

IBM Informix Dynamic Server

Installation Guide

for Microsoft Windows

Version 9.4
March 2003
Part No. CT1TFNA

Note:

Before using this information and the product it supports, read the information in the appendix entitled "Notices."

This document contains proprietary information of IBM. It is provided under a license agreement and is protected by copyright law. The information contained in this publication does not include any product warranties, and any statements provided in this manual should not be interpreted as such.

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 1996, 2003. All rights reserved.

US Government User Restricted Rights—Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Table of Contents

In This Guide	1
Types of Users	1
Related Reading	1
Additional Documentation	2
Preparing to Install IBM Informix Products	2
Upgrading the Database Server	3
Installation Order	3
Installation Requirements	4
Installation Checklist.	5
Configuration Checklist.	6
Filling out the Installation and Configuration Checklists	7
Installing IBM Informix Products	16
Configuring the Database Server	18
Using the Database Server Program Group	22
Starting and Stopping the Database Server	23
Uninstalling and Reinstalling the Database Server	25
Preparing to Uninstall the Database Server	25
Reinstalling the Database Server	28
Troubleshooting Installation Problems	28

Appendix A **Setting Up Specialized Installations**

Appendix B **Notices**

Index



In This Guide

This guide explains how to install, configure, and initialize IBM Informix Dynamic Server and IBM Informix Dynamic Server with J/Foundation on machines running Microsoft® Windows 2000® and Windows XP®.

Types of Users

This guide is written for database administrators (DBAs) who install IBM Informix products. It assumes that you are familiar with the operating procedures of your computer and with your operating system. For information about your operating system, see your Windows documentation.

Related Reading

The following publications provide additional information about the topics that this guide discusses:

- To upgrade from a previous version or migrate from a different database server to IBM Informix Dynamic Server, see the *IBM Informix Migration Guide*.
- For a list of publications that provide an introduction to database servers and operating-system platforms, refer to your *Getting Started Guide*.
- For more information on how to configure and manage your database server, see the *IBM Informix Dynamic Server Administrator's Guide* and the *IBM Informix Dynamic Server Administrator's Reference*.
- For information on how to tune your database server, see the *IBM Informix Dynamic Server Performance Guide*.

Additional Documentation

IBM Informix Dynamic Server documentation is provided in a variety of formats:

- **Documentation notes and release notes.** Documentation notes, which contain additions and corrections to the manuals, and release notes are located in the directory where the product is installed. Please examine these files because they contain vital information about application and performance issues. For additional information on documentation notes and release notes, refer to [“Using the Database Server Program Group” on page 22](#).
- **Error message files.** IBM Informix software products provide ASCII files that contain all of the error messages and their corrective actions. To read error messages and corrective actions on Windows, use the **Informix Error Messages** utility. To display this utility, choose **Start→Programs→Informix** from the task bar.

Preparing to Install IBM Informix Products

Before you install IBM Informix products, follow these steps:

1. Read the [Release Notes](#) and relevant [Documentation Notes](#). These files are located on the CD. For information on the contents of these files, see [“Using the Database Server Program Group” on page 22](#).
2. Verify that your computer meets the minimum requirements ([page 4](#)).
3. Verify that you are logged in as a member of the Windows Administrators group ([page 7](#)).
4. Review the section on pre-installation planning in the *IBM Informix Dynamic Server Administrator's Guide*.
5. Complete the [Installation Checklist](#) ([page 5](#)).

To install your IBM Informix products on Windows computers, you perform the following steps:

1. Install IBM Informix products ([page 16](#)).
2. Configure the database server ([page 18](#)).
3. Start the database server ([page 23](#)).

Refer to “[Setting Up Specialized Installations](#)” on [page A-1](#) for specialized installation topics, such as role separation and multiple residency.

Upgrading the Database Server

When you upgrade from Version 7.24, 7.3x or 9.3x to Version 9.4 of the database server, the installation script overwrites the old version of the database server with the new version.

For instructions on how to upgrade your database server from an earlier version, see the *IBM Informix Migration Guide, Version 9.4*.

Installation Order

The installation program installs products in the correct order. If you install products separately or install additional products later, install them in the following order:

1. Install IBM Informix Dynamic Server.
2. Install IBM Informix Connect.

Do not install an older IBM Informix Connect from a tool application over a newer IBM Informix Connect. For information about how to install IBM Informix Connect, see the *IBM Informix Client Products Installation Guide for Microsoft Windows Environments*.

3. Install DataBlade modules.

Install DataBlade modules in order from the oldest to the newest versions. For information on how to install DataBlade modules, see the *IBM Informix DataBlade Module Installation and Registration Guide*.

4. Install client products.

For information about how to install IBM Informix client products, see the *IBM Informix Client Products Installation Guide for Microsoft Windows Environments*.

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

Installation Requirements

Your computer must meet the following minimum requirements:

- Windows 2000 or Windows XP
- 128 megabytes of RAM (minimum); 256 megabytes (recommended) ♦
- Sum of RAM and swap file must be 128 megabytes (minimum); 256 megabytes (recommended)
- Destination drive with a Windows file system (NTFS)
- 276 megabytes of disk space for the database server (including a minimum of 50 megabytes for the root dbspace, 20 megabytes for the additional dbspaces, and 52 megabytes for the default sbspace)

If you install additional products from the bundle, additional disk space is required. For details, see the release notes.

If installation files already exist on the system, the installation program determines at runtime the amount of disk space required.

Installation Checklist

You need the following information to respond to prompts during the installation.

IBM Informix Product Installation Checklist	
Administrators Group Membership	<input type="checkbox"/> Yes <input type="checkbox"/> No (page 7)
Upgrading from an Existing Version	<input type="checkbox"/> Uninstall Existing Version (page 7) <input type="checkbox"/> Install over Existing Version (page 7) <input type="checkbox"/> Install Multiple Versions (page 8)
Installation Option	<input type="checkbox"/> Cluster (page A-4) <input type="checkbox"/> Local (page 9) <input type="checkbox"/> Domain with Domain Administrator Privileges (page 9) <input type="checkbox"/> Domain without Domain Administrator Privileges (page 10)
Installation Directory (%INFORMIXDIR%) (page 11)	_____
Installation Method (page 12)	<input type="checkbox"/> Typical <input type="checkbox"/> Minimal <input type="checkbox"/> Custom
Role Separation (page 12)	<input type="checkbox"/> No <input type="checkbox"/> Yes Enter Administrative Group Names: Administrator (INFORMIX_ADMIN): _____ Auditing (ix_aao): _____ Security (ix_dbssso): _____ Users (ix_users): _____ Enter Administrative Account Names: Auditing (AAO): _____ Security (DBSSO): _____

Configuration Checklist

You need the following information to respond to prompts during database server configuration.

IBM Informix Database Server Configuration Checklist

Resource Group (for Cluster Installation) (page A-5)	_____
Database Server Number (page 13)	_____
Database Server Name (page 14)	_____
TCP/IP Configuration (page 14)	Service Name: _____ Port Number: _____
Root Dbspace (page 14) (for Custom installation method)	Name: _____ Primary Location: _____ Mirror Location: _____ Size: _____
Default Sbspace (page 15) (for Custom installation method)	Name: _____ Primary Location: _____ Mirror Location: _____ Size: _____ Page Size: _____
Shared Server Definition Computer (page 16)	<input type="checkbox"/> Local <input type="checkbox"/> Remote, name of computer: _____
Initialize Server	<input type="checkbox"/> Yes <input type="checkbox"/> No

Filling out the Installation and Configuration Checklists

Use the information in this section to fill out the [“Installation Checklist” on page 5](#).

The following manuals provide detailed discussions of specific installation and configuration options, such as role separation, the name of the database server, and the database server number:

- *IBM Informix Dynamic Server Administrator’s Guide*
- *IBM Informix IBM Informix Trusted Facility Guide*

Administrators Group Membership

To execute the installation program, you must be a member of the Windows Administrators group for the local computer on which you plan to install the database server. For information on how to create groups and add users to groups, see your Windows documentation.

Uninstalling an Existing Version

If an existing version of the database server is already installed, decide whether to uninstall this version before you run the installation program. Unless you are upgrading from one interim release to another, it is recommended that you uninstall the existing version before you install the new version to make sure that no conflicts exist with directories, .dll files, registry entries, or Informix-related services.

To uninstall an existing version, follow the steps in [“Uninstalling and Reinstalling the Database Server” on page 25](#).

Installing Over an Existing Version

If you install the database server over an existing installation, the installation program prompts you to upgrade or reinstall the database server ([page 17](#)).

Important: *It is recommended that you uninstall the existing version before you install a new version.*



If you are upgrading from a 7.24, 7.3x or 9.3x database server, select the **upgrade** option. The installation program skips most of the setup pages and uses existing information instead.

If you are upgrading from a 7.24, 7.3x or 9.3x database server or you are reinstalling a 9.4 database server, choose **Copy files but leave configuration alone** from the Installing Again dialog box.

