

NaturalONE

Installation

Version 8.2.7

March 2013

This document applies to NaturalONE Version 8.2.7.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Copyright © 2009-2013 Software AG, Darmstadt, Germany and/or Software AG USA, Inc., Reston, VA, United States of America, and/or their licensors.

Detailed information on trademarks and patents owned by Software AG and/or its subsidiaries is located at <http://documentation.softwareag.com/legal/>.

Use of this software is subject to adherence to Software AG's licensing conditions and terms. These terms are part of the product documentation, located at <http://documentation.softwareag.com/legal/> and/or in the root installation directory of the licensed product(s).

This software may include portions of third-party products. For third-party copyright notices and license terms, please refer to "License Texts, Copyright Notices and Disclaimers of Third-Party Products". This document is part of the product documentation, located at <http://documentation.softwareag.com/legal/> and/or in the root installation directory of the licensed product(s).

Document ID: ONE-INSTALL-827-20130320

Table of Contents

Preface	v
1 System Requirements	1
Supported Operating System Platforms	2
Supported Browsers	2
Supported Natural Servers	3
Eclipse Prerequisites	3
Java Prerequisites	3
Hardware Requirements	3
Recommendation for Huge Natural Applications Developed with NaturalONE	4
2 Installing NaturalONE	5
General Information	6
Typical Development Installation	6
Before You Begin	7
Installing NaturalONE Using the Wizard	8
Completing the Installation	12
Online Help on Linux	13
Updating and Migrating NaturalONE from Version 8.2.1 to Version 8.2.7	13
Updating NaturalONE	14
Uninstalling NaturalONE	14
3 Using Your Own Eclipse	15
4 Using an Existing Natural Development Server Environment	17
Prerequisites	18
Startup Transactions	19
Natural Security	19
Library Statistical Records on Mainframes	19
Database Access	20
5 Using an EntireX RPC Environment	21

Preface

This documentation is organized under the following headings:

System Requirements	Supported operating system platforms and browsers. Java prerequisites and hardware requirements.
Installing NaturalONE	Describes how to install NaturalONE with the Software AG Installer.
Using Your Own Eclipse	Describes how to proceed if you want to use NaturalONE in your existing Eclipse environment.
Using an Existing Natural Development Server Environment	Lists the requirements if you prefer to use your own Natural Development Server (NDV) environment instead of the local Natural runtime that is installed with NaturalONE.
Using an EntireX RPC Environment	Describes how to proceed if you want to configure an EntireX RPC environment (Broker and Natural RPC server) instead of using the default configuration of the one that is installed with NaturalONE.

For important last-minute information, see the readme file that is provided with NaturalONE.

1 System Requirements

▪ Supported Operating System Platforms	2
▪ Supported Browsers	2
▪ Supported Natural Servers	3
▪ Eclipse Prerequisites	3
▪ Java Prerequisites	3
▪ Hardware Requirements	3
▪ Recommendation for Huge Natural Applications Developed with NaturalONE	4

Supported Operating System Platforms

NaturalONE supports the following operating system platforms:

Microsoft Windows XP Professional (x86)
Microsoft Windows Vista (x86)
Microsoft Windows 7 (x86)
Microsoft Windows 7 (x86-64) *
Microsoft Windows Server 2003 Standard Edition (x86)
Microsoft Windows Server 2003 Enterprise Edition (x86)
Microsoft Windows Server 2008 R1 (x86)
Microsoft Windows Server 2008 R1 (x86-64) *
Microsoft Windows Server 2008 R2 (x86-64) *
SUSE Linux Enterprise Server 11 (x86)
SUSE Linux Enterprise Server 11 (x86-64)
Red Hat Enterprise Linux Server 5 (x86)
Red Hat Enterprise Linux Server 5 (x86-64)

* For Windows, the runtime components of NaturalONE are always 32-bit applications, even on 64-bit platforms.

Supported Browsers

NaturalONE supports the following browsers:

Internet Explorer 7 through 9
Mozilla Firefox 3.6 through 10 ⁽¹⁾
Safari 5.1 on Windows
Google Chrome ⁽²⁾

Notes:

⁽¹⁾ Mozilla Firefox 10 (Extended Support Release) is supported. In future versions, only the Extended Support Releases of Mozilla Firefox will be explicitly supported.

