software AG

Natural

Installation

Version 6.3.12 for OpenVMS

October 2012

Natural

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Preface

This documentation describes the installation of Natural on OpenVMS. It is organized under the following headings:

Installing and Setting Up Software AG Products on OpenVMS	Gives information about the installation package and the Software AG environment and describes the pre-installation steps which are common to *all* installations of Software AG products on an OpenVMS platform.
Installing Sagbase on OpenVMS	Describes how to install Sagbase, which is the prerequisite for installing Software AG products on the OpenVMS operating system.
Installing and Setting Up Natural on OpenVMS	Describes how to start the installation of Natural and guides you through the instructions for the Natural installation.
General Information for Starting the Daemons	Provides information which applies to the Natural Development Server daemon and the Natural Web I/O Interface daemon.
Installing and Setting Up Natural Development Server on OpenVMS	Describes how to install and set up Natural Development Server.
Installing Natural Security on OpenVMS	Describes how to start the installation of Natural Security and guides you through the instructions for the Natural Security installation.
Uninstalling Software AG Products on OpenVMS	Describes the uninstallation steps which are common to *all* installations of Software AG products on an OpenVMS platform.

> **Note:** For information on how to install and configure the Natural Web I/O Interface server, see the *Natural Web I/O Interface* documentation.

1 Installing and Setting Up Software AG Products on OpenVMS

This chapter contains general information which applies when installing and setting up any Software AG product on an OpenVMS platform.

> **Note:** Before installing the product, please refer to the files *INSTALL.TXT* and *README.TXT* in the root directory and in the product-specific subdirectories of the installation medium. The file *INSTALL.TXT* contains information that you should be aware of before you start the installation. The file *README.TXT* contains information that you should be aware of after the installation has completed and before you start to use the product.

General Information

The general procedure for installing Software AG products on OpenVMS is:

1. Use Software AG's product Sagbase (product code GBA) to prepare the OpenVMS environment for installation of Software AG's OpenVMS products. Sagbase creates an account and a top-level directory, in which all Software AG OpenVMS products are placed in subdirectories. For further information, see *Installing Sagbase on OpenVMS*.

2. Use the command procedure *SETUP.COM* located on the installation medium to install the product in the OpenVMS environment. *SETUP.COM* copies the product's PCSI files from the installation medium to the *SAG$ROOT:[SAGKITS]* directory, changes the default location to this directory and starts the Polycenter Software Installation utility (PCSI).

3. The PCSI utility guides you through the installation and verifies whether the installation was successful.

4. After completion of the PCSI installation procedure, some product-specific post-installation steps must be performed as described in the product-specific installation documentation.

5. When a product consists of several single products, the installation is done within the framework of a **product suite**.

Conventions

The following terms are used throughout this documentation.

version	Refers to a specific version, update package or patch level of the product.
platform	This is a text string representing the name of the OpenVMS platform, for example "I64".

Mounting the Installation Medium

1. Log in to the OpenVMS system manager's account or equivalent account.

2. Mount the installation medium using the following command:

   ```
   MOUNT/OVERRIDE=ID/MEDIA=CD/UNDEF=VAR:CR <device-name>
   ```

   The /OVERRIDE=ID qualifier is necessary because the volume label may differ from installation medium to installation medium.

About Product Suites

The *SETUP.COM* procedure leads you through the suite installation automatically. It copies the product suite files from the installation medium to the *SAG$ROOT:[SAGKITS]* directory and renames the **.PCS* files to **.PCSI* files.

On the installation medium, a product suite file is located in the subdirectory `<installation-medium-device-name>[VMS.<platform>.<product>.<version>]`. It is named `<product><version>`.SUI, for example, *NAT6312.SUI*. A product suite installation allows you to install the products included in the suite in a single installation sequence.

A suite installation consists of a few single product installations. Thus, it is also possible (apart from the suite installation) to install a product separately.

The suite installation establishes a dependency between the components (single products) of the suite. When a product suite component has to be uninstalled, you will be informed about the consequences of the uninstallation, namely that the dependencies between the product components of the suite will be removed. But it is also possible to uninstall a suite component separately.

Directory Structure of the Installation Medium

The installation package containing Software AG products is provided on an installation medium conforming to the ISO 9660 standard.

The following graphic shows the general directory structure for Software AG products on Open-VMS.
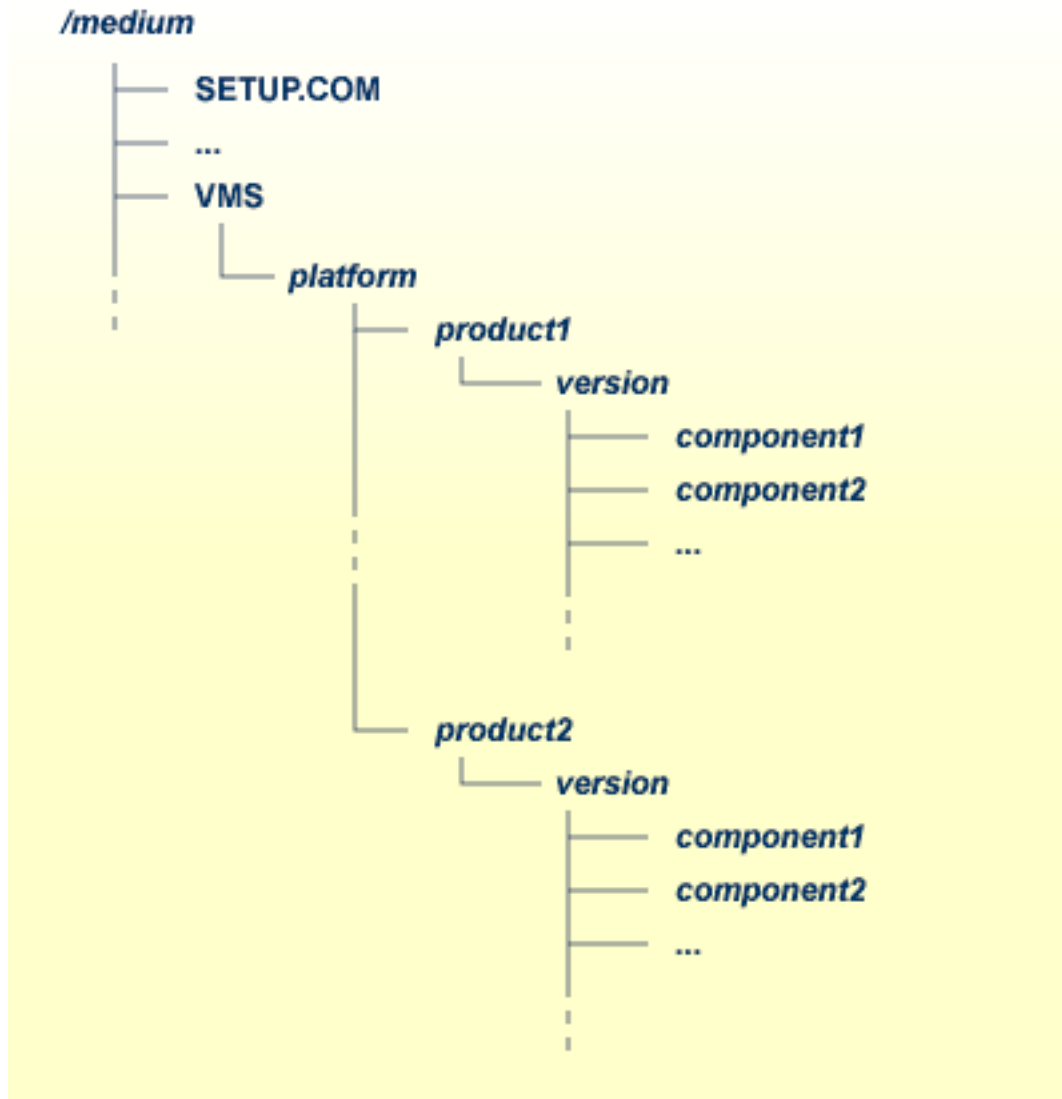
platform in the above graphic may stand for I64 or AXP, and *component* may stand for a suite file (**.SUI*) or a product file (**.PCS*).

