DB2 IBM Informix

IBM

Version 10.0

IBM Informix Dynamic Server Installation Guide for Microsoft Windows

G251-2776-00

DB2 IBM Informix

IBM

Version 10.0

IBM Informix Dynamic Server Installation Guide for Microsoft Windows

G251-2776-00

Note:
Before using this information and the product it supports, read the information in "Notices" on page A-1.

Second Edition (July 2005)

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, 2005. All rights reserved.
US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Introduction v
In This Introduction v
About This Manual v
Types of Users vi
Organization of This Manual. vi
Upgrading the Database Server vi
Documentation Conventions vi
Typographical Conventions vi
Example Code Conventions vii
Additional Documentation vii
IBM Informix Information Center viii
Online Notes viii
Locating Online Notes viii
Online Notes Filenames ix
Online Help ix
Informix Error Messages ix
Manuals ix
Online Manuals ix
Printed Manuals x
Accessibility x
IBM Informix Dynamic Server Version 10.0 and CSDK Version 2.90 Documentation Set x
Compliance with Industry Standards xiv
IBM Welcomes Your Comments xiv

Chapter 1. Preparing to Install Dynamic Server 1-1
In This Chapter 1-1
Reading the Online Notes 1-1
Verifying Hardware Requirements 1-1
Verifying Administrators Group Membership 1-2
Identifying Existing Server Versions 1-2
Uninstalling Existing Versions 1-2
Installing Over an Existing Version 1-2
Configuring Role Separation (Optional) 1-2
Determining the Installation Directory 1-3
Knowing Your Installation Type 1-4
Local Installation 1-4
Domain Installation with Domain Administrator Privileges 1-4
Domain Installation Without Domain Administrator Privileges 1-4
Choosing Your Installation Option 1-5
Completing the Installation Worksheet 1-5
Completing the Configuration Worksheet (Optional) 1-6

Chapter 2. Installing Dynamic Server 2-1
In This Chapter .

Printed Manuals

To order hardcopy manuals, contact your sales representative or visit the IBM Publications Center Web site at http://www.ibm.com/software/howtobuy/data.html.

Accessibility

IBM is committed to making our documentation accessible to persons with disabilities. Our books are available in HTML format so that they can be accessed with assistive technology such as screen reader software.

IBM Informix Dynamic Server Version 10.0 and CSDK Version 2.90 Documentation Set

The following tables list the manuals that are part of the IBM Informix Dynamic Server, Version 10.0 and the CSDK Version 2.90, documentation set. PDF and HTML versions of these manuals are available at http://www.ibm.com/software/data/informix/pubs/library/ and at the IBM Informix Information Center site at http://publib.boulder.ibm.com/infocenter/ids9help/index.jsp. You can order hardcopy versions of these manuals from the IBM Publications Center at http://www.ibm.com/software/howtobuy/data.html.

Table 1. Database Server Manuals

Book Title	Description
IBM Informix: Backup and Restore Guide	This manual explains the concepts and methods required to back up and restore data with the ON–Bar and **ontape** utilities. It includes information on the **archecker** utility.
IBM Informix: Database Design and Implementation Guide	This guide documents how to design, implement, and manage Informix databases. It includes data models that illustrate different approaches to database design and shows you how to use SQL to implement and manage databases.
IBM Informix: DataBlade API Function Reference	This manual describes the API functions.
IBM Informix: DataBlade API Programmer's Guide	This manual describes the API, the C-language application programming interface that is provided with Dynamic Server. Use the API to develop client and server applications that access data stored in a Dynamic Server database.
IBM Informix: DB–Access User's Guide	This guide describes how to use the DB–Access utility to access, modify, and retrieve information from Informix database servers.
IBM Informix: Dynamic Server Administrator's Guide	This user guide for system and database server administrators discusses the concepts and procedures for managing Dynamic Server. It is intended to help you understand, configure, and use the database server.The short manual name is *IBM Informix: Administrator's Guide*.
IBM Informix: Administrator's Reference	This reference manual provides the syntax of database server utilities such as **onmode** and **onstat**, and comprehensive descriptions of configuration parameters, SMI tables in the **sysmaster** database, logical-log records, disk structures, files that the database server uses, trapping errors, event alarms, and message-log messages.

Table 1. Database Server Manuals (continued)

Book Title	Description
IBM Informix: Dynamic Server Getting Started Guide	This guide provides an overview of IBM Informix products, summarizes the new features in this release, and provides a roadmap to user tasks in the documentation set for the database server.
IBM Informix: Dynamic Server Enterprise Replication Guide	This guide contains information to help you understand the concepts of data replication, design your own Enterprise Replication system, install Enterprise Replication, and administer and manage data replication throughout your enterprise.
IBM Informix: Dynamic Server Installation Guide for UNIX and Linux	This guide contains instructions for installing Dynamic Server on UNIX and Linux. It also describes how to solve common installation problems.
IBM Informix: Dynamic Server Installation Guide for Microsoft Windows	This guide contains instructions for installing Dynamic Server on Windows.
IBM Informix: Dynamic Server Performance Guide	This guide explains how to configure and operate Dynamic Server to achieve optimum performance and optimize SQL queries.The short manual name is *IBM Informix Performance Guide*.
IBM Informix: Error Messages	This HTML file in the IBM Informix Online Documentation site includes causes and solutions for numbered error messages that you might receive from IBM Informix products. Use the UNIX **finderr** utility or the Windows **Informix Error Messages** utility to locate the latest information on error messages.
IBM Informix: GLS User's Guide	This manual describes the Global Language Support (GLS), which allows IBM Informix client products and database servers to handle different languages, cultural conventions, and code sets.
IBM Informix: Guide to SQL Reference	This manual describes the Informix system catalog tables, data types, environment variables, the **stores_demo** and **superstores_demo** databases. It also contains a glossary.
IBM Informix: Guide to SQL Syntax	This manual contains the complete syntax descriptions of all Informix (SQL) and Stored Procedure Language (SPL) statements, and functions.
IBM Informix: Guide to SQL Tutorial	This tutorial provides instructions for using SQL to query and modify data in a relational database. It discusses how to embed SQL in programs, create and use stored-procedure language (SPL) routines, create and use triggers, and use casts for extended data types.
IBM Informix: High-Performance Loader User's Guide	This guide describes how to use the High-Performance Loader (HPL) to efficiently load and unload large quantities of data to or from an Informix database.
IBM Informix: Migration Guide	This manual describes the tasks that you perform when you move data from one location to another and when you migrate existing databases to various Informix database servers. It discusses such database server utilities as **dbexport**, **dbimport**, **dbload**, **dbschema**, **onload**, **onunload**, and **onmode -b**.
IBM Informix: Optical Subsystem Guide	This guide describes how to use the Optical Subsystem, a utility that supports the storage of TEXT and BYTE data on optical disks.