⁽²⁾ The Google Chrome support is based on Google Chrome Version 19. Due to frequent version upgrades of Google Chrome, compatibility of NaturalONE with future versions of Google Chrome cannot be fully guaranteed. Possible incompatibilities will be removed during the regular maintenance process of NaturalONE.

Supported Natural Servers

To get full functionality of NaturalONE, specific Natural versions are required. For further information, see [Using an Existing Natural Development Server Environment](#).

Eclipse Prerequisites

Eclipse Version 3.6 is automatically installed with NaturalONE.

If you prefer to use NaturalONE in your existing Eclipse environment, Eclipse Version 3.6 is required. For further information, see [Using Your Own Eclipse](#).

Java Prerequisites

On Windows, Java is automatically installed with NaturalONE when you start the Software AG Installer wizard using the *.exe* file. No further steps are required. However, when you want to start the installer using the *.jar* file instead of the *.exe* file, Oracle Java Version 1.6 must already be installed. This is required to run the installer.

On Linux, Java is not installed with NaturalONE. Oracle Java Version 1.6 is required in this case. You can download this from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.



Note: IBM Java or the GCJ Java should not be used with our products for Linux x86 and x86-64 platforms. Use only Oracle Java for our products on Linux x86 and x86-64.

Hardware Requirements

The table below lists the minimum hardware requirements for NaturalONE.



Important: The hardware requirements below are for NaturalONE only. They do not include 200MB of hard drive space for Software AG infrastructure shared libraries required by most products and installed once per installation directory. They do not include requirements for supporting software such as RDBMSs. You must determine the overall hardware requirements for each of your machines based on the overall requirements of your operating system and software.

Product	Hard Drive Space
Eclipse development installation without runtimes	970 MB
Eclipse development installation with NaturalONE runtime	1 GB
Eclipse development installation with service enabling and NaturalONE and EntireX runtimes	1.8 GB

Recommendation for Huge Natural Applications Developed with NaturalONE

If you handle huge applications with NaturalONE (for example, if you have more than 20,000 Natural objects or huge Natural sources), is recommended that you install NaturalONE on a 64-bit operating system. This ensures that NaturalONE can get more required memory than on a 32-bit operating system.

To make use of a larger amount of memory on a 64-bit operating system, you have to adapt the *Eclipse.ini* file in the NaturalONE installation directory (*<NaturalONE-installation-directory>\eclipse\win36\Eclipse.ini*). Because the required amount of memory is application-dependant, it is not possible to give definite recommendations on how the parameters in this file should be set. Getting the appropriate values is an iterative process.

A good starting point for your own configuration tests are the following parameter values in the *Eclipse.ini* file:

```
--launcher.XXMaxPermSize  
512m  
-Xmx2048m
```

`XXMaxPermSize` is used for static data. A value of 512 MB should be a sufficient setting.

You may change the `Xmx` parameter which specifies the maximum amount of memory that the Java runtime is able to get. With the value in the above example, you allocate 2048 MB.