A single product is saved in the product PCSI file *<product><version>.PCS*, for example *NAT6312.PCS* for a Natural installation contained in the *<version>* directory.

A product suite contains several PCSI files for single products with the file extension *PCS* and an additional product suite file with the file extension *SUI*, for example *NAT6312.SUI* which is also contained in the *<version>* directory.

The *SETUP.COM* procedure invokes the installation.

Product License Key

A Software AG product is protected by a license key. Every time the Software AG product starts, the license key is read and the validity of the license key is checked.

License Key File Location and Use

Before you start the product installation, you have to copy the license key file to the *SYS$LOGIN* directory of the installing user.

During the installation, the license key file will be copied automatically from the *SYS$LOGIN* directory to the *SAG$ROOT:[LKEY]* directory.

The License Key File

The license key file is provided as an XML document. This document can be viewed using a browsing tool or text editor. It contains text which represents the licensing information and a digital signature. It displays Software AG legal notices, copyright information etc. as well as the product license information.

Caution: If the license key is modified in any way, the digital signature will become invalid and the license key check will fail. If the check fails, you will not be able to install or run the product. In the event of a check failure, please contact your Software AG Support representative.

Installing the Software AG Product from the Installation Medium

Use the *SETUP.COM* procedure to copy the product file(s) to the SAG root directory and to start the PCSI installation procedure.

Change your current directory

Enter the following command:

```
SET DEFAULT <installation-medium-device-name>:[000000]
```

Start the SETUP.COM extraction procedure

Enter the following command:

```
@SETUP
```

The *SETUP.COM* procedure will prompt you for all information it needs for the installation.

The product kits from the installation medium will be copied to
SAG$ROOT:[SAGKITS.<product><version>], for example *SAG$ROOT:[SAGKITS.NAT6312]*.

Copy the product PCSI file

When prompted to copy the product PCSI file, enter one of the following:

- "Y" to copy the product to the *SAG$ROOT:[SAGKITS.<platform>_<product><version>]* directory.
- "N" to copy the product to another location.

The *SETUP.COM* command procedure displays a success message, if the product PCSI file was
successfully copied.

The installation procedure displays the location where you copied the PCSI files.

Invoke the PCSI installation procedure or interrupt the process

You have the choice to proceed with the PCSI installation or to interrupt the installation.

When you enter "I", the product will be installed with the PCSI utility. When you press RETURN,
you will leave the *SETUP.COM* procedure. You can continue the installation if you start the
SETUP.COM procedure once more.

The command procedure *SETUP.COM* recognizes what kind of product (a single product or a
product suite) is available on the installation medium. It automatically invokes the corresponding
kind of product and leads you through the installation.

The PCSI utility requires CMKRNL, SYSLCK, SYSPRV and TMPMBX privileges. When the SETPRV privilege
is set, the PCSI utility does not check the privileges before the installation.

Please continue reading the installation instructions for the Software AG product being installed.

Installing Software AG Products in an Adabas or Entire Net-Work Environment

Starting with Adabas Version 6.1 and Entire Net-Work Version 7.4, Software AG uses an access
control list protection mechanism for Adabas-based products on OpenVMS. This provides a more
refined level of protection than that which is available with UIC-based protection.

To make sure your product works in an environment with Adabas Version 6.1 or above or Entire
Net-Work Client Version 1.4 or above, the DCL procedure *USERADMIN.COM*, which is delivered
with Adabas products, has to be used. This procedure enables you to give your users access to
Adabas and Entire Net-Work. For all users, an account using the *USERADMIN.COM* procedure
has to be created.

USERADMIN.COM resides under *SAG$ROOT:[SAGCOMMON]*.

For more information, see your Adabas documentation, section *User Maintenance* in *Installing Adabas on OpenVMS*.

If you use a system-wide Adabas Version 6.1 environment together with your product, you have to make sure that both products use same *SAG$ROOT* definition. To check this definition, enter the following:

```
$ mc sysman
sysman> startup show file STARTUP_ADABAS_I64.COM
```

When an entry for *STARTUP_ADABAS_I64.COM* exists, check the *SAG$ROOT* definition at the beginning of this file. You must remove or uncomment this definition if it differs from the *SAG$ROOT* definition of Sagbase, which is a prerequisite for your product. In such a case, Sagbase makes sure that all products use the same *SAG$ROOT* definition.

2 Installing Sagbase on OpenVMS

Introduction

Installing Sagbase is the prerequisite for installing Software AG products on the OpenVMS operating system. Sagbase prepares an Alpha AXP or Itanium I64 environment on OpenVMS for the subsequent installation of Software AG products (for example Adabas, Natural, Entire Net-Work).

Sagbase creates the product user's account for all Software AG products, with one top-level directory as the entry point to the Software AG product-specific directory structure. It provides a startup procedure which defines the basic logical names that will be used by all Software AG products.

This section covers the following topics:

- Providing Quotas and Privileges
- Creating the Top-Level Directory
- Defining Logicals
- Enabling Disk Quotas
- Setting up a Boot Time Procedure
- Installing Sagbase in a Cluster Environment

Providing Quotas and Privileges

The following quotas and privileges are set for the product user's account:

Process Quota	Function	Minimum Value
ASTLM	Asynchronous trap limit	36
BIOLM	Buffered I/O limit	18
BYTLM	Byte limit	8192
DIOLM	Direct I/O limit	34
ENQLM	Enqueue limit	10
FILLM	Open file quota	40
PGFLQUO	Paging file quota	8192
PWDMINIMUM	Minimum password length	6
TQELM	Timer queue entry limit	10
WSEXTENT	Working set extent quota	2048
WSQUOTA	Working set quota	2048

Process Privilege	Description
ALTPRI	May set any priority value.
OPER	May perform operator functions.
PSWAPM	May change process swap mode.
SYSGBL	May create system-wide global sections.
SYSLCK	May lock system-wide resources.
TMPMBX	May create temporary mailbox.
VOLPRO	May override volume protection (set if UIC is not a system UIC group member).
WORLD	May control any process.

If an existing account is used, the installation procedure checks the settings of this account. Changes are only made if the quota settings are too low or if the required privileges are not set. If the settings exceed the minimum required by Sagbase, the existing settings are not changed.

Creating the Top-Level Directory

A top-level (default) directory *SAG$ROOT* is used by the product user. This directory must not already exist. It will be created by the installation procedure. Once Sagbase has been installed, this top-level directory contains the following files:

File	Description
LOGIN.COM	Login procedure for the product user account.
GETUAI.EXE	Image to check existence of an account.
SETUAI.EXE	Image to set authorization parameters.

