

Entire Net-Work Administration

Entire Net-Work Client Administration

Version 1.1.2

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Entire Net-Work

This document applies to Entire Net-Work Administration Version 1.1.2 and to all subsequent releases.

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

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1 Entire Net-Work Client Administration

This document provides information for administrators responsible for configuring and running the components of Entire Net-Work Client.



Notes:

1. If your site is using (or has purchased) Entire Net-Work 7, you do not need to install Entire Net-Work Client. You can use the Entire Net-Work 7 Client instead. In addition, we recommend that you use only one Directory Server for all Software AG products that require it.
2. Do not install both Entire Net-Work Client and Entire Net-Work 7 Client on the same machine.

This documentation is organized as follows:

	<i>Overview</i>	Provides a high-level description of Entire Net-Work Client.
	<i>Release Information</i>	Lists updates made to this release of Entire Net-Work Client.
	<i>Platform Coverage and Prerequisites</i>	Describes the platforms supported for this version of Entire Net-Work Client as well as the space and Software AG and third-party product requirements.
	<i>Entire Net-Work Client License Key</i>	Describes the Entire Net-Work Client license key, where to find it, and how it gets implemented.
	<i>Configuration Considerations</i>	Describes configuration issues you should address before you install Entire Net-Work Client.
	<i>Installation Sequence</i>	Describes the steps you should perform before you install Entire Net-Work Client.
	<i>Installing and Setting Up Software AG Products on UNIX</i>	Provides general installation information for how to install Software AG products in UNIX environments.
	<i>UNIX Installation Considerations</i>	Provides general installation information on installing Entire Net-Work Client on UNIX in batch mode or using a character-based installation.

• <i>Installing Management Components</i>	Describes the steps necessary to install the Entire Net-Work Client management components (the System Management Hub and the Software AG Directory Server) in Windows and UNIX environments.
• <i>Installing Entire Net-Work Clients</i>	Describes the steps necessary to install Entire Net-Work Clients in Windows and UNIX environments.
• <i>Required Post-Installation Directory Server Updates</i>	Describes the required post-installation Directory Server target entries you must manually set up in the System Management Hub to support the Simple Connection Line Driver.
• <i>Uninstalling Entire Net-Work Client</i>	Describes the steps necessary to uninstall the Entire Net-Work Client components in Windows and UNIX environments.
• <i>C Example</i>	Describes the C example provided with Entire Net-Work Client that contains all of the necessary files to make direct Adabas calls for UNIX and Windows platforms.
• <i>Tracing Entire Net-Work Client Activities</i>	Explains how to turn tracing on for Entire Net-Work Client activities as well as where to find the trace information.
• <i>Software AG Directory Server Documentation</i>	Describes how to use the Software AG Directory Server.
• <i>Port Number Reference</i>	Provides a reference to default ports commonly used by Software AG management components and Entire Net-Work.

2 Overview

The Entire Net-Work Client is a Software AG product option that includes the code for:

- The System Management Hub (SMH)
- The Software AG Directory Server
- An Entire Net-Work e-business Client

The System Management Hub (SMH) and the Software AG Directory Server are commonly installed with Software AG open system products. If they are already installed at your site, you should not need to install them again.

The Entire Net-Work Client can be ordered from Software AG if needed. It is provided to ensure that you can use the Simple Connection Line Driver, even if you do not have Entire Net-Work 7 (or later) on open systems installed. It also provides you with access to the Software AG Directory Server and SMH required for Simple Connection Line Driver and Entire Net-Work e-business Clients.

Once you have installed the Entire Net-Work Client components, you must manually set up Directory Server target entries in the System Management Hub to support the Simple Connection Line Driver. For more information, read [Required Post-Installation Directory Server Updates](#), elsewhere in this guide.



Note: If your site is using (or has purchased) Entire Net-Work 7, you do not need to install Entire Net-Work Client. You can use the Entire Net-Work 7 Client instead. In addition, we recommend that you use only one Directory Server for all Software AG products that require it.

3 Release Information

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This chapter covers the following topics:

Enhancements

Entire Net-Work Client 1.1.2 is a complete replacement for any prior version of Entire Net-Work Client. Before you install Entire Net-Work Client 1.1.2, be sure to uninstall prior versions of the product. Multiple versions of Entire Net-Work Client cannot be installed on the same system at this time.

This release is a maintenance release that includes the latest versions of Software AG internal products. There are no particular updates to Entire Net-Work Client itself.

Last-minute information on problems that have been addressed by this release are described in the *ReadMe* file.

Documentation

The documentation for Entire Net-Work on mainframes is regularly updated to describe the enhancements and changes included in each release. To review different versions of the documentation, link to the Software AG Web site: <http://servline24.softwareag.com/public/>. The Entire Net-Work Client documentation at this site will be updated as required. If you do not have a ServLine24 user ID and password yet, you will find instructions for registering on this site (free for customers with maintenance contracts).

The Entire Net-Work Client documentation includes:

- online HTML topics describing all aspects of the product;
- Adobe Acrobat Reader Portable Document Format (PDF) files created from the HTML topics;
- Adobe Acrobat Reader Portable Document Format (PDF) files of a book created from the HTML topics.

Documentation for the Software AG Directory Server can be found in *Software AG Directory Server Documentation*.

The System Management Hub documentation can be found in the System Management Hub installation. For example, if SMH is installed in Windows at *C:\Program Files\Software AG\System Management Hub*, then the SMH documentation can be found in: *C:\Program Files\Software AG\System Management Hub\help\doc\overview.htm*. Likewise, in UNIX environments, if the SMH installation is located at *\$SAG/common/arg*, then the SMH documentation can be found in *\$SAG/common/arg/help/doc/overview.htm*.

No hard-copy documentation is provided, although you can print the PDF and HTML files on your local printer.