2 Installing NaturalONE

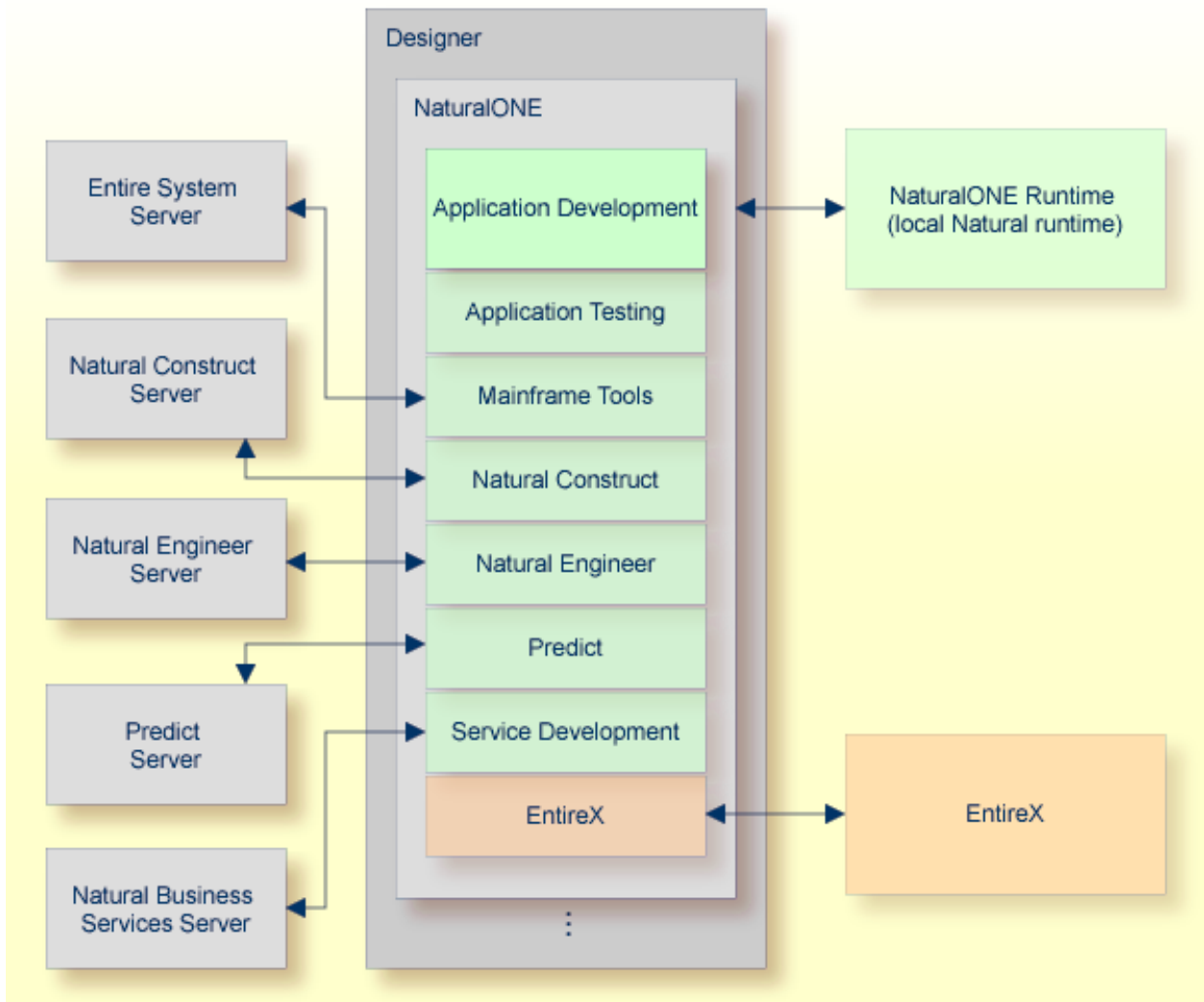
- General Information 6
- Typical Development Installation 6
- Before You Begin 7
- Installing NaturalONE Using the Wizard 8
- Completing the Installation 12
- Online Help on Linux 13
- Updating and Migrating NaturalONE from Version 8.2.1 to Version 8.2.7 13
- Updating NaturalONE 14
- Uninstalling NaturalONE 14


General Information

This document provides product-specific instructions for installing NaturalONE. 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 in the NaturalONE product documentation at <http://documentation.softwareag.com/>.

Typical Development Installation

NaturalONE is part of the Software AG Designer. The following graphic shows the NaturalONE components that can be installed with NaturalONE. The Application Development functionality is mandatory; NaturalONE cannot be installed without this. The other components are optional. Some of the optional components require that additional software is installed on a server. See also *What is NaturalONE?* in the *Introduction*.



 **Note:** NaturalONE's Lifecycle Manager is not included in the above graphic since it has no dedicated Eclipse plug-in. The Lifecycle Manager makes use of CentraSite Control which runs in a browser.

Before You Begin

Software AG strongly recommends that you create an installation image of your Software products and store it on your internal network before installing. You should create an image for each operating system covered by your license agreement on which you plan to install (for example, 32-bit, 64-bit, or both). This will help you reduce WAN traffic and speed up installation, and ensure consistency across installations over time, since the installer provides only the latest release of each product.