Table 1. Database Server Manuals (continued)

Book Title	Description
IBM Informix: R-Tree Index User's Guide	This guide describes the R-tree secondary access method and how to create an R-tree index on user-defined types.
IBM Informix: SNMP Subagent Guide	This manual describes the subagent that allows a Simple Network Management Protocol (SNMP) network manager to monitor the status of Informix database servers. It includes a glossary of terms used in the guide.
IBM Informix: Storage Manager Administrator's Guide	This guide describes IBM Informix Storage Manager (ISM). ISM receives backup and restore requests from ON–Bar and directs the data to and from storage volumes that are mounted on storage devices.
IBM Informix: Trusted Facility Guide	This guide describes the secure auditing facility and includes information on how to set up and administer audit trails, and extract and interpret audit records.
IBM Informix: User-Defined Routines and Data Types Developer's Guide	This guide explains how to define new data types and create UDRs on Dynamic Server. It describes the tasks that you must perform to extend operations on data types, create new casts, extend operator classes for secondary access methods, write opaque data types, and create and register routines.
IBM Informix: Virtual-Index Interface Programmer's Guide	This manual explains how to use the Virtual-Index Interface (VII), typically in a DataBlade module, to create a secondary access method. A *virtual* index accesses data from a source outside the database server or specific data inside large objects. The manual describes the syntax, API function calls, and data structures.
IBM Informix: Virtual-Table Interface Programmer's Guide	This manual explains how to create a primary access method with the Virtual-Table Interface (VTI). A *virtual* table is dynamically created from a source outside the database server or specific data inside of large objects. The manual describes the syntax, API function calls, and data structures.
IBM Informix: J/Foundation Developer's Guide	This guide explains how to use J/Foundation to write user-defined routines (UDRs) in the Java language. It describes the library of classes and interfaces that allow programmers to create and execute UDRs that access Dynamic Server with J/Foundation.

Table 2. Client Manuals for Dynamic Server

Book Title	Description
IBM Informix: Client Products Installation Guide	This guide contains instructions for installing the IBM◂Informix Client Software Developer's Kit and IBM Informix Connect on Linux, UNIX, and Windows.
IBM Informix: Embedded SQLJ User's Guide	This manual describes how to use IBM◂Informix Embedded SQLJ to embed SQL statements in Java programs. When you run a SQLJ program, it uses IBM◂Informix JDBC Driver to connect to the database.
IBM Informix: ESQL/C Programmer's Manual	This manual explains how to use ESQL/C, the Informix implementation of embedded SQL for C, to create client applications with database-management capabilities.
IBM Informix: JDBC Driver Programmer's Guide	This guide describes how to install, load, and use IBM◂Informix JDBC Driver to connect to an Informix database from a Java application or applet. You can use IBM◂Informix JDBC Driver to write user-defined routines.

Table 2. Client Manuals for Dynamic Server (continued)

Book Title	Description
IBM Informix: MaxConnect User's Guide	This manual describes how to install, administer, and tune performance for MaxConnect. MaxConnect enables the database server to support nearly unlimited numbers of client connections and reduces response times and CPU usage.
IBM Informix: Object Interface for C++ Programmer's Guide	This guide describes how C++ and DataBlade developers can develop IBM Informix client applications with the C++ programming language.
IBM Informix Object Translator	This online help describes how to use the IBM Informix Object Translator, a client-side tool, to integrate object-based applications and XML documents into the database.
IBM Informix: ODBC Driver Programmer's Manual	This manual explains how to use the IBM◂Informix ODBC Driver to access Informix databases and the database server. The IBM◂Informix ODBC Driver is the IBM Informix implementation of the Microsoft Open Database Connectivity (ODBC) interface.
IBM Informix: OLE DB Provider Programmer's Guide	This manual explains how to use IBM◂Informix OLE DB Provider to enable Active Data Objects applications and web pages, for example, to access the database server.
IBM Office Connect	This online help describes how to connect your Microsoft Excel worksheets to databases for online retrieval, modification, and updating of database data.
IBM Informix: TP/XA Programmer's Manual	This guide describes how to use the TP/XA library, which facilitates communication between a third-party transaction manager and your database server. TP/XA is supplied with IBM◂Informix ESQL/C.

Table 3. DataBlade and Tools Manuals

Book Title	Description
IBM Informix: Built-In DataBlade Modules User's Guide	This guide explains how to use the following DataBlade modules that are included with Dynamic Server: • MQ DataBlade module, to allow IBM Informix database applications to communicate with other MQ applications. • Large Object Locator, a foundation DataBlade module that can be used by other modules that create or store large-object data.
IBM Informix: DataBlade Developer's Kit User's Guide	This guide describes how to develop and package DataBlade modules using BladeSmith and BladePack.
IBM Informix: DataBlade Module Development Overview	This manual provides an overview of DataBlade module development.
IBM Informix: DataBlade Module Installation and Registration Guide	This guide explains how to install DataBlade modules and use the BladeManager application to manage DataBlade modules in Informix databases. BladeManager runs on client computers.
IBM Informix: Excalibur Text Search DataBlade Module User's Guide	This manual explains how to perform text searches and retrieval using the Excalibur Text Search DataBlade module.
IBM Informix Data Director for Web Tutorial	This tutorial teaches you how to create a small web site using Data Director for Web. You can choose the exercises that teach what you need to learn or copy the entire web site into a database and use it as an example.

Table 3. DataBlade and Tools Manuals (continued)

Book Title	Description
IBM Informix: Data Director for Web User's Guide	This manual describes how to use the Data Director for Web with the IBM◂Informix Web DataBlade module to develop and manage web sites. Also, see the tutorial.
IBM Informix: Geodetic DataBlade Module User's Guide	This manual explains how to use the IBM◂Informix Geodetic DataBlade module to store and use spatio-temporal data such as maps.
IBM Informix: Image Foundation DataBlade Module User's Guide	This manual explains how the Image Foundation DataBlade module provides a base on which new or specialized image types and image processing technologies can be quickly added or changed.
IBM Informix: Spatial DataBlade Module User's Guide	This guide explains how to use the IBM◂Informix Spatial DataBlade module to store, manipulate, index, and analyze multidimensional spatial data.
IBM Informix: TimeSeries DataBlade Module User's Guide	This manual explains how to use the IBM◂Informix TimeSeries DataBlade module to store and manage time-stamped data such as stock reports.
IBM Informix TimeSeries Real-Time Loader DataBlade Module User's Guide	This manual describes how to use the IBM Informix TimeSeries Real-Time Loader DataBlade module to load time-stamped data and make the data available to queries in real-time.
IBM Informix: Video Foundation DataBlade Module User's Guide	This manual describes how to use the IBM◂Informix Video Foundation DataBlade module to store video technology in a media management system.
IBM Informix: Web DataBlade Module Administrator's Guide	This manual describes how to administer web applications that use the IBM◂Informix Web DataBlade module to dynamically retrieve data from Informix databases.
IBM Informix: Web DataBlade Module Application Developer's Guide	This manual explains how to use the IBM◂Informix Web DataBlade module to develop web applications that dynamically retrieve data from Informix databases.