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Platform Coverage and Prerequisites

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This chapter contains the following topics:

Supported Platforms

This release of Entire Net-Work Client supports the following Microsoft Windows and UNIX platforms:

- Windows 2000 Professional
- Windows 2000 Server
- Windows 2000 Advanced Server
- Windows 2003 Standard Server
- Windows 2003 Enterprise Server
- Windows XP Professional
- Windows XP Home
- AIX 5.2L (64-bit)
- AIX 5.3L (64-bit)
- HP-UX 11i for PA-RISC Processors (64-bit)
- HP-UX 11i for Itanium2 Processors (64-bit)
- SuSe Linux Enterprise Server 8 (Intel 32-bit)
- SuSe Linux Enterprise Server 8 for S/390
- SuSe Linux Enterprise Server 9 for S/390
- Red Hat Linux Advanced Server 2.1 (Intel 32-bit) or 3
- Sun Solaris 8 (64-bit only)
- Sun Solaris 9 (64-bit)
- FSC Solaris 8 (64-bit)
- FSC Solaris 9 (64-bit)



Note: Entire Net-Work Client 1.1.2 does not support Windows NT or Windows 2000 Data Center.

Space and Memory Requirements

The following minimum space and memory quantities are required for this version of Entire Net-Work Client:

- 20MB disk space (assuming all components are selected for installation)
- 128MB or more RAM

Prerequisite Software AG Products

No Software AG products are required as a prerequisite for this version of Entire Net-Work Client. However, Entire Net-Work Client uses the Software AG Directory Server as well as System Management Hub (SMH), which are included with the code for Entire Net-Work Client and can be installed at the same time. For information regarding which releases of these Software AG products are currently supported, refer to the documentation for the appropriate product.

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Entire Net-Work Client License Key

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A permanent license is required in order to run Entire Net-Work Client. Every time the Entire Net-Work Client software starts, the license key file is read and the validity of the license key is checked.

This chapter contains the following information on license keys for Entire Net-Work:



Important: If you uninstall Entire Net-Work Client, the license file will be deleted. Management of the license file is, therefore, your responsibility. Make sure that you have a copy of the file before doing the uninstall.

License Key File Location and Use

The Entire Net-Work Client license key file is generally distributed on diskette, although, in special cases, it can be shipped via e-mail. The file name is in the following format, where *vr* is the version and release number of the product: *wclvr.xml*.

Be sure that the file containing the license key is in a location that will be accessible during the Entire Net-Work Client installation, such as on the file system or in a disk drive. During the installation of Entire Net-Work Client with the InstallShield, you are asked to locate the license file. Once it is located, the license file will be copied into a Software AG common area.

If you are installing Entire Net-Work Client on a laptop and you have received your license file on a diskette, note that some laptop configurations do not allow you access to the CD-ROM drive and the diskette drive simultaneously. In such cases you must copy the license file to a location that is accessible while the CD-ROM drive is in use, such as your laptop's hard disk, before you start the installation procedure. In general, Software AG recommends that you place the license file on the file system before starting the installation procedure.



Note: The license file is sometimes transmitted via e-mail. If you received the file via e-mail, copy it to a directory on your hard drive. If you received the file on a floppy disk, you may leave it there.

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: Any modification of the license key file will invalidate the digital signature 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.

6 Configuration Considerations

Before you install Entire Net-Work Client, you must decide how you are going to configure it. To assist you in these decisions, the following table provides some questions you should answer for the installation of Entire Net-Work Client in your enterprise. Corresponding considerations for the questions are also provided.

Category	Question	Considerations
System Management Hub (SMH)	Is SMH already installed in your enterprise?	<p>If SMH is already installed in your enterprise, it should not be installed again. Only one SMH is required to manage all Software AG products that require it.</p> <p>If SMH is not installed in your enterprise, you must install it when you install Entire Net-Work Client. Read Installing Management Components, elsewhere in this guide, for more information.</p>
System Management Hub and Software AG Directory Server	Should you install Entire Net-Work Client management components on the same machine as Entire Net-Work Clients?	Although you are able to install management components on the same machine as Entire Net-Work Clients, Software AG does not recommend it because your system performance could be impacted.
Software AG Directory Server	Is a Directory Server already installed in your enterprise?	<p>If a Directory Server is already installed in your enterprise, you do not need to install another, although you may if you wish. Read Installing Management Components, elsewhere in this guide, for information on the pros and cons of installing more than one Directory Server.</p> <p>Note: We recommend that you use only one Directory Server for all Software AG products that require it.</p> <p>If a Directory Server is not installed in your enterprise, you must install one when you install Entire Net-Work Client.</p>

Category	Question	Considerations
		Read <i>Installing Entire Net-Work Clients</i> , elsewhere in this guide, for more information.
	Do you want to direct specific Clients to specific databases by department or other organizational grouping?	<p>You can direct Clients to specific databases in one of two ways:</p> <ol style="list-style-type: none"> 1. You can install multiple Directory Servers, one for each group. Read <i>Installing Management Components</i>, elsewhere in this guide, for information on the pros and cons of installing more than one Directory Server. 2. You can implement partitioning within a single Directory Server. Once implemented, Clients are directed to databases in an assigned partition. For more information, read <i>Partitioning a Directory Server</i> in the <i>Software AG Directory Server Administration Guide</i>.
Partitioning	Do you want to implement partitioning?	<p>Partitioning allows you to direct specific Clients to specific databases. It lets you use one Directory Server for your whole enterprise, rather than separate Directory Servers for different departments within your enterprise. For more information, read <i>Partitioning a Directory Server</i> in the <i>Software AG Directory Server Administration Guide</i>.</p> <p>Partitions are defined for the Directory Server in the System Management Hub and assigned to specific Clients during installation. If you need to change the partition assigned a Client after installation, contact your Software AG technical representative for instructions.</p>
Clients	How many Entire Net-Work Clients will you need and on which machines will they be needed?	One Entire Net-Work Client must be installed on each machine that needs to communicate with an Adabas database or that needs to access other Software AG product servers (such as those for EntireX Communicator, Tamino, or Adabas SQL Gateway).
	Are there any pre-existing Clients under independent control that might be resistant to change?	You may need to implement a special schedule or plan for the migration of these Clients.
	If you are implementing partitioning, which Clients will be part of which partition?	Partitioning allows you to direct specific Client to specific databases. For more information, read about partitioning in your Software AG Directory Server documentation.
	Can you install Entire Net-Work 7 Clients and Entire Net-Work Client on the same machine?	No. You should not install them on the same machine.

