Informix Client Products Installation Guide

for UNIX, Linux, and Windows

Documentation Team: Kathy Eckardt, Jennifer Leland, Ann McKillop

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Introduction

In This Introduction

This introduction provides an overview of the information in this manual and describes the conventions it uses.

About This Manual

This manual explains how to install Client SDK and Informix Connect on computers that run the UNIX, Linux, and Windows operating systems.

This manual includes the following chapters:

- Chapter 1, "Installing Informix Client SDK on UNIX and Linux," provides instructions for installing and configuring Client SDK for UNIX and Linux.

- Chapter 2, "Installing Informix Client SDK on Windows," provides instructions for installing, configuring, and uninstalling Client SDK for Windows.

- Appendix A, "Distributing Your Informix Client Applications," provides instructions for third-party vendors who intend to redistribute Informix client products.

Client SDK Components

Client SDK allows you to develop and run client applications.The following table describes the components of the Client SDK. Applications that run on client computers require Informix Connect to access database servers. Informix Connect is a runtime connectivity product made up of runtime libraries included in Client SDK.

Component	Description
ESQL/C	An SQL embedded-language product used to create custom C applications.
	For more information, see the *Informix ESQL/C Programmer's Manual.*
Informix Object Interface for C++	A C++ interface to develop object-oriented client applications for use with all Informix database servers and client-side value objects for Dynamic Server.
	For more information, see the *Informix Object Interface for C++ Programmer's Guide.*
Informix GLS	An interface that allows Informix products to use different locales that have defined conventions for a particular language, culture, or code set.
	For more information, see the *Informix ESQL/C Programmer's Manual* and the *Informix GLS Programmer's Manual.*
Informix ODBC Driver with MTS support	An Informix implementation of the Open Database Connectivity (ODBC) 3.0 Level 1+ standard that supports Microsoft Transaction Server (MTS). This driver contains extensibility support for Dynamic Server.
	For more information, see the *Informix ODBC Driver Programmer's Manual.*
Informix OLE DB Provider (for Windows only)	A client-side, native OLE DB provider that implements full functionality for base-level providers and contains extensibility support for Dynamic Server.
	For more information, see the *Informix OLE DB Provider Programmer's Guide.*

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Component	Description
LIBMI for Client Applications	A client-side implementation of the DataBlade API, provided to ease migration of client applications from the Informix Illustra Server to Informix database server 9.x.
Microsoft Data Access Components (for Windows only)	A component that upgrades elements of the Windows environment, such as the Driver Manager.
	For more information, see the Microsoft Web site: http://www.microsoft.com/data/whatcom.htm
Password CSM	Informix Password Communications Support Module for client applications. Password CSM must also be installed on the Informix database server to which the client will connect. To verify that your Informix database server supports this feature, see the *Administrator's Guide for Informix Dynamic Server 2000.*

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Windows

Client SDK and Informix Connect packages include the **Setnet32** utility for configuring client products. Each package can also include on-line help, example programs, and support programs. ♦

Types of Users

This manual is written for database administrators or software engineers who are installing Informix client products. This manual assumes that you are familiar with the operating procedures of your computer and with your operating systems.

Linux

Software Dependencies

This manual is written with the assumption that the Red Hat Package Manager (RPM) is installed on your Linux computer.

Most current Linux distributions include the RPM. For more information on RPM or to obtain a copy of RPM, see the RPM Website at www.rpm.org.

Documentation Conventions

This section describes the conventions that this manual uses. These conventions make it easier to gather information from this and other volumes in the documentation set.

The following conventions are discussed:

- Typographical conventions
- Icon conventions

Typographical Conventions

This manual uses the following conventions to introduce new terms, illustrate screen displays, describe command syntax, and so forth.

Convention	Meaning
KEYWORD	All primary elements in a programming language statement (keywords) appear in uppercase letters in a serif font.
italics *italics* *italics*	Within text, new terms and emphasized words appear in italics. Within syntax and code examples, variable values that you are to specify appear in italics.
boldface ***boldface***	Names of program entities (such as classes, events, and tables), environment variables, file and pathnames, and interface elements (such as icons, menu items, and buttons) appear in boldface.
monospace *monospace*	Information that the product displays and information that you enter appear in a monospace typeface.
KEYSTROKE	Keys that you are to press appear in uppercase letters in a sans serif font.
♦	This symbol indicates the end of product- or platform-specific information.
→	This symbol indicates a menu item. For example, "Choose **Tools→Options**" means choose the **Options** item from the **Tools** menu.

Tip: When you are instructed to "enter" characters or to "execute" a command, immediately press RETURN *after the entry. When you are instructed to "type" the text or to "press" other keys, no* RETURN *is required.*

Icon Conventions

Throughout the documentation, you will find text that is identified by several different types of icons. This section describes these icons.

Comment Icons

Comment icons identify three types of information, as the following table describes. This information always appears in italics.

Icon	Label	Description
	Warning:	Identifies paragraphs that contain vital instructions, cautions, or critical information
	Important:	Identifies paragraphs that contain significant information about the feature or operation that is being described
	Tip:	Identifies paragraphs that offer additional details or shortcuts for the functionality that is being described

Feature, Product, and Platform Icons

Feature, product, and platform icons identify paragraphs that contain feature-specific, product-specific, or platform-specific information.

Icon	Description
GLS	Identifies information that relates to the Informix Global Language Support (GLS) feature
Linux	Identifies information that is specific to the Linux environment

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Icon	Description
UNIX	Identifies information that is specific to the UNIX environment
Windows	Identifies information that is specific to Windows NT, Windows 95, and Windows 98 environments
WIN NT	Identifies information that is specific to the Windows NT environment

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These icons can apply to an entire section or to one or more paragraphs within a section. If an icon appears next to a section heading, the information that applies to the indicated feature, product, or platform ends at the next heading at the same or higher level. A ♦ symbol indicates the end of feature-, product-, or platform-specific information that appears within one or more paragraphs within a section.

Compatibility Information

Client products are compatible with the following database servers:

- INFORMIX-OnLine
- INFORMIX-SE
- INFORMIX-OnLine Dynamic Server
- Informix Dynamic Server
- INFORMIX-OnLine XPS
- Informix Dynamic Server with Advanced Decision Support and Extended Parallel Options
- Informix Extended Parallel Server (XPS)
- Informix Dynamic Server with Universal Data Option
- Informix Dynamic Server 2000
- Informix Enterprise Decision Server

Only client products included in Client SDK, Version 9.1x, or Client SDK, Version 2.0x or later, can use the extended functionality that INFORMIX-Universal Server, Dynamic Server, and Informix Dynamic Server 2000 provide.

Tip: *For additional compatibility information, see the release notes.*

GLS

Global Language Support

Global Language Support (GLS) lets Informix products use different locales. A GLS locale is an environment that defines conventions for a particular language, culture, or code set, including U.S. ASCII English.

Each installation script installs the following GLS locale and code-set conversion files in the **$INFORMIXDIR/gls** directory on your hard disk:

- Locale files for each supported GLS locale
- Code-set-conversion files for each supported code-set conversion
- Code-set files for each supported code set
- The Informix **registry** file

For more information, see the *Informix Guide to GLS Functionality*.

Documentation Notes, Release Notes, and Machine Notes

In addition to printed documentation, the following table describes the on-line files that supplement the information in this manual. Please examine these files before you begin using your database server and client products. They contain vital information about application and performances issues.

Some Client SDK components have on-line notes, located in the **$INFORMIXDIR/release/en_us/0333** directory for UNIX and Linux and the **$INFORMIXDIR\release\en_us\04e4** subdirectory for Windows of your Informix installation directory. In addition, some on-line notes have icons in the program groups.

On-Line Files	Descriptions
Documentation Notes	This item includes additions or corrections to the manual and information about features that might not be covered in the manual or that have been modified since publication.
	The documentation notes for this product are provided in HTML and ASCII text versions.
Releases Notes	This item describes feature differences from earlier versions of Informix products and how these differences might affect current products. This file also contains information about any known problems and their workarounds.
	The release notes file for Client SDK includes information about database server compatibility.
	The release notes for this product are provided in HTML and ASCII text versions.
Machines Notes	The machine notes file describes any special actions that you must take to configure and use Informix products on your computer.

Important: *Your CD-ROM might have a **readme.txt** file in the root directory. This file contains information that was available only after other documentation was complete. In particular, the **readme.txt** file might contain information that you should read before you install your Informix client product. You can open the **readme.txt** file in any Windows text editor, such as Notepad.*

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Installing Informix Client SDK on UNIX and Linux

In This Chapter

This chapter explains how to install Informix Client Software Developer's Kit (Client SDK), Version 2.4, and Informix Connect, Version 2.4, on UNIX and Linux operating systems. For a comprehensive list of Client SDK components, see the Introduction to this manual.

Preparing to Install Informix Products

You install Informix products on a UNIX or a Linux operating system with an installation script that copies files to your client computer.

Before you connect a client application to a database server, perform the following tasks:

- Configure your database server environment.

    For more information, see your *Administrator's Guide* and database server *Installation Guide*.
- Check individual product manuals for installation and configuration tasks that this manual does not cover.
- Check individual product machine notes and release notes for installation information.

You can install Informix products only as licensed by Informix. You must not transfer software from one computer to another or to another portion of your network without reregistration and the written consent of Informix.

If you encounter problems while you install these products, see "Solving Installation Problems" on page 1-22. If the problems persist, contact Informix Technical Support. In North America, call toll-free (800) 274-8184 or send a facsimile to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

Installation Location

Use the following criteria to determine where to install Client SDK and Informix Connect.

Computer Location

Install Client SDK either on the same computer as the database server or on a computer that connects to the database server across a network.

Install Informix Connect on the computer on which your database applications run.

Directory Location

To preserve product files of earlier versions, create separate directories for each version of your Informix products.

If you install multiple versions of an Informix product, set the **$INFORMIXDIR** environment variable to the appropriate directory name for the version that you want to access. For information about **$INFORMIXDIR**, see "Setting the Environment" on page 1-9.

Important: Install the database server and client products in separate directories to avoid overwriting common files and for easier installation and problem solving. Informix recommends this option. If you choose to install the products in the same directory, install the oldest product first.