The installation program prompts you to select from the following choices:

- **Copy all files but leave configuration alone.** The installation program uses the existing database server configuration and installs the new database server over the existing database server.
- **Copy all files and reconfigure the product.** The installation program removes all existing database server configuration information, installs the new database server over the existing database server, and displays new database server configuration screens.
- **Copy all files and upgrade from release.** The installation program uses the existing database server configuration and installs the new database server over the existing database server.
- **Install in a different directory.** The installation program installs the new database server into the directory that you specify and prompts you to configure it. The program does not delete the existing database server or change its configuration.

Installing Multiple Versions

To install multiple versions of the database server in separate directories, choose **Install in a different directory**. In this case, each installation has its own program group on the **Programs** menu. For more information, see [“Multiple Installations and the Database Server Program Group” on page A-2.](#)

Cluster Installation

If you are running the installation program on a cluster using the Microsoft Cluster Server (MSCS) feature, you can specify to install the database server on a single node or on multiple nodes to provide failover protection. The term *failover* means that if a failure occurs on one node of the cluster, the database server is restarted on a surviving node.

- If you are not running the installation program on a cluster, the installation program does not prompt you with the cluster installation option.
- If you specify a cluster installation, the installation program does not prompt you with the domain installation option. When you specify cluster, the installation program automatically performs a domain installation.

For more information on how to install the database server on both nodes of a cluster in fail-safe mode, see [“Installing on Multiple Nodes \(Cluster Installation\)”](#) on page A-4.

Local Installation

If you do not plan to have workstations access a domain controller, install the database server on a local computer.

To perform a local installation of the database server, log onto the local computer before you run the installation program. You must have local administrative privileges on the local computer to perform the installation.

Domain Installation with Domain Administrator Privileges

Domain installation is useful if you run the database server on several computers and want a central security mechanism. If several of your computers belong to the same domain (and therefore share the same primary domain controller or domain controllers), perform a domain install on these computers.

To install in a domain, you must have domain administrative privileges and your computer must already belong to a domain. Run the installation program and choose the **Install in Domain** option when the installation wizard prompts you.

Domain Installation Without Domain Administrator Privileges

You can perform a domain installation if you do not have domain administrative privileges as long as you have administrative privileges on the local computer and the computer belongs to the domain.

To perform a domain installation without domain administrator privileges, before you install the database server

1. Create the user **informix** in the domain and make user **informix** a member of the Global Domain Admin group.
Any user who has the required privileges to create users and groups in the domain can perform this step.
2. Decide whether or not to enable role separation.
 - If you do not plan to enable role separation, create a domain user named **informix** and a domain group called **Informix-Admin**. Make user **informix** part of the group **Informix-Admin**.
For more information, see your Windows documentation.
Skip to step 4.
3. To enable role separation perform the following tasks:
 - a. Create special administrative groups, **ix_aao**, **ix_dbssso**, and **ix_users** ([page 12](#)).
 - b. Create two users, the Auditing Analysis Officer (AAO) and the Database System Security Officer (DBSSO).
 - c. Add the AAO user to the **ix_aao** group and the DBSSO user to the **ix_dbssso** group.
 - d. Add users AAO, DBSSO, and **informix** to the **ix_users** group.
4. Perform the following tasks:
 - a. Make the domain user **informix** a member of the administrators group on the local computer.
 - b. Grant the following advanced privileges/rights to user **informix**: "Logon as service," "Act as part of the operating system," "Increase quotas," and "Replace a process level token."

5. Log in as *domain_name*\informix from individual computers to enable domain installation.
6. Run the installation program and choose the **Install in Domain** option when the installation wizard prompts you.

For more information on domains, see your Windows documentation.

Installation Directory

The installation directory is the location where you want the database server files to reside. The drive on which the directory exists must be formatted using NTFS. IBM Informix software refers to this installation directory as **INFORMIXDIR** and often uses this value to set the **%INFORMIXDIR%** environment variable.

The installation program prompts you for different information, depending on the type of installation that you are performing:

■ **Fresh Installs**

If you previously created the **INFORMIXDIR** directory, this directory is the default installation directory.

If you did not create the **INFORMIXDIR** directory, the default installation directory is a directory named **Informix** at the root level of the first NTFS drive that the installation program finds on your system.

■ **Upgrades and Reinstalls**

If you have already installed the database server, the installation directory is the directory where the database server is installed. If you plan to perform an upgrade or reinstall in the same program group, select this directory as the installation directory.

- **Multiple Installations**

If you have already installed the database server, the installation directory is the directory where the database server is installed. This installation of the database server has a corresponding **IBM Informix Dynamic Server 9.40** program group on the **Start→Programs** menu. To install the database server in a second program group, specify an installation directory for the second program group that is different from the installation directory for the first program group. The result is two separate installations of the database server, each installation has its own program group.

For more information, see [“Multiple Installations and the Database Server Program Group”](#) on page A-2.

Installation Method

Select one of the following installation methods:

- **Typical installation.** A typical installation requires the most disk space and memory. It is the recommended installation for most database servers.
- **Minimal installation.** A minimal installation conserves the most disk space.
- **Custom installation.** A custom installation allows you to perform advanced installation steps.

Role Separation

Role separation provides increased database security because the database server splits administrative tasks into mutually exclusive roles.

For detailed information about the role separation feature, see the *IBM Informix Trusted Facility Guide*.



Important: You cannot turn off role separation once you enable it. To remove role separation, you must uninstall the database server and re-install it without role separation.

If you do not enable role separation, the **Informix-Admin** group performs all administrative tasks.

To enable role separation, run the installation (page 16). On the **Role Separation** page, check the box and perform step 8 on page 18.

During installation, you are prompted to create additional groups and users and add the users to the corresponding groups.

Default Group Name	Role Category	Role Definition
ix_dbsa (INFORMIX-ADMIN)	Database Administrator	Performs general administrative tasks, such as archiving and restoring data, monitoring use and performance, and tuning the system
ix_aao	Auditing Analysis Officer	Audits the records of specific types of database activities If someone attempts to circumvent or corrupt the security mechanism of the database, these actions can be traced.
ix_dbsso	Database System Security Officer	Maintains the security of the database server Functions of this role include audit adjustment and changing security characteristics of storage objects.
ix_users	Database Users	Accesses the database to perform end-user tasks With role separation enabled, only users who are designated as members of the ix_users group can access the database.

Database Server Number

The database server number uniquely identifies a database server if more than one instance of the database server is installed. If only one instance of the database server is installed, set this number to 0. The database server number that you specify is the value for the SERVERNUM configuration parameter.

The database server uses configuration parameters, set in the **ONCONFIG** file, during initialization. For more information about configuration parameters and the **ONCONFIG** file, see the “Configuration Parameters” chapter of the *IBM Informix Dynamic Server Administrator’s Reference*.

To determine how many instances of the database server are installed, run the Server Instance Manager program (choose **Start→Programs→Server Instance Manager**). For more information, see “[Setting Up Multiple Residency](#)” on page A-11.

Database Server Name

The database server name identifies the database server to client applications. In most cases, you can choose the default value. The database server name that you specify is the value for the **DBSERVERNAME** configuration parameter.

Tip: Database server names must begin with a letter and can contain only letters, numbers, and the underscore character.

Service Name and Port Number

Specify the service name and port number for the TCP/IP network protocol.

The service name specifies the **servicename** entry and the port number specifies the **port** entry for the database server in the **sqlhosts** registry.

If only one database server instance exists on the computer, the installation program provides default values. It is recommended that you use these default values. For subsequent instances, you must provide unique values.

Root Dbspace Name, Location, and Size

A dbspace is a logical collection of chunks to which databases and tables are assigned. The root dbspace is the initial dbspace that the database server creates and is the default dbspace location for any database created with the **CREATE DATABASE** statement.

The root dbspace contains reserved pages and internal tables that describe and track all other storage components. For more information on dbspaces and the root dbspace, see the *Administrator’s Guide*.



Specify the storage location and disk-space size for the root dbspace:

- **Primary Data Location**

By default, the Primary Data Location is the current drive. The installation program displays the amount of available disk space. This location is the value of the ROOTPATH configuration parameter.

- **Mirror Location**

The mirrored location serves as the backup area if the primary storage device fails.

If a second NTFS drive (with at least 10 megabytes available) is found, the installation program displays the default drive letter and available disk space. If the installation program cannot find a second local drive formatted using NTFS, you cannot set up a mirror location for the root dbspace.

This location is the value of the MIRRORPATH configuration parameter.

Default Sbspace Name, Location, Size, and Page Size

An sbspace is a logical storage area that the database server uses to store smart large objects (CLOB and BLOB data). The default sbspace is where the database server stores a smart large object if you do not specify an sbspace name when you create the smart large object. The database server also uses the default sbspace to store user-defined statistics.

Specify the primary and mirrored data-storage location for the default sbspace:

- **Primary Data Location.** By default, the Primary Data Location of the sbspace is the current drive. The installation program displays the amount of available disk space. This location specifies the value of the SBSPACENAME configuration parameter.

- **Mirror Location.** The mirrored location serves as the backup area if the primary storage device fails.