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Installation Sequence

Before you begin Entire Net-Work Client installation, ensure that the following prerequisites have been met:

- If you are installing an Entire Net-Work Client, close (stop) all open applications, especially those applications interacting with or depending on your Adabas databases. This includes Natural, the Adabas DBA Workbench, and prior releases of Entire Net-Work.
- If prior versions of Entire Net-Work Client are installed on your system, uninstall them before installing this version.
- Disable any antivirus software.
- Ensure the target computer is connected to the network.
- Verify the license key files are copied somewhere in your environment or have the diskette available. Entire Net-Work Client will not run without valid license keys. For more information, read *Entire Net-Work License Key*, elsewhere in this guide.
- Read the *Entire Net-Work Client Release Information* and *Configuration Considerations* (elsewhere in this guide).
- Before you install Entire Net-Work Client in a UNIX environment, we recommend you read *Installing and Setting Up Software AG Products on UNIX* and *UNIX Installation Considerations*, elsewhere in this guide.

The installation of Entire Net-Work Client should occur in two stages and in the following order:

1. Entire Net-Work Client Management Component Installation. The management components used by Entire Net-Work Client are the System Management Hub (SMH) and the Software AG Directory Server. If these components have not already been installed in your enterprise, install them first.

If SMH has already been installed in your enterprise by other Software AG products, you will still need to run the installation for SMH provided with Entire Net-Work Client. This is because

the Entire Net-Work Client agents for SMH need to be installed. If they are not, you will not be able to administer the product in SMH.

If the Directory Server has already been installed in your enterprise by other Software AG products, you do not need to install it again -- although multiple installations of the Directory Server are allowed (read *[Installation Considerations for the Software AG Directory Server](#)* for more details).

2. Entire Net-Work Client Installation. An Entire Net-Work Client should be installed on every machine from which an Adabas database needs to be accessed.

Once all of these installation phases are complete, you should not need to configure the management components much for Entire Net-Work Client. The defaults supplied in the Entire Net-Work Client installations work for most organizations. This is especially true of the Directory Server settings in SMH. Once the appropriate management components and Clients are installed, we recommend that you try to use Entire Net-Work Client in a test environment prior to attempting to configure it.

Complete descriptions of these components and how they are used by Entire Net-Work Client can be found in your Entire Net-Work 7 documentation.

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Installing and Setting Up Software AG Products on UNIX

■ General Information	22
■ Before Installing Your Software AG Product	23
■ Installing the Contents of the Installation Medium to Disk	24

This document contains general information which applies when installing and setting up any Software AG product on a UNIX platform. The following topics are covered:

General Information

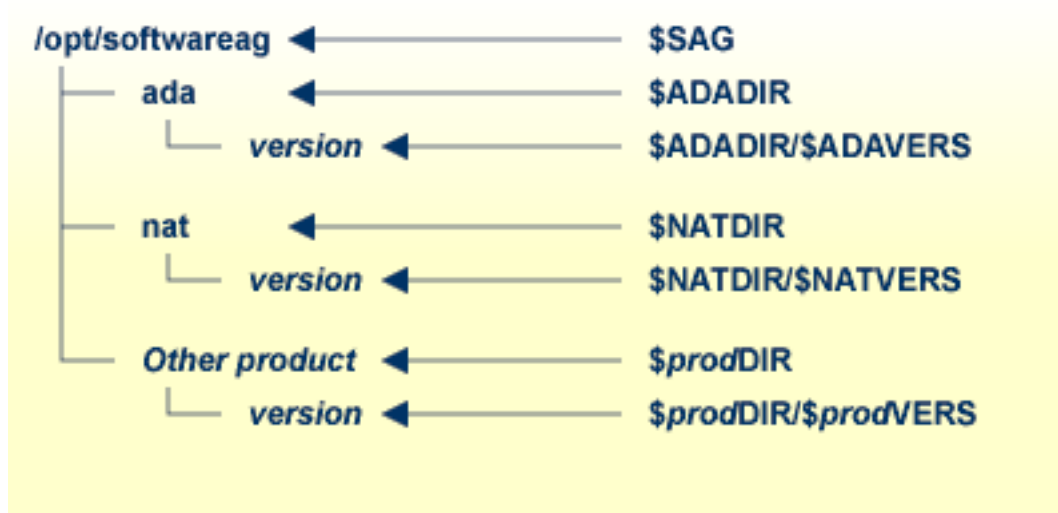
Installation Package

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

The installation medium contains a complete directory structure which clearly specifies product and platform.

Software AG Environment

The following figure shows the general directory structure generated during installation and the environment variables which reference the specified directories:



The environment variable `$SAG` defines the root directory for all Software AG products. It is recommended to define `SAG=/opt/softwareag`.

For each product, the variable `$prodDIR` is set to the path of the main directory of the product specified, where `prod` is a three-letter product code in upper-case letters. For example, all files for Natural, whose product code is NAT, are contained in the directory `$NATDIR`.

However, there are exceptions to this convention. For example, the product code for Predict is "PRD" but the environment variables use the prefix "DIC" instead.

The name of the main directory is usually the same as the product code in lower-case letters. For example, the main directory for Natural is named *nat*.

Version-independent parts of the product, such as examples or data, are stored in a subdirectory of the product main directory. For example, all Adabas demonstration data is contained in the directory *\$ADADIR/adademo*.

Version-dependent components of the product are kept in the version directory *\$prodDIR/\$prodVERS*. For example, the current version of Natural is stored in the directory *\$NATDIR/\$NATVERS*.

The environment variables *prodDIR* and *prodVERS* for all products specified during installation are defined via the file *sagenv.new*. The same applies for any other environment variables needed for the various products.

Before Installing Your Software AG Product

It is recommended that you use */opt/softwareag* as one common root directory for all of your Software AG products. For Linux systems, this location is the registered name with LANANA.

The default search path for dependent libraries of some Software AG products is */opt/softwareag*. They are loaded from this location or using the environment variable *\$LD_LIBRARY_PATH* (*\$SHLIB_PATH* on HP-UX systems). If you install the product to a different location (for example, */usr/SAG* instead of */opt/softwareag*), you may create a symbolic link to your *\$SAG* directory to get a valid default search path:

```
su
cd /opt
ln -s $SAG softwareag
```

The following activities must be performed if you are installing a Software AG product for the first time, or if your environment is not yet set correctly due to any other causes.

