Entire Output Management

Installation on UNIX

Version 3.4.3

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ADABAS & NATURAL

This document applies to Entire Output Management Version 3.4.3 and all subsequent releases.

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

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Preface

This documentation describes the installation of Entire Output Management on a UNIX platform.

Entire Output Management is installed using the Software AG Installer, which you download from the Software AG Empower website at ***https://empower.softwareag.com/***.

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

This documentation is organized under the following headings:

System Requirements	Supported operating system platforms and prerequisites.
Important Information	Important information that you should be aware of before you start the installation.
Installing Entire Output Management	How to install Entire Output Management with the Software AG Installer.
Completing the Installation	How to proceed after the installation.
Uninstalling Entire Output Management	How to uninstall Entire Output Management.

For important last-minute information, see the readme file that is provided with Entire Output Management. You can find it in the Entire Output Management product documentation at ***http://documentation.softwareag.com/*** (Empower login required), or - when you have chosen to download the documentation during the installation of Entire Output Management - in a central directory named *_documentation* in your main installation directory.

1 About this Documentation

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Document Conventions

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

Online Information and Support

Software AG Documentation Website

You can find documentation on the Software AG Documentation website at **http://documentation.softwareag.com**. The site requires credentials for Software AG's Product Support site Empower. If you do not have Empower credentials, you must use the TECHcommunity website.

Software AG Empower Product Support Website

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

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

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

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

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

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

Software AG TECHcommunity

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

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

Data Protection

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

2 System Requirements

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Operating Environments

Operating System

Entire Output Management functions in any UNIX environment that supports Natural Version 8.3.1 or higher.

Data Access

Entire Output Management generates applications that access Adabas data structures.

Natural Security

If Natural Security is installed, access to Entire Output Management is protected and the use of its functions controlled by Natural Security.

Memory Space Requirements

There is no specific memory requirement for operating Entire Output Management.

Disk Space Requirements

The application SYSNOM requires approximately 35 MB of disk space during operation. At installation time, double this amount should be available.

If you install Natural and/or other required products in one step with Entire Output Management, see the installation documentation for these products for further information.

Software Requirements

Entire Output Management requires the products listed in the *Release Notes* under *Prerequisites for UNIX*.

The product versions mentioned in the *Release Notes* are the minimum versions for all platforms. It is recommended that you always use the latest versions of all Software AG products.

You can view all available Software AG product versions and check the dates when their maintenance ends by visiting Software AG's Empower web site at ***https://empower.softwareag.com/***. Go to **Products > Product Version Availability**.

If you intend to convert active reports to various binary formats like PDF or Postscript, you have to install third-party products. See *Converting the Report Format* in the *Concepts and Facilities* documentation.

If UNIX file systems are to be accessed, the UNIX utility "lsof" is required. On LINUX and other UNIX systems, "lsof" is already installed by default. On AIX systems, it usually isn't. So if you want to access AIX files, you will usually have to install "lsof" manually (as described in the corresponding IBM documentation).

License File

During the installation of Entire Output Management, the Software AG Installer prompts you to enter the path to a valid license file. The license file is an XML file which is delivered by e-mail.

The components that can be installed with Entire Output Management are based on your license file.

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Administrator Status

During the installation, the **Sudo** panel may appear. This happens because Entire Output Management depends on the installation of Natural where the **Sudo** panel may be used. For the installation of Entire Output Management, however, you do not need sudoers privileges.

User ID for Installation

Entire Output Management depends on Natural. Therefore, the user ID under which you run the Software AG Installer must not be longer than eight characters. If you use a longer user ID, an error message is shown. You can then exit the installer and use a different user ID or - in case you also want to install other products - return to the product selection tree and deselect Natural.

Installation Directory

During the installation, you are asked to specify an installation directory. The installation of Entire Output Management requires the installation of Natural. If Natural is already installed, choose the directory of your Natural installation. Otherwise, see *Installation* in the Natural for UNIX documentation for detailed information regarding the installation directory. The user that you are using to install must have full read and write permissions to this directory.

File Permissions

The user who starts the installation owns all files that are installed.

The user file-creation mode mask (`umask` command) determines the file permissions for newly created files. Make sure that the `umask` command you are using for the installation will not prevent users from accessing and executing the installed files. On UNIX systems, for example, the command `umask 022` allows full access rights for the file owner and read-only access rights for group members and others.

The Entire Output Management installation sets execution permissions (`chmod ug+x`) for the scripts located in the directory *`install-dir`*`/EntireOutputManagement/INSTALL`.

Side-by-Side Installations

Entire Output Management is a Natural application. Therefore, the rules for Natural also apply for Entire Output Management. For detailed information regarding side-by-side installations, see *Installation* in the Natural for UNIX documentation.