If a second NTFS drive (with at least 10 megabytes available) is found, the installation program displays the default drive letter and available disk space. If the installation program cannot find a second local drive formatted using NTFS, you cannot set up a mirror location for the default sbspace.

- **Size.** The size of the sbpace should be at least 50 megabytes.
- **Page Size.** The size of the sbpage should approximate the size of the most frequently occurring smart large object that the sbpace holds. The default is one page.

For more information about sbspaces, see the *Administrator's Guide*.

Shared Server Definition Computer

Specify the computer on which to update the **sqlhosts** registry information with the shared server definition for the new database server instance and administrative tools as follows:

- The local computer on which you are installing the database server (default)
- Another computer in the network that serves as a central, shared repository of **sqlhosts** information for multiple database servers in the network

If you specify another computer on the network, you must set the **INFORMIXSQLHOSTS** environment variable on your local computer to the name of the computer that stores the **sqlhosts** information.

Installing IBM Informix Products

Use the information from the [“Installation Checklist” on page 5](#) to respond to prompts and select options during installation.

The installation program checks the information that you enter and displays an error message if the information is not valid. If you get an error, see [“Troubleshooting Installation Problems” on page 28](#).

Tip: *If the page or message box you are viewing disappears and is replaced by a blank screen or a screen that consists of the IBM Informix logo and a picture of a CD-ROM, hold down the **Alt** key and press the **Tab** key to restore the current page or message box. You might have to perform this action several times.*



To install IBM Informix products

1. Start the installation program.
 - If you purchased your product from IBM, insert the CD-ROM in the drive and enter:


```
X:\Ids\Setup.exe (for IBM Informix Dynamic Server)
X:\Iif\Setup.exe (for IBM Informix Dynamic Server with
J/Foundation)
```

 where *X* is the drive or shared volume on which the CD-ROM that you received from IBM is mounted.
 - If you received your product materials from an ESD vendor, click the **Setup** application icon (**setup.exe**) in the directory where you downloaded the product files.
2. Specify the installation directory where you want the database server files to reside ([page 11](#)).



Important: *The drive must be formatted using NTFS if you have selected to install the database server.*

3. Select the products to install. See [“Preparing to Install IBM Informix Products” on page 2](#).
4. If you have a previous version of the database server installed, the installation program displays one of two pages.



Important: *It is recommended that you uninstall the previous version before you install the new version. See [“Uninstalling and Reinstalling the Database Server” on page 25](#).*

- If you are upgrading from a 7.2x or a 9.1x database server, select the **upgrade** option from the Upgrade Page dialog box. The installation program skips most of the setup pages and uses existing information instead.
- If you are upgrading from a 7.24, 7.3x or 9.3x database server or you are reinstalling a 9.4 database server, choose **Copy all files and upgrade** from the Run the Installation Again? dialog box.

For more information, see [“Installing Over an Existing Version” on page 7](#).

5. At the main page of the Installation wizard, click **Next** to select installation options and supply data.

6. Specify the installation option:
 - **Cluster Install** (page 9), if applicable
 - **Install in Domain** (page 9), if applicable
7. Choose the installation method (page 12).
8. Choose to enable role separation. To skip role separation, click **Next** and skip to step 9.

If you enable role separation:

- a. Enter or select the names of the administrative groups that access the database server.
- b. Enter the name of the auditing administrator account and the password twice for confirmation.
- c. Enter the name of the security administrator account and the password twice for confirmation.

For more information, see “[Role Separation](#)” on page 12.

9. Enter the **informix** user password.

The database server service that the installation program creates runs under this account. If the account does not exist, the installation program creates the account.

10. Click **Next** to return to the main page of the wizard and click **Next** again to start copying the files onto your system.



Important: The installation copy process might take several minutes. To cancel the copy process and return to Windows, click **Cancel**. You must then re-run the installation program from the beginning.

Configuring the Database Server

After the installation program installs the files on your system, you return to the main page of the wizard. You can either configure a database server now or cancel the installation and use the Server Instance Manager to configure a database server later.

For more information, review the discussion of configuration tasks in the *IBM Informix Dynamic Server Administrator's Guide*.



Important: If you reinstalled the database server using the existing configuration (page 8), the installation program does not prompt you to configure or initialize the database server. Instead, you see a message that indicates that the database server was installed successfully. To complete the installation, click OK and restart your computer.

To configure the database server

1. Click **Finish** from the main installation wizard page.
2. If you specified a cluster installation, specify the resource group to which to add the database server instance (page A-4).
3. Specify the database server number (page 13).
4. Specify a name for the database server (page 14).
5. Specify the service name and port number for the TCP/IP network protocol (page 14).
6. If you selected the **Custom installation** method (page 12):
 - a. Specify a name for the root dbspace (page 14).
 - b. Specify the primary and mirrored storage location and disk-space size for the root dbspace (page 14).
 - c. Specify the name of the default sbspac (page 15).
 - d. Specify the primary and mirrored storage location and disk-space size for the default sbspac (page 15).
7. Specify the computer to use for shared server definition for your database server and administrative tools (page 16).

The installation program installs services on the computer and configures the database server.

8. If you configured a new instance of the database server, you are prompted to initialize the database server:
 - Click **Yes** to initialize the database server and the root dbspace.
 - Click **No** to skip initialization.

If you skip initialization, you must manually start the database server and create the storage later. For more information on manual initialization, see “Starting and Stopping the Database Server” on page 23.



Important: Database server initialization might take several minutes.

You see a message that indicates that the database server was successfully installed.

9. If you selected other products to install, the installation prompts you to configure these products.

For more information, see the appropriate IBM Informix documentation.

10. Log out and log back in to update the members of the **Informix-Admin** group.

This step enables you to run the IBM Informix administration tools.

11. Restart your computer, if prompted.

After you complete the installation, you might want to:

- Start the database server manually ([page 23](#)).
- Set up the database server to start whenever Windows is launched ([page 23](#)).
- Stop the database server ([page 23](#)).
- Configure the storage manager to use ON-Bar backups and restores. For information, see the *IBM Informix Storage Manager Administrator's Guide*.
- Configure your database server to use a locale other than the default Global Language Support (GLS) locale, U.S. English.

The GLS feature allows you to create databases that use the diacritics, collating sequence, and monetary and time conventions of the language that you select. For more information, see the *IBM Informix GLS User's Guide*.

For information on how to configure the database server, see the *Getting Started Guide* and the *IBM Informix Dynamic Server Administrator's Guide*.

The installation program automatically performs the following actions to make the database server ready to run on Windows:

- Installs the database server as a Windows service
- Creates an **informix** user account and an **Informix-Admin** administrative group

If you enabled role separation when you installed the database server, you can change the name of the **Informix-Admin** group.

- Automatically assigns the **informix** user account, which the database server runs under, to the **Informix-Admin** group and to the **Administrators** group
- Grants the following advanced privileges to the **informix** user account:
 - Logon as service
 - Act as part of the operating system
 - Increase quotas
 - Replace a process level token
- Creates a program group that includes items for the database server instance, the uninstall program, the Server Instance Manager, and other items

To access this program group, click **Start→Programs→IBM Informix Dynamic Server 9.40**.



Important: *If you performed a domain installation without domain administrator privileges (page 10), the installation program does not perform most of these steps because you performed them manually.*

Using the Database Server Program Group

After you install the database server, to access the following items on the database server program group, click **Start→Programs→IBM Informix Dynamic Server 9.40**.

Menu Item	Description
Documentation Notes	Describes features that are not covered in database server manuals or that have been modified since publication. Read this file before you use the database server.
IBM Informix Error Messages	Provides a complete list of all of the error messages and their corrective actions.
Release Notes	Describes feature differences from earlier versions of IBM Informix products and how these differences might affect current products. This file also contains information about any known problems and their workarounds. Read this file before you use the database server.
Server Instance Manager	Creates and configures new server instances and removes configured server instances. For more information about the Server Instance Manager, see “Setting Up Multiple Residency” on page A-11 .
Uninstall Server	Removes the database server from your system. See page 25 .
<i>server-name</i>	One <i>server-name</i> menu item exists for each database server instance. Each item opens a Command Prompt window that enables you to run DB-Access and certain command-line utilities such as onstat , oncheck , and onspaces . The oninit utility is designed to be started by a service rather than from this window (see “Starting and Stopping the Database Server” on page 23). For more information about DB-Access, see the <i>IBM Informix DB-Access User’s Guide</i> . For more information about command-line utilities, see the <i>Administrator’s Guide</i> .

Starting and Stopping the Database Server

This section describes how to:

- Start the database server after you initialize it ([page 23](#)).
- Initialize and start the database server if you did not initialize it during the installation process ([page 24](#)).
- Set up the database server to start automatically when Windows starts ([page 24](#)).
- Stop the database server ([page 25](#)).



Important: To start and stop the database server from the Control Panel, you must be a member of the Windows Administrators group ([page 7](#)). To start and stop the database server from the command line, you must be a member of the **Informix-Admin** group. For detailed information about how to start the database server, see the “Administrator’s Guide.”