This section covers the following topics:

- [Creating the Administrator's Account and Group](#)
- [Backing Up Your Current Product Version](#)

- Logging in as User "sag"

Creating the Administrator's Account and Group

You must create one administrator account and one group for all Software AG products when you install your first Software AG product.

1. Define an administrator account to which all of the Software AG products installed at your site belong. Since all environment definition files for the products are written in Bourne shell syntax, the Bourne (or Korn) shell is recommended as the login shell for the administrator account. This section assumes that the administrator account is called "sag".
2. Define a group to which the administrator belongs. This section assumes that this group is also called "sag".
3. Create a login directory for the user "sag" (for example, */opt/softwareag*).
4. Make sure that the group "sag" is defined in the system file */etc/group* and the user "sag" is defined in the system file */etc/passwd*.



Note: To perform these steps, use an appropriate system administration tool.

Backing Up Your Current Product Version

When upgrading a product, it is strongly recommended that you back up your current product version.

Logging in as User "sag"

This description assumes that the user "sag" is the administrator for Software AG products. It is recommended to log in as the user "sag".

Installing the Contents of the Installation Medium to Disk

Before performing the following steps, make sure that the administrator user and group have been created and defined.

► To install the contents of the installation medium to disk

- 1 Load the installation medium and mount it if this is not done automatically.

Command	Description
<code>su - root</code>	To mount an installation medium you may need to be root.
<code>mkdir /mount-dir</code>	You may need to create a mount directory for the installation medium.
<code>mount platform-specific_mount_options device-name /mount-dir</code>	Execute the mount command (see the table below for operating system-specific mount commands).
<code>exit</code>	Return to "sag" user.

Platform-specific mount command and options to mount the installation medium as ISO9660 or High-Sierra file system:

Platform	Mount Command
AIX	<code>/usr/sbin/mount -F cdfs -o cdcase device-name /mount-dir</code>
HP-UX	<code>/usr/sbin/mount -F cdfs -o cdcase device-name /mount-dir</code>
Solaris	<code>/usr/sbin/mount -F hsfs -o ro device-name /mount-dir</code>
Linux	<code>/bin/mount -t iso9660 -o ro device-name /mount-dir</code>

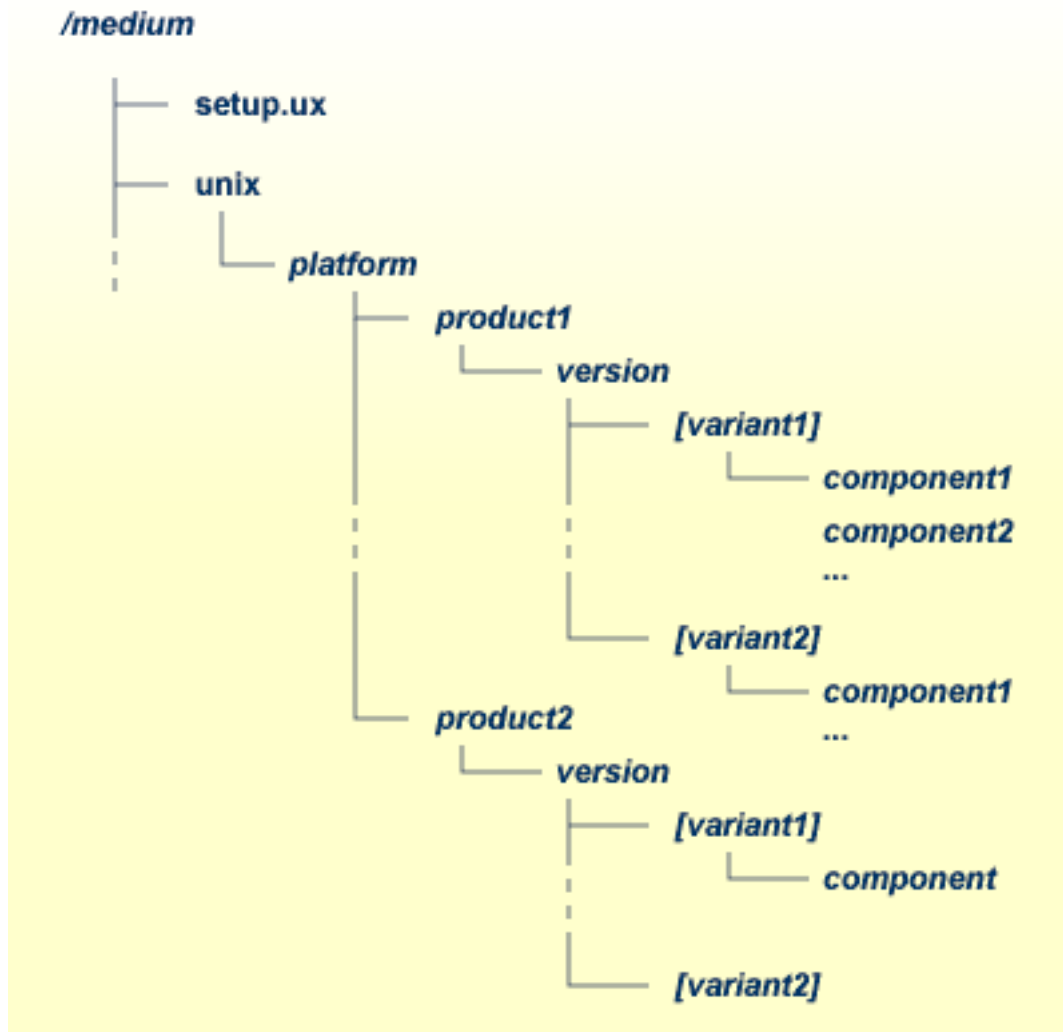


Note: On Solaris, the volume management daemon *vold* might be active. This daemon mounts the installation medium automatically.

Example for Linux:

```
/bin/mount -t iso9660 -o ro /dev/cdrom /mnt
```

- 2 Check the directory structure of the UNIX part of the installation medium. When you run an `ls(1)` command on the installation medium, you will see a structure like the following:



Note: Depending on the mount options used, the files will be all upper case or all lower case. If you mount the installation medium as a pure ISO 9660 Interchange Level I CD, you will also see a version number ;1 appended to all files. Please note this for the following steps and use the correct name format.