Important: Do not install a 32-bit version and a 64-bit version of Client SDK *in the same* **INFORMIXDIR** *directory.*

Installation Order

If you are not installing client and server products in the same directory, skip this section.

You must install products in a specific order if you are installing client products and server products in the same **$INFORMIXDIR** directory. Use the following table as a guide to install products in the correct order. Database servers are listed vertically and client products are listed horizontally.

Important: Versions 2.0 and 2.0.1 of Client SDK do not support Versions 5.0x, 5.1, and 7.1x database servers listed in this table.

Database Server Versions	Versions of Client SDK and Informix Connect			
	2.0x	**2.1 and 2.2**	**2.3**	**2.4**
5.x	Database server first	Database server first	Database server first	Database server first
7.1x and 7.2x	Database server first	Database server first	Database server first	Database server first
7.3x	Client products first	Database server first	Database server first	Database server first
8.1x	Client products first	Database server first	Database server first	Database server first
8.2x	Client products first	Client products first	Database server first	Database server first
8.3	Client products first	Client products first	Database server first	Database server first
9.1x	Client products first	Client products first	Database server first	Database server first
9.2	Client products first	Client products first	Database server first	Database server first

The following table describes database server versions and corresponding names.

Database Server Version Numbers	Database Server Names
5.x	INFORMIX-OnLine and INFORMIX-SE
7.1x, 7.2x	INFORMIX-OnLine Dynamic Server and INFORMIX-SE
7.3x	Informix Dynamic Server
8.1x	INFORMIX-OnLine XPS
8.2x	Informix Enterprise Decision Server
8.3	Informix Extended Parallel Server (XPS) or Informix Enterprise Decision Server
9.01, 9.1 through 9.13	INFORMIX-Universal Server
9.14	Informix Dynamic Server 2000
9.2	Informix Dynamic Server 2000

You might encounter problems if you install an older product after you install a new product. For example, if you install an older version of the **finderr** utility, the older version overwrites the newer version and you will not have the most current listing of error message text and corrective action. If you encounter problems with the **finderr** utility, see *Informix Error Messages* in Answers OnLine.

Prior to the Client SDK, Version 2.01, release, clients and servers shared common message files. In more recent versions, the common message files for the client have new names. For more information on how to rename common message files, see the Client SDK release notes.

If you install more than one Informix product, complete all installation procedures for one product before you start to install the next product. Do not load the files from another Informix product onto your computer until you complete the current installation.

Tip: If you install and want to use Informix ODBC Driver with an existing DSN that uses Informix-CLI ODBC driver or INTERSOLV DataDirect ODBC driver, see the information on the DSN Migration Utility in the release notes for Informix ODBC Driver.

Installing the Products

The Client SDK package installation includes the following tasks. Make sure that you complete the tasks in each section before you go to the next section.

- "Preparing the Environment" on page 1-7
- "Setting the Environment" on page 1-9
- "Using the Package Manager" on page 1-10
- "Loading Product Files" on page 1-13
- "Running Installation Scripts" on page 1-16

Some platforms require special installation procedures. If you have such a platform, Informix includes a separate installation letter with the product materials package. If you find such a letter, follow those instructions before you continue with the installation instructions in this manual. For more instructions that pertain to your computer, see the appropriate machine notes.

If any Informix product is currently installed, go directly to "Setting the Environment" on page 1-9.

Preparing the Environment

To prepare the environment for the installation procedure, log in as **root** and set the erase key to the backspace key with the following command:

```
stty erase ^h
```

If you need to modify the **termcap** file, make the modifications in a copy of the file and reference the modified file with the **TERMCAP** environment variable.

Important: Prepare the environment for every shell within which you install or use Informix client products.

Linux

Applying Operating-System Patches

To find out if you need to apply patches to your Linux computer, see the Informix Linux Web page at www.informix.com/linux. The Linux Web page contains links to current information about Informix products for Linux.

Creating the informix Group, User, and Product Directory

The first time that you install an Informix product, you need to create a new **informix** group, user, and product directory. If you do not have **root** user privileges, ask your system administrator to perform these steps.

To create group informix

1. If you use a 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

2. Create a new entry for group **informix** in the group file. On most UNIX-based and Linux-based systems, the group file is located in **/etc/group**.

   Some systems use the **groupadd** utility to create groups. For more information, see your operating-system manual.

3. Provide an unused group number equal to or greater than 100.

To create user informix

1. If you use a 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

2. Create a new entry called **informix** in the **/etc/passwd** file.

   Some systems use the **useradd** utility to create user entries. For more information, see your operating-system manual.

3. Provide a user ID number equal to or greater than 100 for that user.

4. Assign the user to group **informix**.

5. Create a password for user **informix**.

*Important: If you use a network, propagate the new user name to all the systems on the network that must recognize user **informix**. For example, on some systems you (or the network administrator) must perform this change on the NIS master database server and then run the **ypmake** utility.*

The user **informix** is the database equivalent of the UNIX or Linux **root** account, so that anyone logged in as **informix** has complete access to any Informix products and databases. Make sure that you keep the password for user **informix** confidential.

Informix products use group **informix** internally to control database access. Make user **informix** the *only* member of group **informix**. If you make an actual user of an Informix product a member of group **informix**, you can cause unintended and uncontrolled database access. User accounts in **informix** group have all the privileges of user **informix** and can be used to disrupt the database server, either intentionally or unintentionally.

To create the Informix Product Directory ($INFORMIXDIR)

1. If you use a 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

2. Create an **$INFORMIXDIR** directory for your Informix products.

    Your **$INFORMIXDIR** directory can be any directory that is local and is not mounted from another system on the network.

Important: Before you create the $INFORMIXDIR directory, see "Installation Location" on page 1-4 and "Installation Order" on page 1-5.

Linux

The default Linux location for Informix products is **/opt/informix**. To use the default, create an **/opt/informix** directory. ♦

Setting the Environment

Before you install Informix products, set the **INFORMIXDIR** and **PATH** environment variables as follows:

1. Set the **INFORMIXDIR** environment variable to the directory that you created for your Informix products in "To create the Informix Product Directory ($INFORMIXDIR)".

2. Add **$INFORMIXDIR/bin** to the **PATH** environment variable.

    The **PATH** environment variable indicates the directories and search order that the shell uses to search for executable files.

For more information about Informix environment variables, see the *Informix Guide to SQL: Reference.*

Important: *You must set **INFORMIXDIR** and put **$INFORMIXDIR/bin** in the **PATH** for each user and shell within which you install or use Informix client products.*

Linux

Using the Package Manager

This section describes how to query, install, and uninstall the packages with the package manager.

Querying the Package Information

To find out more about the product, including the complete release and update number, use the RPM query option. The following table shows some examples. For more options, see your RPM documentation.

Command	Purpose
`rpm -qp *`	Queries the names of packages in the binary package files that reside in the current directory
`rpm -qpi *.rpm`	Queries detailed information about the binary package files (with the filename extension **.rpm**) that reside in the current directory
`rpm -qa`	Queries the names of the installed packages that are maintained in the RPM database

The following table describes the command options that the preceding table uses. For additional information on these options, see the man pages.

Option	Purpose
`a`	Queries all installed packages
`i`	Displays package information, including name, version, and description
`p <packagefile>`	Specifies an uninstalled RPM package <package file> where <package file> might be a local file or the URL for a file that is accessed through the Internet
`q`	Specifies RPM query mode

To install a package file

1. Verify that you are logged in as **root**.

2. Mount the drive that contains the Informix package files using the **mount** command.

3. Change the current directory to the location of the Informix package files.

4. Optionally, check the package information as "Querying the Package Information" on page 10 describes.

5. Load the contents of the Informix package file under the directory that **INFORMIXDIR** is set to, as the following example shows:

    ```
    INFORMIXDIR=/opt/informix/LE
    export INFORMIXDIR
    rpm -iv --relocate /opt/informix=$INFORMIXDIR
    <filename>.rpm
    ```

    In this example, **INFORMIXDIR** is set to **/opt/informix/LE**.

    During installation, the **rpm** script checks the directory where the products will be installed for existing Client SDK installations. Similarly, the Informix Connect installer script checks the directory where the products will be installed for existing Informix Connect or Client SDK installations. If the existing installations are the same version or a later version than the version you are installing, you get a warning. You can then choose whether to proceed with the installation or terminate it.

    The Informix Connect installer script also asks you if you want to upgrade existing Version 7.x, ESQL/C libraries that might be linked to the existing Version 7.x client applications. If you choose no, the installer does not overwrite Version 7.x, ESQL/C libraries. If you choose yes, the installer overwrites Version 7.x, ESQL/C libraries. If you choose to upgrade, you have to recompile and relink Version 7.x client applications to make use of the new shared libraries because Version 2.4 shared libraries are not backward compatible with Version 7.x, ESQL/C shared libraries.

6.   Enter the 11-character serial number.

If you received your product materials directly from Informix, this number appears on your serial-number keycard. If you received your product materials from an Electronic Software Download (ESD) vendor, the vendor provides you with the serial number.

The serial number consists of three uppercase letters, followed by a pound sign (#), followed by one uppercase letter and six digits.

After you press RETURN, the script prompts you to enter your activation key.

7.   Enter the six-letter activation key.

If you received your product materials directly from Informix, this value appears on your serial-number keycard. If you received your product materials from an ESD vendor, the vendor provides you with the value of the activation key.

After you enter the installation command, the script displays information about the product and the script requirements, and finishes the installation.

To uninstall a package file

1.   Verify that you are logged in as user **root**.

2.   Use **rpm** -**qi** to determine the name, version, and release of the package.

3.   Use **rpm** -**e** to remove the product files and directories, as well as the corresponding entry in the RPM database.

Do not use the longer name of the package file.

You can use the commands in the following example to query the RPM database for Dynamic Server and uninstall the database server product:

```
$ rpm -qi csdk
Version :2.40.UC1
Release    : 1
:
$ rpm -ev csdk-2.40.UC1-1
```

Loading Product Files

Important: *Sometimes machine notes contain information on how to load and install Informix products on a particular computer. Make sure you read the appropriate Informix machine notes after you load and before you run the appropriate installation script for your product.*

Loading Product Files from an ESD Vendor

For information on how to load ESD vendor product files, see individual vendor documentation. Make a note of the serial number and activation key for your product. The Informix product-installation program requires that you supply these values when you install that product.