Compliance with Industry Standards

The American National Standards Institute (ANSI) and the International Organization of Standardization (ISO) have jointly established a set of industry standards for the Structured Query Language (SQL). IBM Informix SQL-based products are fully compliant with SQL-92 Entry Level (published as ANSI X3.135-1992), which is identical to ISO 9075:1992. In addition, many features of IBM Informix database servers comply with the SQL-92 Intermediate and Full Level and X/Open SQL Common Applications Environment (CAE) standards.

IBM Welcomes Your Comments

We want to know about any corrections or clarifications that you would find useful in our manuals, which will help us improve future versions. Include the following information:

- The name and version of the manual that you are using
- Section and page number
- Your suggestions about the manual

Send your comments to us at the following email address:

docinf@us.ibm.com

This email address is reserved for reporting errors and omissions in our documentation. For immediate help with a technical problem, contact IBM Technical Support. For instructions, see the IBM Informix Technical Support website at http://www-306.ibm.com/software/data/informix/support/contact.html.

We appreciate your suggestions.

Chapter 1. Preparing to Install Dynamic Server

In This Chapter 1-1
Reading the Online Notes 1-1
Verifying Hardware Requirements 1-1
Verifying Administrators Group Membership 1-2
Identifying Existing Server Versions 1-2
Uninstalling Existing Versions 1-2
Installing Over an Existing Version 1-2
Configuring Role Separation (Optional) 1-2
Determining the Installation Directory 1-3
Knowing Your Installation Type 1-4
Local Installation 1-4
Domain Installation with Domain Administrator Privileges 1-4
Domain Installation Without Domain Administrator Privileges 1-4
Choosing Your Installation Option 1-5
Completing the Installation Worksheet 1-5
Completing the Configuration Worksheet (Optional) 1-6

In This Chapter

This chapter discusses preparing to install IBM Informix products.

To install on Windows, complete the following preliminary tasks:

- Reading the Online Notes
- Verifying Hardware Requirements
- Verifying Administrators Group Membership
- Identifying Existing Server Versions
- Configuring Role Separation (Optional)
- Determining the Installation Directory
- Knowing Your Installation Type
- Choosing Your Installation Option
- Completing the Installation Worksheet
- Completing the Configuration Worksheet (Optional)

Reading the Online Notes

Read the release notes and documentation notes.

These files are located on the CD, in the **SERVER/doc** directory. For information on the contents of these files, see "Online Notes" on page viii.

Verifying Hardware Requirements

Verify that your computer meets the minimum requirements:

- Windows 2000, Windows XP Professional, or Windows Server 2003
- 128 megabytes of RAM (minimum); 256 megabytes (recommended)
- Sum of RAM and swap file must be 256 megabytes (minimum); 512 megabytes (recommended)
- Destination drive with a Windows file system (NTFS)

© Copyright IBM Corp. 1996, 2005

- 154 megabytes of disk space for the database server (including a minimum of 50 megabytes for the initial chunk of root dbspace and adequate space to accommodate your data)

  The installation program determines at runtime the amount of disk space required.

Verifying Administrators Group Membership

Verify that you are logged in as a member of the Windows Administrators group.

For information on how to create groups and add users to groups, see your Windows documentation.

Identifying Existing Server Versions

An existing version of the database server can cause complications during the installation of a new one.

Uninstalling Existing Versions

Uninstall any existing version of Dynamic Server before you install the new version to avoid conflict with directories, **.dll** files, registry entries, or Informix-related services.

To uninstall an existing version, follow the steps in Chapter 4, "Uninstalling Dynamic Server," on page 4-1.

Installing Over an Existing Version

If you install the database server over an existing installation, the installation program prompts you to choose one of the following options:

- **Install new files without changing configuration.**

  The installation program uses the existing database server configuration and installs the new database server over the existing database server.
- **Install new files and reconfigure, overwriting existing data.**

  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 perform upgrade.**

  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.**

  Use this prompt to install multiple versions of the database server on your computer. 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. In this case, each installation has its own program group on the **Programs** menu.

Configuring Role Separation (Optional)

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*.

You cannot turn off role separation once you have enabled it. To remove role separation, you must uninstall the database server and reinstall it without role separation.

To enable role separation, run the installation. (See Chapter 2, "Installing Dynamic Server," on page 2-1.) On the Role Separation screen, check the box to create users and groups.

If you choose to enable role separation during installation, you are prompted to create groups and users and add the users to the corresponding groups.

Table 1-1. Role Separation

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.

After installation you can manually add users to these groups.

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

Determining the Installation Directory

The installation directory is 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.

However, there is no need to create **INFORMIXDIR** prior to installation. You can provide the installation directory during the installation process; otherwise, the installation application will create a directory.

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

- **First-Time Installations**

  If you previously created the **INFORMIXDIR** directory, this directory is the default installation directory.
- **Upgrades and Reinstallations**

If you have already installed a 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 Informix Dynamic Server 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 having its own program group.

Knowing Your Installation Type

Choose to install locally or in a domain.

Local Installation

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

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 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:

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**. Skip to step 4.
3. To enable role separation in a domain installation without domain administrator privileges, perform the following tasks:
   a. Create special administrative groups, **ix_aao**, **ix_dbsso**, and **ix_users**.
   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_dbsso** 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 and rights to user **informix**:
      - Log in as service
      - Act as part of the operating system
      - Increase quotas
      - 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.

Choosing Your Installation Option

Select one of the following installation options:

- **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 and configuration of the database server.

Completing the Installation Worksheet

Use the following information to respond to prompts during the installation process.

IBM Informix Product Installation Worksheet	
Administrators Group Membership	_ Yes _ No
Upgrading from an Existing Version	_ Uninstall existing version. _ Install new files without changing configuration. _ Install new files and reconfigure, overwriting existing data. _ Copy all files and perform upgrade. _ Install in a different directory.
Installation Option	_ Local _ Domain with Domain Administrator Privileges _ Domain without Domain Administrator Privileges
Installation Directory (%INFORMIXDIR%)	Default location is **C:\Informix**. _____

IBM Informix Product Installation Worksheet	
Installation Option	_ Typical _ Minimal _ Custom
Role Separation	_ No _ Yes **Enter Administrative Group Names:** Administrator (**INFORMIX_ADMIN**): _____ _____ **Enter Administrative Account Names:** Auditing (**AAO**): _____ Security (**DBSSO**): _____

Completing the Configuration Worksheet (Optional)

The Configuration Worksheet contains the information you need to respond to prompts during database server configuration. After the installation program installs the IBM Informix files on your system, you return to the main page of the wizard. If you have completed the information in the configuration worksheet and are ready to configure a database server, you can configure it at this time. Alternatively, you can choose to cancel and use the Server Instance Manager to configure a database server later.