To start the database server if you initialized it during installation

- **From the Control Panel:**

Choose either:

- **Control Panel→Administrative Tools**
- **Control Panel→Administrative Tools→Component Services→Console Root→Event Viewer (Local)→Services (Local)** (for a Domain Controller)

1. Double-click **Services**.
2. Select **Informix IDS - server_name** from the **Service** list box.
3. Click **Start**.

The database server automatically starts the Message Server service to write to the Windows event log.

- **In the Command Prompt window:**

```
starts server_name
```

Warning: Do not use the *oninit* utility to start the database server.



To initialize and start the database server

■ **From the Control Panel:**

1. Choose **Start**→**Settings**→**Control Panel**→**Administrative Tools**.
2. Double-click **Services**.
3. Select **Informix IDS - server_name** from the **Service** list box.
4. In the **Startup Parameters** text box, enter **-iy**.

The database server creates and initializes the root dbspace.

5. Click **Start**.

■ **In the Command Prompt window:**

```
starts server_name -iy
```

Warning: Do not use the *oninit -iy* utility to start the database server.

To set up the database server to start automatically when Windows starts

1. Choose **Start**→**Settings**→**Control Panel**→**Administrative Tools**.
2. Double-click **Services**.
3. Select **Informix IDS - server_name** from **Service** list box.
4. Click **Startup** and click **Automatic** in the Service dialog box.
5. Click **OK**.
6. Verify that the **Startup Parameters** text box is empty.
7. Click **Start**.



To stop the database server

- **From the Control Panel:**
 1. Choose **Start**→**Settings**→**Control Panel**→**Administrative Tools**.
 2. Double-click **Services**.
 3. Select **Informix IDS - *server_name*** from the **Service** list box.
 4. Click **Stop**.
- **In the Command Prompt window:**
 1. Click **Start**→**Programs**→**IBM Informix Dynamic Server 9.40** to display the program group for the database server.
 2. Click the database server instance (*server_name*) to display the Command Prompt window.
 3. In the Command Prompt window, type:

```
onmode -ky
```

Uninstalling and Reinstalling the Database Server

This section explains how to:

- Prepare to uninstall the database server ([page 25](#)).
- Remove the database server from your system ([page 26](#)).
- Reinstall the database server ([page 28](#)).

Preparing to Uninstall the Database Server

Before you run the uninstall program, remove any IBM Informix client programs before you uninstall the database server.

To uninstall client programs, click **Start**→**Settings**→**Control Panel**→**Add/Remove Programs** and then select any client programs and remove them.

To uninstall the database server

1. Use one of these methods to start the uninstall program:
 - Click **Start→Programs→IBM Informix Dynamic Server 9.40→Uninstall Server** or
 - Click **Start→Settings→Control Panel→Add/Remove Programs**. Select any database server program to remove and click **Add/Remove**.
2. Select from the following uninstall options:
 - **Remove only database server executables and support files**

This option removes the program files but preserves the configuration of the database server (the registry, groups, configuration files, and your databases). Select this option if you plan to perform a reinstall or an upgrade.

If you select this option, shut down the SNMP service if it is running (click **Start→Settings→Control Panel→Services**, select the SNMP service, and stop it). Also make sure that the OnSNMP process that runs from the %INFORMIXDIR%\bin directory has terminated (open the **Task Manager** and select the **Processes** tab). This process remains for a period of time after the database server has terminated and the SNMP service is stopped, depending on the linger time set in the registry.
 - **Remove all database server files and all database information**

This option removes the program files, configuration information, and all your databases for the database server. (To remove only a specific database server instance, run the Server Instance Manager. See [“Deleting an Instance of the Database Server” on page A-13.](#))

- **Remove files and revert registry to previous version**

This option reverts to an earlier version of the database server only if you upgraded from an earlier version of the database server.

This option removes only the program files and support files but preserves the databases. The uninstall reverts some changes made while upgrading.

When you revert to an earlier version, only the configuration information is reverted. Before you run the uninstall program, you must run **onmode -b** to change the database format. For more information, see the *IBM Informix Migration Guide*.

If you select this option, shut down the SNMP service and wait for the OnSNMP process to terminate (see [“Remove only database server executables and support files” on page 26](#)).

The database server service that is created after reversion contains an incorrect password. To change this password, select **Start→Settings→Control Panel→Services** and click **Startup**.

The uninstall program reverts only one instance of the database server. If multiple instances of the database server are configured, the program prompts you to remove all other instances of this version of the database server, except for one.

3. If you elect to remove all database server files and information, the uninstall program prompts you to confirm your action.
 - Click **Yes** to proceed. The uninstall program removes the database server files.
 - Click **No** to cancel the uninstall operation.
4. Specify whether to remove ISM servers, if appropriate.

Important: *If other Informix database servers are running, it is recommended that you preserve ISM servers.*

- Click **Yes** to remove ISM servers.
- Click **No** to preserve ISM servers.

For more information about ISM, see the *IBM Informix Storage Manager Administrator's Guide*.

5. Specify whether to remove SNMP extension agents, if appropriate.
For more information, see the *IBM Informix SNMP Subagent Guide*.





Important: If no dependencies on the *informix* user or the *Informix-Admin* group are detected, the uninstall program removes them from the local computer. However, both the user and group remain on the domain controller if they were created during a domain installation.

The uninstall program displays a message that indicates that the database server has been uninstalled.

Reinstalling the Database Server

If an earlier version of the database server is already installed, the installation program proceeds only if you select an upgrade. To perform a fresh installation of the database server, you must first uninstall the previous version completely. See [“To uninstall the database server” on page 26](#) and [“To install IBM Informix products” on page 17](#).

Troubleshooting Installation Problems

This section describes the most common installation problems and the corresponding solutions for users who receive their product materials directly from IBM.

If any of the problems in this section persist, contact Technical Support at the IBM Informix product family technical support site, <http://www.ibm.com/software/data/informix/support/>, or by email at tmail@us.ibm.com.



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

- **Problem.** If you enter an invalid database server name, you receive the following message:

```
The database server name you entered is not valid. Please
note the following limitations: a database server name
cannot exceed 128 characters; it can only contain letters,
numbers, and underscores; and it must begin with a letter.
```

Solution. Enter a different name and note the limitations stated in the message.

- **Problem.** If you have insufficient virtual memory for the installation, you receive the following message:

This installation of Dynamic Server requires *number MB* of free page file space. After you install this product, increase your page file size to properly use your virtual memory with this product.

Solution. For information about how to increase the size of your page file, refer to your Windows documentation.

- **Problem.** If you do not have the correct privileges to run the install program, you receive the following message:

You do not appear to be an administrator. In order to run this program, you must belong to the Administrators group on *local computer*.

Solution. Use the administrator account to log on or contact your system administrator to add your user account to the Administrators group.

Setting Up Specialized Installations

This appendix covers the types of specialized installations that you can perform:

- [Installing on a Remote Computer](#)
- [Installing Multiple Versions](#)
- [Installing on Multiple Nodes \(Cluster Installation\)](#)
- [Setting Up Multiple Residency](#)
- [Performing a Silent Installation](#)

Installing on a Remote Computer

To install the database server on a remote computer, use the Microsoft SMS utility. For example, if you are logged onto a computer in Los Angeles, you can use the SMS utility to install the database server on a computer in New York City. For more information, see your operating-system documentation.

Installing Multiple Versions

You can install multiple versions of the database server on your computer. For example, you might have two or more installations of the same database server version, or two or more installations of different versions of the database server.

To maintain an existing database server and install a new version, enter a different installation directory for the new database server when prompted during installation. See [“Installing Multiple Versions” on page 8](#) and step 2 on [page 17](#).

To uninstall a specific installation of the database server, use the Uninstall Server program in the program group for that database server. This program uninstalls the database server associated with that program group but preserves other installations of the database server. For more information, see [“Uninstalling and Reinstalling the Database Server” on page 25](#).

To reinstall the database server in the same program group, choose the installation directory where the database server is already installed when prompted in step 2 on [page 17](#) of the installation procedure. For more information, see [“Installation Directory” on page 11](#).

Multiple Installations and the Database Server Program Group

If you have multiple installations of the database server, the **Start→Programs** menu includes one program group for each installation. Each program group corresponds to the installation directory in which the product files for a particular database server reside. For more information about the database server program group, see [page 22](#).

If you are converting from IBM Informix Universal Server, Version 9.1x, to the current version, the installation program changes the program group name on the **Start→Programs** menu from IBM Informix Universal Server to IBM Informix Dynamic Server 9.40. If single or multiple installations of Dynamic Server, Version 9.4, are already installed on your computer, the installation program prefixes the name of the converted program group with the first free number.

For example, if two separate installations of Dynamic Server, Version 9.4, already exist on your computer and you convert an installation of IBM Informix Universal Server, Version 9.1x, to Version 9.4, the name for the converted program group is **2. IBM Informix Dynamic Server 9.40**.

The same considerations apply if you convert your database server from IBM Informix Dynamic Server, Version 7.3, to the current version. The installation program changes the name of the converted program group to **IBM Informix Dynamic Server 9.40** and prefixes this name with a number if one or more installations of the current database server version already exist.

