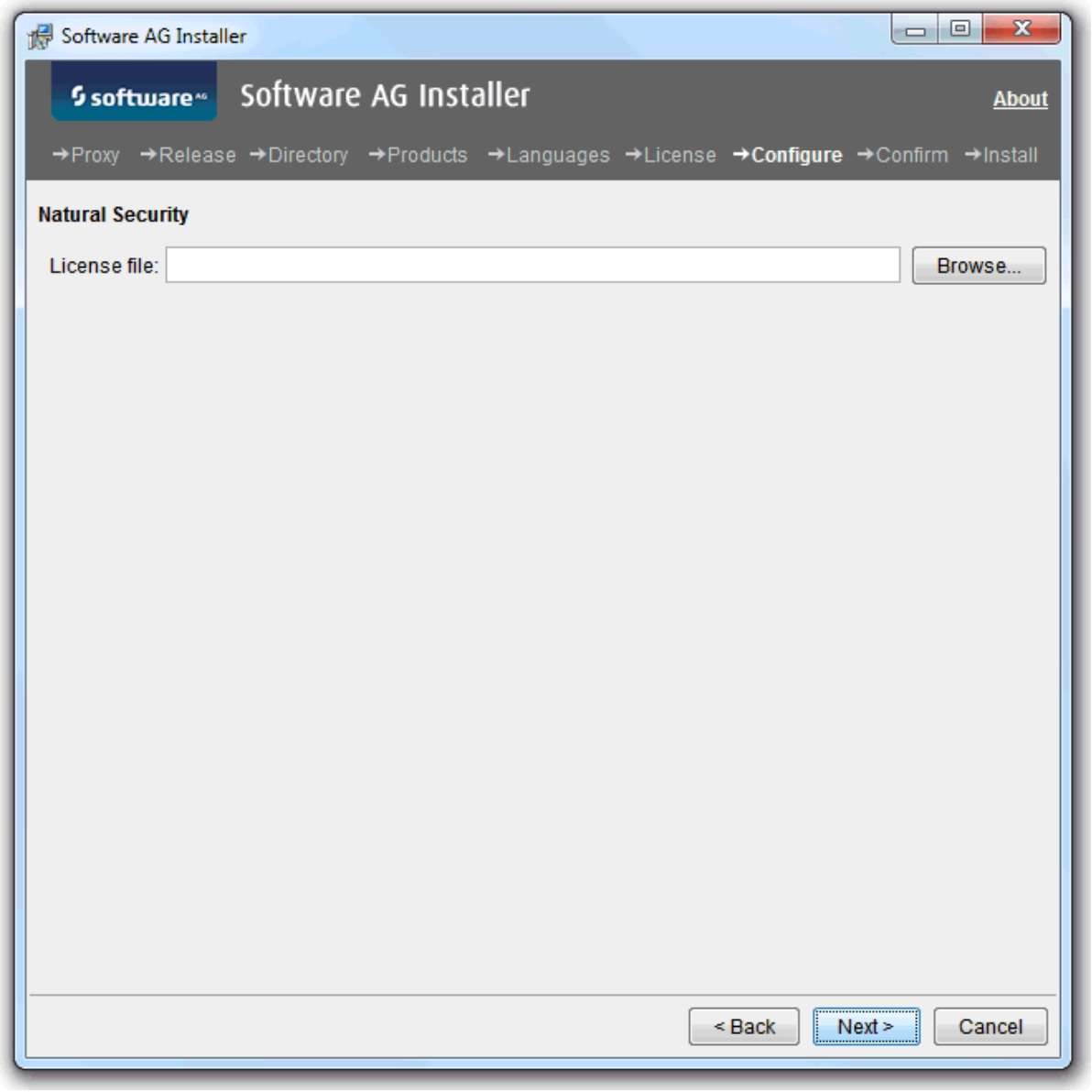
10 Choose the **Next** button.