- 3 For Linux S/390, a single archive is provided for your convenience (for example, for Natural this is the file `NATv621n.tgz`). The following steps can be performed after you have loaded the installation medium on a Windows or UNIX machine that has a network connection to the Linux S/390 system:

1. Copy the archive file (*file-name.tgz*) that is located in the root directory of the installation medium to a temporary area such as */tmp/cdrom* in your Linux S/390 environment, using for example ftp in binary mode.
2. Unpack the archive using the command `tar -xzvf file-name.tgz`.
3. Read the installation instructions for details on how to start the installation from this media in the file *setup.txt* in this directory. Instructions of how to proceed after installing the software will be displayed at the end of the installation and also copied onto your hard disk.
- 4 Please continue reading the step-by-step installation instructions for the Software AG product being installed.

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UNIX Installation Considerations

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- Installing Entire Net-Work on UNIX (Character-Based) 30

This chapter covers the following topics:

Installing Entire Net-Work on UNIX in Batch Mode

When installing interactively, the install binaries used by Entire Net-Work provide code that may be used for a batch install. This code is written to the end of the log file of the Entire Net-Work installation. This log file is named *WCPvrsInst.log* and is located in the directory from which the installation was started. The code for the batch install is located between the following lines in this log file.

```
# ----- <Start of generated batch script> -----
```

and

```
# ----- <End of generated batch script> -----
```

To create a batch install script for Entire Net-Work, copy this section and adapt it to your needs.

Installing Entire Net-Work on UNIX (Character-Based)

Software AG recommends some common steps for the installation of Software AG products under UNIX using a character-based installation. See [Installing and Setting Up Software AG Products under UNIX](#), elsewhere in this guide, for a detailed description. The installation itself is started with the command:

```
$ sh <mount_dir>/setup.ux
```

where *<mount_dir>* is the path under which the CD-ROM has been mounted.

The setup procedure checks the hardware platform and operating system version and then starts the appropriate installation program INSTALL. The installation procedure allows for selective installation and configuration of Entire Net-Work components. It provides

- a graphical user interface if an X-Server is available and the DISPLAY variable is set,
- a character screen based user interface otherwise.

Some installation steps require super-user (root) permissions. The installation offers a choice between the su and sudo commands and asks for the corresponding password required to become super-user.

► To install Entire Net-Work on UNIX using a character-based interface:

- Follow the instructions in [Installing and Setting Up Software AG Products under UNIX](#).

The Entire Net-Work Client installation kit includes the following installable units:

- Entire Net-Work Client
- Directory Server components
- System Management Hub

There are two types of installation: **Client Mode** and **Custom**.

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Installing Management Components

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The management components used by Entire Net-Work Client are the System Management Hub (SMH) and the Software AG Directory Server. These components:

- Must be installed on a machine in your network that can be accessed by all machines where Entire Net-Work Client will be installed. They should be installed on a dedicated system that is operational 24 hours a day, with a UPS.
- Can be installed together on the same machine or individually on separate machines. To reduce resource consumption, Software AG recommends that you install them on the same machine.

Once these management components are installed, you should not need to configure them much for Entire Net-Work Client. The defaults supplied in the Entire Net-Work Client installations of these components should work for most organizations. This is especially true of the Directory Server settings in SMH. Once the appropriate management components, Kernels, and Clients are installed, we recommend that you try to use Entire Net-Work Client in a test environment prior to attempting to configure it.

This chapter covers the following topics:

Installation Considerations for SMH

Only one System Management Hub (SMH) should be installed in your enterprise. It can be used to manage all Software AG products that use it. However, if you elect to install SMH while running the installation procedure, the procedure automatically checks to see if SMH is already installed and will either update the installed version or perform a new installation of SMH.

Regardless of whether or not SMH has already been installed in your enterprise, you will need to run the SMH installation supplied with Entire Net-Work Client to ensure that the Entire Net-Work Client SMH agents get installed.

The use of an X-terminal or suitable software emulator is recommended for a UNIX installation of SMH. This way, if SMH is installed on a UNIX system, it can be accessed from any suitable Web browser on both Windows or UNIX systems. Software AG does not recommend a particular Web Browser for UNIX use.



Note: When installing SMH, other Software AG internal components may also be installed (if they have not already been installed by another Software AG product). SMH cannot run without these internal products.

Installation Considerations for the Software AG Directory Server

One or more Directory Servers can be installed in your enterprise. You may want to install more than one if you are trying to limit access to specific databases by specific Clients. If a Directory Server does not have the URL for a database, any Entire Net-Work Client attempts to access the database will fail. Note, however, that you can use Directory Server partitioning to perform the same function. For more information, read *Partitioning a Directory Server* in the *Software AG Directory Server Administration Guide*.

Software AG recommends that you use only one Directory Server in your enterprise. However, if you install more than one, remember:

- You will have to manage and administer multiple Directory Server configurations.
- The more Directory Servers you use, the more physical resources on your system will be consumed.
- You will need to be very careful about which Directory Server you select to use in your installation of Entire Net-Work Client -- especially if other Directory Servers have been installed by other Software AG products.
- As you are restricted to a single pointer to a Directory Server in your DNS (via its SAGXTSDSHOST and SAGXTSDSPORT entries), all systems required to use a different Directory Server must be redirected using local, manual, administration. For more information on this manual administration, contact your Software AG technical support representative.

The Software AG Directory Server uses port number 12731 by default; the port number can be changed to a custom setting during the installation of the Software AG Directory Server. If you need to change the port number after the Directory Server is installed, you will need to reinstall it.

To verify the existence of the Software AG Directory Server, check with your system administrator.

Installing Management Components on Windows Platforms

This section describes how to install Entire Net-Work Client management components on Windows systems. Prior to attempting the installation, verify that you have met all of the requirements described in [Platform Coverage and Requirements](#), elsewhere in this guide.



Notes:

1. Ideally, the installation of Entire Net-Work Client should be performed by a system administrator or someone with administrator privileges.

2. The steps provided in this section will install both SMH and the Directory Server on the same machine. Be aware that the sequence of steps will vary if you are installing one or the other of these management components or if you are installing an Entire Net-Work Client as well.

► **To install Entire Net-Work Client management components on Windows:**

- 1 Insert the Entire Net-Work Client installation CD into your CD-ROM drive.
- 2 Locate and run the *setup.exe* file found in the root directory on the CD-ROM.