For more information on how to convert an earlier version of the database server to the current version, see [“Installing Over an Existing Version”](#) on [page 7](#) and step 4 on [page 17](#).

Using the Server Instance Manager with Multiple Installations

Even when you have multiple separate installations of the database server, the Server Instance Manager program in any program group always displays all the database server instances on your computer. You can delete any database server instance on your computer from the Server Instance Manager program in any program group.

However, when you create a new database server instance in a particular program group, the new instance is installed in the program group from which you ran the Server Instance Manager program. The Server Instance Manager program always creates a new database server instance with a unique database server name and unique port number across all installations.

For more information on how to use the Server Instance Manager program, see [“Setting Up Multiple Residency”](#) on [page A-11](#).

Installing on Multiple Nodes (Cluster Installation)

The database server supports the Microsoft Cluster Server (MSCS) feature, which enables high availability on Windows. The MSCS feature allows you to cluster two Windows computers (*nodes*) as redundant components. When a failure occurs on one node in the cluster, Windows restarts the failed applications (such as the database server) on the surviving node in the pair.

MSCS includes the Cluster Administrator that enables you to designate a cluster and define resources, resource ownership, and dependencies on other resources. A *resource* is a hardware component, such as a shared disk, or a software application, such as the database server, that is shared between the two nodes in a cluster.

The Cluster Administrator also enables you to define groups that specify resource dependencies so that the Microsoft Resource Manager can move groups of dependent resources to the surviving node in the event of failure. The Resource Manager is a program that invokes specific start, restart, stop, and monitoring functions for a resource.

You can install the database server either on one node of a cluster or on both nodes (in a fail-safe mode). Installation on one node of a cluster is the same as regular installation on a stand-alone computer (see [“Installing IBM Informix Products” on page 16](#)).

To install the database server on multiple nodes of a cluster

1. Start the Cluster Administrator ([page A-5](#)).
2. Create an **Informix** resource group ([page A-5](#)).
3. Add or create dependent resources for the **Informix** group ([page A-6](#)).
4. Create new resources ([page A-6](#)).
5. Install the database server on both nodes ([page A-8](#)).
6. Create Informix resources ([page A-8](#)).
7. Set resource properties ([page A-9](#)).
8. Initialize the database server ([page A-9](#)).
9. Create additional dbspaces ([page A-9](#)).

Starting the Cluster Administrator

To start the Cluster Administrator program, click **Start→Programs→Administrative Tools (Common)→Cluster Administrator**.

When you start the Cluster Administrator, connections left open when you closed the previous session are restored. If no connections were left open, the Cluster Administrator prompts you to enter a cluster name, a node, or an IP address before it displays any information.

To open a connection to a cluster, use the network name or IP address of the cluster or one of its nodes. If the Cluster Administrator cannot find the cluster by its name, enter the name of an active node in the cluster.

Creating an Informix Resource Group

To create an **Informix** group, perform the following steps:

1. Select **File→New→Group**.
2. In the **Name** field, type a name for the new group (for example, Informix Database).
The name that you give the group is only for administrative purposes. It is not the same as the Network Name, which is the UNC resource that identifies the group in the browse list.
3. In the **Description** field, type a comment and click **Next**.
The group description appears with the group name when the group is listed in the right pane of the Cluster Administrator.
4. Under **All Nodes in the Cluster**, click the nodes you want to be the preferred owners for the group and click **Add**.
5. Click **Move Up** and **Move Down** to change the priority of a selected owner.
6. When the list of preferred owners is complete and prioritized, click **Finish**.

All resources within the new group will fail over together. To have the group fail back to a node, specify that node as the preferred owner. Groups can be balanced between two nodes to maximize the performance of the cluster. However, you can choose not to have a preferred owner if the location of the group does not greatly affect performance.

Defining Dependent Resources for the Informix Group

Through examples, define the dependent resources in advance. List typical dependent resources that will always be present, such as disk drives that host dbspaces, IP addresses, and so on. This definition process includes the following steps:

1. Define the shared drives for the group.
Add the drives where the root dbspace and other dbspaces will be stored to the Informix group. Similarly, add the drive on which Informix executable files are installed to the Informix group.
2. Define a network name resource for the **Informix** group.
The network name resource is the name of the *virtual host* that will be used in the **sqlhosts** registry. When client applications connect to the database server, they communicate with the network name resource *virtual host* rather than with any physical computer. For cluster configurations, virtual host names are used in the **sqlhosts** registry. As opposed to physical host names, the virtual host names persist even after failure of a node, because upon failure they simply move over to the surviving node during failover.
To create a network name resource, follow the procedure described in [“Creating New Resources” on page A-6](#).
3. Define an IP address resource for the Informix group.
The IP address resource that you create is the IP address to which the network name resource will be bound. Because this IP address migrates from one node to another during failover, it is also called a floating IP address.
To create an IP address resource, follow the procedure in [“Creating New Resources” on page A-6](#).

Creating New Resources

To create new resources:

1. Select the Informix Resource Group.
In the left or right pane of the Cluster Administrator, click the newly created **Informix** group to which to add the resource.
2. Choose **New Resource** and select **File→New→Resource**.

3. Set up the new resource. In the **New Resource** dialog box, perform the following actions:
 - a. In the **Name** field, type a unique name for the resource.
 - b. In the **Description** field, type a description for the resource. (This step is optional).
 - c. In the **Resource Type** field, enter the appropriate type: for example, IP address, Network Name, IBM Informix Dynamic Server, and so on.
 - d. In the **Group** field, enter the name of the newly created Informix group to which the resource will belong.
 - e. If you want to have this resource monitored separately from other resources, select **Run this resource** in a separate Resource Monitor check box.
4. Click **Next**.
5. Set up the owner of the resource. Add or remove possible owners of the resource and then click **Next**.
6. Add dependencies. Under **Available resources**, click a resource and then click **Add**.

For example, the Network Name resource depends on the IP address resource, and the IBM Informix Dynamic Server resource depends on the Network Name resource and shared disk resource.
7. Repeat the preceding step for any other resource dependencies and then click **Next**.
8. Enter resource-specific information and then click **Finish**.

Before you add a resource to your cluster, verify that the following conditions are true:

- The resource type is either one of the basic types that MSCS recognizes or is a type that was created by using an appropriate **.dll** file that the resource manufacturer provided.
- A group already exists within the cluster to which your resource will belong.

- All dependent resources have been created.
A separate Resource Monitor is recommended for a resource whose .dll file is likely to conflict with other resource .dll files. Separate Resource Monitors are also recommended for resources that will have to be investigated and corrected.

Installing the Database Server on Both Nodes

Perform the following steps to install the database server on both nodes of the cluster:

1. Install the database server on each node by following the procedure on [page 16](#).
2. Create dbspaces on the shared drives that were added to the Informix group.
3. Specify the Network Name resource name as the name of the virtual host to which database server clients will connect.
4. When the installation program prompts you to initialize or not initialize the database server, **do not initialize the database server**.

Creating Informix Resources

The installation of the database server in a cluster automatically sets up a new resource type definition, IFXDB930, for Informix resources. After you install the database server on both nodes of the cluster, you can use the Cluster Administrator to create new resources of type IFXDB930, as [“Creating New Resources” on page A-6](#) describes.

Use the Informix database server name (the value of the DBSERVERNAME configuration parameter) as the name of the resource that you create in this step. To deploy multiple instances of the database server, you must create a new resource group and IFXDB930 resource within that group for each instance. IFXDB930 resources should always have the same name as the Informix database server name for that instance.

Setting Resource Properties

After you create the IFXDB920 resource, set the Resource Property Server Instance. Use the following command **<windir>\Cluster** directory in the Command Prompt window to set the property parameter (ServerInstance):

```
<windir>\Cluster\CLUSTER RES IFXDB930_resource_name /PRIV  
ServerInstance= informixserver
```

In this command, the *informixserver* value that you assign to the ServerInstance parameter has the form **ol_njcluster12**. The **ol_njcluster12** value is also the resource name and is the same value as the DBSERVERNAME configuration parameter.

Initializing the Database Server

After you install the database server on both nodes of the cluster and set up resource dependencies in the Informix resource group, initialize the database server from the Services Control panel with the **-iy** parameter (see [page 23](#)). Keep in mind that MSCS provides no failover support during database server initialization.

Creating Additional Dbspaces

If you plan to use additional dbspaces, create them on the disk drives that you already added to the Informix resource group. Keep in mind that MSCS provides no failover support during creation of additional dbspaces.

Testing the Cluster Installation

The following procedure shows you how to test whether you installed the database server on both nodes of a cluster correctly:

1. Use the Cluster Administrator to bring the database server resource online on the first node of the cluster.

Verify that the database server is online.

2. Use the Cluster Administrator to move the complete Informix group to the second node of the cluster.

The Cluster Administrator gracefully shuts down the server instance. In the Cluster Administrator status display, the resource changes to offline mode. All the resources in the Informix group change to online mode on the second node. The database server instance should start gracefully on the second node and show an online status.