11 First-time installation only: When **Web I/O Interface** was selected in the product selection tree, you can enter a different value for the port. This port is used by the Natural Web I/O Interface service. Values between 1023 and 65536 are valid. The default value is 2900. If this port is already used, the number of the next free port will be shown.



12 Choose the **Next** button.

13 First-time installation only: When Natural Security was selected in the product selection tree, enter the full path to the Natural Security license file (or use the **Browse** button to select it from a dialog box).



14 Choose the **Next** button.

15 On the last panel, review the list of products and items you have selected for installation. If the list is correct, choose the **Next** button to start the installation process.

When the Software AG Installer has completed the first-time installation, additional configuration steps are required. See *Completing the Installation* for further details.

Using Software Distribution Tools to Install Natural

You can use the Software AG Installer to create an installation package which can then be distributed automatically to any number of computers in your environment. You can use third-party distribution tools for this purpose.

To distribute Natural, the following items are required:

- Software AG Installer.
- Installer image containing the products to be installed.
- Script file which defines the location of the image file, the products to be installed, and the locations of all required license files.
- License files for the products to be installed.

The description below just provides a brief overview on how to create the required files. For more detailed information, see *Using the Software AG Installer*.

To create the image and script

1 Start the Software AG Installer GUI as described in *Using the Software AG Installer*.

2 On the Welcome panel, choose the **Advanced Options** button.

3 Go to the **Images** tab and proceed as follows:

   1. Select the **Use installation image** check box.
   2. Select the **Create image** option button.
   3. Specify a location and name for the image. The installer will automatically add the extension *.zip*.
   4. Specify the platform for which you want to create the image. You can create an image for any platform from any platform.
   5. Choose the **OK** button to return to the Welcome panel.

4 Choose the **Next** button repeatedly in order to:

   1. Select the products to be installed.
   2. Agree to the terms of the license agreement.
   3. Start the installation to create the image.

   Note: When creating an image, the panels on which you usually specify the license files and ports do not appear.

5 Start the Software AG Installer GUI once more, and choose the **Advanced Options** button again.

6 Go to the **Images** tab again and proceed as follows:

1. Select the **Use installation image** check box.
2. Select the **Install from image** option button.
3. Specify the name of the image that you have previously created.

7 Go to the **Scripts** tab and proceed as follows:

1. Select the **Use installation script** check box.
2. Select the **Create script** option button.
3. Select the **Do not install products on local machine** option button, unless you also want to install on the local machine in the same step.
4. Specify a location and name for the script.
5. Choose the **OK** button to return to the Welcome panel.

8 Choose the **Next** button repeatedly in order to:

1. Specify the installation directory.
2. Select the products to be installed.
3. Agree to the terms of the license agreement.
4. First-time installation only: Specify the paths to all required license files and, if required, specify the ports for the selected products.
5. Start the installation to create the script.

Note: It is recommended that you create separate scripts for first-time installations and update installations.

To adapt the script

1 Edit the script that you have previously created and adjust the references to the image and license files. For example:

```
guiNscLicense=__VERSION1__,C%3A%5CUsers%5Cxyz%5CDocuments%5CLics%5Cnsc84.WinDesk.2017.xml
guiNatLicense=__VERSION1__,C%3A%5CUsers%5Cxyt%5CDocuments%5CLics%5Crun84WinDesk.2017.xml
imageFile=C\:\\Users\\xyz\\Documents\\NaturalSec84.zip
```

For an automated installation, the references to the image and license files need to be adjusted to the actual installation location. You can specify either the full path or a relative path such as *file-name*, .*file-name* or .*folder-name**file-name*. You can also specify the full path to a file server such as *file-server**folder-name**file-name*. The following examples show the different ways in which a path can be specified:

```
guiNscLicense=__VERSION1__,nsc84.WinDesk.2017.xml
guiNscLicense=__VERSION1__,.\\Lics\\nsc84.WinDesk.2017.xml
guiNscLicense=__VERSION1__,\\\\Server1\\Lics\\nsc84.WinDesk.2017.xml
```

You also can use environment variables as part of the path specification. For example:

```
imageFile=$IMAGEDIR$\\NaturalSec84.zip
```

2 If necessary, adjust the parameter values in the script (for example, port numbers).

Note: You can delete the port specification lines for Natural Development Server (`guiNdvPort=..`) and the Natural Web I/O Interface (`guiWebioPort=..`) from the script if you want to make sure that the installation does not stop if the specified port number is in use. In this case, the next free port number will be used.