See Chapter 3, “Post-Installation Tasks,” on page 3-1 and, specifically, “Configuring Dynamic Server” on page 3-1 for configuration information.

Chapter 2. Installing Dynamic Server

In This Chapter 2-1
Installing IBM Informix Products 2-1
Performing a Silent Installation 2-2
Setting Up Specialized Installations 2-8
Installing Multiple Versions 2-8
Multiple Installations and the Database Server Program Group 2-8
Using the Server Instance Manager with Multiple Installations 2-8
Setting Up Cluster Installations 2-8
Overview of Implementing a Cluster on Two Nodes 2-9
Implementing a Cluster on the Primary Node 2-9
Installing Dynamic Server as a Cluster on the Secondary Node 2-11
Setting Up Multiple Residency 2-12

In This Chapter

This chapter explains how to install Informix Dynamic Server on Microsoft Windows. You can also use the installation program to install the following IBM Informix products:

3
- IBM Informix Client SDK
- IBM Informix Connect
- IBM Informix Server Administrator
- IBM Informix BladeManager
- IBM Informix DataBlade Developer's Kit
- IBM Informix ClusterIT

For information about these products, see the *IBM Informix: Getting Started Guide*.

IBM Informix JDBC Driver is available on the installation media to be separately installed. For information on installing IBM Informix JDBC Driver, see the *IBM Informix: JDBC Driver Programmer's Guide*.

Installing IBM Informix Products

Use the information from the Installation Worksheet to respond to prompts and select options during installation. For information on the Installation Worksheet and preparations for installing Dynamic Server, see Chapter 1, "Preparing to Install Dynamic Server," on page 1-1

3 Dynamic Server for Windows includes a Windows launch pad, a graphical
3 interface with the options to view this manual or the release notes, start the
3 installation, or browse the CD. The launch pad will start automatically when the
3 CD is inserted.

You can also follow these steps to install IBM Informix products.

To install IBM Informix products:

1. Start the installation program in one of the following ways:
   - Double-click **Setup.exe** from the root directory of the CD.
   - At the command prompt, Enter: `run X:\Setup.exe`

     where `X:` is the drive where the product CD is mounted.

© Copyright IBM Corp. 1996, 2005

For server-only installation, click the Setup application icon (**Setup.exe**) in the in the **X:\IIF** subdirectory of the directory where you downloaded the product files.

2. Read and then accept the license agreement.
3. Specify the installation directory.

   The destination drive must be formatted with a Windows file system (NTFS).
4. Select the products to install.

   All the products that come bundled with Dynamic Server are selected by default. Entering the number that corresponds to the appropriate product will select the product if it is not selected and deselect the product if it is already selected.
5. If you are upgrading your database server or reinstalling a 10.0 database server, choose **Copy all files and upgrade** from the Run the Installation Again? dialog box (which comes up automatically if you have previously installed the database server).

   The installation program skips most of the setup pages and uses existing information instead.
6. Specify a domain installation type, if applicable.
7. Choose the installation option:
   - Typical
   - Minimal
   - Custom
8. If desired, 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.
   d. Specify 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.
9. Complete the installation.

After the installation program installs the files on your system, you return to the main page of the wizard. If you have already filled out a Configuration Worksheet (that is, in addition to an Installation Worksheet), you can configure a database server now. Alternatively, you can choose Cancel and use the Server Instance Manager to configure a database server later.

For information on configuration and post-installation tasks, see Chapter 3, “Post-Installation Tasks,” on page 3-1.

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**) to a temporary directory.
2. Customize the **silent.ini** file.
3. Start the silent installation.

The last two steps are described in the following sections.

Customizing the silent.ini File

The **silent.ini** file contains installation parameters as well as comments that show you 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 whose values you set 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.

Table 2-1. BUNDLE_COMMON and PRODUCT_IDS Parameters

Parameter	Description
Install_Dir	The directory in which you plan to install the product files. See "Determining the Installation Directory" on page 1-3
ACTUAL_INSTALL_DIR	The directory in which 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. From more information, see "Choosing Your Installation Option" on page 1-5.

Table 2-2. Server Install Parameters

Parameter	Description
Typical	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	Specify a value of 1 to install the database server as a minimal install. You cannot set both Typical and Minimal to 1.
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 such as 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`.

Table 2-2. Server Install Parameters (continued)

Parameter	Description
Reinstall	The Reinstall parameter is similar to the Upgrade parameter. However, you can install the same version again.
Domain_Install	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. For more information, see "Domain Installation Without Domain Administrator Privileges" on page 1-4.
Role_Separation	Specify a value of 1 to enable role separation. If you specify any other value than 1, role separation is not enabled.
IXDBSA_Group	Set this parameter to the name of the **ix_dbsa** group. The database server uses this parameter to verify that the user belongs to the **ix_dbsa** 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	Set this parameter to the name of the **ix_dbsso** group. The database server uses this parameter to verify that the user belongs to the **ix_dbsso** 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	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	Set this parameter to the name of the **ix_usersgroup**. 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.
Account_Passwd	Set this parameter to the password for the **informix** user. The password provided for this value can be read by anyone. After installation is completed, remove the password from this file or copy the file to a secure place and remove it from the installation directory.
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.

Server Instance Parameters

The Server Instance section of the **silent.ini** file specifies parameters that are 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 if you are reinstalling without reconfiguration, 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.

Table 2-3. Server Instance Parameters

Parameter	Description
DBSERVERNAME	Specify the name of the database server. If you do not specify a name, a default name of the form *ol_computer-name* is assigned. You cannot change the database server name after it is installed.
SERVERNUM	Specify a server number that is unique across all instances of the database server configured on the computer. Set 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.
Storage_Name	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. For more information, see "Root Dbspace Name, Location, and Size" on page 3-2.
Primary_Location	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. For more information, see "Root Dbspace Name, Location, and Size" on page 3-2.
Mirror_Location	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. For more information, see "Root Dbspace Name, Location, and Size" on page 3-2.
Storage_Size	Specify the size of the additional dbspace (in megabytes). If you do not specify a value, the installation uses a default value. For more information, see "Root Dbspace Name, Location, and Size" on page 3-2.
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. If you do not specify a value of 1, you must start the database server manually.

Table 2-3. Server Instance Parameters (continued)

Parameter	Description
Server_Proto	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 let this parameter default only when no other instance of the database server is configured. For more information, see "Service Name and Port Number" on page 3-2.

Running the Silent Installation

To start the silent installation, run the following command from the directory in which you want to install Dynamic Server:

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

The *silent_ini_pathname* is the full path and filename of the customized file. The *silent_log_pathname* is the full path and filename of the location where you want the silent installation log file to reside.

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
```

The following sample file shows how to edit the **silent.ini** to run the silent installation of Dynamic Server.