3. Test failover by stopping the cluster service on the node where Informix resources are currently running.

This action is an example of an ungraceful switchover. All the resources should shift to the other node and should change to online mode. The Informix database server resource also changes to online mode on the other node. To test this condition, check the status of the database server.

4. Test node failover by a sudden node failure.

Turn off the computer where the database server is currently running. All the resources should shift to the other node and should change to online mode. The Informix database server resource also should change to online mode on the other node. To test this condition, check the status of the database server.

5. Add more than one database server resource instance to the Informix group or create different Informix groups for each database server resource instance.

Follow this step and the next step if you plan to have multiple instances of the database server.

6. Test all the database resource instances by repeating the first four steps for each database server resource instance and each Informix group.

Setting Up Multiple Residency

Multiple residency refers to multiple database server instances and their associated shared memory and disk structures coexisting on a single computer.

Multiple residency is different from multiple versions ([page A-2](#)) in that you use the Server Instance Manager to create and manage further database server instances, rather than install additional copies of the database server in different directories on your computer. See [“Installing Multiple Versions” on page A-2](#).

Creating multiple independent database server environments on the same computer allows you to:

- Separate production and development environments
You can protect the production system from the unpredictable nature of the development environment.
- Isolate critically important or sensitive databases
You can increase security or accommodate more frequent backups than most databases require. When you use multiple residency, each database server has its own configuration file. Thus, you can create a configuration file for each database server that meets its special requirements for backups, shared-memory use, and tuning priorities.
- Test distributed data transactions on a single computer
If you are developing an application for use on a network, you can use local loopback to perform your distributed-data simulation and testing on a single computer. (See the section on using a local loopback connection in the *IBM Informix Dynamic Server Administrator's Guide*.) Later, when a network is ready, you can use the application without changes to application source code.

Planning for Multiple Residency

When you plan for multiple residency on a computer, consider the following factors:

- Storage space

Each database server must have its own unique storage space. You cannot use the same disk space for more than one instance of a database server. When you prepare an additional database server, you need to repeat some of the planning that you did to install the first database server. For example, you need to consider these questions:

- Will you use mirroring? Where will the mirrors reside?
- Where will the message log reside?
- Can you dedicate a tape drive to this database server for its logical logs?
- What kind of backups will you perform?

- Memory

Each database server has its own memory. Can your computer handle the memory usage that an additional database server requires?

Creating a New Database Server Instance

Before you set up multiple residency, you must install one database server as described in [“Installing IBM Informix Products” on page 16](#).



Important: *It is not necessary to install more than one copy of the database server binary files. All instances of the same version of the database server on one computer can share the same executable files.*

To set up multiple residency, use the Server Instance Manager. To use the Server Instance Manager program, you must have administrative privileges on the database server. However, local administrator privileges are sufficient, even if the database server was installed for domain use.

Before you use the Server Instance Manager, verify that you are a member of the **Informix-Admin** group ([page 7](#)).

To create a new database server instance

1. Choose **Start→Programs→Server Instance Manager**.
2. Select the Installation Method ([page 12](#)) and click **Create New** to create a new instance of the database server.
3. Follow the prompts.

For information about how to respond to prompts, see [“Installation Checklist” on page 5](#).

After you enter the required information, the Server Instance Manager installs services, records environment variables, updates the registry, and creates an ONCONFIG file for the new database server instance.

Deleting an Instance of the Database Server

To delete an instance of the database server, choose **Start→Programs→Server Instance Manager**, select a database server instance from the list, and click **Delete Server**.

The Server Installation Manager first checks to see if online services for the database server are running and, if so, stops them. If the Server Instance Manager can determine how to delete the instance for the version, it deletes all information related to the instance, including files and directories, icons, services, registry keys, associated registry entries (for example, for OnSNMP), configuration information, dbspaces, and the ONCONFIG file.

Performing a Silent Installation

A *silent installation* requires no user interaction with the installation program.

To run a silent installation, you must:

1. Copy the **silent.ini** file from the top directory in the database server product folder (**Iif** or **Ids**) to a TEMP directory.
2. Customize the **silent.ini** file ([page A-14](#)).
3. Start the silent installation ([page A-19](#)).

Customizing the silent.ini File

The **silent.ini** file contains installation parameters as well as comments that show the user how to modify these parameters. You must modify this file to contain the correct parameters for your silent installation.

The following tables show the parameters for which values must be present in the **silent.ini** file.

BUNDLE_COMMON and PRODUCT_IDS Parameters

The following table lists the minimum set of BUNDLE_COMMON and PRODUCT_IDS parameters that must be present in the **silent.ini** file and explains the values for each parameter.

Parameter	Description
Install_Dir (page 11)	The directory where you plan to install the product files
ACTUAL_INSTALL_DIR	The directory where you plan to install the product files (same as the Install_Dir)

Server Install Parameters

The values in the Server Install section of the **silent.ini** file specify how the database server is to be installed. The following minimum set of parameters in this section is necessary for copying files over in a database server install.

Parameter	Description
Typical (page 12)	Specify a value of 1 to install the database server as a typical install. If you do not specify any value, the default value is 1. You cannot set both Typical and Minimal to 1.
Minimal (page 12)	Specify a value of 1 to install the database server as a minimal install. You cannot set both Typical and Minimal to 1.

(1 of 4)

Parameter	Description
Shutdown_Services	Specify a value of 1 to shut down the services that must be shut down for the installation to proceed. These services include any services that the computer must upgrade, such as the database server and other services like OnSNMP. If you specify any value other than 1, the computer does not shut down services. If some of the services are using the files that must be upgraded, the install might not complete correctly.
Upgrade	Specify a value of 1 to upgrade any existing versions that the installation program detects. If you specify 0, and the installation program detects an existing version, the database server is not upgraded. Because co-existence with previous versions is not supported in this release, an unspecified value implies a value of 0.
Reinstall	The Reinstall parameter is similar to the Upgrade parameter. However, you can install the same version again.
Domain_Install (page 9)	Specify a value of 1 to create the user groups in a domain. If you do not specify a value of 1, all of the user accounts and groups that are created reside in the local computer. However, enabling domain install requires that the person who performs the install have domain administrator privileges. This parameter is ignored if the person who performs the install cannot install in a domain.
Cluster_Install (page 9)	Specify this parameter if the computer on which the installation program runs is part of a Windows cluster. Specify a value of 1 to enable installation on a cluster in a fail-safe mode. A cluster install requires a domain install. This parameter is ignored on non-clustered computers.
Role_Separation (page 12)	Specify a value of 1 to enable role separation. If you specify any other value than 1, role separation is not enabled.

(2 of 4)

Parameter	Description
IXDBSA_Group (page 12)	Set this parameter to the name of the ix_dbssa group. The database server uses this parameter to verify that the user belongs to the ix_dbssa group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Use the default value unless you require a specific group name.
IXDBSSO_Group (page 12)	Set this parameter to the name of the ix_dbssso group. The database server uses this parameter to verify that the user belongs to the ix_dbssso group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Use the default value unless you require a specific group name.
IXAAO_Group (page 12)	Set this name to the ix_aao group. The database server uses this parameter to verify that the user belongs to the ix_aao group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Use the default value unless you require a specific group name.
IXUSERS_Group (page 12)	Set this parameter to the name of the ix_users group. The database server uses this parameter to verify that the user belongs to the ix_users group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Use the default value unless you require a specific group name.
DBSSO_User	Set this parameter to the name of the Security Administrator.
DBSSO_Passwd	Set this parameter to the password of the Security Administrator.
AAO_User	Set this parameter to the name of the Auditing Administrator.
AAO_Passwd	Set this parameter to the password of the Auditing Administrator.
Account_Passwd	Set this parameter to the password for the informix user.

(3 of 4)

Parameter	Description
Configure_Instance	Specify a value of 1 to create a new instance of the database server. If you specify a value of 0, an instance is not configured in the case of a fresh install. If you are performing a reinstall, this parameter determines whether the existing configuration information is used, or whether a new instance of the database server is to be configured after deleting the existing instance.
Create_Icons	Specify a value of 1 to create icons for the installed programs. Specify a value of 0 to disable icon creation.

(4 of 4)

Server Instance Parameters

The Server Instance section of the **silent.ini** file specifies parameters required to configure a particular instance of the database server. The installation program uses these parameters only in the case of a fresh install. If the install is an upgrade or you are reinstalling without reconfiguring, the installation program uses all the existing information. The following minimum set of parameters in this section is necessary for configuring a particular instance in a database server install.

Parameter	Description
DBSERVERNAME	Specify the name of the database server. If you do not specify a name, a default name of the form <i>ol_computer-name</i> is assigned. You cannot change the database server name after it is installed.
SERVENUM	Specify a server number that is unique across all instances of the database server configured on the computer. Make the value as small as possible. You can use the default server number only for the first instance that you are configuring. This parameter sets the corresponding parameter in the onconfig file, which contains the configuration parameters for the database server.
SQLHOSTS	Specify the computer where the sqlhosts registry is located. The default is the computer on which you install the database server.