FNAT Usage

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

Entire Output Management can only be installed into this `FNAT`.

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

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

For this reason:

- Do not install products into the `FNAT` without the use of the Software AG Installer.
- Do not replace the default `FNAT` (*`install-dir`*`/Natural/fnat`) with another `FNAT`.
- Make sure to complete the installation of Entire Output Management by using the SYSPCI utility (this is explained later in this documentation).

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

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

FUSER Usage

During the installation of Entire Output Management, product-specific information is written to the `FUSER` system file (*`install-dir`*`/Natural/fuser`). The `FUSER` path must not contain a symbolic link.

Upgrading Your Entire Output Management Environment

When one of the first two digits of the version number changes, we consider an installation an **upgrade** installation.

Updating Your Entire Output Management Environment

When the first two digits of the version number remain the same and the third or fourth digit changes, we consider an installation an **update** installation.

An update installation does not prompt again for license files. The existing license files will be used.

4 Installing Entire Output Management

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

To install Entire Output Management

Software AG provides license files for Entire Output Management. Copy the license file to the machine on which you want to install Entire Output Management. You can copy the license file to any temporary location. The installer will ask for the location of your license file and will then copy it to the `common/conf` directory of your installation directory.

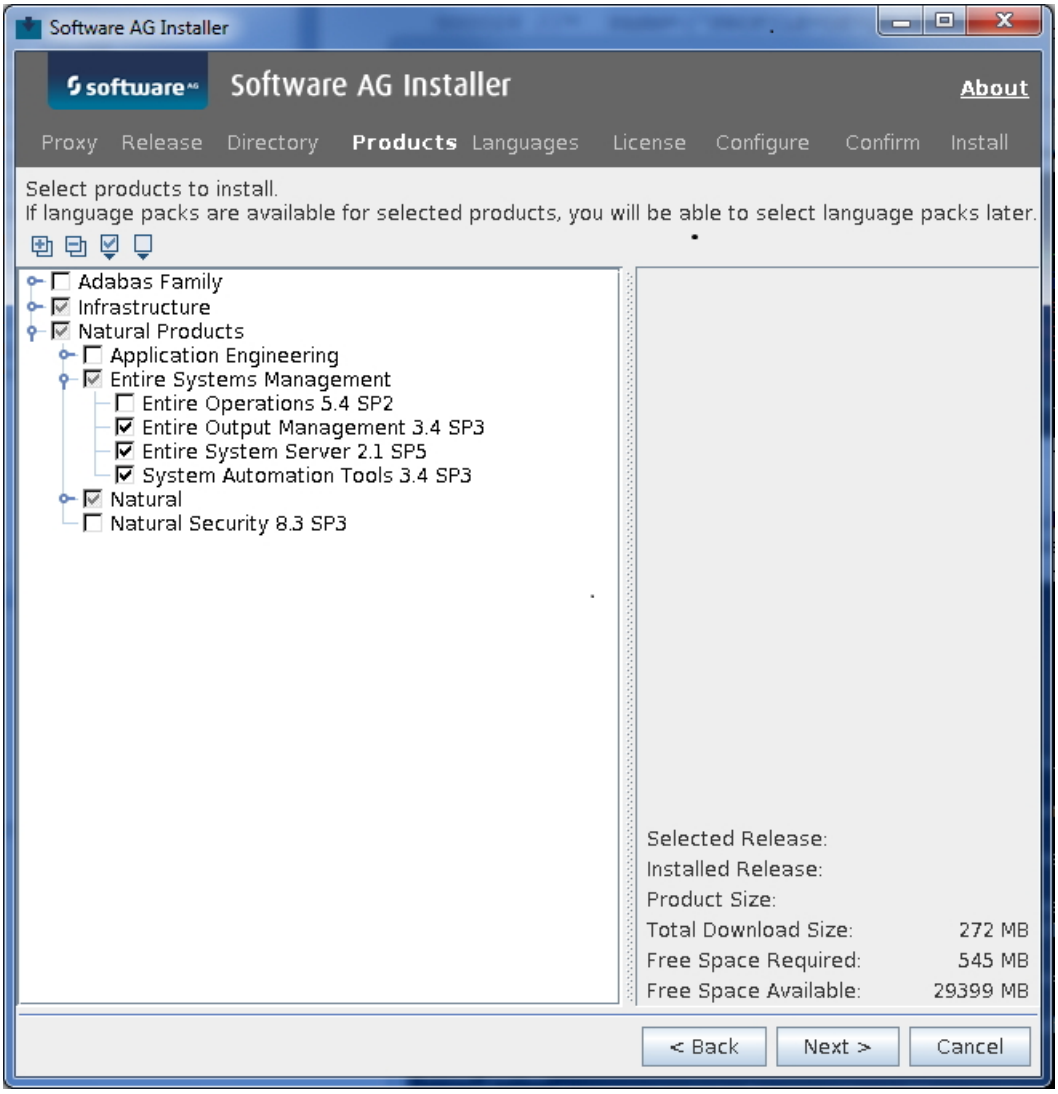
1 Start the Software AG Installer GUI as described in *Using the Software AG Installer*.