A Welcome panel appears. The appearance of this panel varies depending on whether this is the first time you have installed an Entire Net-Work component on this machine.



Note: If you are prompted to "Modify", "Repair", or "Remove" the management component software during the course of installing Entire Net-Work Client, please select the "Modify" option. Selecting "Modify" will ensure all SMH features are correctly enabled.

- 3 Follow the prompts on the installation panels. The following panels should be noted:
 - When you get to the **Setup Type** panel, select **Custom** to install Entire Net-Work Client management components. The types of installation you can perform are described in the following table.

Installation Type	Description
Typical	Select this option to install an Entire Net-Work Client only.
Custom	Allows you to choose particular components to install, including the Entire Net-Work Client, the Software AG Directory Server, and the System Management Hub and allows you to direct the installation to a specific directory and to specify a program folder name for the installation.

- On the **Select Features** panel, select the management components you want to install. You must select either the **Directory Server component**, the **System Management Hub**, or both.

If you attempt to install the management components on the same machine as an Entire Net-Work Client, a warning message appears. We recommend that management components be installed on a separate system from the other Entire Net-Work components.



Caution: If you deselect a component already selected when the **Select Features** panel first appears, that component will be uninstalled when the installation procedure runs. If you do not want to uninstall the component, do not deselect it on this panel; simply select the additional components you want installed. By default, **Client Mode** is selected when you first access the **Select Features** panel. If no Client has been installed on this machine, you can safely deselect **Client Mode** in this instance.

- On the License File Information panel, enter the fully-qualified **license file** name or click **Browse** to locate the **license file** for Entire Net-Work Client.

For more information about the license file, read *Entire Net-Work Client License Key*, elsewhere in this guide.

- Indicate whether or not you want to use a named Directory Server for this Client on the **Directory Server Detection**, **Directory Server Access** panels

The installation utility installs the software needed to operate Entire Net-Work Client in this order, based on what you selected for installation on the **Select Features** panel:

- Software AG's System Management Hub software
- Software AG Directory Server software.

The **Setup Status** panel displays the current status of the installation process.

Installing Management Components on UNIX Platforms

This section describes how to install Entire Net-Work Client management components on UNIX systems. Prior to attempting the installation, verify that you have met all of the requirements described in *Platform Coverage and Requirements* and *UNIX Installation Considerations*, elsewhere in this guide.



Notes:

1. The installation of Entire Net-Work Client on UNIX systems should be performed by a system administrator or someone with administrator privileges.
2. The steps provided in this section will install both SMH and the Directory Server on the same machine. Be aware that the sequence of steps will vary if you are installing one or the other of these management components or if you are installing an Entire Net-Work Client as well.

► To install Entire Net-Work management components on UNIX:

- 1 Mount the Entire Net-Work CD as described in *UNIX Installation Considerations*, elsewhere in this guide.

- 2 Run the `setup.ux` command:

```
sh <cd mount dir>/setup.ux
```

where `<cd mount dir>` is the directory where the CD is mounted.

A **Welcome** panel appears.

- 3 Follow the prompts on the installation panels. The following areas should be noted:

- On the **SAG Environment Shell** panel, specify the fully-qualified name of the Software AG environment file you want used for this installation.
- On the **Choose Programs** panel, select the **Software AG Directory Server**. This will install the Directory Server agents for the System Management Hub (SMH) and will also automatically install SMH if it is not already installed.

If you attempt to install the management components on the same machine as an Entire Net-Work Client, a warning message appears. We recommend that management components be installed on a separate system from the other Entire Net-Work Client components.

- On the **Directory Server - Agents** panel, select **Directory Server** to install the Software AG Directory Server software. Select **ADI Agents** to install the SMH agents for the Software AG Directory Server.
- The default ports listed on the installation panels should be acceptable for most installations. They can, however, be changed should your configuration require it.

To avoid port number conflicts during installation, read [Port Number Reference](#), later in this guide, for a general list of the ports used by Software AG products.

- Some of the installation steps will be performed as superuser, so you are prompted during the installation to indicate whether you will be using **su** or **sudo** commands. If using **su** commands, supply the root password in the Root's password text box; if using **sudo** commands, supply your own password in the Root's password text box.



Note: If you select **No command** from the **Use** drop-down list box on the installation panels that request this superuser information, the installation may not proceed as expected. Therefore, we recommend that you do not choose **No command**.

- When specifying the proper path for the installed Java runtime module (JRE), be sure to specify the location of JRE itself, not JDK. In other words, the path specified should end in `"/jre"`. If you do not specify a valid path to JRE, errors will occur before you can proceed.
- As part of the SMH installation process, a couple of popup windows appear describing the lines you should add to the configuration of an Apache or Sun Java System Web server if you want to enable the Software AG Management Independent Layer. Make note of the information on the Web server popup windows and click **OK** on both of them.

- On the **Activate Installed Products** panel, select the products for which you want the Software AG environment file (*sagenv.new*) created.
- 4 Change to the Software AG installation directory and run *sagenv.new* to set up the environment for Software AG products.

```
. sagenv.new
```

The installation and deployment of Entire Net-Work management components in UNIX is complete.

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Installing Entire Net-Work Clients

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The Entire Net-Work Client installation includes only the components required to run Software AG client applications (Natural and Tamino, for example) that access Adabas databases.

This chapter covers the following topics:

Installing Clients on Windows Platforms

This section describes how to install Entire Net-Work Clients on Windows systems. Prior to attempting the installation, verify that you have met all of the requirements described in *Platform Coverage and Requirements*, elsewhere in this guide.



Notes:

1. Ideally, the installation of the Entire Net-Work Client should be performed by a system administrator or someone with administrator privileges.
2. The steps provided in this section will install only an Entire Net-Work Client on the machine. Be aware that the sequence of steps will vary if you are installing another Entire Net-Work component as well.

► To install an Entire Net-Work Client on Windows:

Shut down all open applications, especially those applications interacting with or depending on your Adabas databases. This includes Natural, the Adabas DBA Workbench, and prior releases of Entire Net-Work.

- 1 Insert the Entire Net-Work Client installation CD into your CD-ROM drive.
- 2 Locate and run the *setup.exe* file found in the root directory on the CD-ROM.