(1 of 2)

Parameter	Description
Storage_Name (page 14)	Specify the name of the additional dbspace to create. By default, this name is the same as the database server name in the DBSERVERNAME parameter.
Primary_Location (page 14)	Specify the drive on which the root dbspace and additional dbspace are created. By default, the dbspace is created on the same drive as the install directory.
Mirror_Location (page 14)	Specify the drive where the mirror dbspaces are created, if mirroring is enabled. If you do not specify the drive, the database server uses a default value. If the value is a dash (-), mirroring is not enabled.
Storage_Size (page 14)	Specify the size of the additional dbspace (in megabytes). If you do not specify a value, the installation uses a default value.
Initialize_Server	Specify whether the database server is to be initialized after creation. Specify a value of 1 for the program to attempt to initialize the database server. Otherwise you must perform the initialization manually. If you do not specify a value, the default is 1.
Service_Start_Auto	Specify how the database server is to be started. Specify a value of 1 to set up the database server to start automatically on reboot. If you do not specify a value of 1, you must start the database server manually.
Server_Proto (page 14)	Specify the network protocol parameters for the database server. The protocol field names the protocol to be used. Normally, you use the olsoctp protocol. The service name field specifies the name of the TCP/IP service that is used to access the database server. The port number field specifies the TCP port number to be used for the service name. You can default this parameter only when no other instance of the database server is configured.

(2 of 2)

Running the Silent Installation

After you modify the **silent.ini** file, start the silent installation:

1. Change to the server product folder.
2. Run the following command:

```
setup.exe -s silent_ini_pathname -l silent_log_pathname
```

where *silent_ini_pathname* is the full pathname to the **silent.ini** file, and *silent_log_pathname* is the full pathname to the **silent.log** file.

Because the silent installation cannot send error messages to the user interactively, it uses the **silent.log** file as an installation log. If the silent installation fails for any reason, the failure is recorded in the **silent.log** file.

For example, if **silent.ini** and **silent.log** reside in C:\TEMP, enter the following command to start the silent installation of the database server:

```
setup.exe -s C:\TEMP\silent.ini -l C:\TEMP\silent.log
```


Notices

IBM may not offer the products, services, or features discussed in this document in all countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe on any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
J46A/G4
555 Bailey Avenue
San Jose, CA 95141-1003
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. You may copy, modify, and distribute these sample programs in any form without payment to IBM for the purposes of developing, using, marketing, or distributing application programs conforming to IBM's application programming interfaces.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. (enter the year or years). All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

AIX; DB2; DB2 Universal Database; Distributed Relational Database Architecture; NUMA-Q; OS/2, OS/390, and OS/400; IBM Informix[®]; C-ISAM[®]; Foundation.2000[™]; IBM Informix[®] 4GL; IBM Informix[®] DataBlade[®] Module; Client SDK[™]; Cloudscape[™]; Cloudsync[™]; IBM Informix[®] Connect; IBM Informix[®] Driver for JDBC; Dynamic Connect[™]; IBM Informix[®] Dynamic Scalable Architecture[™] (DSA); IBM Informix[®] Dynamic Server[™]; IBM Informix[®] Enterprise Gateway Manager (Enterprise Gateway Manager); IBM Informix[®] Extended Parallel Server[™]; i.Financial Services[™]; J/Foundation[™]; MaxConnect[™]; Object Translator[™]; Red Brick Decision Server[™]; IBM Informix[®] SE; IBM Informix[®] SQL; InformiXML[™]; RedBack[®]; SystemBuilder[™]; U2[™]; UniData[®]; UniVerse[®]; wintegrate[®] are trademarks or registered trademarks of International Business Machines Corporation.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

Windows, Windows NT, and Excel are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

UNIX is a registered trademark in the United States and other countries licensed exclusively through X/Open Company Limited.

Other company, product, and service names used in this publication may be trademarks or service marks of others.

Index

A

AAO account
 creating
 for domain installation 10
 for role separation 13
 description of 13
 specifying for role separation 18
 Accessing database server program
 group 21
 Accounts
 AAO 10, 13
 DBSSO 10, 13, 18
 informix user 18, 21
 Adding members to Administrators
 group 7
 Administrative
 groups
 creating for role separation 10
 specifying for role separation 18
 privileges, Server Instance
 Manager A-12
 tasks, separating with role
 separation 12
 Administrator
 auditing. *See* AAO account.
 database. *See* Database
 administrator.
 privileges, incorrect 29
 security. *See* DBSSO account.
 Administrators group
 adding members 7
 incorrect privileges 29
 requirements for installing 7
 Advanced privileges, granted to
 informix user 21

Auditing administrator account. *See*
 AAO account.
 Auditing Analysis Officer. *See* AAO
 account.

B

Backups
 and multiple residency A-12
 configuring storage manager 20
 BLOB data 15
 BUNDLE_COMMON, silent.ini file
 parameters A-14

C

Client application, using multiple
 residency to test A-11
 CLOB data 15
 Cluster
 directory A-9
 installation
 description of 9, A-4
 fail-safe mode A-4
 on multiple nodes A-4, A-8
 specifying resource group 19
 testing A-10
 installation option 18
 resource A-4
 Cluster Administrator
 definition of A-4
 starting A-5
 testing cluster installation A-10
 Command line
 initializing database server 24
 starting database server 23

- stopping database server 25
- utilities, running 22
- Configuration Checklist. *See* Installation Checklist.
- Configuration file, and multiple residency A-11
- Configuration parameters
 - DBSERVERNAME A-17
 - SERVERNUM A-17
 - SQLHOSTS A-17
 - See also* Parameters.
- Configuring database server 18
- Control Panel
 - initializing database server 24
 - starting database server 23
 - stopping database server 25
- Creating
 - additional dbspaces A-9
 - administrative groups for role separation 10
 - database server instances A-12
 - Informix resource group A-5
 - Informix resources A-8
 - resources A-6
- Custom installation, description of 12
- Customizing, silent.ini file A-14

D

- Database administrator
 - definition of 13
 - Informix-Admin account 13
- Database security and role separation 12
 - isolating databases A-11
- Database server
 - configuring 18
 - creating multiple instances A-11
 - creating new instances A-12
 - deciding to uninstall 7
 - deleting instances A-13
 - fresh installation 28
 - initializing 19
 - installation order 3
 - installing
 - in a cluster 9, A-4
 - in a domain 9

- multiple instances 12, A-11
- multiple versions 8, A-2
- on a local computer 9
- on a remote computer A-1
- on multiple nodes A-4, A-8
- migrating. *See the "Migration Guide."*
- program group
 - accessing 21
 - and multiple installations A-2
 - description of 22
- reinstalling 7, 25, 28
- starting 23
- starting the installation 16
- stopping 23, 25
- uninstalling 25, 26
- upgrading 3, 7
 - description of options 7
 - See also the "Migration Guide."*
- Database server name
 - description of 14
 - error message 28
 - fixing invalid 28
 - Informix resources A-8
 - limitations 28
 - specifying 19
- Database server number
 - description of 13
 - specifying 19
- Database System Security Officer. *See* DBSSO account.
- Database users, ix_users group 13
- Databases, isolating for security A-11
- DataBlade modules, installing 3
- DB-Access utility, running 22
- DBSERVERNAME parameter and IFXDB920 resource A-9
- Informix resources A-8
- silent.ini file A-17
- Dbspaces
 - creating additional A-9
 - definition of 14
 - root 14, 15, 19
 - See also the "Administrator's Guide."*
- DBSSO account
 - creating
 - for domain installation 10

- for role separation 13
- description of 13
- specifying for role separation 18
- Default subspace
 - definition of 15
 - specifying 19
- Defining
 - dependent resources A-6
 - IP address resource A-6
 - network name resource A-6
 - shared drives A-6
- Deleting database server
 - instances A-13
- Dependent resources, defining A-6
- Disabling role separation 12
- Disk space, installation requirements 4
- Documentation notes, description of 22
- Documentation, types of related reading 1
- Domain installation and role separation 10
 - description of 9
 - option 18
- Drives
 - NTFS 17
 - shared A-6

E

- Enabling role separation 13, 18
- Environment variables, INFORMIXSQLHOSTS 16
- Error messages
 - database server name 28
 - incorrect privileges 29
 - insufficient virtual memory 29
 - page size 29

F

- Failover
 - definition of 9
 - support
 - during dbspace creation A-9
 - during initialization A-9

Fail-safe mode, cluster
 installation 9, A-4
 Fresh installation
 database server 28
 INFORMIXDIR directory 11

G

Global Language Support (GLS) 20
 Groups
 ix_aao 10, 13
 ix_dbsa 13
 ix_dbsso 10, 13
 ix_users 10, 13

H

Host, virtual. *See* Virtual host.