Shut down all products that are running on the machine on which you are going to install. To be on the safe side, also shut down all Software AG services; use the instructions provided in the documentation of the corresponding Software AG product.



Important: For some Software AG products, the uninstaller will not be able to remove key files that are locked by the operating system if they are not shut down.

If you plan to install EntireX together with NaturalONE (NaturalONE's Service Development functionality requires EntireX), read the information on EntireX in the *Installing webMethods Products* guide before you start the NaturalONE installation. There you will find important information on topics such as sudo authentication. The most up-to-date version of *Installing webMethods Products* is always available at <http://documentation.softwareag.com/>.

Installing NaturalONE Using the Wizard

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



Note: See *Using the Software AG Installer* also if you want to use console mode, or if you want to install using an installation script or installation image.

It is possible to install parallel versions of NaturalONE on one machine. In this case, you have to install each version into a separate directory.

▶ To install NaturalONE

Software AG provides a license file for NaturalONE; the installer requires it during installation. Copy the license file to the machine on which you want to install NaturalONE. You can copy it to any temporary location. The installer will ask for the location of your license file and will then copy it to the appropriate location.

- 1 Start the Software AG Installer as described in *Using the Software AG Installer*.
- 2 When the first page of the Software AG Installer wizard (the so-called Welcome panel) is shown, choose the **Next** button repeatedly (and specify all required information on the shown panels) until the panel containing the product selection tree appears.

For the installation of NaturalONE, the product selection tree provides the following entries:

- **Designer > NaturalONE**
- **NaturalONE 8.2 SP n**

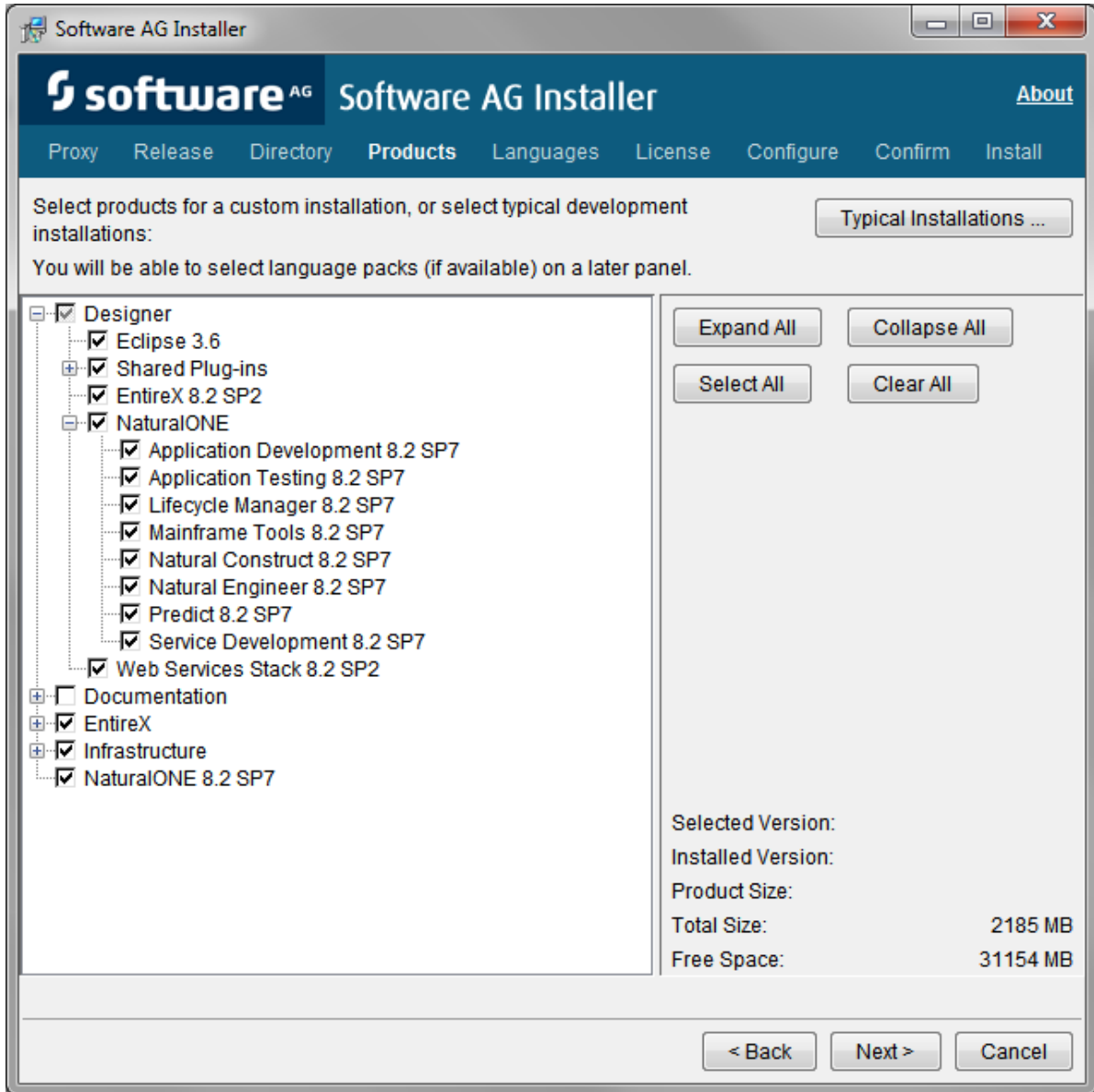
Application Development (which is shown when you expand **Designer > NaturalONE**) is always required. NaturalONE cannot be installed without this item. It contains the core functionality of NaturalONE which consists of the basic functionality for Natural application development plus the possibility to create rich internet applications that use the Ajax technology. All other items under **Designer > NaturalONE** are optional components for NaturalONE. See also *What is NaturalONE* in the *Introduction*.