To start the installation

- Start the installation from the command line. Start the installer jar file as follows:

```
java -jar SoftwareAGInstaller.jar -readScript script-file-name ↩
-scriptErrorInteract no
```

Alternatively, you can use the installer exe file. In this case, you have to set the environment variable `ZFUSION_INSTALL_ARGS` to the required installer options:

```
set  ZFUSION_INSTALL_ARGS=-readScript fullpath\script-file-name ↩
-scriptErrorInteract no
SoftwareAGInstaller.exe
```

Note: An appropriate Java version must be installed on the machine when using the jar file. A Java installation is not required when using the exe file.

6 Completing the Installation

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Entries in the Start Menu

Depending on your selection in the product selection tree, some or all of the following entries have been created in the Windows **Start** menu:

- Under **All Programs > Software AG > Administration**:

  ESM Configuration for Natural *n.n*
  Natural Buffer Pool Monitor *n.n*
  Natural Component Browser *n.n*
  Natural Configuration Utility *n.n*

- Under **All Programs > Software AG > Tools**:

  Natural *n.n*
  Natural Runtime *n.n*
  Entire Systems Management for Natural *n.n*

- **All Programs > Software AG > Documentation**

where *n.n* stands for the current version number. The **Start** menu group name (by default, this is "Software AG") can be changed during the installation.

Setting Up Your Products Using the SYSPCI Utility

After you have installed your product, you need to set up a number of files, parameters and individual settings depending on your environment. These are described below. To set them up, you use the SYSPCI utility. For detailed information on this utility, see *SYSPCI Utility - Product Configuration and Initialization* in Natural's *Tools and Utilities* documentation.

The Natural Command Processor requires an `NCP` file.

Natural Security requires an Adabas `FSEC` system file.

Natural Security provides the function **Logging of Maintenance Functions**. If logging is activated, a Natural Security log file (`NSL`) is required in Adabas and needs to be set up with the SYSPCI utility. With this version, you can continue to use your existing Natural Security log file. If you want to set up a Natural Security log file, it is recommended that you do this before setting up an `FSEC` file for Natural Security. In this order, both files can be set up by starting the SYSPCI utility only once.

The database IDs and file numbers of the new or existing files (`FSEC` or `NCP`) that you specify using the SYSPCI utility are entered into the default parameter files for Natural Security (`NSCPARM`) and Natural (`NATPARM`).

Note: If Natural Security is already active and you use the SYSPCI utility to create a new `FSEC` file, database ID and file number are not entered into the current `NATPARM` and `NSCPARM` files.

When you initialize (activate) Natural Security using the SYSPCI utility, the default `FNAT` system file from the installation must be used (that is, `<install-dir>`/*Natural/fnat*). Otherwise, a subsequent update installation will not be possible.

The required Adabas files can either be local or remote.

- **Remote Access**
  If the file is located in a remote database, Entire Net-Work must be active and the database must be accessible.

  Note: For Natural Security, see also *Using Natural Security on Multiple Platforms* in the *Natural Security* documentation.

- **Existing Local File**
  Before you start the SYSPCI utility, make sure that the Adabas database containing the required files is active. With this version, you can continue to use your existing files. No migration of data from the previous version to the current version is necessary.
- **New File**
  Before you start the SYSPCI utility, make sure that the Adabas database which will contain the required files is active. The SYSPCI utility will load and initialize these files. This should be also done if another file is required for your product.

Before you create new files with the SYSPCI utility, make sure that the ASSO and DATA sizes of your Adabas database are appropriate for these files. It is therefore recommended that you check the Adabas *.fdu* files in the `<install-dir>`/`<product>`/*INSTALL*/`<product-code>` directory for the used sizes. If required, change your database setup so that the files can be created.