GETUAI.EXE and *SETUAI.EXE* will be used for subsequent installations of Software AG products to check that the given account has adequate privileges and quotas.

The Sagbase kit contains images for Alpha AXP and Itanium I64, but only the corresponding images will be moved to the Sagbase top-level directory.

Defining Logicals

The startup procedure *STARTUP_SAGBASE.COM* which resides in the directory *SYS$STARTUP* defines two system-wide logicals in the *LNM$SYSTEM_TABLE* that are the basis for all other Software AG products:

Name	Description
SAG$DEVICE	The logical name for the device where the Software AG products will be installed.
SAG$ROOT	The logical name that points to the Sagbase top-level directory as a concealed device. This directory is the installation directory for all Software AG products.

Enabling Disk Quotas

The installation procedure checks whether disk quotas are enabled on the specified device or not. If they are enabled, you are asked to enter an integer value for the specified account.

Setting up a Boot Time Procedure

During the installation of Sagbase, the product-specific startup procedure *STARTUP_SAGBASE.COM* is created in the directory *SYS$STARTUP*. If you are installing in a cluster environment, you are asked to decide whether the startup procedure is to be copied to the common or the specific directory of the system. The installation procedure adds the command procedure as a component to the startup database by using the OpenVMS SYSMAN utility. This causes *STARTUP_SAGBASE.COM* to be executed in the phase LPBEGIN at system boot time.

For further information about SYSMAN, refer to the *OpenVMS System Management Utilities Reference Manual*.

Installing Sagbase in a Cluster Environment

Each node in a cluster on which Software AG products are to be used has to be prepared with Sagbase. The installation procedure checks whether Sagbase is already installed on another node in the cluster. If it was installed in the common root directory, *STARTUP_SAGBASE.COM* is executed. If it was installed in the specific root directory, a complete, independent Sagbase installation will be performed in this node's local root.

In a mixed cluster environment (Alpha AXP and Itanium I64), Sagbase must be installed with separate root directories on Alpha AXP and Itanium I64. This means that the logical name *SAG$ROOT* must point to different top-level directories for the Alpha AXP and Itanium I64 machines.

In a mixed cluster environment, all Software AG products must be installed on both Alpha AXP and Itanium I64.

Installing Sagbase

This section covers the following topics:

- Preparing for Installation
- Installation Overview
- Installation Steps

Preparing for Installation

In order to install Sagbase on an Alpha AXP or Itanium I64 system, the prerequisite is

- Version 8.3 of the Alpha AXP/OpenVMS operating system, or
- Version 8.3 or 8.4 of the Itanium I64 operating system.

You must have access to the SYSTEM account on the machine or to an account with the user privilege SETPRV. You will also need BYPASS, CMKRNL and SYSNAM privileges.

Installation Overview

Sagbase is installed using VMSINSTAL, the command procedure that is used to install software products in the OpenVMS environment. Refer to the OpenVMS documentation set for further information about VMSINSTAL.

VMSINSTAL guides the user through the installation step by step. Sagbase is contained in a single saveset: *SAGBASE013.A*. Sagbase has to be installed before any other Software AG products in a given OpenVMS environment. The Sagbase installation procedure only takes a few minutes to complete.

Installation Steps

Sagbase is installed by executing the following steps:

1. Invoke VMSINSTAL as follows:

   Log in to the privileged OpenVMS system manager's account.

   Establish the default directory *SYS$UPDATE*:

   ```
   SET DEFAULT SYS$UPDATE
   ```

   Start the installation procedure by entering the following command:

   ```
   @VMSINSTAL
   ```

During the installation procedure, a number of general information messages are displayed. Read all messages carefully and follow any advice they may provide.

The following messages are displayed once the procedure has started:

```
OpenVMS Software Product Installation Procedure Vx.y

It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.
```

where *dd-mmm-yyyy* and *hh:mm* are the current date and time.

If DECnet is active on the system, the following message appears:

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
```

If other users are accessing the system, the following message appears:

```
%VMSINSTAL-W-ACTIVE, The following processes are still active:
<name>
.
.
.
* Do you want to continue anyway [NO]?
```

where *<name>* refers to the process name of a user logged into the system. Enter "YES" and continue processing: the installation of Sagbase is not affected if users are active.

The following message is then displayed:

```
* Are you satisfied with the backup of your system disk [YES]?
```

It is not necessary to back up the system disk because the files and directories that are installed by Sagbase can be removed easily.

The following message is then displayed:

```
* Where will the distribution volumes be mounted:
```

Enter the name of the device on which the distribution medium is to be mounted.

2. Now enter the products to be processed from the first distribution volume set:

```
* Products: SAGBASE
* Options:
```

If the distribution medium is not already mounted on the specified device, VMSINSTAL requests the distribution medium to be mounted on the device specified when VMSINSTAL was invoked, or when the response to the device prompt was entered. If, for example, Sagbase is to be installed from the device MTA0, VMSINSTAL will display the following:

```
Please mount the first volume of the set on MTA0:.
```

VMSINSTAL then displays the following:

```
* Are you ready ?
```

The first volume of the distribution medium should now be mounted.

Enter "Y" and press RETURN when the volume has been mounted. VMSINSTAL now mounts the distribution medium and a message is displayed, e.g.:

```
%MOUNT-I-MOUNTED, <label> mounted on _MTA0:

The following products will be processed:

  SAGBASE V1.2

        Beginning installation of SAGBASE V1.2 at hh:mm

%VMSINSTAL-I-RESTORE, Restoring product saveset A ...
```

Sagbase does not contain any release notes. If "N" was specified in the Options field, the following messages will be printed:

```
%VMSINSTAL-W-NOFILE, New file *.RELEASE_NOTES does not exist.
%VMSINSTAL--NORELNOTE, Unable to locate release notes.
* Do you want to continue the installation?
```

Enter "Y" to continue with the installation.

3. If you are installing on a cluster, VMSINSTAL displays the following prompt:

```
* Enter to install in [C]ommon or [S]pecific root ? [C]:
```

Press RETURN to install in the common directory root or enter "S" and press RETURN to install in the specific directory root.

4. VMSINSTAL then displays the following prompt:

```
* Which account do you want to use ? [DBA]:
```

Specify the account that will be used by layered Software AG products. Press RETURN if the default name "DBA" is to be used, or enter another name in response to this prompt. The installation procedure checks whether the specified account exists or not.

5. If the specified account does not exist, you are asked:

```
* Do you want to create this account ? [YES]:
```

Press RETURN to create the account. If an existing account is to be used, the installation procedure will set *SYS$LOGIN* for this account to the default directory that is requested in step 9.

6. VMSINSTAL now displays:

```
* Which UIC do you want to use ? [2,0]:
```

Enter the UIC for the account to be created, using correct UIC syntax, or press RETURN to accept the default.

7. VMSINSTAL now displays:

```
* Please enter password for account DBA [ ]:
```

Enter a password to create the Sagbase account.

VMSINSTAL now displays:

```
* Please verify password for account DBA [ ]:
```

Enter the password a second time in order to verify it. The password must conform to any minimum length rules set up by your system manager. VMSINSTAL does not provide a dummy password.

8. VMSINSTAL now displays:

```
* Which disk do you want to use ? [SYS$SYSDEVICE]:
```

Enter a system logical name of a disk device or press RETURN to accept the default value. All layered Software AG products will then be installed on the specified device.

If a device name is entered which is not in the system logical name table, the installation procedure will ask whether you want to enter another logical device name.