A Software AG-supplied Eclipse and a number of shared plug-ins are always installed with NaturalONE. Other items in the tree (such as EntireX) are only required for service development (they are automatically selected when **Service Development** is also selected).

When **Designer > NaturalONE** (or just an item in this node) is selected, the **NaturalONE 8.2 SP n** item at the bottom of the tree is automatically selected. This installs the integrated NaturalONE runtime environment (which is also referred to as the "local Natural runtime"). If you want to use an already installed Natural runtime on the local machine or on a remote machine, you can deselect the NaturalONE runtime. See also [Using an Existing Natural Development Server Environment](#).

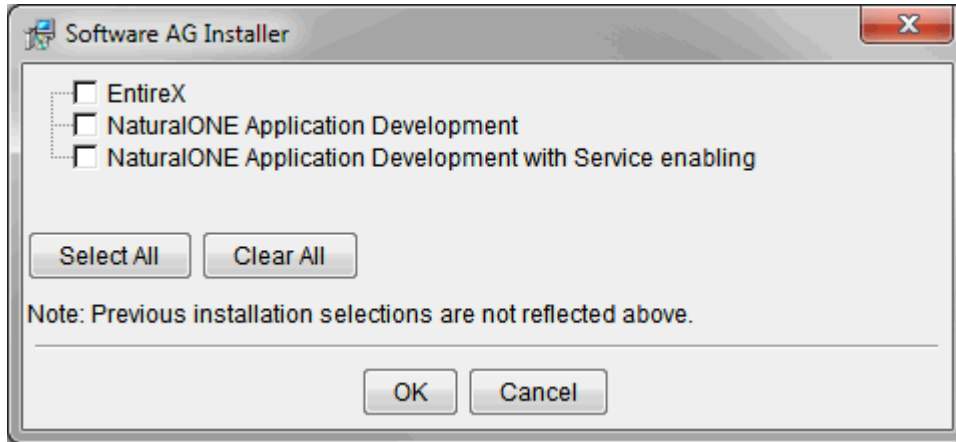
- 3 To install the full functionality of NaturalONE, expand the **Designer** node and select **NaturalONE**.

All required items are automatically selected. This corresponds to the **NaturalONE Application Development with Service enabling** typical installation (see the description below).



Or:

Choose the **Typical Installations** button to display the following dialog box.