For Natural Security, for example, the ASSO and DATA sizes are not appropriate if you are using the default database. The *.fdu* files for Natural Security can be found in the `<install-dir>`/*Natural/INSTALL/nsc* directory.

In addition, make sure that the Adabas nucleus parameters listed in the following table are set for the database you want to use at database startup. They are not appropriate if you are using the default nucleus parameters.

`LWP`	Must be at least 1,000,000.
`OPTIONS`	The option `TRUNCATION` must be set in the `OPTIONS` parameter.

Invoking the SYSPCI Utility

In order to invoke the SYSPCI utility, you must first invoke Natural. You can then invoke the SYSPCI utility using the command line.

To invoke the SYSPCI utility

1. From the Windows **Start** menu, choose **All Programs > Software AG > Tools > Natural** *n.n* to invoke Natural.
2. From the **View** menu, choose **Command Line** to switch on the display of the command line.
3. Enter the following command in the command line:

   ```
   SYSPCI
   ```

   For more information, see *SYSPCI Utility - Product Configuration and Initialization* in Natural's *Tools and Utilities* documentation.

Setting Up the Additional Natural Components

After Natural has been installed for the first time, additional configuration steps are required in the following cases:

- **Entire Systems Management**
  Entire Systems Management requires additional software on the server. If you have installed the Entire Systems Management clients, you have to initialize the clients before you can use them. To do so, choose **All Programs > Software AG > Administration > ESM Configuration for Natural** *n.n* from the Windows **Start** menu. In the resulting dialog box, you can select whether to initialize or remove a client. Only initialized clients will be shown in the Entire Systems Management application window. See the following documentation sets for further information - these documentation sets are available separately:
  - Mainframe Navigation documentation
  - Output Management GUI Client documentation
  - Entire Operations GUI Client documentation

- **Natural Web I/O Interface**
  If you have installed the Natural Web I/O Interface, see the *Natural Web I/O Interface* documentation for information on how to configure the server part (that is, the service), and how to install and configure the Natural Web I/O Interface client. If you want to use Natural for Ajax as the client, see the Natural for Ajax documentation. This documentation is available separately.

Setting Up Natural Security

If you have installed the Natural Security runtime version, no further steps are required.

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 security profiles will not be modified by a subsequent installation, nor will any objects or relationships already defined be affected.

If you have installed the full version of Natural Security for the very first time (that is, if the version you have installed is your first version of Natural Security on this `FSEC` system file), proceed as described in the *Natural Security* documentation under the heading *First Steps After the Installation*. Do this immediately after a successful installation of Natural Security.

Configuring Natural

After setting up Natural and the add-ons, Natural can easily be configured using the Configuration Utility. See the *Configuration Utility* documentation for further details, especially the *Overview of Configuration File Parameters*.

7 Uninstalling Natural

You uninstall Natural using the Software AG Uninstaller. For detailed information on how to use the uninstaller, see the *Using the Software AG Installer* guide.

In short, you uninstall Natural using the standard uninstall functionality of the Windows. The Control Panel offers the following entry: **Software AG Products:** `<installation-directory>`. When you choose to uninstall this entry, the Software AG Uninstaller is invoked.

Note: Natural Security cannot be uninstalled without removing the whole Natural environment in which Natural Security has been installed.

Exception: the plug-ins and the terminal emulation located in the common Natural directory cannot be uninstalled using the standard uninstall functionality. These are the files in *\Program Files\Common Files\Software AG\Natural\V1* (32-bit machines) or *\Program Files (x86)\Common Files\Software AG\Natural\V1* (64-bit machines). After you have uninstalled all side-by-side installations of Natural, you can use the batch file *Unregister.bat* in the *V1* directory to remove the plug-ins, the terminal emulation and the corresponding registry entries. Use the Windows command **Run as administrator** to execute the batch file.