Loading Product Files from Informix

If you receive your product materials directly from Informix, these materials include a serial-number keycard, which shows the serial number and activation key, and electronic media, such as a compact disk or a downloaded disk file. Both the serial-number keycard and the electronic media are necessary for installation. If you do not have the serial-number keycard or the proper media, contact your supplier or Informix sales representative.

To load the product source files

1. If you use a 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

2. Load the media supplied with your software into the appropriate drive of your computer.

    This media contains the product files.

    If you are installing from a CD-ROM, use the UNIX **mount** command to mount the CD-ROM.

3. Change directories to **$INFORMIXDIR**.

4. Check the loadline that is printed on your packaging material or product media to see which load command you must use.

    Use the following examples as guides to enter the appropriate **tar**, **cpio**, or other load command:

    ■ On some UNIX platforms you can use the following **tar** command to place the product files in the current directory:

    ```
    tar xvf <filename>
    ```

    In this command, *filename* is the pathname of the **tar** file that contains the product files.

    For example, if you are installing from a CD-ROM, the tar command might be:

    ```
    tar xvf /cdrom/INFORMIX/csdk.tar
    ```

    ■ On some UNIX platforms you can use the following **cpio** command to place the product files in the current directory:

    ```
    cpio -icdumvB < <filename>
    ```

    In this command, *filename* is the pathname of the **cpio** file that contains the product files.

5. Some platforms require you to use the following pkgadd procedure to load and install products. If you use this procedure, make sure that your **/tmp** directory has enough room to accommodate the products. Use the following procedure to load the products using the **pkgadd** utility.

    a. Log in as user **root**.

    b. Enter one of the following commands:

    To load from a tape device enter:

    ```
    pkgadd -d <tapedevice>
    ```

    where *tapedevice* is the name of your tape device.

    To load from a CD-ROM enter:

    ```
    mount -F hs -o dos <devicefile> mountdirectory
    pkgadd -d <mountdirectory>/prodimag
    ```

    where *devicefile* is the name of the CD-ROM and *mountdirectory* is the location where you mount the CD-ROM.

c. Enter the 11-character serial number.

If you received your product materials directly from Informix, this number appears on your serial-number keycard. If you received your product materials from an ESD vendor, the vendor provides you with the serial number.

The serial number consists of three uppercase letters, followed by a pound sign (#), followed by one uppercase letter and six digits.

After you press RETURN, the script prompts you to enter your activation key.

d. Enter the six-letter activation key.

If you received your product materials directly from Informix, this value appears on your serial-number keycard. If you received your product materials from an ESD vendor, the vendor provides you with the value of the activation key.

e. On some platforms (such as Siemens), the script prompts you for an absolute pathname to the directory where you want to install the products.

During the installation process, the **pkgadd** utility checks the directory where the products will be installed for existing Client SDK and Informix Connect installations. If the existing installations are the same version or a later version than the version you are installing, you get a warning. You can then choose whether to proceed with the installation or terminate it.

f. If you use the **pkgadd** utility and you are installing Informix Connect, the utility asks you if you want to upgrade existing ESQL/C libraries that might be linked to the existing Version 7.x Client applications.

If you choose no, the **pkgadd** utility does not overwrite the current ESQL/C libraries. If you choose yes, the utility overwrites the current ESQL/C libraries. If you choose to upgrade, you will have to and recompile and relink Version 7.x client applications to make use of the new shared libraries.

After you enter the installation command, the script displays information about the product, displays the script requirement, and completes the product installation.

Important: *To continue to run your existing **ESQL/C** applications after you upgrade, set the **LD_LIBRARY_PATH** environment variable (or equivalent variable for your system) to **$INFORMIXDIR/lib/lib-7x**.*

Important: *The exact form of the **tar** or **cpio** command depends on a number of factors, which include your platform, the type of media, and whether multiple products are bundled on the media. In some cases you need to specify a device name rather than a filename in your **tar** or **cpio** command. If your media is a CD-ROM that contains a readme file or insert, check the readme file or insert for the exact form of the **tar** or **cpio** command that you should use.*

Checking On-Line Files

The product files include on-line informational files that answer specific technical questions. These files are installed in the **$INFORMIXDIR/release/en_us/0333** directory.

UNIX

Running Installation Scripts

Important: *Some machine notes explain how to install Informix products on a particular computer. Read the appropriate machine notes before you run the installation script for your product.*

If your platform uses the **pkgadd** utility, do not perform the steps in this section.

If you use a Version 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

If you do not have **root** privileges, ask your system administrator to perform the procedures that require user **root**.

Using the Scripts for Version Checking

As of Client SDK, Version 2.02, the **installconn** and **installclientsdk** scripts perform version checking. The scripts check for previously installed versions of Client SDK and Informix Connect and proceed with installation only if all previously installed versions are older than the version that you are installing.

Use the -**f** option to override version checking during installation.

If you install over a version older than Client SDK, Version 2.02, you can use the **check**-**version** utility to determine whether you installed an older version of the product over a newer one. For example:

```
check_version [csdk | conn]
```

Using installconn

You must be in **$INFORMIXDIR** to run this script.

The **installconn** script installs Informix Connect and has the following command syntax:

```
./installconn [-i|-o] [-s serial number [-k key]] [-f] [-u|-a|-n]
```

Important: Use the exact syntax shown above or you will get an error.

To run the **installconn** script, see .

The **installconn** script can take the following arguments for installing the client products. The following table lists each argument and describes its usage.

Argument	Usage	Additional Information
-**i**	Use Informix Connect with an Informix database server, Version 9.x or later.	You must be logged in as **informix**.
-**o**	Use Informix Connect with an Informix database server that is not Version 9.x or later	You must be logged in as **root**.
-**s** *serial number*	Automate the installation process by including the serial number on the command line.	The serial number must follow the -**s** option. The serial number is an 11-character license serial number from your serial-number keycard. It consists of three uppercase letters, followed by a pound sign (#), followed by one uppercase letter and six digits.

(1 of 2)

Argument	Usage	Additional Information
-k *key*	Automate the installation process by including the key on the command line.	The six-letter key from your serial-number keycard must follow the -**k** option.
-u	Upgrade Version 7.x ESQL/C shared libraries to Version 2.4 Client SDK.	When you use the -**u** argument, the installation script overrides ESQL/C, Version 7.x, shared-library files.
		With this option, you are prompted for verification during installation.
		If you use the -**u** argument, recompile and relink Version 7.x client applications because Version 2.4 shared libraries are not backward compatible with ESQL/C, Version 7.x, shared libraries. For more information, see the machine notes for Client SDK, Version 2.4.
-a	Upgrade ESQL/C, Version 7.x, shared libraries to Client SDK, Version 2.4, and do not prompt to verify this upgrade during installation.	The -**a** option operates similarly to the -**u** option, without a verification prompt during installation.
-n	Do not upgrade ESQL/C, Version 7.x, shared libraries to Client SDK, Version 2.4, and do not prompt to verify this upgrade during installation.	None.
-f	Use Informix Connect. Overrides version checking.	Use -**f** only if you are sure that the version you install is the newer version.

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Using installclientsdk

You must be in **$INFORMIXDIR** to run this script.

The **installclientsdk** installs Client SDK and has the following command syntax:

```
./installclientsdk [-i|-o] [-s serial number [-k key]] [-f]
```

Important: Use the exact syntax shown above or you will get an error.

To run the **installconn** script, see

The **installclientsdk** script installs all the Client SDK components. The script takes arguments. The following table lists each argument and describes the corresponding function.

Argument	Usage	Additional Information
-i	Use Client SDK with an Informix database server, Version 9.x, or later.	You must be logged in as **informix**.
-o	Use Client SDK with an Informix database server that is not Version 9.x or later.	You must be logged in as **root**.
-s *serial number*	Automate the installation process by including the serial number on the command line.	The serial number must follow the -**s** option. The serial number is an 11-character license serial number from your serial-number keycard. It consists of three uppercase letters, followed by a pound sign (#), followed by one uppercase letter and six digits.
-k *key*	Automate the installation process by including the key on the command line.	The six-letter key from your serial-number keycard must immediately follow the -**k** option.
-f	Overrides version checking.	Use -**f** only if you are sure that the version you install is the newer version.

To run either installconn or installclientsdk

1. If you use a Version 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

2. Determine in what order and where to install the products. See "Installation Order" on page 1-5 and "Installation Location" on page 1-4.

3. Copy the **clientsdk.tar** or **conn.tar** file to your **$INFORMIXDIR** directory.

4. Use the following command to tar the file:

    ```
    tar xvf [clientsdk.tar | conn.tar ]
    ```

5. Enter the command for one of the scripts (see "Using installconn" on page 1-17 and "Using installclientsdk" on page 1-19). The script displays information about the product and the script requirements.

6. Press RETURN to continue the installation procedure.

    If you specify the -**i** or -**o** options and both the -**s** and -**k** options, go to step 11.

    If you do not specify both the -**s** and -**k** options and do not provide a serial number and key, the script displays the following prompt:

    ```
    Enter your serial number (for example, INF#X999999) >
    ```

7. Enter the serial number.

    If you do not specify either the -**i** or the -**o** option, the script displays the following prompt:

    ```
    Is ClientSDK being installed along with Informix
    database server Version 9.x? (yes or no)
    ```

    Type y if you installed the database server and n if you did not install the database server. A screen prompts you for the serial number.

8. Enter the 11-character serial number.

    If you received your product materials directly from Informix, this number appears on your serial-number keycard. If you received your product materials from an ESD vendor, the vendor provides you with the serial number.

    The serial number consists of three uppercase letters, followed by a pound sign (#), followed by one uppercase letter and six digits.

    After you press RETURN, the script prompts you to enter your activation key.

9. Enter the six-letter activation key. If you received your product materials directly from Informix, this value appears on your serial-number keycard. If you received your product materials from an ESD vendor, the vendor provides you with the value of the activation key.

    After you press RETURN, the script displays a message about the license agreement with Informix. If your software is licensed for use by an unlimited number of simultaneous users, the script displays a message to that effect.