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

3 To install Entire Output Management with all of its product components, expand the **Natural Products** node and select **Entire Systems Management > Entire Output Management 3.4 SP3**.

   Or:

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



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

The following products are prerequisites and will be selected as well, if they are not already installed:

- Natural
- Entire System Server
- System Automation Tools

The installer automatically selects any additional components which are also required. If you have not yet installed the Natural development environment, these components are automatically selected.

Entire Output Management also requires Adabas. However, since it is possible to use a remote Adabas installation or an older Adabas version, this is not automatically selected in the tree.

4 Choose the **Next** button.

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

Note: If you are installing other products together with Entire Output Management, several panels may appear that are not explained in this documentation. See the documentation for these products for more information.

6 First-time installation only. Depending on your selection in the tree, the installer may ask for a license file. Enter the full path to the license file (or use the **Browse** button to select it from a dialog box), and choose the **Next** button.

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

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

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Defining Libraries and Users to Natural Security

After you have installed Entire Output Management for the first time and if Natural Security is active, you have to create security profiles in Natural Security for the Entire Output Management libraries and users, as described under *Natural Security Definitions* in the section *Installing and Customizing Entire Output Management on Mainframes*.

Important: You have to do this before invoking the SYSPCI utility for Entire Output Management. Otherwise, the initialization with the SYSPCI utility will fail.

Migration

On UNIX systems, a migration to Version 3.4.3 is possible from Version 3.3.1 or later versions, but not from earlier versions.

On UNIX systems, a data migration of all data of the system files is required.

UNIX requires an additional FDT option "HF" for some fields. This means that the whole Entire Output Management system file has to be unloaded, decompressed, recompressed, and reloaded. This is done by the installation utility with update installation. Make sure that there is enough free disk space to hold the complete Entire Output Management system file.

You have to perform the following steps for:

- the system file (`NOM-SYSF1_MASTER`);
- the active-data file (`NOM-ACTIVE_DATA`), if used;
- the container file (`NOM-CONTAINER`).

To migrate each Entire Output Management file manually:

1 Create a directory as a work directory and copy `$NOM_HOME/INSTALL/mig.bsh` and the `fdu` definition file into it, e.g. `nomsysf1.fdu`.

Enter an unused file number for a new Entire Output Management system file in `nomsysf1.fdu`.

Make sure you have sufficient space to keep the unloaded and uncompressed system file in that directory.

2 Backup your database and use it exclusively.

3 Supposing you are using database 100 and the current system file number is 5, select a free file number (e.g. 15) and change to the created directory.

Invoke the script as follows: `./mig.bsh 100 5 nomsysf1 15`

`mig.bsh` will renumber file 5 to 15, call several Adabas utilities which will change and add fields to the current system file, unload and decompress it, and change FDT options.

Then the file will be recompressed and loaded as file 5. The old file will be left in the system as file 15.

4 You need not specify a temporary file. If you want to replace the system file in place, invoke the utility as follows:

```
./mig.bsh 100 5 nomsysf1 5.
```

`mig.bsh` will write a log file `mig.bsh.log` into the install directory which contains the complete output of all Adabas utilities.

After you have performed the above steps for each file, execute the following scripts:

- `$NOM_HOME/INSTALL/migd.bsh`
- `$NOM_HOME/INSTALL/migmail.bsh`

The execution of the second script may require considerable time.

Setting Up Your Products Using the SYSPCI Utility

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

Before you can define Entire Output Management system files, the System Automation Tools system file (`LFILE 131`) has to be defined.

Entire Output Management requires the following Adabas system files:

- `NOM-SYSF1_MASTER`, where the logical file number (`LFILE`) is `206`.
- `NOM-ACTIVE_DATA`, where the logical file number (`LFILE`) is `91`.

  This is optional; if `NOM-ACTIVE_DATA` is not specified, `NOM-SYSF1_MASTER` will also be used for the active data.
- `NOM-CONTAINER` without a logical file number.

The database IDs and file numbers of the new/existing files `NOM-SYSF1_MASTER` and `NOM-ACTIVE_DATA` which you specify with the SYSPCI utility will be entered into the default parameter files of Entire Output Management (`NOMPARM`) and Entire Operations (`NOPPARM`, if available).

The required Adabas files can either be local or remote.