```
[CIT]
;               IBM Informix Dynamic Server on Windows
;                  Silent Installation Template Script
;
;Steps to edit this file and do silent installation
;-------------------------------------------------
;STEP 1:Copy this file silent.ini in your TEMP directory and modify
;       the parameters as described below (parameters are located after
;       this comment block below):
;
;In section [BUNDLE_COMMON]
;              INSTALL_DIR=<Installation Directory>
;
;In section [PRODUCT_IDS]
;              ACTUAL_INSTALL_DIR=<Installation Directory>
;
;In section [server install]
;              Reinstall= 1 if you already have an installation
;                       = 0 if this is your first time installation
;              Typical=
;              Minimal=
;              Either of Typical or Minimal should be 1. The other should be 0
;              Account_Passwd=<Informix user's password here>
;
;In section [server instance]
;           DBSERVERNAME=<Enter your Informix server name like ol_pathfinder>
;
```

```
;STEP 2: Run setup.exe with the following parameters
;
;        setup.exe -s c:\temp\silent.ini -l c:\temp\silent.log
;
;        silent.log will show install progress
;
;        If you have problems with install, check the Reinstall variable
;        again to make sure that it is indeed a fresh install or a reinstall.
;

    VERSION=1.00
    INTERNAL_D=
;
[BUNDLE_COMMON]
PRODUCTS=IIF
INSTALL_DIR=C:\INFORMIX10.00
SUCCESS_FLAG=TRUE

[PRODUCT_IDS]
    NAME=            IIF
    DESCRIPTION_RES_ID=    5001
    OS=            WINNT
    NTFS_ONLY=        Y
        IS_SELECTED=Y
        ACTUAL_INSTALL_DIR=C:\INFORMIX10.00
        REBOOT_REQUESTED=Y


[server install]
    Shutdown_Services=    1
    Upgrade=        0
    Reinstall=        1
    Configure_Instance=    1
    Domain_Install=
    Cluster_Install=
    Typical=        0
    Minimal=        1
    Role_Separation=    0
    IXDBSA_Group=
    IXDBSSO_Group=
    IXAAO_Group=
    IXUSERS_Group=
    DBSA_User=
    DBSA_Passwd=
    SSO_User=
    SSO_Passwd=
    Account_Passwd=        in4mix
    Create_Icons=        1

[server instance]
    DBSERVERNAME=        ol_stiggy2
    SERVERNUM=        21
    DBSERVERALIASES=
    SQLHOSTS=
    Storage_Name=
    Primary_Location=
    Mirror_Location=
    Storage_Size=
    Initialize_Server=    1
    Service_Start_Auto=    1
    Server_Proto=        olsoctcp turbo 1535
```

When the silent installation is complete and Dynamic Server has been successfully installed on your system, you will find the license text for your language in the **ids_license** subdirectory of the installation directory, for example:

```
%INFORMIXDIR%\ids_license\license\English.txt
```

Setting Up Specialized Installations

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

- Installing Multiple Versions
- Setting Up Cluster Installations
- Setting Up Multiple Residency

Installing Multiple Versions

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.

Using the Server Instance Manager with Multiple Installations

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

However, when you use the Server Instance Manager program to 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. 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.

Setting Up Cluster Installations

Dynamic Server supports Microsoft Cluster Server (MSCS), which enables high availability on Microsoft Windows (Windows 2000 and Windows 2003). MSCS allows you to cluster two Windows computers as redundant components, or nodes. 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, which 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 Microsoft Resource Manager is a program that invokes specific start, restart, stop, and monitoring functions for a resource.

You can install Dynamic 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. For more information about installing Dynamic Server, see “Installing IBM Informix Products” on page 2-1.

Overview of Implementing a Cluster on Two Nodes

After you complete cluster-implementation preparation tasks, you implement Dynamic Server in a cluster environment in two steps:

1. You install Dynamic Server on the primary node.
2. You install the ClusterIT utility.
3. You convert the database servers to a cluster configuration.

   This step is implemented with the ClusterIT utilities:

   - You use the **clusterIT_a** utility to configure Dynamic Server on the primary node for use in a cluster.
   - You use the **clusterIT_b** utility to install Dynamic Server and configure it for use in a cluster on the secondary node.

To prepare to implement a cluster:

1. Install Dynamic Server on the primary node without initialization.
2. Edit the onconfig file. For more information on the **onconfig** file, see the *IBM Informix: Administrator's Reference*.
3. Put the rootdbs on a shared disk.
4. Move all shared disks to the primary node.
5. Initialize the database server.

   For more information, see "Configuring Dynamic Server" on page 3-1.
6. Create additional dbspaces, if needed.

   For more information, see "Root Dbspace Name, Location, and Size" on page 3-2.

   Additional dbspaces must be located on shared disks.

Implementing a Cluster on the Primary Node

When you run the clusterIT_a utility on the primary node, ClusterIT performs the following tasks:

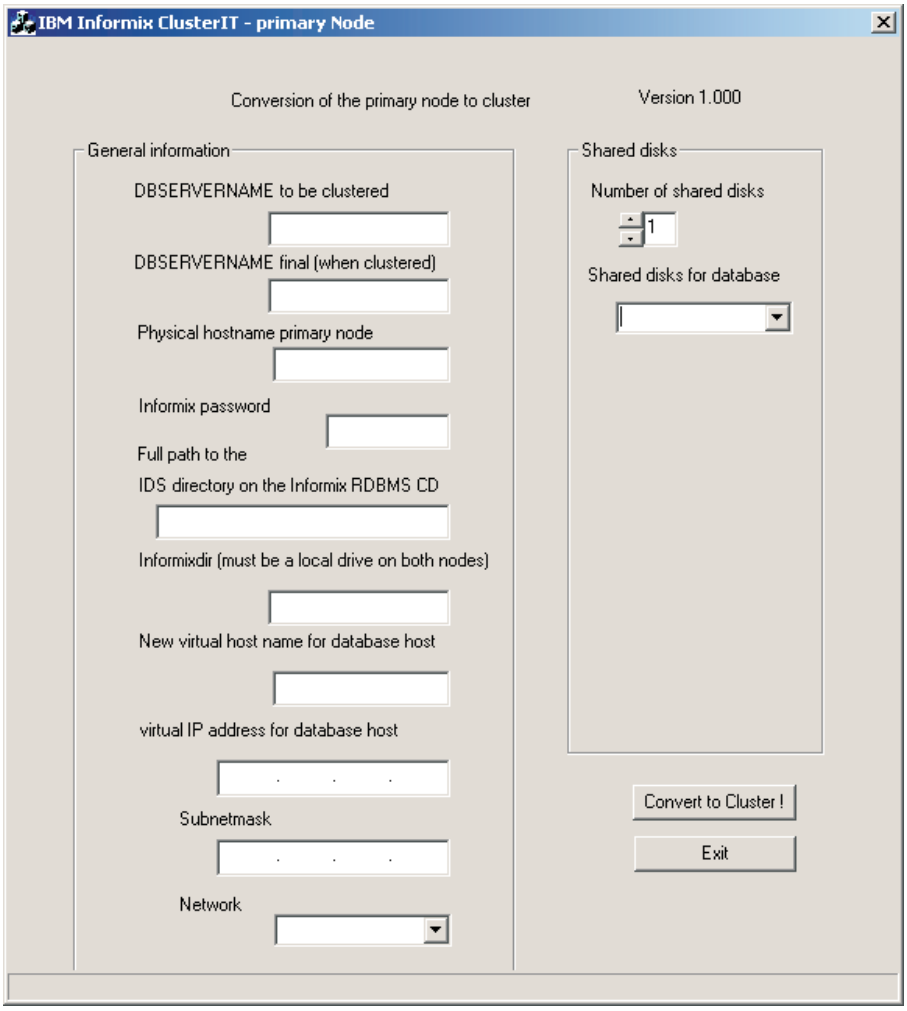
- Extracts the resource **.dll** (**ifxdb920.dll**) to the **WINDOWS\Cluster** directory
- Creates an Informix resource group
- Moves all physical disks on which chunks are located to the Informix group
- Creates a virtual IP address and a virtual hostname
- Registers the resource type IFXDB920
- Creates the Dynamic Server cluster resource
- Sets dependencies
- Sets the Dynamic Server cluster resource to online

To use ClusterIT to implement a cluster, the **INFORMIXDIR** directory must be located on a local disk, the (**INFORMIXDIR** directory must be on an identical local path for each node, and any chunks must be on shared disks. It must be possible to move the disks from one node to another.

To implement a cluster on the primary node:

1. Run the following command on the primary node: **clusterIT_a**.

   The **Conversion of the primary node to cluster** window appears.



2. Fill out the information about networking environment, machine names, and configuration for installing Dynamic Server:
   a. In the **DBSERVERNAME to be clustered** text box, enter the name of your unclustered Dynamic Server instance.
   b. In the **DBSERVERNAME final (when clustered)** text box, enter a name for your Dynamic Server instance after it has been converted into a cluster configuration.
   c. In the **Physical hostname primary node** text box, enter the physical hostname of the primary node.
   d. In the **Informix** password text box, enter your **Informix** password.
   e. Fill in the **Full path to the Dynamic Server directory on the Informix RDBMS CD** field.
   f. Enter the location of the installation (the value of **%INFORMIXDIR%**, which must be located on a local disk and must be identical for both nodes.
   g. In the **New virtual host name for the database host** text box, enter the new virtual host name.
   h. In the **virtual IP address for the database host** text box, enter the IP address for the new virtual host.
   i. In the **Subnetmask** text box, enter the value of the **Subnetmask** for the new virtual host.

j. Choose the network you want to use for the IP address from the **Network** drop-down menu.

k. Choose the **Number of shared disks** where you have chunks located.

l. Enter the name of the shared disks you use as chunk locations for Dynamic Server from the **Shared Disk for database** text box.

These disks are moved to the **Informix** group that will be created by the ClusterIT utility. In the event of failover, the disks you specify here will move over to the other node.

3. Click **Convert to Cluster**.

After the ClusterIT utility completes, a Dynamic Server comes back online, but it is now controlled by the Microsoft Cluster Service. The resource group **Informix** has been created.

You can check the state of your Dynamic Server by running the **onstat-** command.

Installing Dynamic Server as a Cluster on the Secondary Node

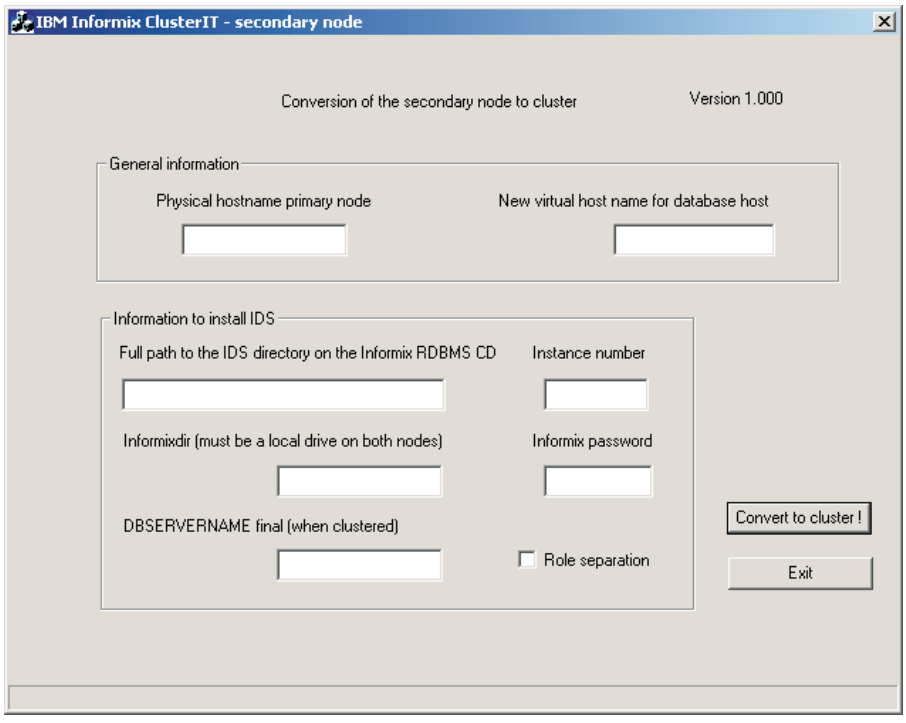
When you run the **clusterIT_b** utility on the secondary node, ClusterIT performs the following tasks:

- Installs Dynamic Server on the secondary node (silent installation)
- Copies registry entries from the primary node
- Copies the **ONCONFIG** file from the primary node
- Makes the resource .dll **(ifxdb920.dll)** available on the secondary node

To install Dynamic Server in a cluster configuration on the secondary node:

1. Run the following command on the secondary node: **clusterIT_b**

The **Conversion of the secondary node to cluster** window appears.



2. Fill in the text boxes:

a. In the **Physical hostname primary node** field, enter the physical host name of the primary node.

b. Fill in the **Full path to the Dynamic Server directory on the Informix RDBMS CD** field.

c. Enter the **Instance number** that you choose for Dynamic Server on the secondary node.

   This number is the same as that of Dynamic Server on the first node.

d. Enter the location of the installation (the value of **%INFORMIXDIR%**, which must be located on a local disk and must be identical for both nodes).

e. Enter your **Informix** password.

f. In the **DBSERVERNAME final (when clustered)** text box, enter the name of the Dynamic Server instance in the cluster configuration.

   On this secondary node, Dynamic Server will be installed directly with this name.

g. Check whether or not to enable **Role separation**. For more information, see "Configuring Role Separation (Optional)" on page 1-2.

3. Click **Convert to Cluster.**

   After the ClusterIT utility completes, Dynamic Server starts on the secondary node.