10. Press RETURN to continue the installation procedure.

    The script begins to install the products. The script displays a series of messages as it installs each directory.

11. If you plan to use Informix client products with a Version 9.x database server, a message indicates that you must log in as **root** to finish the installation procedure.

    In this case, log in as **root** at the shell prompt and run the **RUN_AS_ROOT.*ext*** script; otherwise, follow any directions that the script displays to complete the installation.

    The **RUN_AS_ROOT.*ext*** script is in **$INFORMIXDIR**. The **.*ext*** extension indicates the product. To execute the **RUN_AS_ROOT.*ext*** script, include the full path. For example, to complete the Client SDK installation when **$INFORMIXDIR** is **/local/informix**, enter the following command:

    ```
    /local/informix/RUN_AS_ROOT.clientsdk
    ```

    When the **RUN_AS_ROOT.*ext*** script completes, it displays the following message:

    ```
    Installation of product complete
    ```

If no error messages appear during the installation procedure, the installation is successful. If any error messages appear before the `Installation of product complete` message, see "Solving Installation Problems" on page 1-22.

The installation script changes the owner of **$INFORMIXDIR** to user **informix** and grants the appropriate privileges. Installation also automatically adjusts the ownership and privileges for subdirectories and files in **$INFORMIXDIR** that user **informix** must access or control.

*Important: If any error messages appear before the installation is complete, do not use the **oninit** command. If you use **oninit** you might cause further installation problems. For more information, see "Solving Installation Problems" on page 1-22.*

Solving Installation Problems

If you receive your Informix product materials from an ESD vendor, consult the vendor's documentation for information on how to solve any problems you might encounter.

This section describes the most common installation problems and the corresponding solutions for users who receive their product materials directly from Informix. If any of the outlined problems persist, contact Informix Technical Support. In North America, call toll-free (800) 274-8184 or send a facsimile to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

UNIX

Media-Loading Failures

The problems documented in this section might appear when you load files to your computer.

- **Problem.** You copy files with **cpio** from multiple disks onto your computer. After you enter the **cpio** command, a message similar to one of the following examples appears:

    ```
    error 9:  cannot read input ... type
    device/filename to continue.
    error 2:  cannot read input ... type
    device/filename to continue.
    ```

    Solution. The **cpio** command has read all the data on the current disk. Load the next disk, enter the device name exactly as you entered it for the **cpio** command, and press RETURN. Continue the process for each disk supplied for that Informix product.

- **Problem.** You attempt to load the files, but the **cpio**, **tar**, or other load command fails with an error message similar to one of the following examples:

    ```
    invalid blocksize
    cannot open devicename
    unknown option
    tape read error
    ```

    Solution. Verify that you entered the **cpio**, **tar**, or other load command correctly, then try the command again. If the load command fails again, contact Informix Technical Support or the vendor from whom you purchased the product. You might need to obtain new media.

Package-Manager Failures

The problems documented in this section might appear when you use the **rpm** utility to load or unload an Informix package:

■ *Problem.* The command displays the following message:

```
ERROR: Failed to locate directory with write
permissions.
```

Solution. Check that you are logged in as **root**. Use the chmod command to grant write permission on the current directory and then run the **rpm** command again.

■ *Problem.* The command displays one of the following messages:

```
ERROR: User informix must exist to install product.
ERROR: Group informix must exist to install product.
```

Solution. Follow the instructions in "Creating the informix Group, User, and Product Directory" on page 8 to create the necessary user or group.

■ *Problem.* The command displays one of the following messages:

```
ERROR: You must be root to install product.
ERROR: You must be root to uninstall product.
```

Solution. Check that you are logged in as **root**.

■ *Problem.* The command displays the following message:

```
package product is already installed
ERROR: product.rpm cannot be installed
```

Solution. If you want to reinstall the product, uninstall the previous package, as described in "To uninstall a package file" on page 12.

■ *Problem.* The **rpm** -**e** command displays the following message:

```
package product is not installed
```

Solution. You have probably misspelled the package name. Use the **rpm** -**q** option to print the name, version, and release. Rerun the **rpm** -**e** command with the correct specification for the package. For information about specifying a package name, see "Querying the Package Information" on page 10.

■ *Problem.* The command displays the following message:

```
rpm: arguments to --relocate must begin with a /
```

Solution. Specify the absolute path, as the following example shows:

```
rpm -i --relocate /opt/informix=/$INFORMIXDIR
<filename>.rpm
```

Installation Failures

The problems in this section might occur during installation:

- *Problem.* After you enter the six-letter activation key, the script displays a message similar to one of the following examples:

  ```
  chmod:  can't change filename
  etc/brand:  cannot open filename
  filename:  not owner
  ```

  Solution. This problem usually occurs because you logged into the wrong account to load the product source files.

  If you use a 9.x database server, confirm that you are logged in as **informix**. Otherwise, confirm that you are logged in as **root**.

- *Problem.* After you enter the six-letter key, the script displays the following message or a similar message:

  ```
  "WARNING: This is an invalid serial number.
  Exiting install script."
  etc/brand: invalid serial number and/or key.
   ** Verify serial number and key values. **
   ** Restart installation procedure.      **
   ** Please type carefully.               **
  ```

  Solution. This problem occurs because you did not enter the correct serial number or key. Make sure that you enter the correct values.

  This problem can also occur because you did not run the stty erase ^h command properly, which causes the installation script to misinterpret certain keystrokes. For example, the installation script might interpret a pound sign (#) as a backspace.

  Rerun the stty command as described in "Setting the Environment" on page 9. Then repeat the steps in "Running Installation Scripts" on page 16 and all subsequent steps. If this problem occurs again, repeat the steps in "Loading Product Files" on page 1-13 and all subsequent steps.

- **Problem.** When you attempt installation, the following message appears:

  ```
  INFORMIXDIR and working directory do not match.
  INFORMIXDIR = pathname
  Current working directory = pathname
  ```

  Solution. Make sure that you are in **$INFORMIXDIR**.

  To check that the value of the **INFORMIXDIR** environment variable matches the directory path where you loaded the package, use the following command:

  ```
  echo $INFORMIXDIR
  ```

  If necessary, reset the **INFORMIXDIR** environment variable, as "Setting the Environment" on page 9 describes.

- **Problem.** When you attempt an installation, the following message appears:

  ```
  INFORMIXDIR is not set.
  ```

  Solution. Set the **INFORMIXDIR** environment variable to the directory where the Informix client product will be installed. The installation script does not set the **INFORMIXDIR** environment variable for you.

- **Problem.** When you attempt an installation, the following message appears:

  ```
  Please rerun this installation procedure as user
  ```

  Solution. If you use a 9.x database server, make sure that you are logged in as **informix**. Otherwise, make sure that you are logged in as **root**.

- **Problem.** The script displays the following message, where `scriptname` **is the name of the installation script (installclientsdk** or **installconn**):

  ```
  ./scriptname has exited abnormally. This may have left
  your Informix installation in an incomplete state.

  Please correct this problem and rerun ./scriptname,
  using the "-f" option, as follows:
                  ./scriptname -f
  ```

  Solution. Make sure that you have enough disk space and then rerun the script with the -**f** option.

- **Problem.** The script displays the following message, where
scriptname is the name of the installation script (**installclientsdk** or
installconn):

```
The file "etc/.filename" is not writable! Please have
your system administrator set the following
permissions before proceeding with ./scriptname.

chmod 644 etc/.filename
chown informix etc/.filename
chgrp informix etc/.filename
```

Solution. The script cannot update the file because the existing
permissions in the **etc/.*filename*** file are too restrictive. Change the
mode, owner, and group to the permissions specified in the error
message.

- **Problem.** After you enter the six-letter key, the script displays the
following message:

```
Unknown message number 32766.
```

Solution. You must set **INFORMIXDIR** before you run the installation
script. Set **INFORMIXDIR** and repeat the steps in "Running Instal-
lation Scripts" on page 16 and all subsequent steps.

Access Problems After Installation

The problems in this section can occur when you try to start an Informix
client product:

- **Problem.** You try to send a command to an Informix product from the
command line (or through an alternative method), but you receive
the following message or a similar message:

```
cannot attach to shared memory
```

Solution. Before you use the database server, you must bring the
server to on-line mode. See the database server configuration
discussion in your *Administrator's Guide*.

■ **Problem.** You try to call an Informix product from the command line (or through an alternative method), but you get the following (or a similar) message:

```
Invalid serial number or mistyped key.
Please consult your installation instructions.
```

Solution. Place **$INFORMIXDIR/bin** first in the **PATH** environment variable, rerun the installation script (see "Running Installation Scripts" on page 16), and repeat all subsequent steps.

■ **Problem.** You try to run an Informix product program from the command line (or through an alternative method), but you receive only a system prompt or the following (or a similar) message:

```
program:   Command not found.
```

Solution. Verify that the environment variables are set properly (see "Setting the Environment" on page 9).

If the environment variables are set correctly, check if another file with the same name exists in the **PATH** variable that would be accessed before the Informix executable file. Move, rename, or delete that file, or reorder the member paths in the path value so that the path in which the Informix executable resides precedes the path in which the conflicting executable resides.

For more information about environment variables, see the *Informix Guide to SQL: Reference.*

■ **Problem.** You try to invoke an Informix product from the command line (or through an alternative method), but you get the following (or a similar) message:

```
Unknown message number 32766.
```

Solution. Verify that the **INFORMIXDIR**, **DBLANG**, and **CLIENT_LOCALE** environment variables are set correctly (see "Setting the Environment" on page 9) and repeat the steps in "Running Installation Scripts" on page 16 and all subsequent steps.

GLS

For more information, see the *Informix Guide to GLS Functionality.* ◆

Difficulties While Using Informix Products

The problems in this section can occur while you run Informix client products. These problems are not directly related to installation, but they do involve environment variables.

- **Problem.** The list of databases is incomplete.

  Solution. Check that the **DBPATH** environment variable contains the names of all other database servers not referenced by the **INFORMIXSERVER** environment variable.

- **Problem.** After you access an Informix application, the screen display is unformatted.