```
* Do you want to enter a new device name? [YES]:
```

Enter "N" to keep the device name given, or press RETURN to reenter a disk device name.

9. VMSINSTAL now displays:

```
* Which top level directory do you want to use ? [SAG]:
```

Enter the directory name of the top-level directory, which will then be used by all Software AG products. The specified directory is created by the installation procedure, with the UIC given in step 6. Software AG recommends that the default directory name "SAG" is used. If an existing account is used, note that the installation procedure sets the default of the account to this directory.

The Sagbase installation will not allow an existing directory to be used. Therefore, if the given directory name already exists on the given device, VMSINSTAL now displays:

```
* Enter new device and directory name ? [YES]:
```

Press RETURN to go back to step 8 to enter a new device and/or a new directory name, or enter "N" and press RETURN to terminate the installation procedure.

10. If disk quotas are enabled on your disk and it is a new account, VMSINSTAL now displays:

```
* How many blocks do you want to use ? [200000]:
```

Enter an integer, or press RETURN to accept the default value.

If the account already exists, VMSINSTAL now displays its disk quota settings. If the settings are less than the default values, VMSINSTAL displays the following:

```
* How many blocks do you want for user <account> ? [200000]:
```

Enter an integer, or press RETURN to accept the default value.

Sagbase is now installed.

3 Installing and Setting Up Natural on OpenVMS

This document describes how to set up and install Natural 6.3 on an OpenVMS platform.

Product Requirements

The following topics are covered below:

- Required Memory Space
- Disk Space
- Related Software AG Products

See also *Supported Operating Systems* in the *Release Notes*.

Required Memory Space

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 `NATPARM`, especially by the values of profile parameters such as `USIZE` and `SSIZE`.

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

Disk Space

The space required on disk will be checked by the PCSI utility during the installation.

Approximately 385 MB of hard-disk space is required for Natural, another 20 MB for Natural Security, and another 8 MB for Natural Development Server.

Related Software AG Products

The following product is required for installing Natural for OpenVMS:

- Sagbase (GBA) Version 1.3.

Natural 6.3 requires:

- EntireX Broker Stub Version 8 to access a remote EntireX Broker (necessary if RPC is used).

Natural 6.3 includes interfaces to:

- Adabas Version 6 (necessary if Natural Security, Natural Command Processor or Natural Development Server is used).
- Entire Net-Work Client Version 1.3 or above (necessary if a remote Adabas database is used).

The Natural Distribution Kit

The Natural distribution kit on the installation medium contains the installation files for OpenVMS. An example of the directory hierarchy on the installation medium is shown in the section *Directory Structure of the Installation Medium*.

Please note that the license key file is not contained on this installation medium. It is delivered separately in your product package. If this is not the case, it can be obtained from Software AG.

Before You Start

This section contains important information on the necessary activities before installing Natural on an OpenVMS platform.

The following topics are covered below:

- General Information
- Required UAF and SYSGEN Parameters
- Required Process Privileges

General Information

Please note the following before you start the Natural installation:

- Software AG recommends some common steps for the installation of Software AG products on OpenVMS. See *Installing and Setting Up Software AG Products on OpenVMS* for a detailed description.

- Before you start the installation, back up your current product version.

- During the installation, you need a valid license key file.

- Ensure that prerequisite software is installed.

Required UAF and SYSGEN Parameters

The following UAF (User Authorization File) and SYSGEN parameters should have at least the following values for each Natural user:

Parameter	Function	Minimum Value	Utility
FILLM	File limit	100	UAF
TQCNT	Timer queue elements	10	UAF
ENQLM	Lock queue entry limit	1000	UAF
BYTLM	Byte limit	30000	UAF
MAXBUF	Maximum size of buffered I/O transfer	4096	SYSGEN
JTQUOTA	Job table quota	2048	UAF
PGFLQUO	Page file quota	50000	UAF
PROCSECTCNT	Process section count	70	SYSGEN

To install the recommended Natural images, the following system resources are required:

Images for	GBLPAGES	GBLSECTIONS
Natural Nucleus	10000	50
Natural Buffer Pool	8000	1

Required Process Privileges

To install the Natural images and to create the Natural buffer pool, the following system privileges are required: CMKRNL, SYSNAM, SYSPRV, PRMGBL, SYSGBL, BYPASS.

The process privilege TMPMBX is required before Natural can be used.

Installing Natural in a Cluster Environment

In a cluster environment, you must install Natural on each node on which it is to be used.

Initial Installation

Depending on the Sagbase installation, the initial Natural installation within a cluster will choose either the common or the specific root directory. Each node must first be prepared by installing Sagbase. The installation procedure checks for an existing Natural installation in the cluster.

Subsequent Installations

Subsequent installations consist of the following steps:

- Checking whether or not system parameters have correct values.

- Modifying *NATBPENV_<nodename>.COM* according to the parameters specified.

- Modifying the startup component database if *STARTUP_NAT<v>.COM* was found in `SYS$STARTUP`.

- Executing the command procedure *STARTUP_NAT<v>.COM*.

> **Note:** *<v>* in the above file name stands for the first digit of the Natural version number.

Installing Natural in an Adabas or Entire Net-Work Environment

Starting with Adabas Version 6.1 and Entire Net-Work Version 7.4, Software AG uses an access control list protection mechanism for Adabas-based products on OpenVMS. This provides a more refined level of protection than that which is available with UIC-based protection.

To make sure that Natural works in an environment with Adabas Version 6.1 or above or Entire Net-Work Client Version 1.4 or above, see *Installing Software AG Products in an Adabas or Entire Net-Work Environment*.

Multiple Versions of Natural

You can use more than one Natural version on your system. Image names contain the current version number, and the command procedure *LOGIN.COM* is downward compatible.

When *LOGIN.COM* is called, the parameter `P1` should be set to the value of the full version number of the used Natural version. For example, `@SAG$ROOT:[NATURAL]LOGIN 631200`.

Activating Another Natural Version

If another version is to be used in the job environment of a specific user, the UAF parameter `JTQUOTA` must be set to 2048.

If you have already installed Natural system-wide by executing *STARTUP_NAT<v>.COM*, the value of the parameter `P1` was set to the value of the installed Natural version.

You can now activate another version of Natural in a job environment by executing *STAR-TUP_NAT<v>.COM* with the parameter `P1` set to a different value of an existing Natural version.

Natural Directory Structure

Natural will be installed in the *SAG$ROOT:[NATURAL.V<version>]* directory.

The Natural logicals are to be found in a version-specific name table called *NATURAL_C$V<version>_LOGICAL_NAMES*.

Overview of the Installation Procedure

The installation procedure PSCI automatically performs the following steps when used to install Natural:

- Checks whether the prerequisite version of the operating system is running.
- Temporarily sets the privileges (`BYPASS`, `CMKRNL`, `SYSNAM`).
- Checks whether Sagbase (GBA) is installed.
- Sets the owner of the *SAG$ROOT* directory to all installed product directories and files.
- Checks whether system parameters have correct values.
- Registers the product Sagbase to PCSI, if required.
- Calculates and verifies the disk space needed for installation on both the work-directory device and the installation device.
- Invokes the Natural suite installation.
- Creates Natural directories, if necessary.
- Moves all files and images to the appropriate directories.
- Sets protections for files and directories.
- The Natural product installation in the Natural product suite asks whether you want to copy *STARTUP_NAT<v>.COM* into the *SAG$ROOT:[NATURAL]* directory or the *SYS$STARTUP* directory.

  > **Note:** If you want Natural to be loaded and activated automatically at every booting, specify the option that the *STARTUP_NAT<v>.COM* shall be moved to *SYS$STARTUP* during the PCSI installation. An entry in the system startup database will then automatically be generated. When rebooting, *STARTUP_NAT<v>.COM* will then be invoked with the most current Natural version number as parameters `P1` and `P2` will be set to "BP". For more information, see *Changing a Process Environment with STARTUP_NAT<v>.COM*.

- The Natural product installation in the Natural product suite asks whether you want to modify the system startup database (only if the directory *SYS$STARTUP* was selected to contain *STARTUP_NAT<v>.COM*).

- Creates the patch level file in the version subdirectory of the Natural directory (*V<version>*).

    > **Note:** Patch level files are for internal use and should not be modified or deleted. They are used for other installations.

- Inserts the node-specific buffer pool section into the local configuration file.

- Asks for the location of the buffer pool section file.

- Creates the buffer pool start procedure *NATBPENV_<nodename>.COM*.

    > **Note:** For more information, see *Activating the Natural Buffer Pool*.

- Executes *STARTUP_NAT<v>.COM* for the new Natural version.

- Verifies the Natural installation.

- The Natural suite installation invokes the installation of other products in the suite such as Natural Security or Natural Development Server.

PCSI Installation Procedure

Before you start installing Natural using the PCSI procedure, perform the necessary steps as described in *Installing and Setting Up Software AG Products on OpenVMS*.

You started the installation using the command procedure *SETUP.COM* located on the installation medium to install Natural in the OpenVMS environment.

SETUP.COM copies the Natural PSC file from the installation medium to the *SAG$ROOT:[SAGKITS]* directory and starts the Natural suite installation of the Polycenter Software Installation utility (PCSI). The suite installation automatically invokes the single product PCSI installations for Natural, Natural Security and Natural Development Server. During the installation procedure, a number of general information messages are displayed. Read all messages carefully and follow any advice they may provide.

Continue the Suite Installation

If you have interrupted the *SETUP.COM* procedure after it has copied the product kits from the installation medium to the *SAG$ROOT:[SAGKITS]* directory, you can also start the Natural suite installation by entering the following:

```
product install NAT_<version>_SUITE /destin=sag$root:[000000] /OPTIONS=NOVALIDATE ↵
```

After the Natural suite is started, you will be informed. For example:

```
The following product has been selected:
  SAG I64VMS NAT_631200_SUITE V6.3 Platform (product suite)

Do you want to continue? [YES] ↵
```

Enter "YES" to continue the installation.

```
Configuration phase starting ...

You will be asked to choose options, if any, for each selected product and for
any products that may be installed to satisfy software dependency requirements.

SAG I64VMS NAT_631200_SUITE V6.3: NAT-suite for OpenVMS/Itanium

Do you want the defaults for all options? [YES] ↵
```

Enter "NO" if you want to set the options for single product installations.

```
Do you want to install NAT<version>? [YES] ↵
```

Enter "YES" to continue with the Natural PCSI installation.

Modify the PCSI Options

When you are asked whether you want to use the defaults for all options, enter "NO". You can then modify the following options (the recommended actions are given below):

Move STARTUP_NAT<v>.COM to SYS$STARTUP?
    Press RETURN to accept the default: the startup file is moved to the *SYS$STARTUP* directory and an entry is made in the startup database. Software AG recommends running the *STARTUP_NAT<v>.COM* procedure during system startup.

    If you enter "NO", the startup file will be moved to the directory *SAG$ROOT:[NATURAL]*.

Enable STARTUP_NAT<v>.COM using SYSMAN?
    Only shown when you used the default value for the previous question.

    Press RETURN to generate entries in the system startup database in order to execute the procedure automatically during system startup.

An entry of the following form will be generated:

```
with P1:<version>, P2:BP, P3:INST
```

Phase	Mode	File
LPBETA	DIRECT	STARTUP_NAT*<v>*.COM

After rebooting the system, *STARTUP_NAT<v>.COM* defines the Natural logical table, starts the Natural buffer pool, and installs the Natural images.

Run STARTUP_NAT*<v>*.COM after successful installation?
If you want to run the startup file during the installation, enter "YES".

If you enter "NO", you have to start the startup file manually after the product suite installation.

Run Natural buffer pool after successful installation?
If you want to run the Natural buffer pool after the installation, enter "YES". The prerequisite for this is that you have also entered "YES" for the option **Run STARTUP_NAT*<v>*.COM after successful installation?**.

Are you satisfied with these options?
Not shown when Natural is installed with the suite installation.

If you enter "YES", the procedure now installs Natural to the destination directory.

If you enter "NO", you can review and change your options.

If you are installing Natural with the Natural suite installation, you are asked whether you want to install other products included in the suite. For example, for Natural Development Server (the other product installations are described separately in this documentation):

```
Do you want to install NDV22? [Yes]
```

If a license file is required for a product in the suite, you will be asked for a license file.

```
License file >SYS$LOGIN:NDV22.XML<
```

After the PCSI installation of the products in the suite is finished, the post-installation steps described in the above options are performed. Answer the questions (such as the location of the buffer pool) asked by the post-installation procedures. You will be informed whether the post-installation steps were successful.

After the successful installation of the suite, you are informed about the installed products, for example:

```
The following products have been installed:
    SAG I64VMS NAT_631200 V 6.3           Layered Product
```

Continue the PCSI Installation

A message appears during the installation process, informing you that the product "SAG I64VMS NAT_<version> V<version> Layered Product" has been selected, and asks whether you want to continue.

When you answer "YES", the installation procedure checks whether the product Sagbase (product code GBA) has already been installed and registered with the PCSI utility. If Sagbase has been installed but not yet registered, you will be asked to do so. Register by following the instructions on the screen. If the Sagbase software has not been found on your system the installation aborts. In this case, follow the steps in *Installing Sagbase on OpenVMS*.

Information on the **product license key** is shown. Check whether the license key file is available on *SYS$LOGIN* of the installing user. Without a proper license key file, the installation will abort.

Set Up the Natural Buffer Pool Section File

The procedure inserts the node-specific buffer pool section into the local configuration file.

The information about the global section file for the Natural buffer pool file is displayed. You have the choice to place the section file into the *NATETC* directory or to another location.

If you answered **Run STARTUP_NAT<v>.COM after successful installation** with "YES", and if you selected the buffer pool BP to be started, the procedure continues by executing *STAR-TUP_NAT<v>.COM* with parameters P1 (version number), P2 ("BP") to define the logical names required by Natural, and P3 ("INST") to install the Natural images. See the section *Changing a Process Environment with STARTUP_NAT<v>.COM* below.

After the Installation

The following topics are covered below:

- Verifying the Installation Procedure
- Completing the Installation
- Changing a Process Environment with STARTUP_NAT<v>.COM

   ▪ Activating the Natural Buffer Pool

Verifying the Installation Procedure

To verify the product entry in the PCSI database enter:

```
PRODUCT SHOW PRODUCT NAT_<version>
```

Completing the Installation

After the Natural suite installation (PCSI), the following post-installation steps for Natural have to be performed.

Go to the following directory:

```
SET DEF SAG$ROOT:[NATURAL.V<version>.INSTALL]
```

In this directory, execute the following procedure:

```
@SAGINST_NAT.COM
```

The **Installation Procedure** screen appears. It offers the following functions:

```
1 - Load Natural modules
2 - Check logfile of inpl procedure
3 - Specify Adabas DBID for SYSNCP
4 - Create SYSNCP file
```

To complete the installation, first execute function 1, then execute function 2. If you want to use the Natural command processor, execute functions 3 and 4.

Your installation is now complete.

To set the Natural symbols, run the *LOGIN.COM* command procedure:

```
SET DEF SAG$ROOT:[NATURAL]
@LOGIN.COM <version>
```

for example, `@LOGIN.COM 631200`.

To invoke Natural, enter "NAT63".

Changing a Process Environment with STARTUP_NAT<v>.COM

During the Natural installation with PCSI as described above, the command procedure *STARTUP_NAT<v>.COM* was executed for the environment, if you answered **Run STARTUP_NAT<v>.COM after successful installation?** with "YES". However, if you want to change a user-specific environment, you can use *STARTUP_NAT<v>.COM* again, but you specify different parameters. These parameters are:

Parameter	Description
<p1>	Natural version.
<p2>	"BP" if you want to activate the Natural buffer pool, or "NOBP" if you do not want to activate it.
<p3>	"INST" if you want to install the Natural images, or nothing if you do not want to install them.

> **Note:** If you want to install the Natural images, you must have the privileges SETPRV, CMKRNL, SYSNAM or SYSPRV.

Enter the following command to start *STARTUP_NAT<v>.COM*:

```
@STARTUP_NAT<v> <p1> <p2> <p3>
```

For example:

```
@STARTUP_NAT6 631200 BP INST
```

Activating the Natural Buffer Pool

To activate the Natural buffer pool, you execute the command procedure *STARTUP_NAT<v>.COM* with parameter P2 set to "BP" as in the following example:

```
@STARTUP_NAT<v>.COM <version> BP
```

4 General Information for Starting the Daemons

This chapter applies to the Natural Development Server daemon and the Natural Web I/O Interface daemon.

IMPERSONATE Privilege

The account from which a daemon is started requires the `IMPERSONATE` privilege.

SYSUAF Limits

The following `SYSUAF` limits need to be adapted for the account from which the daemon is started.

Name	Default Value	Description
`FILLM`	128	The open file limit is the maximum number of files that can be open at one time, including active network logical links.
`BIOLM`	150	The buffered I/O count limit is the maximum number of buffered I/O operations.
`DIOLM`	150	The direct I/O count limit is the maximum number of direct I/O operations (usually disk) that can be outstanding at one time.
`BYTLM`	128000	The buffered I/O byte limit is the maximum number of bytes of non-paged system dynamic memory that a user's job can consume at one time.

The sizes of `FILLM`, `BIOLM`, `BYTLM` and `PRCLM` depend on the number of started sessions. Make sure to increase these values so that they meet your requirements.

Command Procedure STARTUP_DAEMONS.COM

After the installation of Natural, the command procedure *STARTUP_DAEMONS.COM* can be found in the directory *SAG$ROOT:[NATURAL]*. You can use this command procedure to ensure that a daemon is started in the correct account during the startup of a machine.

You can either use the command procedure as it is, or you can edit it to adapt it to your needs. In both cases, you have to copy the (edited) command procedure to *SYS$STARTUP* and then add it to the startup database (see below).

The command procedure is controlled by the parameter `P1` and passes the parameters `P2` through `P8` to the subsequent procedures as needed.

Arguments for P1	Description
NDV	Starts only the daemon for the Natural Development Server. If required, you can specify P2 through P8.
NWO	Starts only the daemon for the Natural Web I/O Interface server. You must specify a port number in P2.
ALL	Starts all of the above daemons. In this case, you cannot enter arguments. Instead, you have to edit the command procedure as described below.

If you want to specify ALL for the parameter P1, you have to edit the command procedure and adapt the following lines to your requirements:

```
$  l_user     = "SAG"
$  l_ndv_para = """START"""
$  l_nwo_para = """2800"""
```

Variable	Description
l_user	The name of the account under which the daemons are to run.
l_ndv_para	You can specify all start parameters that are valid for the Natural Development Server daemon. These parameters are described in the Natural Development Server documentation for OpenVMS. You can find this documentation on *http://documentation.softwareag.com/*. Example: `$ l_ndv_para = """-port=1234""",""parm=test"""` Instead of the above parameters, you can also specify START. In this case, the values defined in *START_NATDVSRV.COM* are used.
l_nwo_para	The port number for the Natural Web I/O Interface daemon.

Using the following command, you can add the command procedure *STARTUP_DAEMONS.COM* to the startup database:

```
$mcr sysman startup add file /mode=direct /phase=end STARTUP_DAEMONS.COM ↵
/parameter=(P1:<arg1>,P2:<arg2>,...,P8:<arg8>)
```

For example:

```
$mcr sysman startup add file /mode=direct /phase=end STARTUP_DAEMONS.COM ↵
/parameter=(P1:NDV,P2:"-p=1234",P3="parm=test")
```

5 Installing and Setting Up Natural Development Server on OpenVMS

This chapter describes how to install Natural Development Server Version 2.2 on an OpenVMS platform.

Natural Development Server can be installed with a Natural **suite installation**.

Product Requirements

The following topics are covered below:

- Disk Space
- Prerequisites
- License Key File Issues

Disk Space

The space required on disk will be checked by the PCSI utility during the installation. See *Disk Space* in the section *Installing and Setting Up Natural on OpenVMS*.

Prerequisites

Make sure that the following software has been installed on your computer:

- Natural.

- Adabas.

- Entire Net-Work (only required if the `FDIC` system file is located in a remote database).

Natural Development Server uses the same versions of Adabas and Entire Net-Work as Natural. For the supported versions, see *Related Software AG Products*.

Also, make sure that *LOGIN.COM* and *STARTUP_<name><v>.COM* for the above products have been executed with the required product versions.

License Key File Issues

You need a **license key file** to install and activate Natural Development Server.

Before you start the installation, ensure that the license key file is available locally on *SYS$LOGIN* of the installing user on the machine where you intend to install Natural Development Server.

In general, Software AG recommends you to place the license key file on the file system before starting the installation.

Installing Natural Development Server in a Cluster Environment

If you install Natural Development Server in a cluster environment, you have to install it on each node in the cluster environment.

> **Note:** Sagbase must be installed on each node on which Natural Development Server is to be installed.

Initial Installation in a Cluster Environment

Depending on how Sagbase has been installed, the initial Natural Development Server installation within a cluster will choose either the common or the specific root directory. The installation procedure checks if there is already an existing Natural Development Server installation in the cluster.

Update Installations in a Cluster Environment

During an update installation the values of the system parameters are automatically checked.

Overview of the Installation Procedure

The Natural Development Server installation procedure performs the following steps:

- Checks whether the prerequisite version of the operating system is running.
- Temporarily sets the privileges (`BYPASS`, `CMKRNL`, `SYSNAM`).
- Checks whether Sagbase (GBA) is installed.
- Sets the owner of the *SAG$ROOT* directory to all installed product directories and files.
- Checks whether system parameters have correct values.
- Registers the product Sagbase to PCSI, if required.
- Calculates and verifies the disk space needed for installation on both the work-directory device and the installation device.
- Checks whether Natural is installed.
- Creates the directories *SAG$ROOT:[NATNDV]* and *SAG$ROOT:[NATNDV.V`<version>`]*.
- Moves all files and images to the appropriate directories.
- Sets protections for files and directories.
- Creates the patch level file in the version subdirectory of the Natural Development Server directory.

> **Note:** Patch level files are for internal use and should not be modified or deleted. They are used for other installations.

PCSI Installation Procedure

Before you start installing Natural Development Server using the PCSI procedure, perform the necessary steps as described in *Installing and Setting Up Software AG Products on OpenVMS*.

You started the installation using the command procedure *SETUP.COM* located on the installation medium to install Natural Development Server in the OpenVMS environment.

SETUP.COM copies the Natural Development Server PSC file from the installation medium to the *SAG$ROOT:[SAGKITS]* directory and starts the Natural suite installation of the Polycenter Software Installation utility (PCSI). The suite installation automatically invokes the single product PCSI installations such as Natural and Natural Development Server. During the installation procedure, a number of general information messages are displayed. Read all messages carefully and follow any advice they may provide.

Continue the Suite Installation

During the Natural suite installation (see *Continue the Suite Installation* in the section *Installing and Setting Up Natural on OpenVMS*), you will be asked whether you want to install Natural Development Server:

```
Do you want to install NDV<version>? [YES] ↵
```

Enter "YES" to continue with the Natural Development Server PCSI installation.

Continue the PCSI Installation

A message appears during the installation process, informing you that the product "SAG I64VMS NDV_<version> V<v.r> Layered Product" has been selected.

The installation procedure checks whether the product Sagbase (product code GBA) has already been installed and registered with the PCSI utility.

Information on the **product license key** is shown. Check whether the license key file is available on *SYS$LOGIN* of the installing user. Without a proper license key file, the installation will abort.

After the successful installation of the suite, you are informed about the installed products.

You will have to perform some post-installation steps (that is, set up Natural Development Server and start the daemon). See *After the Installation* for further information.

After the Installation

The following topics are covered below:

- Verifying the PCSI Installation Procedure
- Completing the Installation
- Starting the Daemon

Verifying the PCSI Installation Procedure

To verify the product entry in the PCSI database, enter the following:

```
PRODUCT SHOW PRODUCT NDV_<version>
```

Completing the Installation

When Natural has been installed, enter the following commands to proceed with the setup of Natural Development Server:

```
@ADABAS$VERSION:SYMBOLS
```

```
SET DEFAULT SAG$ROOT:[NATNDV.V<version>.INSTALL]
```

```
@SAGINST_NDV.COM
```

⚠️ **Important:** Several functions of the *SAGINST_NDV.COM* command procedure require Natural administrator rights. Before you start the command procedure, you should therefore make sure that you are defined as a Natural administrator in the local configuration file (see *Administrator Assignments* in the *Configuration Utility* documentation).

The following screen appears:

```
  Development Server for Natural V<version>
                      Installation Procedure

------------------------------------------------------------------------
                                         Parameter File=NATPARM
                                                     DBID=000
        1  -   Specify Adabas DBID for FDIC file
                (DBID=000 means creation of a procedure for a remote database)
        2  -   Create command procedure to load FDIC into remote database

        3  -   Specify Natural parameter file for INPL
        4  -   Specify FDIC profile parameter in parameter file
                (same DBID as in Step 1, same FNR as in Step 2)

        5  -   Add database assignment for FDIC to
                global configuration file

        6  -   Start NDV INPL procedure (this step takes some time)
        7  -   Check log file of INPL procedure




Enter the function   [exit]                      :
```

Execute all functions shown in the screen, one after the other. With function 1, you decide whether to work with a local database or a remote database.

With function 2, the following parameters are shown with their default values. If required, you can modify the default values.

Parameter for Database File	Default Value
Number of blocks for DATA	1000
Number of blocks for NORMAL INDEX	1000
Number of blocks for UPPER INDEX	100
Maximum number of ISNs	60000
Padding factor for ASSO	10
Padding factor for DATA	10

If you want to create a new FDIC file for your Natural Development Server environment (function 2), check if the Adabas nucleus parameters listed in the following table are set for the database you want to use for your Natural Development Server system file (FDIC).

`LWP`	Must be at least 1,000,000.
`MGC`	Must be at least 50.
`NISNHQ`	Must be at least 1,000.
`OPTIONS`	The option `TRUNCATION` must be set in the `OPTIONS` parameter.

In the case of a remote database, proceed as follows before executing function 6:

- Transfer the command procedure (*NDVDIR:[V`<version>`]FDIC_NDV`<version>`.COM*) to the OpenVMS node on which the database is running and then execute it.

- Make sure that the `FDIC` file can be accessed.

Starting the Daemon

When Natural Development Server has been installed as described above, you have to start the Natural Development Server daemon. This is described in the *Natural Development Server for OpenVMS* documentation.

6 Installing Natural Security on OpenVMS

This chapter describes how to install Natural Security on an OpenVMS platform.

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.

⚠️ **Important:** 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.

See also *Natural Security On Different Platforms* in the *Natural Security* documentation.

Product Requirements

The following topics are covered below:

- Disk Space
- Prerequisites
- License Key File Issues
- Shared Natural Security System File FSEC

Disk Space

The space required on disk will be checked by the PCSI utility during the installation. See *Disk Space* in the section *Installing and Setting Up Natural on OpenVMS*.

Prerequisites

Make sure that the following software has been installed on your computer:

- Natural (same version and update package or patch level as that of Natural Security). Natural and Natural Security will be installed with the Natural suite installation.

- Adabas.

- Entire Net-Work (only required if the `FSEC` system file is located in a remote database).

Natural Security uses the same versions of Adabas and Entire Net-Work as Natural. For the supported versions, see *Related Software AG Products*.

Also, make sure that *LOGIN.COM* and *STARTUP_<name><v>.COM* for the above products have been executed with the required product versions.

License Key File Issues

You need a **license key file** to install and activate Natural Security.

Before you start the installation, ensure that the license key file is available locally on *SYS$LOGIN* of the installing user on the machine where you intend to install Natural Security.

In general, Software AG recommends you to place the license key file on the file system before starting the installation.

Shared Natural Security System File FSEC

The Natural Security system file `FSEC` in the Adabas database which has been installed once for a Natural Security Version 6 can be used for all later Natural Security versions.

Installing Natural Security in a Cluster Environment

If you install Natural Security in a cluster environment, you have to install it on each node in the cluster environment.

> **Note:** Sagbase must be installed on each node on which Natural Security is to be installed.

Initial Installation in a Cluster Environment

Depending on how Sagbase has been installed, the initial Natural Security installation within a cluster will choose either the common or the specific root directory. The installation procedure checks if there is already an existing Natural Security installation in the cluster.

Update Installations in a Cluster Environment

During an update installation the values of the system parameters are automatically checked.

Overview of the Installation Procedure

The Natural Security installation procedure performs the following steps:

- Checks whether the prerequisite version of the operating system is running.
- Temporarily sets the privileges (`BYPASS`, `CMKRNL`, `SYSNAM`).
- Checks whether Sagbase (GBA) is installed.
- Sets the owner of the *SAG$ROOT* directory to all installed product directories and files.

- Checks whether system parameters have correct values.

- Registers the product Sagbase to PCSI, if required.

- Calculates and verifies the disk space needed for installation on both the work-directory device and the installation device.

- Checks whether Natural is installed.

- Creates the directories *SAG$ROOT:[NATSEC]* and *SAG$ROOT:[NATSEC.V`<version>`]*.

- Moves all files and images to the appropriate directories.

- Sets protections for files and directories.

- Creates the patch level file in the version subdirectory of the Natural Security directory.

> **Note:** Patch level files are for internal use and should not be modified or deleted. They are used for other installations.

PCSI Installation Procedure

Before you start installing Natural Security using the PCSI procedure, perform the necessary steps as described in *Installing and Setting Up Software AG Products on OpenVMS*.

You started the installation using the command procedure *SETUP.COM* located on the installation medium to install Natural Security in the OpenVMS environment.

SETUP.COM copies the Natural Security PSC file from the installation medium to the *SAG$ROOT:[SAGKITS]* directory and starts the Natural suite installation of the Polycenter Software Installation utility (PCSI). The suite installation automatically invokes the single product PCSI installations such as Natural and Natural Security. During the installation procedure, a number of general information messages are displayed. Read all messages carefully and follow any advice they may provide.

Continue the Suite Installation

During the Natural suite installation (see *Continue the Suite Installation* in the section *Installing and Setting Up Natural on OpenVMS*), you will be asked whether you want to install Natural Security:

```
Do you want to install NSC<version>? [YES] ↵
```

Enter "YES" to continue with the Natural Security PCSI installation.

Continue the PCSI Installation

A message appears during the installation process, informing you that the product "SAG I64VMS NSC_⟨*version*⟩ V⟨*v.r*⟩ Layered Product" has been selected.

The installation procedure checks whether the product Sagbase (product code GBA) has already been installed and registered with the PCSI utility.

Information on the **product license key** is shown. Check whether the license key file is available on *SYS$LOGIN* of the installing user. Without a proper license key file, the installation will abort.

After the successful installation of the suite, you are informed about the installed products.

Depending on the type of installation, initial or update, you will have to perform some post-installation steps (see below).

Verifying the PCSI Installation Procedure

To verify the product entry in the PCSI database, enter the following:

```
PRODUCT SHOW PRODUCT NSC_<version>
```

Completing the Initial Installation

The information in this section is only relevant if this is a first-time installation of Natural Security.

1. Make sure that Natural Version ⟨*version*⟩ (where ⟨*version*⟩ must be the same version as the Natural Security version you are installing) is installed on your OpenVMS system.

2. Make sure that the Adabas database is running.

3. Enter the following commands to start the installation procedure:

```
SET DEF SAG$ROOT:[NATSEC.V<version>.INSTALL]
```

```
@SAGINST_NSC.COM
```

⚠️ **Important:** Several functions of the *SAGINST_NSC.COM* command procedure require Natural administrator rights. Before you start the command procedure, you should therefore make sure that you are defined as a Natural administrator in the local configuration file (see *Administrator Assignments* in the *Configuration Utility* documentation).

A menu is displayed providing several functions.

4. Perform each of the following functions:

```
1  -   Specify Adabas DBID for FSEC file
2  -   Create database file for FSEC
3  -   Select Natural parameter file for INPL
4  -   Specify FSEC profile parameter in parameter file
 (same DBID as in Step 1, same FNR as in Step 2)
5  -   Add FSEC definition to NATCONF.CFG
6  -   Start FSEC INPL procedure (this step takes some time)
7  -   Check log file of INPL procedure
8  -   Copy NATSEC.EXE to Natural default directory
```

In the functions 1 and 2, you have to specify the DBID and FNR of the FSEC file to be loaded into the Adabas database.

When you choose function 4, the **Natural Parameter Setting** screen for the current parameter file appears. Using the **Edit** option, enter the same DBID and FNR for FSEC that you specified in functions 1 and 2 respectively. For further information, see the *Overview of Profile Parameters* in the *Configuration Utility* documentation.

In function 5, you have to specify the section [NAT-DB-TABLE] in Natural's global configuration file *NATCONF.CFG* which must contain the following subsection:

```
###Natural FSEC Definition
 [DBID_nnn]
 GEN = ADA
 EXE = ADA
 [DBID_nnn-END]
```

where *nnn* is the number of the database which contains FSEC. If this subsection is missing (because *NATCONF.CFG* was modified using the Configuration Utility), add it, and if it is present, edit it accordingly.

After you have performed functions 1 to 8, Natural Security is installed and operational.

5. Proceed as described below in the section *After the Natural Security Installation*.

Completing the Update Installation

The information in this section is only relevant if this is not a first-time installation of Natural Security.

1. Make sure that Natural Version <version> (where <version> must be the same version as the Natural Security version you are installing) is installed on your OpenVMS system.

2. Make sure that the Adabas database is running.

3. Enter the following command to start the installation procedure:

```
@SAGINST_NSC.COM
```

A menu is displayed providing several functions.

4. In the case of an upgrade installation, you have the choice to use your `FSEC` file from the previous installation or to create a new one.

   If you want to use an already existing `FSEC` file from a previous installation, skip function 2 and then use functions 3 and 4 to enter the DBID and FNR of your existing `FSEC` file.

   If you want to use a new `FSEC` file, perform function 2 and then use functions 3 and 4 to enter the DBID and FNR of the new `FSEC` file.

   Natural Security is now installed and operational.

5. If necessary, perform the functions 6, 7 and 8 of the *SAGINST_NSC.COM* procedure.

After the Natural Security Installation

If you have installed 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 and after the post-installation steps performed with the command procedure *SAGINST_NSC.COM*.

7 Uninstalling Software AG Products on OpenVMS

This chapter contains general information which applies when uninstalling any Software AG product on an OpenVMS platform.

Stopping the Daemons

Before uninstalling a product, stop all daemons that are running for the product.

Uninstalling Single Products

To uninstall a product which is delivered as a single product on the installation medium, you have to remove the product using the PCSI uninstallation utility.

Before uninstalling a product, stop all demons running for the product.

Check whether the product is in the PCSI database:

```
PRODUCT SHOW PRODUCT <name>_<version>
```

To remove the product:

```
PRODUCT REMOVE <name>_<version>
```

When you remove the product, the following items are deleted:

- The product entries in the PCSI database.
- All product files installed during the PCSI installation.

Product files created after the PCSI installation remain untouched and you can remove them manually.

Uninstalling Product Suites

To uninstall products delivered with a product suite, you can remove all of the products by calling the PCSI uninstallation of the product suite as follows:

```
PRODUCT REMOVE <name>_<version>_SUITE
```

You are guided through the uninstallation of all products included in the product suite and you have to confirm the removal of each single product.

When you remove a product, the following items are deleted:

- The product entries in the PCSI database.

- All product files installed during the PCSI installation.

Product files created after the PCSI installation remain untouched and you can remove them manually.

A product suite installation with PCSI creates dependencies between the single products. These dependencies are stored in the PCSI database. When you try to uninstall a single product, the PCSI database will inform you about any found dependencies; you have to be careful when you perform the uninstallation.

Caution: When you uninstall a prerequisite product such as Natural, you will probably not be able to use any other product from the product suite. In this case, a new installation of the prerequisite product will be required.