After implementing a cluster environment on multiple nodes, you can find a record of the ClusterIT utility activities in the **clusterIT.log** files, one for **clusterIT_a** in the primary node directory, and one for **clusterIT_b** in the secondary node directory where the ClusterIT executables were installed.

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 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.

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 Chapter 2, "Installing Dynamic Server," on page 2-1. 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 For more information, see "Verifying Administrators Group Membership" on page 1-2.

To create a new database server instance:

1. Choose **Start > Programs > IBM Informix Dynamic Server 10.0 > Server Instance Manager**.
2. Select the Installation Method, and click **Create New** to create a new instance of the database server.
3. Follow the prompts.

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.

Chapter 3. Post-Installation Tasks

In This Chapter 3-1
Configuring Dynamic Server 3-1
Completing the Configuration Worksheet 3-1
Database Server Number 3-1
Database Server Name 3-1
Service Name and Port Number 3-2
Root Dbspace Name, Location, and Size 3-2
Default Sbspace Name, Location, Size, and Page Size 3-2
Configuration Worksheet 3-3
Configuring Dynamic Server 3-4
Additional Post-Installation Tasks 3-5
Using the Dynamic Server Program Group 3-6
Starting and Stopping the Database Server 3-6

In This Chapter

This chapter discusses post-installation tasks.

Configuring Dynamic 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 at that time or choose Cancel and use the Server Instance Manager to configure a database server later

You should complete the Configuration Worksheet to have the information to respond to prompts during configuration.

Completing the Configuration Worksheet

You need the following information to respond to prompts during database server configuration, which appears at the end of the installation process.

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 > IBM Informix Dynamic Server 10.0 > Server Instance Manager**). For more information, see

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.

© Copyright IBM Corp. 1996, 2005

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 *IBM Informix: 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.

Use the TBLTBLFIRST and TBLTBLNEXT configuration parameters to specify the first and next extent sizes for the tblspace **tblspace** in the root dbspace that is created when the server is initialized. These parameters can be added if they are not in the standard **onconfig** file.

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 sbspace 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 sbspace holds. The default is one page.

For more information about sbspaces, see the *IBM Informix: 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.

Configuration Worksheet

Use the above information to fill out the Configuration Worksheet. This information will help you respond to the prompts during database server configuration.

IBM Informix Database Server Configuration Worksheet	
Database Server Number	_____
Database Server Name	_____
TCP/IP Configuration	**Service Name:** _____ **Port Number:** _____
Root Dbspace (for **Custom installation** method)	**Name:** _____ **Primary Location:** _____ **Mirror Location:** _____ **Size:** _____

IBM Informix Database Server Configuration Worksheet	
Default Sbspace (for **Custom installation** method)	**Name:** _____ **Primary Location:** _____ **Mirror Location:** _____ **Size:** _____ **Page Size:** _____
Shared Server Definition Computer	**_ Local** **_ Remote** (name of computer): _____
Initialize Server	**_ Yes** **_ No**

Configuring Dynamic Server

The following procedure shows how to use the configuration information to configure Dynamic Server.

To configure the database server:

1. Click **Finish** from the main installation wizard page.
2. Specify the database server number.
3. Specify a name for the database server.
4. Specify the service name and port number for the TCP/IP network protocol.
5. If you selected the **Custom installation** option:
   a. Specify a name for the root dbspace.
   b. Specify the primary and mirrored storage location and disk-space size for the root dbspace.
   c. Specify the name of the default sbspace.
   d. Specify the primary and mirrored storage location and disk-space size for the default sbspace.
6. Specify the computer to use for shared server definition for your database server and administrative tools.

   The installation program installs services on the computer and configures the database server.
7. 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 3-6.

Note: Database server initialization might take several minutes.

A message indicates that the database server was successfully installed.

8. If you selected other products to install, the installation prompts you to configure these products.
9. To update the members of the **Informix-Admin** group, log out and log back in.

   This step enables you to run the IBM Informix administration tools.
10. Restart your computer, if prompted.

Additional Post-Installation Tasks

After you complete the installation, you might want to:

- Start the database server manually.
- Set up the database server to start whenever Windows is launched.
- Stop the database server.
- 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*.

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, under which the database server runs, 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 **Create a new informix group and user if they do not already exist**.

Note: If you performed a domain installation without domain administrator privileges, the installation program does not perform most of these steps because you performed them manually.

Using the Dynamic Server Program Group

After you install the database server, to access the following items on the database server program group, click **Start > Programs > Informix Dynamic Server 10.0.** The following table describes the program group menu.

Table 3-1. Dynamic Server Program Group

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.
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.
Uninstall Server	Removes the database server from your system.
server-name	One *server-name* 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. For more information about DB-Access, see the *IBM Informix: DB–Access User's Guide*. For more information about command-line utilities, see the *IBM Informix: Administrator's Guide*.

Starting and Stopping the Database Server

This section describes how to:

- Start the database server after you initialize it.
- Initialize and start the database server if you did not initialize it during the installation process.
- Set up the database server to start automatically when Windows starts.
- Stop the database server.

Important: To start and stop the database server from the Control Panel, you must be a member of the Windows Administrators group. 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 *IBM Informix: Administrator's Guide*.

To start the database server if you initialized it during the installation process:

- From the Control Panel:

  Choose either:

  – **Control Panel > Administrative Tools**

– **Control Panel > Administrative Tools > Component Services > Console Root > 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.

- From the Command Prompt window:

  ```
  starts server_name
  ```

Attention: 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**.
- From the Command Prompt window:

  ```
  starts server_name -iy
  ```

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**.
- From the Command Prompt window:
  1. Click **Start > Programs > IBM Informix Dynamic Server 10.0** 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
     ```

For more information on how to configure the database server and other post-installation tasks, see the *IBM Informix: Getting Started Guide* and the *IBM Informix: Dynamic Server Administrator's Guide*.

Chapter 4. Uninstalling Dynamic Server

In This Chapter 4-1
Preparing to Uninstall Dynamic Server 4-1
Uninstalling Dynamic Server 4-2
Reinstalling the Database Server 4-3
Uninstalling ISA 4-3
Troubleshooting Installation Problems 4-3

In This Chapter

This chapter explains:

- Preparing to Uninstall Dynamic Server
- Uninstalling Dynamic Server
- Reinstalling the Database Server
- Uninstalling ISA

Preparing to Uninstall Dynamic Server

You must remove IBM Informix products one at a time. Before you run the uninstall program to uninstall the database server, remove any IBM Informix client programs.

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

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

When you uninstall the database server, you will select from the following 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.

    To do this, click **Start > Settings > Control Panel > Administrative Tools > Services**, select the SNMP service, and stop it.

  – Ensure that the OnSNMP process that runs from the **%INFORMIXDIR%\bin** directory has terminated.

    To check this, open the Task Manager and select the Processes tab. This process remains for a while 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.)

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

© Copyright IBM Corp. 1996, 2005

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*.

The database server service that is created after reversion contains an incorrect password. To change this password, select **Start > Settings > Control Panel > Administrative Tools > Services**, select the database server service, 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.

Uninstalling Dynamic Server

After deciding what IBM Informix products you want to remove, follow the instructions to uninstall them.

To uninstall the Dynamic Server:

1. Use one of these methods to start the uninstall program:
   - Click **Start > Programs > IBM Informix Dynamic Server 10.0 > Uninstall Server** or
   - Click **Start > Settings > Control Panel > Add/Remove Programs.**

     Select Dynamic Server to remove and click **Add/Remove.**
2. If you choose to only remove executables or to revert to a previous version, shut down the SNMP service and wait for the OnSNMP process to terminate.
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.

   Attention: 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*.

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 “Identifying Existing Server Versions” on page 1-2 and “Installing Multiple Versions” on page

L

Large Object Locator DataBlade xiii
Large objects, smart 3-2
Limitations, database server name 4-3
Linux
  installing database server xi

M

Machine notes viii
MaxConnect
  documentation xiii
Memory
  virtual 4-3
Memory requirements, and multiple residency 2-13
Message log, for multiple residency 2-13
Migration
  documentation xi
Mirrored location
  defined 3-2
  root dbspace 3-4
Mirroring, and multiple residency 2-13
MIRRORPATH configuration parameter 3-2
Multiple installations
  INFORMIXDIR directory 1-4
Multiple instances, reversion 4-2
Multiple nodes, installing on 2-9
Multiple nodes, installing with ClusterIT 2-9
Multiple residency
  and backups 2-13
  and mirroring 2-13
  and multiple binaries, warning 2-13
  benefits of 2-12
  configuration file 2-12
  definition of 2-12
  different from multiple versions 2-12
  memory requirements 2-13
  message log for 2-13
  ONCONFIG file 2-13
  planning for 2-13
  setting up 2-12
  storage-space requirements 2-13
  tape drive 2-13
  use for testing 2-12

N

Network protocol
  TCP/IP 3-2

O

Object Translator xiii
Office Connect xiii
ON-Bar
  configuring storage manager 3-5
  documentation x
ONCONFIG file, and multiple residency 2-13
Online help ix
Online manuals ix
Online notes viii
onmode utility 3-7, 4-2
OnSNMP
  process, terminating 4-1
ontape utility
  documentation x
Optical Subsystem
  documentation xi
Optimizing
  performance xi
Options
  uninstall 4-1

P

Page size
  default sbspace 3-3
  error message 4-3
Parameters
  MIRRORPATH 3-2
  required in silent.ini file 2-3
  ROOTPATH 3-2
  Server Install silent.ini file 2-3
  Server Instance silent.ini file 2-4
Password
  incorrect after reversion 4-2
  setting informix user 2-2
Performance
  optimizing xi
Port number
  defined 3-2
  specifying 3-4
Preserving
  ISM servers 4-2
Primary
  storage location, root dbspace 3-4
Printed manuals x
Privilege
  administrator 4-3
  advanced 3-5
Privileges
  local 2-13
  Server Instance Manager 2-13
Problems
  installation 4-3
PRODUCT_IDS, silent.ini file parameters 2-3
Program
  database server group 3-5

R

R-tree index
  documentation xii
RAM, installation requirements 1-1
Registering DataBlades xiii
Reinstalling database server 4-3
Reinstalling INFORMIXDIR directory 1-3
Release Notes viii
Removing
  ISM servers 4-2
Restore
  configuring storage manager 3-5
Reversion, fixing incorrect password 4-2
Reverting
  multiple instances 4-2
  to earlier version.
    See the Migration Guide.
Role separation
  enabling 2-2
Role separation, configuring on Windows 1-2

Root dbspace
defined 3-2
disk space requirements 1-2
primary and mirrored storage locations 3-4
specifying name 3-4
ROOTPATH configuration parameter 3-2
Running silent installation 2-6

S

Sample-code conventions vii
sbpage
size 3-3
sbspace
default
specifying location 3-2
specifying name 3-4
specifying storage location 3-4
defined 3-2, 3-4
size 3-3
Searching text
Excalibur Text Search xiii
Server Install, silent.ini parameters 2-3
Server Instance Manager
Informix-Admin Group 2-13
multiple residency 2-12
privileges 2-13
starting 2-13
Server Instance, silent.ini parameters 2-4
Server name.
See Database server name.
Server number.
See Database server number.
Servers, ISM.
See ISM servers.
Service name
defined 3-2
specifying 3-4
Setting
informix user password 2-2
Setting up
multiple residency 2-12
setup.exe, silent installation 2-6
Shared server
defined 3-3
specifying 3-4
Silent installation
definition of 2-2
running 2-6
setup.exe 2-6
silent.ini file 2-3
silent.ini file
customizing 2-3
required parameters 2-3
silent installation 2-3
Simple Network Management Protocol xii
Size
default sbspace 3-3
sbpage 3-3
Smart large object 3-2
SNMP service
shutting down 4-1
SNMP subagent xii
Spatial DataBlade module xiv
Specifying
database server name 3-4
database server number 3-4
Specifying *(continued)*
default sbspace 3-4
installation directory 2-2
installation method 2-2
root dbspace name 3-4
service name 3-4
SQL code vii
SQL statement
documentation xi
sqlhosts registry
port entry 3-2
servicename entry 3-2
shared server definition computer 3-3
Starting
database server automatically 3-7
installation program 2-1
starts utility 3-7
Storage locations, specifying 3-4
Storage-space requirements, and multiple residency 2-13
Swap file, installation requirements 1-1
System catalog tables
documentation xi

T

Tape drive, for multiple residency 2-13
TCP/IP
port number 3-2
service name 3-2
specifying port number 3-4
specifying service name 3-4
Text search
Excalibur Text Search xiii
Time-stamped data xiv
Timeseries DataBlade xiv
TOC Notes viii
Troubleshooting
installation problems 4-3
Typographical conventions vi

U

Uninstall Server
options 4-1
Uninstalling
database server 4-2
UNIX
installing database server xi
Updating Informix-Admin group 3-5
Upgrading
INFORMIXDIR directory 1-3
User account
informix
creating 3-5
User accounts
informix
setting password 2-2
User-defined routine
documentation xii
Utilities
onmode 3-7, 4-2
starts 3-7
Utility
auditing xii
DB-Access x
migration xi

V

Variables.
See Environment variables.
Video Foundation DataBlade xiv
Virtual memory
insufficient 4-3

W

Warning messages.
See Error messages.
Web DataBlade module xiv
Web pages, accessing with
Web DataBlade xiv
Windows
installing database server xi
Windows Administrators group 1-2
Windows file system, installation requirements 1-1

X

XML documents xiii

Part Number: CT3I9NA

Printed in USA

(1P) P/N: CT3I9NA

G251-2776-00