  Solution. Verify that the **TERM**, **TERMCAP** (or **TERMINFO**), and **INFORMIXTERM** environment variables are set correctly. For more information about environment variables, see the *Informix Guide to SQL: Reference.*

- **Problem.** After you successfully install your client products and successfully invoke your database server, you cannot connect to the database server.

  Solution. Check that your **sqlhosts**, **/etc/hosts**, **/etc/services** files do not contain typographical errors, misspellings, or inconsistencies.

  If you use a network information system, check that the changes you make to the **services** file are properly accessed and available to your computer.

  Check that the database server is configured correctly (see the discussion of configuration information in the *Administrator's Guide*).

- **Problem.** Unusual problems occur (for example, networking problems on Hewlett-Packard platforms or unexplainable failures on Sun platforms).

  Solution. Your system might need a patch. Read the **IDS_9.2** file in the default directory **$INFORMIXDIR/release/en_us/0333** for advice on patch information.

Installing Informix Client SDK on Windows

In This Chapter

This chapter explains how to install Informix Client Software Developer's Kit (Client SDK), Version 2.4, and Informix Connect, Version 2.4, on Windows NT, Version 4.0, with Service Pack 3 (SP 3) or above, Windows 95, and Windows 98. For a comprehensive list of Client SDK components, see the Introduction to this manual.

Preparing to Install Client SDK and Informix Connect

You install Informix products for Windows environments with an installation program that copies files to your client computer.

Install Informix products only as licensed by Informix. You cannot transfer software from one computer to another, or to another portion of your network, without reregistration and the written consent of Informix.

Before you install Client SDK, you must install the appropriate operating-system patches and comply with the software, system, database server, protocol, compiler, and driver-manager requirements.

System Requirements

The following table outlines the system requirements for Informix client products for Windows environments.

Requirement	Windows 95/98	Windows NT
Hardware	80486 or higher microprocessor	80486 or higher microprocessor
Windows version	Windows 95 or Windows 98	Version 4.0 with SP 3
RAM	16 megabytes	32 megabytes
Hard-disk storage	20 megabytes (or less, depending on the products and components you install)	20 megabytes (or less, depending on the products and components you install)

Database Server Requirements

Client SDK, Version 2.4, and Informix Connect, Version 2.4, can be used on client computers connecting to Informix databases. See the on-line release notes for each client component for a list of compatible Informix servers.

Protocol Requirements

Informix client products work with any TCP/IP protocol that complies with Windows Sockets 1.1. Select a protocol through **Setnet32** to configure your client product utilities. For instructions, see "Setting Database Server Information" on page 13.

C Compiler Requirements

Informix client products are certified with the Microsoft Visual C++ compiler, Version 5.0 and Version 6.0. For individual components for other supported compilers, see the release notes.

Driver-Manager Requirements

Client SDK and Informix Connect products include Microsoft Driver Manager, Version 3.51, as a component of Microsoft Data Access Components (MDAC), Version 2.1.

If Microsoft Driver Manager 3.0 or later is already installed on your computer, you do not have to install a new Driver Manager unless you want to use a newer version.

Finding the Version of the Installed Driver Manager

To find out what version of the Driver Manager is installed on your computer, choose **Start→Settings→Control Panel→ODBC Data Sources** to display the ODBC Data Source Administrator window. If the window does not have an **About** tab, your computer has a Driver Manager earlier than Version 3.0.

To find the specific version number of your Driver Manager, use the following procedure:

1. Use Windows Explorer to finds your Windows system directory (**SYSTEM** directory on Windows 95 and Windows 98 or **SYSTEM32** directory on Windows NT).

2. Double-click **odbc32.dll**.

3. Click **File Properties.**

4. Click **Version** tab.

   The **Version** tab page displays your Driver Manager version number.

Installing the Driver Manager

Use the Informix **Setup** utility to install Microsoft Driver Manager, Version 3.51. When you run **Setup**, you must specify the **Custom install** option. You can only install Microsoft Driver Manager, Version 3.51, by choosing MDAC, Version 2.12, which requires a system reboot.

If you want to install an older version of Driver Manager than is currently installed on your computer, first uninstall the newer version using the appropriate uninstall program.

Installation Location

Before you install client products, you must verify that the installation location is correct. For more information, see Chapter 1, "Installing Informix Client SDK on UNIX and Linux."

Installation Order

Before you install client products, you must verify that the installation order is correct. For more information, see Chapter 1, "Installing Informix Client SDK on UNIX and Linux."

Installing Client SDK and Informix Connect

To install Client SDK and Informix Connect on Windows, run the **Setup** utility for each package that you want to install. **Setup** allows you to choose which components of the package to install.

The following sections describe Informix client product installation options, how to install your software, and solutions to installation problems.

Important: You must install Client SDK *products before you run* Enterprise Replication *commands and before you convert the* **syscdr** *database. For more information, see the "Guide to Informix Enterprise Replication."*

Installation Options

While you run the **Setup** utility, select which components and subcomponents to install. Subcomponents include on-line help and an example program. The following table describes the installation options.

Option	Description
Typical	Includes all components, on-line help, and examples, except Microsoft Data Access Components and Informix OLE DB Provider.
Compact	Includes all components except Microsoft Data Access Components, Informix OLE DB Provider, on-line help, and examples.
Custom	You select the components and subcomponents to install.

Using the Setup Utility for Version Checking

In Client SDK, Version 2.02, and later, the **Setup** utility avoids copying files over newer versions of the files that are already on your computer. **Setup** compares file versions using either the file system file date or, for **.exe** and **.dll** files, a version number stored within the file. It installs only files that are newer than existing files. In previous versions, some files were checked by date and others were overwritten without any version checking.

Configuring OLE DB

Informix OLE DB Provider is a Custom install option and is not installed if you choose a Typical installation. Informix OLE DB Provider installation requires administrative privileges.

To enable your Informix database server for OLE DB access, a database administrator must run the SQL registration script, **coledbp.sql**, against the **sysmaster** database as user **informix**.

To drop OLE DB support, a database administrator must run the SQL unregistration script, **doledbp.sql**, against the **sysmaster** database as user **informix**.

Using the Setup Utility to Install Client SDK and Informix Connect

To install Client SDK and Informix Connect, run the **Setup** utility.

To install Client SDK

1. Load the CD-ROM for Client SDK or Informix Connect into the CD-ROM drive.

2. Read the **readme.txt** file in the root directory of the CD-ROM. This file might have information you need before you continue.

3. Exit all Windows programs.

4. Choose **Start→Programs→Command Prompt** or **Start→Run to** start the **Setup** utility.

5. In the Run dialog box or at the DOS prompt, type:

    `d:setup`

    Replace *d:* with the CD-ROM drive letter.

6. Press ENTER or click **OK**. The Welcome dialog box appears.

7. Click **Next**.

    The Enter Serial # and Key dialog box appears.

8. Type the serial number and key found on the Serial Number Card you received with the product package.

9. Click **Next**. The User Information dialog box appears.

10. Type your name and company name in the fields provided.

11. Click **Next**. The Choose Destination Location dialog box appears.

12. Type the directory where you want the Informix product to be installed. The default installation directory is **C:\INFORMIX**. Click **Browse** to choose a nondefault directory.

13. Click **Next**. The Setup Type dialog box appears.

*Important: **Setup** sets the **INFORMIXDIR** registry entry to the destination directory you choose. Informix software products are designed to be installed in a single directory identified by this registry entry. If you install Informix products in different directories, only those in the directory identified by the **INFORMIXDIR** registry entry can run.*

14. Select an installation type. The installation options (Typical, Compact, and Custom) are discussed in the section "Installation Options" on page 2-7.

15. Click **Next**. If you selected the Custom installation type, the Select Components dialog box appears. If you did not select Custom installation, go to step 17.

16. In the Select Components dialog box, check the boxes of the components and subcomponents you want to install.

    The disk-space requirements are listed next to each component and subcomponent.

    When you have selected the components to install, click **Next**. The Select Program Folder dialog box appears.

17. In the Select Program Folder dialog box, specify the folder where you want to store Informix applications and icons. Accept the default (**INFORMIX**), choose another existing folder, or type the name of a new folder to create.

18. Click **Next**. The Start Copying Files dialog box appears.

19. Click **Next** if all the information is correct. Click **Back** to return to previous screens and change installation options.

20. If **Setup** does not encounter errors during the installation procedure, it displays the Setup Complete dialog box to indicate that the installation is successful.

21. Click **Finish** to exit **Setup**.

If **Setup** displays a reboot dialog box, choose *y* to reboot your computer now or *n* to reboot it later. Informix recommends that you restart your computer after this step.

During this procedure, **Setup** copied the client product software to your computer, created the **Setnet32** icon and other icons in the **INFORMIX** program folder, and created the **INFORMIX** subkey of the Windows Registry.

If **Setup** generates an error message, see "Solving Installation Problems" on page 10.

Uninstalling Client SDK

Uninstalling Client SDK completely removes the driver and all its components from your computer. To uninstall Client SDK on Windows NT, double-click **Uninstall** in the folder that contains the Client SDK products.

To uninstall Client SDK on Windows 95 and Windows 98, choose **Start→Settings→Control Panel→Add/Remove Programs→Informix Client SDK**.

The Uninstall program guides you through the uninstallation of Client SDK.

*Important: When you uninstall Client SDK, the Uninstall program removes all components if no other Informix products are installed. If other Informix products are installed, the Uninstall program removes all components except Windows Registry entries. You must use the **regedit** utility to manually remove all Informix-related Registry entries after you uninstall Client SDK.*

Solving Installation Problems

If you receive your Informix product materials from an Electronic Software Download (ESD) vendor, consult the vendor's documentation for information on how to solve any problems you might encounter.

This section describes the most common installation problems and the corresponding solutions for users who receive their product materials directly from Informix. If any of the outlined problems persist, contact Informix Technical Support. In North America, call toll-free (800) 274-8184 or send a facsimile to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

- *Problem.* The following error message appears:

    ```
    Error: file reading error
    ```

    Solution. The installation program is unable to read the media. Try loading the CD-ROM again. If the error persists, you might have corrupted hardware or media. See your system administrator.