A Welcome panel appears. The appearance of this panel varies depending on whether this is the first time you have installed an Entire Net-Work component on this machine.

- 3 Follow the prompts on the installation panels. The following panels should be noted:
 - When you get to the **Setup Type** panel, select **Typical** if you are only installing a Client and if you want the Client installed in the default directory *C:\Program Files\Software AG\Entire Net-Work Client v.r.m* (where "v.r.m" are the version, release, and maintenance number of Entire Net-Work Client). The types of installation you can perform are described in the following table.

Installation Type	Description
Typical	Select this option to install an Entire Net-Work Client only.
Custom	Allows you to choose particular components to install, including the Entire Net-Work Client, the Software AG Directory Server, and the System Management Hub and allows you to direct the installation to a specific directory and to specify a program folder name for the installation.

If you want to install other Entire Net-Work Client components at the same time or if you want to install any Entire Net-Work Client components in a directory other than the default directory, select **Custom** on the **Setup Type** panel.

- On the **Select Features** panel, if it appears, select the components you want to install. You must select the **Client Mode** component.

If you attempt to install the management components on the same machine as an Entire Net-Work Client, a warning message appears. We recommend that management components be installed on a separate system from the other Entire Net-Work components.



Caution: If you deselect a component already selected when the **Select Features** panel first appears, that component will be uninstalled when the installation procedure runs. If you do not want to uninstall the component, do not deselect it on this panel; simply select the additional components you want installed. By default, **Client Mode** is selected when you first access the **Select Features** panel. If no Client has been installed on this machine, you can safely deselect **Client Mode** in this instance.

- On the License File Information panel, enter the fully-qualified **license file** name or click **Browse** to locate the **license file** for Entire Net-Work Client.

For more information about the license file, read [Entire Net-Work Client License Key](#), elsewhere in this guide.

- Indicate whether or not you want to use a named Directory Server for this Client on the **Directory Server Detection**, **Directory Server Access** panels

This installation is complete.

If the installation is not successful, you will receive one of several possible error messages. Contact your local distributor for information about customer support services. If the installation fails, it is likely that some parts of the product will have been installed. Therefore, before you attempt to install the Entire Net-Work Client again, run the installation program to remove it. See [Uninstalling Entire Net-Work Client](#), elsewhere in this guide, for instructions on removing the product.

Installing Clients on UNIX Platforms

This section describes how to install Entire Net-Work Clients on UNIX systems. Prior to attempting the installation, verify that you have met all of the requirements described in [Platform Coverage and Requirements](#) and [UNIX Installation Considerations](#), elsewhere in this guide.



Notes:

1. The installation of Entire Net-Work Client on UNIX systems should be performed by a system administrator or someone with administrator privileges.
2. The steps provided in this section will install only an Entire Net-Work Client on the machine. Be aware that the sequence of steps will vary if you are installing another Entire Net-Work Client component as well.

▶ To install an Entire Net-Work Client on UNIX:

Shut down all open applications, especially those applications interacting with or depending on your Adabas databases. This includes Natural, the Adabas DBA Workbench, and prior releases of Entire Net-Work Client.

- 1 Mount the Entire Net-Work CD as described in [UNIX Installation Considerations](#), elsewhere in this guide.
- 2 Run the setup.ux command:

```
sh <cd mount dir>/setup.ux
```

where *<cd mount dir>* is the directory where the CD is mounted.

A **Welcome** panel appears.

- 3 Follow the prompts on the installation panels. The following areas should be noted:
 - On the **SAG Environment Shell** panel, specify the fully-qualified name of the Software AG environment file you want used for this installation.
 - On the **Choose Programs** panel, select the **Entire Net-Work Client**.

If you attempt to install the management components on the same machine as an Entire Net-Work Client, a warning message appears. We recommend that management components be installed on a separate system from the other Entire Net-Work Client components.

- On the **Installation Type** panel, select **Client Mode** if you are only installing a Client and if you want the Client installed in the default directory.

Installation Type	Description
Client Mode	Select this option to install an Entire Net-Work Client only.
Custom	Allows you to choose particular components to install, including the Entire Net-Work Client, the Software AG Directory Server, and the System Management Hub and allows you to direct the installation to a specific directory and to specify a program folder name for the installation.

- On the **Choose Packages** panel, select **Client Mode**.

If you attempt to install the management components on the same machine as an Entire Net-Work Client, a warning message appears. We recommend that management components be installed on a separate system from the other Entire Net-Work Client components.

- Some of the installation steps will be performed as superuser, so you are prompted during the installation to indicate whether you will be using **su** or **sudo** commands. If using **su** commands, supply the root password in the Root's password text box; if using **sudo** commands, supply your own password in the Root's password text box.



Note: If you select **No command** from the **Use** drop-down list box on the installation panels that request this superuser information, the installation may not proceed as expected. Therefore, we recommend that you do not choose **No command**.

- On the **License File** panel, enter the fully-qualified **license file** name or click **Browse** to locate the **license file** for Entire Net-Work Client.

For more information about the license file, read [Entire Net-Work Client License Key](#), elsewhere in this guide.

- On the **Directory Server Detection** panel, select an option to indicate whether or not you want to use the named Directory Server for this Client.

If you elect to install another Directory Server, installation screens appear appropriate for the installation of a new Directory Server. Read [Installing Management Components](#), elsewhere in this guide, for information on installing Directory Servers.

- On the **Activate Installed Products** panel, select the products for which you want the Software AG environment file (*sagenv.new*) created.

- 4 Change to the Software AG installation directory and run *sagenv.new* to set up the environment for Software AG products.

```
. sagenv.new
```

The installation and deployment of Entire Net-Work management components in UNIX is complete.

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Required Post-Installation Directory Server Updates

Once you have installed the Entire Net-Work Client components, you must manually set up Directory Server target entries in the System Management Hub to support the Simple Connection Line Driver. Specifically, one XTSaccess (access) target entry must be created in the Directory Server for each open systems Adabas database you want to access using the Simple Connection Line Driver.

For example, if you needed to access database 5 on the host machine named BHOST at port 2504, your access entry might look like this:

```
XTSaccess.5[0]=tcpip://bhost:2504
```

For complete instructions on creating target entries in the Directory Server, read *Maintaining Targets* in the *Software AG Directory Server Administration Guide*. For general information about target entries, read *Directory Server Target Entries* in the *Software AG Directory Server Administration Guide*.