- **Remote Access**
  If the file is located in a remote database, Entire Net-Work must be active and the database must be accessible.
- **Existing Local File**
  Before you start the SYSPCI utility, make sure that the Adabas database containing the required files is active. With this version, you can continue to use your existing files.
- **New File**
  Before you start the SYSPCI utility, make sure that the Adabas database which will contain the required files is active. The SYSPCI utility will load and initialize these files. This should be also done if another file is required for your product.

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

For Entire Output Management, the SYSPCI utility offers the following optional function:

Option	Description
Load NOM data	If marked, the Entire Output Management data will be loaded into the Entire Output Management system file `NOM-SYSF1_MASTER`.

Invoking the SYSPCI Utility

In order to invoke the SYSPCI utility, you must first invoke Natural. You can then invoke the SYSPCI utility using the **Direct Command** window.

To invoke the SYSPCI utility

1 Enter the following command at the UNIX system prompt to invoke Natural:

```
natural
```

2 Select the **Direct** menu and press ENTER to invoke the **Direct Command** window.

3 Enter the following command in the **Direct Command** window:

```
SYSPCI
```

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

Invoking the SYSPCI Utility Using a Shell Script

It is possible to execute certain functions of the SYSPCI utility with a UNIX shell script. Two shell scripts are available in `<install-dir>/Natural/INSTALL` directory. They are called *syspci_reuse.sh* and *syspci_create.sh*. These scripts can be used to automatically call SYSPCI for each installed product to intialize the product.

The scripts can be used for the following tasks:

- **syspci_reuse.sh**
  This script executes the SYSPCI utility to initialize installed Natural products with already existing Adabas files.

  Note: The necessary conversion of Adabas files to the new version has to be done before starting this script.

- **syspci_create.sh**
  This script executes the SYSPCI utility to initialize installed Natural products and create the required Adabas files.

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

Scripts

After the installation, all scripts used to run Entire Output Management (`nom*.bsh`) are contained in the directory `$NOM_HOME`. Adapt them to suit your requirements.

Script	Function
`nomarc.bsh`	Starts the archiving tasks.
`nomcdn.bsh`	Starts the condense tasks.
`nomchkpr.bsh`	Checks for finalized printouts.
`nomconfi.bsh`	Manual confirmation of printouts.
`nominit.bsh`	Loads the initial sample objects of a new Entire Output Management version.
`nommon.bsh`	Starts the monitor tasks.
`nomprt.bsh`	Starts the printer tasks.
`nomrev.bsh`	Starts the revive tasks.
`nomrpc.bsh`	Starts an RPC server to be invoked by the Entire Output Management GUI Client or the Open Print Option (OPO).

Script	Function
nomshut.bsh	Can be used to shut down the monitor from outside of Entire Output Management.

Environment Variables

Make sure that the following environment variables are set appropriately:

Environment Variable	Function	Default Value
EOM_WORK	A directory used by Entire Output Management to store intermediate files or log information.	$NOM_HOME/work
EOM_ARC	The directory in which archive files are stored.	$NOM_HOME/archive

The environment variables must be known by the Entire System Server on UNIX which is accessed, not the Entire Output Management monitor itself (unless a monitor of type "L" (local) is used).

Monitor Defaults

The Entire Output Management monitor is accessed using the user ID and the password of a UNIX node definition which can be entered via **UNIX Defaults** (menu 8.1 > menu entry 13).

This is an addition to the **Monitor Defaults** (menu 8.1 > menu entry 2) and has to be created for the UNIX node where the monitor is executed.

Entering "M" in the suspend type definition indicates that the node is a monitor and must not be suspended by Entire Output Management. A type "M" monitor accesses Entire System Server on UNIX using EntireX, even if the destination Entire System Server resides on the same machine. However, it is possible to use an Entire System Server on the same machine by entering type "L": This will install the node as a local monitor which invokes Entire System Server as a subprogram in the same address space.

If you use Entire Output Management on UNIX exclusively without accessing any mainframe Entire System Server node, set the node ID to "0" in the **Monitor Defaults**.

The database ID and file number of the container file (NOM-CONTAINER), as specified with the SYSPCI utility, must also be specified in the **UNIX Defaults**.

Natural Nucleus

If you wish to use the Export/Import functions (which are described under *Transferring Objects* in the *System Administration* documentation) or process XML data in any other way with Entire Output Management, you have to use a Natural nucleus which is able to process XML data, that is, a Natural nucleus built with:

```
make natural ada=yes sax2=yes
```

Verifying the Installation

See *Installation Verification* in the *Installation and Customization* documentation for mainframes.

6 Uninstalling Entire Output Management

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

In short: to uninstall Entire Output Management, proceed as follows:

1. Open a command window and go to the *bin* directory of your main installation directory.
2. Run the command `uninstall`. This starts the Software AG Uninstaller.