■ *Problem.* The following error message appears:

```
Invalid Processor: Error
```

Solution. Use a computer with an Intel 80486 or higher microprocessor.

■ *Problem.* The following error message appears:

```
Invalid OS: Error
```

Solution. Your client computer has an unsupported operating system. Use Windows NT, Version 4.0; Windows 95; Windows 98; or Windows 2000.

■ *Problem.* The following error message appears:

```
Not enough disk space - Error
```

Solution. Make more space available on the disk on which you want to install the Informix product or choose a new disk location for the software. For more information, see "System Requirements" on page 2-4.

■ *Problem.* The following error message appears:

```
Warning - Invalid serial number and key
```

Solution. Reenter the serial information. If the installation still fails, reload the product files from the media and repeat all subsequent steps.

Configuring Informix Client Products on Windows

This section describes how to use the **Setnet32** utility to configure Client SDK products. The **Setnet32** utility sets or modifies environment variables and network parameters that Informix products use at runtime. The environment variables and network parameters are stored in the Windows system registry and are valid for every Informix client product you install.

This section is divided into the following components:

- "Setting Environment Variable Information" on page 12
- "Setting Database Server Information" on page 13
- "Setting Host Information" on page 15
- "Using Client APIs from Windows NT Services" on page 17

To set component-specific environment variables, see individual product documentation.

Setnet32 has the following four tabbed pages:

- **Environment** allows you to set environment variables.
- **Server Information** allows you to set database server network information.
- **Host Information** allows you to set your host computer and login information.
- **About Setnet32** provides information about **Setnet32**.

Setting Environment Variable Information

To obtain information about Informix products and the environment in which they run, client products need to access environment variables. Some environment variables are required and others are optional.

For more information about environment variables, see "Environment Variables" on page 2-18 and the *Informix Guide to SQL: Reference*.

GLS

For more information about environment variables for locales, see the *Informix GLS Programmer's Manual*. ♦

To set environment variables using Setnet32

1. Double-click **Setnet32** in the folder that contains the Client SDK products. The Informix **Setnet32** dialog box appears.

2. Click the **Environment** tab to display the **Environment** page, which has the following elements:

   ■ **Informix Client/Server Environment** list box

   Select an environment variable to edit.

   After you select an environment variable, the environment variable name appears above the **Variable Name** text box.

   ■ **Edit Environment Variable** group

   Type a new value in the text box, edit the existing value, or select a value by clicking the down arrow.

   Click **Clear** to assign a null value to that environment variable. After you make your change, click **Set** to save that value.

   ■ **Save/Load** group

   Click **Load From File** to load your environment variables and their values from a specific file. However, you cannot load environment variables from a specific file unless the **Setnet32** utility has already created that file (use the **Save To File** option to create a file).

   Click **Save To File** to save your environment variables and their values to a specific file.

Setting Database Server Information

A client application connects to an Informix database server running on a computer that can be reached through the network. To establish the connection, use **Setnet32** to specify the location of the Informix database server on the network and the network communications protocol to use. You must obtain this information from the administrator of the database server you want to use.

Set the following database server parameters with the **Server Information** page of **Setnet32**, which contains the following elements:

- **Informix Server** list box

  Select an existing Informix database server or type the name of a new database server.

- **HostName** list box

  Select the host computer with the database server you want to use or type the name of a new host computer.

- **Protocolname** list box

  Select a network protocol from a list of protocols provided by the installation procedure.

- **Service Name** text box

  Specify the service name associated with a specific database server. Type either the service name or the port number assigned to the database server on the host computer. You must obtain this information from the database server administrator.

- **Options** text box

  Enter options specific to the database server. For more information, see the *Administrator's Guide*.

*Important: If you enter a service name, it must be defined on the client computer in the **services** file in the Windows installation directory. For Windows NT, Version 4.0, this file is located in **system32\drivers\etc\services**. For Windows 95 and Windows 98, this file is located in the **%windir%** directory. The service definition must match the definition on the database server host computer.*

- **Make Default Server** button

  Sets the **INFORMIXSERVER** environment variable to the name of the current database server to make it the default database server.

- **Delete Server** button

  Deletes the definition of a database server from the Windows registry. It also deletes the host name, protocol name, and service name associated with that database server.

Click **OK** to save the values.

Setting Host Information

A client application can make connections only to a host computer that it can access through the network. You describe a connection to a host computer by specifying *host parameters.*

For more information on host parameters, see your *Administrator's Guide.*

Set the following host parameters for a specific host with the **Host Information** page of **Setnet32** that contains the following elements:

■   **Current Host** list box

This list displays host computers previously defined in the current Windows Registry. Select the name of a host computer with which to establish a network connection or edit or retype a name on the list to define a new host name.

■   **User Name** text box

This text box displays the user name for an account on the currently selected host computer. This text box accepts a case-sensitive value with a maximum length of 18 characters.

■ **Password Option** list box

Select one of the following password options:

❑ **Ask Password At Runtime**

Your application prompts the user for a password.

For information about how to use the **sqlauth()** function to prompt for a password and verify it, see the *Informix ESQL/C Programmer's Manual.*

❑ **No password**

The user account has no password. When the application opens a new database, that application does not send a password to the database server. If the host computer of the database server requires a password, the connection fails, and you receive an error.

❑ **Password**

The user account has a password that matches the encrypted value that the **Password** text box displays. When the application opens a new database, the database server compares the password that the user enters with the login password for the host computer of the database server. If the passwords are not identical, the user cannot connect to that database server across a network.

■ **Password** text box

This text box, which the **Password** option activates, displays asterisks (*) that represent the account password. When this text box is enabled, it accepts a password value with a maximum length of 18 characters. The value is case sensitive and cannot contain any spaces.

To enter a new password, place the cursor inside the **Password** text box and type the new password. Asterisks (*) represent the characters as you type.

■ **Delete Host** button

This button deletes the name of the currently selected host computer from the Windows Registry, as well as the user name, password option, and password associated with that host computer.

Using Client APIs from Windows NT Services

You can run applications, such as Web servers and Microsoft Transaction Server (MTS), as Windows NT services.

Windows NT services do not search for configuration information in the Windows registry hive where the **Setup** utility and the **Setnet32** utility store client products environment variables.

To enable a client application to run as a Windows NT service, you must copy the values from the **HKEY_CURRENT_USER\SOFTWARE\Informix\Environment** registry hive of the **informix** user to the **HKEY_USERS\Default\Software** registry hive. You must run the **regcopy** utility each time you change the registry with **Setnet32** to synchronize data across hives.

To run **regcopy**, log in as user **informix** or as another user that has administrator privileges and can run Informix software. **Regcopy** is in the **bin** subdirectory of the Informix installation directory. After you run **regcopy**, check the progress by reviewing the **regcopy.log** file located in the **%TEMP%** directory.

Environment Variables

Client SDK, Version 2.4, supports the following environment variables. For more information on these environment variables, see their descriptions in the respective manuals.

Environment Variable	Purpose	Manual Reference and Possible Values
CC8BITLEVEL	Specifies how the C-language compiler processes non-ASCII (8-bit and multibyte) characters.	*Informix GLS Programmer's Manual* Default is 2.
CLIENT_LOCALE	Specifies the locale that the client application uses to perform read/write operations that involve the keyboard, display, file, or printer on the client computer.	*Informix GLS Programmer's Manual* Any valid locale specifier. No default.
COLLCHAR	Specifies a collation sequence for characters. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference*
DB_LOCALE	Specifies the locale of all the databases that a client application accesses in a single connection (the database locale).	*Informix GLS Programmer's Manual*
DBALSBC	When set to 1, enables compatibility with ALS products.	*Informix ESQL/C Programmer's Manual* Values:0 or 1
DBANSIWARN	When turned on (y), causes the preprocessor to check for Informix extensions to ANSI-standard SQL syntax at compile time and causes an application to check for Informix extensions at runtime.	*Informix Guide to SQL: Reference* Default is n.
DBAPICODE	Enables pre-7.2 systems that use nonstandard or rare code sets to access databases that store data in a standard code set. Maximum size = 23 characters. Provided for backward compatibility with NLS and ALS products.	*Informix GLS Programmer's Manual*

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Environment Variable	Purpose	Manual Reference and Possible Values
DBASCIIBC	When set to 1, enables compatibility with ASCII products.	*Informix ESQL/C Programmer's Manual* Values: 0 or 1
DBCENTURY	Specifies how to expand values of two-digit-year DATE and DATETIME values. P = past century, R = present century, C = closest century.	*Informix Guide to SQL: Reference* Values: P, R, or C Default is R.
DBCODESET	Specifies an Asian-locale code set. Overrides the code set that DB_LOCALE specifies. Provided for backward compatibility with Version 4.x and 5.x ALS products.	*Informix GLS Programmer's Manual* Same values as ALS DBAPICODE. Default is 8859-1: (unless the **informix.rc** file specifies another system-wide default)
DBCONNECT	Specifies whether or not connections are restricted.	*Informix ESQL/C Programmer's Manual* Values: 1 or 3
DBCSCONV	Controls code-set conversion initialization. Maximum size is eight characters. Provided for backward compatibility with ALS products.	*Informix ESQL/C Programmer's Manual* Values: 1 or 2:*codesetname* See 5.0 ALS documentation.
DBCSOVERRIDE	Forces the user-specified DB_LOCALE value to override default restrictions on accessing databases with locales different from DB_LOCALE. Provided for backward compatibility with Version 6.0 ALS database servers.	*Informix ESQL/C Programmer's Manual* Values: 0 or 1