Select one of the following and choose the **OK** button:

- **NaturalONE Application Development**

This installs the following, in addition to the Application Development core functionality:

- Lifecycle Manager
- Mainframe Tools
- Natural Construct
- Natural Engineer
- Predict
- NaturalONE runtime

- **NaturalONE Application Development with Service enabling**

This installs the following, in addition to the Application Development core functionality:

- Application Testing
- Lifecycle Manager
- Mainframe Tools
- Natural Construct
- Natural Engineer
- Predict
- Service Development
- NaturalONE runtime
- EntireX and many other items which are required by EntireX



Note: For NaturalONE, it is not required that you select EntireX in this dialog box.

EntireX is automatically installed with the Application Testing or Service Development component of NaturalONE.

- 4 If you want to install the NaturalONE documentation, expand the **Documentation** node in the product selection tree and select the entry for NaturalONE.

This is the HTML documentation which also includes the PDF books (as provided on <http://documentation.softwareag.com/>). The location of the downloaded documentation is a central directory named `_documentation` in the main installation directory.



Note: The Eclipse help for a selected NaturalONE component is always installed, regardless of your selection in this panel.

- 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 Enter the full path to the NaturalONE license file (or use the **Browse** button to select it from a dialog box), and choose the **Next** button.

The installer will copy the NaturalONE license file to the `common/conf` directory of your NaturalONE installation.

- 8 When EntireX was selected, additional panels appear (for example, a System Management Hub panel and an EntireX panel). For detailed information on these panels, see the *Installing webMethods Products* guide. The most up-to-date version of this guide is always available at <http://documentation.softwareag.com/>.
- 9 On the last panel, review the items you have selected for installation. If the list is correct, choose the **Next** button to start the installation process.

Completing the Installation

After NaturalONE has been installed, you can start it as described in *Starting NaturalONE* which is part of *Using NaturalONE*. NaturalONE's core functionality can be used without further configuration. Additional configuration steps, however, are required in the following cases:

- You want to use an Eclipse other than the Software AG-installed Eclipse. See [Using Your Own Eclipse](#).
- You installed a complete development installation, with or without the NaturalONE runtime, and you also want to use an existing Natural Development Server (NDV). See [Using an Existing Natural Development Server Environment](#).
- You installed the Mainframe Tools component. This component includes Mainframe Navigation, which requires an Entire System Server environment. See *Installation and Configuration* in the *Mainframe Navigation* documentation.
- You installed the Natural Construct component, which requires a Natural Construct server environment. See *Requirements* in the *Using Natural Construct* section of the *Code Generation* documentation.

- You installed the Natural Engineer component, which requires a Natural Engineer server environment. See *Setting Up a Natural Engineer Environment* in the *Natural Engineer* documentation.
- You installed the Predict component, which requires a Predict server environment. See *Setting Up a Predict Environment* in the *Predict Description and Generation* documentation.
- You installed the Service Development component, which requires a Natural Business Services server environment. See *Before You Start* in the *Business Services* documentation.
- You installed a complete development installation with service-enabling, but you did not install EntireX because you want to use an existing EntireX on the local or a remote machine. See [Using an EntireX RPC Environment](#).
- You installed the Lifecycle Manager component, which requires a CentraSite environment. See *System Requirements* and *Installation and Configuration* in the *Lifecycle Manager* documentation.

Online Help on Linux

In order to display the NaturalONE online help in Eclipse, it is required to set the Linux environment variable `no_proxy` in `/etc/sysconfig/proxy` to "localhost".

Updating and Migrating NaturalONE from Version 8.2.1 to Version 8.2.7

If you want to update an existing NaturalONE Version 8.2.1 installation to Version 8.2.7, it is not possible to do this as described below under *Updating NaturalONE*. Instead, you have to install a parallel version of NaturalONE, that is, you have to install NaturalONE Version 8.2.7 into a separate directory (not into the same directory as NaturalONE Version 8.2.1).

For NaturalONE Version 8.2.7, you have to use a different workspace. You must not use the workspace of a NaturalONE Version 8.2.1 installation.

After NaturalONE Version 8.2.7 has been installed, you have to import your Natural projects from the NaturalONE Version 8.2.1 workspace to the NaturalONE Version 8.2.7 workspace. In case you also make use of non-Software AG plug-ins, you have to reinstall these plug-ins in Eclipse (via **Help > Install New Software**).