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Uninstalling Entire Net-Work Client

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This chapter covers the following topics:

Uninstalling Entire Net-Work Client on Windows

This section describes how to uninstall Entire Net-Work Client on Windows.



Notes:

1. Uninstalling will not remove any files that were not originally installed by the Entire Net-Work Client installation tool. For example, files modified, expanded, moved, or introduced after installation must be removed manually.
2. Uninstalling will stop Entire Net-Work Client.

The complete uninstallation of Entire Net-Work Client on Windows occurs as a four-part process, although, other than some messages in the InstallShield Wizard, this will largely be transparent to you. Software used by Entire Net-Work Client must be uninstalled in the following sequence:

- Entire Net-Work Client-specific software
- Software AG Directory Server software
- Software AG's System Management Hub (SMH)

SMH and BTY (Software AG's Base Technology software) are uninstalled automatically if they are not used by any other Software AG product concurrently installed with Entire Net-Work Client.

The environment variable WCPDIR is removed when you uninstall this product. The environment variable SAG_COMMON is not removed; it may or may not be used by other installed Software AG products.

► To uninstall Entire Net-Work Client on Windows:

- 1 Go to Start/Settings/Control Panel.
- 2 Select **Add/Remove Programs**.
- 3 Select **Software AG Entire Net-Work Client** and click on the **Change/Remove** button.

The InstallShield Wizard is invoked.

- 4 Select **Remove** on the Welcome panel and click **Next**. Click **OK** for any verification messages.

The **Setup Status** panel appears on which you can watch the progress of the uninstallation.

- 5 You may be prompted for the uninstallation of the Software AG Directory Server, SMH, and BTY (Base Technology). In these cases, select the option appropriate for your site. If these

components are needed by other Software AG products that are still installed, do not uninstall them.

- 6 When the uninstallation has completed, the Finish panel appears. Click **Finish** to end the uninstallation.

Alternatively, when you try to install this version of the product, the InstallShield automatically detects whether another version is already installed and prompts you to remove it.

Uninstalling Entire Net-Work Client on UNIX

The Entire Net-Work Client uninstall process will not remove any files that were not originally installed by the Entire Net-Work Client installation tool.

The complete uninstallation of Entire Net-Work Client on UNIX involves the uninstallation of the following software in this sequence:

- Entire Net-Work Client-specific software
- Software AG Directory Server software
- Software AG's System Management Hub (SMH) software

If you want to uninstall all of these software areas, you must run the procedure described in this section four times. On the other hand, if you do not want to uninstall the Software AG Directory Server, SMH, or BTY (Base Technology), you do not have to -- especially if other Software AG products are using them.

The environment variables WCPDIR and WCPVERS are removed when you uninstall this product. However, you must exit the current console and log in again to make it effective.

► To uninstall Software AG software on UNIX:

- 1 Enter `sagrm` on the command line.



Note: The executable *sagrm* file resides in the `$SAG/common/bin` directory. Ensure that this path is included in the PATH environment variable.

The Software AG deinstallation GUI is started and the **Product Selection** panel appears.

- 2 On the **Product Selection** panel, select the Software AG products in this environment that you want to uninstall. To select a product, click on the check box to the left of the product name until a check appears in the box.

When all products have been selected, click **Next**.

A subpanel appears allowing you to select specific component packages of the product you selected in **Step 1** to be uninstalled.

- 3 Select the component packages you want installed. To select a package, click on the check box to the left of the component package name until a check appears in the box.

Click **Next** when all appropriate component packages have been selected.

The component packages and product are uninstalled.

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C Example

Entire Net-Work Client provides a C example in an Example folder once you have installed the product. It contains all of the necessary files to make direct Adabas calls for UNIX and Windows platforms. You can use this example to build a third generation program calling Adabas. Documentation for this example can be found in the Adabas open systems (Version 3.3) Command Reference documentation.



Note: Some of the commands described in the Adabas open systems (Version 3.3) Command Reference documentation apply only to calls to an Open Systems database. If you need to make calls to a mainframe database, refer to the Adabas mainframe (Version 7.4) Command Reference documentation for equivalents. For example, on open system databases, you can use the MC command, but on mainframe system databases you cannot; on mainframe system databases, you can use the C3 and S5 commands, which are not available on open system databases.

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Tracing Entire Net-Work Client Activities

On systems where Entire Net-Work Client is installed, you can trace transport subsystem activities. This chapter explains how those traces can be activated and where the traces can be located.



Caution: We recommend that you perform this tracing only under the advisement of your Software AG support representative.

► To trace transport subsystem activities:

- 1 Locate the *xts.config* file in your Entire Net-Work installation. The default location of this file on Windows systems is: *C:/Program Files/Software AG/Entire Net-Work Client 1.1.1*.
- 2 Edit the *xts.config* file and add entries for the following parameters:

Parameter	Value
XTSTRACE=65534	Setting the XTSTRACE parameter to "65534" enables full transport subsystem tracing.
XTSLOGDIR= <i>path</i>	Specify the fully qualified path of the directory used to store the transport subsystem trace files.

This will activate tracing of transport subsystem activities performed by the Entire Net-Work Client. Transport subsystem trace information is collected.

Transport subsystem activities are traced to files in the format *xtsnnnn.log*, where *nnnn* is an incremental file counter (starting with "0000", then "0001", and so on). By default, these files are stored in the *\log* directory, wherever Entire Net-Work Client is installed. To change this directory, use the XTSLOGDIR parameter in the *xts.config* file, as described above.

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Port Number Reference

The following table lists the default port numbers used by Software AG's management components and Entire Net-Work. You should consider avoiding the use of these port numbers for other applications.

Default Port Number	Software AG Product	Use
7869	Entire Net-Work 7 Kernel	Communication with classic Entire Net-Work Version 2 systems
8010	Entire Net-Work 7 Kernel	Communication with System Management Hub (SMH)
9010	Entire Net-Work 7 Kernel	Communication with Entire Net-Work 7 Clients (for example, Natural)
9020	Entire Net-Work 7 Kernel	Communication with Servers (for example, Adabas)
990x series	SMH	SMH communications
999x series		
12731	Software AG Directory Server	Handling directory service requests

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