I

IBM Informix Connect, installing 3
 IBM Informix Dynamic Server
 Version 7.3, upgrading
 from A-3
 IBM Informix Technical Support,
 contact information 28
 IBM Informix Universal Server
 Version 9.1x, upgrading
 from A-2
 IFXDB920 resource A-8
 Incorrect privileges error
 message 29
 Informix Error Messages, in
 program group 22
 Informix resource group,
 creating A-5
 Informix resources, creating A-8
 informix user
 advanced privileges 21
 creation of 21
 setting password 18
 uninstall 28
 Informix-Admin account
 creation of 21
 description of 13

Informix-Admin group
 uninstall program 28
 updating members 20
 using Server Instance
 Manager A-12
 INFORMIXDIR directory 11
 fresh installation 11
 multiple installation 12
 upgrade 11
 INFORMIXSQLHOSTS
 environment variable 16
 Initializing database server 19, 24,
 A-9
 Installation
 cluster 9, 19
 directory
 NTFS 17
 specifying 17
See also INFORMIXDIR
 directory.
 domain 9
 error messages 28
 fresh 11
 local 9
 methods
 about 12
 specifying 18
 options, specifying 18
 order for IBM Informix
 products 3
 problems, troubleshooting 28
 program, starting 17
 requirements, minimum 4
 Installation Checklist,
 completing 5, 6, 7
 Installations, specialized A-1
 Installing
 database server 16
 in a cluster 9, A-4
 in a domain 9
 multiple instances 12, A-11
 multiple versions 8, A-2
 on a local computer 9
 on a remote computer A-1
 on multiple nodes A-4, A-8
 DataBlade modules 3
 Installing, IBM Informix Connect 3
 Instance Manager. *See* Server
 Instance Manager.

Instances, reverting multiple 27
 Insufficient virtual memory error
 message 29
 Invalid database server name 28
 IP address resource, defining A-6
 ISM servers
 preserving 27
 removing 27
 ix_aao group 10, 13
 ix_dbsa group 13
 ix_dbsso group 10, 13
 ix_users group 10, 13

L

Large objects, smart 15
 Limitations, database server
 name 28
 Local installation 9

M

Maintaining existing versions A-2
 Memory requirements, and
 multiple residency A-12
 Memory, virtual 29
 Message file for error messages 2
 Message log, for multiple
 residency A-12
 Microsoft Cluster Server (MSCS).
See Cluster installation.
 Microsoft Resource Manager,
 definition of A-4
 Microsoft SMS utility A-1
 Migrating from a different database
 server. *See the "Migration Guide."*
 Minimal installation, description
 of 12
 Mirrored location
 description of 15
 root dbspace 19
 Mirroring, and multiple
 residency A-12
 MIRRORPATH parameter 15
 MSCS. *See* Cluster installation.
 Multiple installations
 and database server program
 group A-2

and Server Instance Manager A-3
 INFORMIXDIR directory 12
 Multiple instances, reversion 27
 Multiple nodes, installing on A-4
 Multiple program groups A-2
 Multiple residency
 and backups A-12
 and mirroring A-12
 and multiple binaries,
 warning A-12
 benefits of A-11
 configuration file A-11
 definition of A-11
 different from multiple
 versions A-11
 memory requirements A-12
 message log for A-12
 ONCONFIG file A-13
 planning for A-12
 setting up A-11
 storage-space requirements A-12
 tape drive A-12
 use for testing A-11
 Multiple versions, installing A-2

N

Network name resource,
 defining A-6
 Network protocol, TCP/IP 14
 Nodes
 installing database server A-8
 multiple A-4
 NTFS drive, installation
 directory 17

O

ON-Bar, configuring storage
 manager 20
 ONCONFIG file, and multiple
 residency A-13
 oninit utility 22
 onmode utility 25, 27
 OnSNMP 27
 process, terminating 26
 Options, uninstall 26

P

Page size
 default sbspace 16
 error message 29
 Parameters
 DBSERVERNAME A-8, A-9
 MIRRORPATH 15
 required in silent.ini file A-14
 ROOTPATH 15
 Server Install silent.ini file A-14
 Server Instance silent.ini file A-17
 ServerInstance A-9
 Passwords
 incorrect after reversion 27
 setting informix user 18
 Port number
 description of 14
 specifying 19
 Preparing to install IBM Informix
 products 2
 Preserving ISM servers 27
 Previous version, upgrading
 from 3, 17
 Primary storage location, root
 dbspace 19
 Privileges
 administrator 29
 advanced 21
 for domain administrators 10
 for local administrators 10
 local A-12
 Server Instance Manager A-12
 Problems, installation 28
 PRODUCT_IDS, silent.ini file
 parameters A-14
 Program group
 database server 21

R

RAM, installation requirements 4
 Registry entries, sqlhosts A-6
 Reinstallation, and INFORMIXDIR
 directory 11
 Reinstalling database server 7, 25,
 28
 Related reading 1

Release notes, description of 22
 Remote computer, installing
 on A-1
 Removing
 ISM servers 27
 See also Deleting.
 See also Uninstalling.
 Requirements, minimum
 installation 4
 Resource group, specifying for
 cluster installation 19
 Resource Monitors, separate A-8
 Resource Property Server Instance,
 setting A-9
 Resource type definition A-8
 Resources
 cluster, definition of A-4
 creating A-6
 dependent A-6, A-8
 IFXDB920 A-8
 Informix, creating A-8
 IP address A-6
 network name A-6
 properties, setting A-9
 types A-7
 Restores, configuring storage
 manager 20
 Reversion, fixing incorrect
 password 27
 Reverting
 multiple instances 27
 to earlier version. *See also the*
 "Migration Guide".
 Role separation
 adding AAO user to group 10
 adding DBSSO user to group 10
 disabling 12
 enabling 13, 18
 enabling in domain
 installation 10
 groups and users 13
 ix_aao group 10, 13
 ix_dbsa group 13
 ix_dbssso group 10, 13
 ix_users group 10, 13
 separating administrative
 tasks 12
 setting up 12
 See also the "Trusted Facility Guide."

Root dbospace
 description of 14
 disk space requirements 4
 primary and mirrored storage
 locations 19
 specifying name 19
 ROOTPATH configuration
 parameter 15
 Running silent installation A-19

S

sbpage, size 16
 Sbspace
 default
 specifying location 15
 specifying name 19
 specifying storage location 19
 definition of 15, 19
 size 16
See also the "Administrator's Guide."
 Security administrator. *See* DBSSO account.
 Security. *See* Database security.
 Server Install, silent.ini
 parameters A-14
 Server Instance Manager
 and multiple installations A-9
 deleting database server
 instance A-13
 description of 22
 Informix-Admin Group A-12
 multiple residency A-11
 privileges A-12
 starting 14, A-13
 Server Instance, silent.ini
 parameters A-17
 Server name. *See* Database server name.
 Server number. *See* Database server number.
 ServerInstance parameter A-9
 SERVERNUM parameter, silent.ini
 file A-17
 Servers, ISM. *See* ISM servers.
 Server. *See* Database server.

Service name
 description of 14
 specifying 19
 Services Control panel, initializing
 database server from A-9
 Setting
 informix user password 18
 resource properties A-9
 Setting up
 multiple residency A-11
 role separation 12
 setup.exe, silent installation A-19
 Shared drives, defining A-6
 Shared server definition
 description of 16
 specifying 19
 Silent installation
 definition of A-13
 running A-19
 setup.exe A-19
 silent.ini file A-13
 silent.ini file
 customizing A-14
 required parameters A-14
 silent installation A-13
 silent.log file A-19
 Size
 default sbospace 16
 sbpage 16
 Smart large objects 15
 SNMP 27
 SNMP service, shutting down 26
 Specialized installations, setting
 up A-1
 Specifying
 database server name 19
 database server number 19
 default sbospace 19
 installation directory 17
 installation method 18
 root dbospace name 19
 service name 19
 SQLHOSTS parameter A-17
 sqlhosts registry
 port entry 14
 servicename entry 14
 shared server definition
 computer 16
 virtual host A-6

Starting
 Cluster Administrator A-5
 database server 23
 database server automatically 24
 installation program 17
 starts utility 23, 24
 Stopping, database server 23
 Storage locations, specifying 19
 Storage manager, configuring. *See the "IBM Informix Storage Manager Administrator's Guide".*
 Storage-space requirements, and
 multiple residency A-12
 Swap file, installation
 requirements 4

T

Tape drive, for multiple
 residency A-12
 TCP/IP
 port number 14
 service name 14
 specifying port number 19
 specifying service name 19
 Testing cluster installation A-10
 Troubleshooting installation
 problems 28
 Typical installation, description
 of 12

U

Uninstall Server
 description of 22
 options, description of 26
 program A-2
 Uninstalling
 database server 25, 26
 informix user 28
 Informix-Admin group 28
 Updating Informix-Admin
 group 20
 Upgrading
 and INFORMIXDIR directory 11
 database server 3, 7
 from previous version 17
 from previous versions 3

options, database server 7
See also the "Migration Guide."
Upgrading the database server 3
User accounts, informix
 creation of 21
 setting password 18
Utilities
 DB-Access 22
 onmode 25, 27
 running 22
 SMS A-1
 starts 23, 24

V

Variables. *See* Environment variables.
Virtual host, definition of A-6
Virtual memory, insufficient 29

W

Warning messages. *See* Error messages.
Windows Administrators group 7
Windows file system (NTFS),
 installation requirements 4