Updating NaturalONE

The information below applies when NaturalONE Version 8.2.2 or a later version is installed and you want to update to a newer version.

To update your NaturalONE installation, you proceed as described under *Installing NaturalONE Using the Wizard*. Make sure to specify the same information as for your first-time installation, that is:

- specify the same directory,
- specify the same items to install (for example, if you have previously installed NaturalONE using the **NaturalONE Application Development with Service enabling** typical installation, use the same type of installation for the update).

Uninstalling NaturalONE

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

3 Using Your Own Eclipse

The easiest and recommended way to install NaturalONE is to make use of the Software AG Installer. However, you may prefer to make use of your already existing Eclipse environment. In this case, a specific version of Eclipse is required. See [Eclipse Prerequisites](#) in the section *System Requirements*.

If you want to use NaturalONE in your existing Eclipse environment, you need the NaturalONE Eclipse plug-ins. To get them, it is required that you do a regular installation using the Software AG Installer first. When the installation has completed, you will find the required plug-ins in the installation directory of the Software AG Designer. They are stored in `<your-installation-directory>\eclipse\updates`. Now, you have to proceed as follows:

1. Install all NaturalONE plug-ins using the update manager of your Eclipse.

You have to install the plug-ins in the following order:

- a. `com.softwareag.common.zip`
- b. `com.softwareag.cis.ide-82.zip`
- c. `com.softwareag.naturalone.natural.ide-one82.zip`

When the above plug-ins are installed, you can install the other NaturalONE plug-ins in any order you like.

2. Copy the file `naturalone.properties` from the `\eclipse\updates` folder of the Designer installation to the folder of your Eclipse installation which contains the file `eclipse.exe`. Normally, this is the root folder of the Eclipse installation.

You can now use NaturalONE from within your own Eclipse environment.

4 Using an Existing Natural Development Server Environment

- Prerequisites 18
- Startup Transactions 19
- Natural Security 19
- Library Statistical Records on Mainframes 19
- Database Access 20

Prerequisites

If you prefer to use your own Natural Development Server (NDV) environment instead of the local Natural runtime that is installed with NaturalONE, it is recommended that you upgrade your Natural Development Server environment to the versions listed below. Only with these versions, you will get the complete functionality of NaturalONE.

The recommended versions are:

■ Mainframe

Use one of the following combinations:

- Natural Development Server Version 8.2.3 cumulative fix 1 with the Natural Web I/O Interface.
Natural Version 8.2.3 cumulative fix 2.
Natural Security Version 8.2.3 cumulative fix 2.
- Natural Development Server Version 2.2.7 cumulative fix 13 with the Natural Web I/O Interface.
Natural Version 4.2.7 cumulative fix 14.
Natural Security Version 4.2.7 cumulative fix 14.



Important: When Natural Development Server runs on a mainframe, Unicode and code page support must be enabled (with the Natural profile parameters `CFICU` and `CP`).

■ UNIX, OpenVMS or Windows

- Natural Development Server Version 2.2.7 with the Natural Web I/O Interface.
- Natural Version 6.3.13.
- Natural Security Version 6.3.13.

■ Servlet Container

- Natural for Ajax Version 8.2.7 on Apache Tomcat 6 (6.0.20 or above).



Note: Apache Tomcat is required by Ajax Developer. Execution and debugging of rich internet applications, however, can be done with any application server or servlet container on which Natural for Ajax is running.

If the above mentioned Natural or Natural Development Server versions are not installed in your environment, specific Eclipse functionality does not work. However, NaturalONE as such can be used.

Startup Transactions

When a NaturalONE client connects to a Natural server, any startup transaction program executed on the server must meet the following conditions:

- It must not perform any screen I/Os.
- It must be executed only once (that is, the Natural system variable *STARTUP must be reset to blank within the startup transaction).
- It must terminate properly.

You have to check the source code of each startup transaction in question and, if necessary, change it to meet these conditions.

If you adjust the relevant source-code sections within a startup transaction - in dependency of the client type - you can use the Natural application programming interface (API) USR4218N in the library SYSEXT. This API has to be invoked from within the startup transaction and provides you with the client type.