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Environment Variable	Purpose	Manual Reference and Possible Values
DBCSWIDTH	Maximum number of display bytes (1-2) and storage bytes (1-4) for the characters in up to three code sets. Display and storage widths are separated by commas; code sets are separated by colons. Maximum size of this field is, therefore, 11 characters. Provided for backward compatibility with ALS products.	*Informix ESQL/C Programmer's Manual* Example: `1,1:2,3` means a display and storage width of 1 byte for character set 1; a display width of 2 bytes and a storage width of 3 bytes for code set 2.
DBDATE	Specifies the end-user format for DATE values so that they can conform with various international date conventions. Provided for backward compatibility with pre-7.2 products. Informix recommends GL_DATE for 7.2 ESQL/C applications.	*Informix GLS Programmer's Manual* Default is `MDY4` unless NLS variable LC_TIME is activated.
DBFLTMASK	Specifies the number of decimal digits to use when storing a DECIMAL, SMALLFLOAT, or FLOAT data type in a character buffer.	*Informix Guide to SQL: Reference* Values: `0-16` Default is `16`.
DBLANG	Specifies the subdirectory of the Informix installation directory that contains the product-specific message (**.iem**) files.	*Informix GLS Programmer's Manual* Default is `\msg`.
DBMONEY	Specifies the end-user format for MONEY values so that they can conform with various international and local monetary conventions.	*Informix GLS Programmer's Manual* Default is `$.,`.
DBMONEYSCALE	Specifies the total number of digits and number of decimal digits for monetary values. Provided for backward compatibility with ALS products.	*Informix GLS Programmer's Manual*
DBNLS	Specifies whether an application can access NLS features. Provided for backward compatibility with NLS products.	*Informix GLS Programmer's Manual* Default is `n`.
DBPATH	Identifies the database servers that contain databases that the application accesses.	*Informix GLS Programmer's Manual*

Environment Variable	Purpose	Manual Reference and Possible Values
DBSS2	Maximum size is four characters. Provided for backward compatibility with ALS products.	*Informix GLS Programmer's Manual* **Values:** `0x00-0xff` or `0-255`
DBSS3	Maximum size is four characters. Provided for backward compatibility with ALS products.	*Informix GLS Programmer's Manual* **Values:** `0x00-0xff` or `0-255`
DBTEMP	Specifies the directory on the client computer that the client processor uses to store temporary files (also called **swap** files).	*Informix GLS Programmer's Manual* **Default is** `\tmp`.
DBTIME	Specifies the end-user format for DATETIME values so that they can conform with various international date conventions. Informix recommends GL_DATETIME for 7.2 ESQL/C applications. Provided for backward compatibility with pre-7.2 products.	*Informix GLS Programmer's Manual* **Default is** `%Y-%m-%d %H:%M:%S`.
DELIMIDENT	Indicates whether (`y`) or not (`n`) to interpret strings in double quotes as delimited identifiers.	*Informix GLS Programmer's Manual* Default is `n`.
ESQLMF	Indicates whether the ESQL/C processor automatically invokes the ESQL/C multibyte filter (*value*=1 and CC8BITLEVEL<3, or not *value*=0).	*Informix GLS Programmer's Manual*
FET_BUF_SIZE	Overrides the default size of the fetch buffer.	*Informix GLS Programmer's Manual* Any valid buffer size, in bytes. Default value depends on row size.
GL_DATE	Specifies a customized end-user format for DATE values.	*Informix GLS Programmer's Manual*

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Environment Variable	Purpose	Manual Reference and Possible Values
GL_DATETIME	Specifies a customized end-user format for DATETIME values.	*Informix GLS Programmer's Manual*
IFX_NOZEROMDY		ESQL/C release notes
IFX-USE_PREC_16		ESQL/C release notes
INFORMIXCONRETRY	Specifies the maximum number of additional connection attempts made to a database server in the time limit that CONTIME specifies.	*Informix ESQL/C Programmer's Manual* Default is 1.
INFORMIXCONTIME	Specifies the number of seconds an SQL CONNECT statement continues to try to establish a connection before it generates an error.	*Informix ESQL/C Programmer's Manual* Default is 15.
INFORMIXDIR	Identifies the location of the client programs, library files, message files, header files, and other Informix software components.	*Informix GLS Programmer's Manual* Default is C:\INFORMIX.
INFORMIXSERVER	Identifies the default database server.	*Informix GLS Programmer's Manual*
INFORMIXSQLHOSTS	Specifies the name of the computer on which the central registry resides.	*Informix GLS Programmer's Manual*
LANG	Specifies the language environment (called a *locale*) for an NLS database that an application accesses. *Provided for backward compatibility with NLS products.*	*Informix GLS Programmer's Manual* Default is C.
LC_COLLATE	Specifies a collation or sort sequence for data in NCHAR and NVARCHAR columns of an NLS database. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
LC_CTYPE	Specifies character attributes such as character classification and case conversion of regular expressions for data in NCHAR and NVARCHAR columns of an NLS database. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.

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Environment Variable	Purpose	Manual Reference and Possible Values
LC_MONETARY	Specifies the end-user format for MONEY values in an NLS database. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
LC_NUMERIC	Specifies the end-user format for numeric values in an NLS database. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
LC_TIME	Specifies the end-user format for DATE and DATETIME values in an NLS database. Provided for backward compatibility with NLS products.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
NODEFDAC	Allows default table privileges for PUBLIC when a new table is created in a database that is not ANSI compliant.	*Informix Guide to SQL: Reference* Default is to allow privileges.
OPTMSG	Enables optimized message transfers (message chaining) for all SQL statements in an application.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
OPTOFC	Enables optimize-OPEN-FETCH-CLOSE functionality in an Informix ESQL/C application that uses DECLARE and OPEN statements to execute a cursor.	*Informix Guide to SQL: Reference* Default is the value that LANG specifies.
USE_DTENV	Enables support for non-ANSI datetime formats in ESQL/C client programs.	See ESQL/C release notes

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Use a set of environment variables with the function call **ifx_putenv** to override the information entered in the **Server Information** and **Host Information** pages of **Setnet32**. To use these environment variables, set the **INFORMIXSERVER** environment variable to a valid database server name. Overrides affect only that database server.

Client SDK, Version 2.4, supports the following WIN32 override environment variables. For more information on these environment variables, see the *Informix ESQL/C Programmer's Manual*.

Environment Variable	Overrides the Value For
WIN32HOST	The HOST network parameter
WIN32USER	The USER network parameter
WIN32PASS	The PASSWORD network parameter
WIN32ASKPASSATCONNECT	The PASSWORD OPTION network parameter
WIN32SERVICE	The SERVICE network parameter
WIN32PROTOCOL	The PROTOCOL network parameter

Distributing Your Informix Client Applications

Windows

This appendix discusses the technical and legal requirements you must observe when you distribute applications created using Informix client APIs (such as Informix ESQL/C and Informix ODBC Driver) on Windows platforms. With your client application files, you might distribute and install Informix client runtime components required by your application.

To install these components, you can either:

- require your customers to install the components separately.
- record the installation process and run the resulting script as part of your client application's installation program.

By installing and configuring Informix client APIs using prere-corded installation scripts, you can enable your customers to bypass the installation dialog boxes that normally appear. Such an installation is referred to as a *silent* installation.

Distributing Informix Client Applications and Components

When you distribute a client application that you have developed using an Informix client API, you might decide to distribute Informix components that are required by your application at runtime. The following table lists the Informix components that your customer needs in order to run your client application.

Client Development API	Components Required at Runtime
Informix Client SDK	Informix Connect
Informix ESQL/C	Informix Connect
Informix ODBC Driver	Informix Connect
Informix Object Interface for C++	Informix Connect
Informix OLE DB Provider	Informix Connect (including MDAC, obtained by recording a custom installation)
DataBlade API	Informix Connect

Client Runtime Component Redistribution Guidelines

You can redistribute Informix runtime components when your client application is installed in the following two ways:

- Install all required components
- Install specific components (for example, you can redistribute only the files required by Informix OLE DB Provider)

Warning: Do not copy single files or directories from any Informix client API into your application installation; doing so violates your Informix Technical Support agreement or contract.

To redistribute Informix client runtime components, run the Informix installation program and use InstallShield to record the installation procedure. You invoke the resulting installation script from your client application installation program.

When you package your client application for distribution to your users, you must provide the user with the CD image of the Informix client runtime components. If you created your client application using Client SDK, you must include the following two files, which are created when you record the installation:

- **setup.iss** (recorded install options)
- *filename***.nfx** (recorded configuration with the filename of your choice)

For details about how to combine the installation of Informix client runtime components with the installation of your client application, refer to "Creating the Installation Script" on page A-11 and "Creating Your Client Application Installation Program" on page A-13.

Informix Client Application Distribution Options

The following sections explain your options for distributing your Informix client application. These sections describe the agreements you must make with Informix to acquire the legal rights to redistribute Informix client runtime components with your application. For details on how to establish such a relationship with Informix, call Informix Sales at 1-800-331-1763.

There are five options, described in detail in the following sections.

Option	Agreement Required
Your customers order required components directly from Informix and install them themselves. Refer to page A-5.	None
You ship the required components with your client application; your customer installs them. Refer to page A-6.	Redistribution agreement
You ship required components on the same CD as your client application; your customer installs them. Refer to page A-7.	Manufacturing agreement
You ship required components on the same CD as your client application; your customers install them silently when they install your application. Refer to page A-9.	Manufacturing agreement
You distribute your application within your company (not for sale), and you distribute required components on the same CD as your client application; your customers install them silently when they install your application. Refer to page A-10.	Multiuser license (no special agreement); Distribution limited to number of licensed users

The following sections provide details about these arrangements. These sections primarily discuss Informix Connect, the most commonly redistributed runtime component.

Your customers order Informix Connect directly from Informix and install it themselves.

The installation documentation for your application must clearly tell your customers that they are responsible for ordering Informix Connect from Informix and installing it themselves. Be sure to list the versions of Informix Connect that you have tested with the application. The installation documentation for your application must also supply the following information so your customer can complete the installation of Informix Connect:

- Installation option: typical, compact, or custom. If they need to use the custom option, explain which components they must install.
- Destination directory
- Which directory to set as **INFORMIXDIR**

Your customers receive their own license agreement with serial number and key when they order Informix Connect directly from Informix.

Category	Comment
Redistribution Effort	No need for you to redistribute Informix Connect.
Ease of Installation	Your customer must acquire Informix Connect from Informix and install it separately; your customer may already have the correct version of Informix Connect installed.

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Category	Comment
Customer Cost	Informix Connect is a free product. Your customers can purchase technical support from Informix.
Version Compatibility	Informix might ship a version other that the version you tested your application with. Risks:
	Earlier version: the application may not work.
	Later version: risk unknown because the combination of application and Informix Connect has not been tested. Informix commits to backward compatibility of the runtime files, but without testing, the risk cannot be assessed.
Technical Support for Your Customer	Because your customer acquires Informix Connect directly from Informix, they can easily arrange for technical support and are likely to address problems with Informix Connect directly to Informix.