Natural Security

When Natural Security is active in your Natural server environment, several actions in the **Natural Server** view and in the **Navigator** view (such as upload and download) are controlled by Natural Security. A utility profile for SYSMAIN is then required in Natural Security which has the appropriate settings. For detailed information, see *Protecting the Natural Development Environment in Eclipse* in the Natural Security documentation, which is part of the Natural documentation.

If the Natural Security settings are not appropriate, you may not be able, for example, to add projects from the Natural server to the NaturalONE workspace.

Library Statistical Records on Mainframes

In order to reduce the number of Adabas calls and to improve the performance, it is highly recommended that you create a so-called "library statistical record" for every Natural library on the mainframe. This ensures that data which is often used is kept persistently. Thus, when using NaturalONE, there is no need to retrieve this specific information many times. To initialize the statistical records, you have to invoke the program NDVCSTAR which is available on the mainframe. For further information, see *SPoD-Specific Limitations and Considerations* in the Natural Development Server documentation for the appropriate platform.

Database Access

You can access Adabas databases when they are on the same PC as your NaturalONE installation.

However, in order to access remote Adabas database systems, Entire Net-Work is required. Currently, you have to configure your environment accordingly. For remote access to Adabas 6 (Open Systems) or Adabas 8 (Mainframe), Entire Net-Work 7.3.2 is required.

5

Using an EntireX RPC Environment

EntireX is required if you want to develop Natural business services and RPC clients with NaturalONE. This is supported by the optional EntireX and Business Services components of NaturalONE. This is sufficient for testing RPC clients for Natural subprograms. Testing Natural Business Services clients, however, requires an additional Natural Business Services installation as described under *Before You Start* in the *Business Services* documentation.

If you prefer to use a different EntireX RPC environment (Broker and Natural RPC server) instead of the one that is installed with NaturalONE, specify this as follows for those components for which you need a custom EntireX RPC environment:

- **RPC Environments Preferences**

On the **RPC Environments** page of the EntireX preferences, add your custom RPC environment to the list of predefined RPC environments (**Window > Preferences > Software AG > EntireX > RPC Environments**).

- **EntireX Natural Wrapper**

In the EntireX Natural Wrapper wizard (**Generate Natural from Software AG IDL** command in the context menu of an IDL file), choose either an RPC environment from the list defined on the **RPC Environments** preference page, or create a new RPC environment definition (which is then added to the list on the **RPC Environments** preference page).

- **EntireX IDL Extractor for Natural**

In the IDL Extractor for Natural wizard (which is started with **New > Other > Software AG > EntireX > IDL Extractor for Natural**), choose either an RPC environment from the list defined on the **RPC Environments** preference page, or create a new RPC environment definition (which is then added to the list on the **RPC Environments** preference page).

- **Natural Subprogram Tester**

If you run the Natural subprogram tester on a Natural subprogram (**Test Subprogram** command in the context menu of the Natural subprogram (NSN file), specify your Broker ID and server address on the **Connection** tab of the tester user interface.

■ **EntireX IDL Tester**

If you run the IDL tester on an IDL file (**Test Software AG IDL** command in the context menu of the IDL file), specify your custom Broker ID and server address in the tester user interface.

■ **General EntireX IDL Preferences**

On the **EntireX** preference page, define your custom Broker ID and RPC server address that is to be used as the default RPC environment with the EntireX wrappers (**Window > Preferences > Software AG > EntireX**).

■ **IDL File Properties**

In the properties of an IDL file (**Properties** command in the context menu of the IDL file), specify your custom Broker ID and RPC server address that is to be used by the EntireX Wrappers for this IDL file. You do this in the general EntireX section and in the EntireX Web Services Wrapper section (on the **Mapping** tab).

■ **WS-Stack Configuration Editor**

In the WS-stack configuration editor, configure an EntireX web service (AAR file) to use your custom Broker ID and RPC server. To do so, open the web service archive (*.aar*) and on the **EntireX Settings** tab, specify your custom Broker ID and RPC server address to be used. Save the modified *.aar* file and redeploy it.

See also *EntireX Workbench* which is part of the EntireX documentation.