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You ship the Informix Connect product with your client application; your customer installs it.

You must have redistribution rights through a contract with Informix, and you have pre-ordered the Informix Connect product with license agreements, including serial numbers and keys.

In the installation documentation for your application, you must clearly state the customer's responsibility for installing the version of Informix Connect supplied with the application. Be sure to supply customers with the following information so that they can install Informix Connect:

- The license agreement, with serial number and key, you ordered from Informix
- Installation option: typical, compact, or custom. If the custom option is required, tell your customers which components they must install.
- Destination directory
- Which directory to set as **INFORMIXDIR**

Category	Comment
Redistribution Effort	You must include a copy of Informix Connect along with the application distribution.
Ease of Installation	Your customer must separately install Informix Connect; customer might already have the correct version of Informix Connect installed.
Customer Cost	Your customers can purchase technical support from Informix.
Version Compatibility	Informix might ship a version other that the version you tested your application with. Risks: Earlier version: the application may not work. Later version: risk unknown because the combination of application and Informix Connect has not been tested. Informix commits to backward compatibility of the runtime files, but without testing, the risk cannot be assessed.
Technical Support for Your Customer	You have three options: ■ Customers call you directly for support. ■ You purchase support for each specific customer (you must supply Informix with customer name) at the time of ordering product and license agreements from Informix. ■ You ask your customers to order technical support from Informix.

You ship Informix Connect on the same CD as your client application; your customer installs it.

You must have a manufacturing contract or license with Informix. You have the option of ordering license agreements, with serial numbers and keys, in blocks or individually at point of sale. For details on how to establish such a relationship with Informix, call Informix Sales at 1-800-331-1763.

The application installation documentation must clearly state the customer's responsibility for installing the version of Informix Connect shipped with the application. Be sure to supply the customers with the following information so that they can complete the installation of Informix Connect:

- Where to find the Informix Connect **setup.exe** file (either on its own CD or in an Informix Connect directory on the application CD)
- The license agreement, with serial number and key, you ordered from Informix
- Installation option: typical, compact, or custom. If the custom option is required, tell your customers which components they must install.
- Destination directory
- Which directory to set as **INFORMIXDIR**

Category	Comment
Redistribution Effort	You must include a copy of Informix Connect with the application distribution.
Ease of Installation	Your customer must separately install Informix Connect; customer may already have the correct version of Informix Connect installed.
Customer Cost	Your customers can purchase technical support from Informix.
Version Compatibility	Informix might ship a version other that the version you tested your application with. Risks:
	Earlier version: the application may not work.
	Later version: risk unknown because the combination of application and Informix Connect has not been tested. Informix commits to backward compatibility of the runtime files, but without testing, the risk cannot be assessed.
Technical Support for Your Customer	You have three options:
	■ Customers call you directly for support.
	■ You purchase Informix Connect support for each specific customer (you must supply Informix with customer name) at the time of ordering product and license agreements from Informix.
	■ You ask your customers to order technical support from Informix.

You ship Informix Connect on the same CD as your client application; your customers install it silently when they install your application.

You must have a manufacturing contract or license with Informix. You have the option of ordering license agreements, with serial numbers and keys, in blocks or individually at point of sale. For details on how to establish such a relationship with Informix, call sales at 1-800-331-1763.

Record each Informix Connect installation using the unique serial numbers and keys previously ordered from Informix. For details about recording an installation, refer to "Installing Informix C and C++ Client Runtime Components" on page A-11.

You should also supply the customer with the license agreement and the serial number and key you embedded through silent install.

Category	Comment
Redistribution Effort	Must embed Informix Connect install into the application install.
Ease of Installation	Informix Connect gets installed automatically for the customer.

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Category	Comment
Customer Cost	Technical support can be purchased.
Version Compatibility	Informix might ship a version other that the version you tested your application with. Risks:
	Earlier version: the application may not work.
	Later version: risk unknown because the combination of application and Informix Connect has not been tested. Informix commits to backward compatibility of the runtime files, but without testing, the risk cannot be assessed.
Technical Support for Your Customer	You have three options:
	■ Customers call you directly for support.
	■ You purchase Informix Connect support for each specific customer (you must supply Informix with customer name) at the time of ordering product and license agreements from Informix.
	■ You ask your customers to order technical support from Informix.

(2 of 2)

For internal use: you ship Informix Connect on the same CD as your client application; your employees install it silently when they install your application.

You must have a multiuser license of Informix Connect or a redistribution contract or license with Informix Software, Inc. You agree to keep track of how many users are on the Informix Connect license and to add users to this license when needed.

Record each Informix Connect installation using the unique serial numbers and keys previously ordered from Informix. For details about recording an installation, refer to "Installing Informix C and C++ Client Runtime Components" on page A-11.

After your employees install Informix Connect, they are bound by the license agreement.

Installing Informix C and C++ Client Runtime Components

To package Informix C and C++ client runtime components with your client application and install them on your customers' computers, you must:

1. create an installation script for the client runtime components.
2. create a client configuration file.
3. create your client application installation program, which must invoke the installation script you created in step 1 and configure the client according to the configuration file you created in step 2.

The following sections tell you how to perform these steps.

Creating the Installation Script

Your client application installation program invokes the installation script to install required Informix client runtime components when your customers install your client application. To create an installation script, use the InstallShield **Setup** utility to record the installation of the Informix client runtime components required by your client application.

*Warning: If you record the installation process on a computer where **INFORMIXDIR** has already been set, your installation script will fail to install Informix client runtime components correctly.*

To record the installation process

1. Insert the Client SDK or Informix Connect installation disk in your CD-ROM drive.

2. Open the DOS **Command Prompt** utility.

3. In the DOS window, change directory to the directory on the CD-ROM that contains the **setup.exe** file.

4. Execute the following command at the Windows command prompt:

   ```
   setup -r
   ```

   The *-r* option records the options you specify during installation to a file named **setup.iss** in the **Winnt** directory (for Windows NT) or in the **Windows** directory (for Windows 95 and 98).

5. Install Client SDK or Informix Connect, entering the options you want your customers to use with your client application. For details about installing Client SDK, see "Installing the Products" on page 1-7.

Creating the Client Configuration File

Your client application installation program invokes **Setnet32** using this configuration file when your customers install your application, to ensure that their computers are configured to run your Informix client application. To create the client configuration file, you use the Informix **Setnet32** utility to record the desired client configuration.

To record the Setnet32 configuration

1. Launch **Setnet32** and specify the client computer settings required by your application. For details, see "Setting the Environment" on page 1-9.

2. Click **Save to File**.

3. Browse to the directory where you want the configuration file to be saved.

4. Enter a name for the file.

5. Click **Save**. The file is saved with an **.nfx** file extension.

Creating Your Client Application Installation Program

Your client application installation program must:

- install your application.
- install required Informix client runtime components.
- configure the Informix settings on your customer's computer.

Installing Client Runtime Components

To install these components, your client application installation program invokes the installation script you created as described in "Creating the Installation Script" on page A-11. When your customer installs your application, the Informix components are installed silently; that is, no installation dialogs are displayed while these components are being installed.

To verify that the Informix components were successfully installed, your customer can check the installation log file; for details, refer to "Verifying the Results of Silent Installation" on page A-15.

When you prepare your installation media master, place all Informix files together in the same directory. These files include the CD-ROM image of the Informix client runtime components, the installation script (the **setup.iss** file), and the client configuration file (the **.nfx** file).

The following procedure tells you how to invoke the installation script from your client application installation program.

To invoke the installation script from your client installation program

1. Change directory to the directory that contains the CD-ROM image of the Informix client runtime components (which includes an Informix-supplied **setup.exe** file that installs the client runtime components).

2. Execute the following command:

    ```
    setup -s
    ```

    Setup silently installs the Informix client runtime components. When installation is complete, **Setup** creates a log file; for details about logging, refer to "Verifying the Results of Silent Installation" on page A-15.

Important: You must install the Informix runtime components before you can configure the client computer as described in the following section.

Configuring the Client Computer

To configure the customer's computer to run with your Informix client application, your client application installation program must invoke the Informix **Setnet32** utility, specifying the file in which you stored the required client settings.

The following procedure tells you how to configure the customer's computer from your client application installation program.

To configure the client computer from your client installation program

1. Change directory to the directory that contains the CD-ROM image of the Informix client runtime components (which must include the **.nfx** file in which you stored the desired client configuration settings).

2. Execute the following command:

    ```
    setnet32 -l filename.nfx
    ```

    In this example, *filename* refers to the file in which you stored the client configuration settings.

Verifying the Results of Silent Installation

When your client application installation program executes a silent installation script to install Informix client runtime components, InstallShield logs the results of the silent installation. Your customers or technical support representatives can check this log file to determine whether the installation succeeded.

By default, results are logged in a file named **setup.log** located in the same directory as the CD image.

The **setup.log** file contains the following three sections:

- **InstallShield Silent** identifies the version of InstallShield Silent used in the silent installation.
- **Application** identifies the installed application's name and version and the company name.
- **ResponseResult** contains the result code that indicates whether the silent installation succeeded. The following table lists the result codes that InstallShield returns.

Result Code	Description
0	Installation was successful.
-1	General error occurred.
-2	Invalid mode specified.
-3	Required data not found in the **setup.iss** file.
-4	Not enough memory available.
-5	File does not exist.
-6	Cannot write to the installation script file.
-7	Unable to write to the log file.
-8	Invalid path to the InstallShield Silent installation script file was specified.
-9	Not a valid list type (string or number).

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Result Code	Description
-10	Data type is invalid.
-11	Unknown error occurred during setup.
-12	Dialog boxes are out of order.
-51	Cannot create the specified folder.
-52	Cannot access the specified file or folder.
-53	Invalid option selected.

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An example of a log file for a successful silent installation is shown here:

```
[InstallShield Silent]
Version=v5.00.000
File=Log File

[Application]
Name=InstallShield5
Version=5.00.000
Company=InstallShield

[ResponseResult]
ResultCode=0
```

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