Informix Enterprise Command Center Installation Guide

Informix Dynamic Server, Version 7.3
Informix Dynamic Server, Workgroup Edition, Version 7.3

Table of Contents

Appendix A   **Configuring the Smart Agent**

Index

About This Guide

The *Informix Enterprise Command Center Installation Guide* contains instructions for installing:

- the Informix Enterprise Command Center (IECC) client and the IECC Server Agent in Windows 95 and NT environments.
- the IECC Server Agent in UNIX environments.

The IECC client consists of the IECC console and its tools and editors, described in "New Features of This Product." The Server Agent is a process that monitors and administers an Informix server.

New Features of This Product

IECC includes the IECC console, a graphical tool for managing your Informix servers and databases. The IECC console contains tools that enable you to administer:

- servers.
- databases.
- spaces.
- storage.
- events.
- sessions.
- reports.
- backup and restore.
- loading and unloading of tables and databases.
- data replication.

In addition, IECC provides the following integrated database object editors:

- SQL editor

- Stored Procedure editor
- Table editor
- Trigger editor
- View editor

Software Dependencies

To use IECC, you must be using Informix Dynamic Server Version 7.3 or later, running in a UNIX (SUN Solaris) or Windows NT environment, as your database server.

Additional Documentation

The documentation set for IECC includes the *Informix Enterprise Command Center User Guide.*

The following on-line files supplement the information in this manual.

On-Line File	Purpose
Documentation notes	Describes features not covered in the manuals or modified since publication.
Release notes	Describes any special actions required to configure and use IECC on your computer. This file also describes feature differences from earlier versions of IECC. Additionally, this file contains information about any known problems and their workarounds.
Machine notes	Describes platform-specific information regarding the release.

UNIX

For UNIX installations, on-line files are located in the following directory: **$INFORMIXDIR/release/en_us/0333**. ◆

Windows

For Windows installations, on-line files are located in the following directory: **%INFORMIXDIR%\release\en_us\04e4**. ◆

For additional information on installing Informix products, consult the following manuals:

- The *Installation Guide* for your Informix server.
- The *Informix Client Products Installation and Configuration Guide for Microsoft Windows Environments.*

Preparing to Install IECC

To install and use IECC, you must first install and configure your Informix server. If you need to install the server, see the *Installation Guide* that accompanies your server.

The instructions in this guide are based on the assumption that you are familiar with your computer operating procedures and your Windows or UNIX environment.

If you encounter problems, contact your Informix Technical Support department. In North America, call toll-free (800) 274-8184 or send a fax to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

System Requirements

Before installing IECC, verify that your system meets the following minimum requirements.

Requirement	Windows 95	Windows NT	UNIX
Hardware	80486 or higher microprocessor	80486 or higher microprocessor	SUN Solaris
Operating system version	Windows 95 with: ■ Service Pack 1 ■ the DCOM95 patch (see "DCOM95 Patch" on page 5) ■ the COMCTL32.DLL updated common control library (see "COMCTL32.DLL Updated Common Control Library" on page 5)	Version 4.0 with ■ Service Pack 3	Version 2.5.1
Network protocol	TCP/IP	TCP/IP	TCP/IP
Memory			
IECC console, tools, and editors	32 MB RAM	32 MB RAM	Not applicable
Server Agent	Not applicable	*	32 MB (70 MB swap)
Hard-disk storage			
IECC console, tools, and editors	40 MB	40 MB	Not applicable
Server Agent	5 MB	5 MB	10 MB

* If your server is configured with sufficient memory, you will have sufficient memory to efficiently run the Server Agent. Refer to your *Installation Guide* for information about the memory requirements of the server.

Windows

If your computer fails to meet any of the minimum requirements, the Installation wizard displays the Minimum Requirements screen and informs you which parameter does not meet requirements. ♦

Windows 95

DCOM95 Patch

If you are running IECC on Windows 95, you must have installed Microsoft's DCOM95 patch on your computer. The patch is available at the following URL:

`http://www.microsoft.com/workshop/prog/com/dcom95/dcom95.htm`

The patch is also available with the Visual C++ 5.0 installation. ♦

Windows 95

COMCTL32.DLL Updated Common Control Library

Before you run IECC on a Windows 95 computer, you must run the **40comupd.exe** program located on your CD in the **Win95** directory underneath the **Client** directory. The **40comupd.exe** program installs the required Microsoft updated common control library, **COMCTL32.DLL**. For IECC to run successfully, you must install this control library. ♦

Providing a Protocol

Informix client products work with any TCP/IP protocol that is compliant with Windows Sockets 1.1. You select a protocol using the Informix **Setnet32** utility when you configure your server, or you can use IECC's Client Configuration feature. See "Configuring Your Environment" on page 10 for information about **Setnet32** and Client Configuration.

The I-Connect Utility

The I-Connect utility is automatically installed when you install the IECC console and its tools and editors. **I**-**Connect** includes the runtime versions of Informix ESQL/C and CLI, and the **Setnet32** utility, for setting environment variables and other configuration tasks.

Supported Configurations

IECC uses a two-process architecture that is suited for client/server computer networks. The IECC console and the tools it provides run on a PC workstation and communicate with either local or remote Informix servers.

All Informix client products listed in this manual are compatible with Informix Dynamic Server Version 7.3.

The IECC Products

IECC consists of two products:

- The IECC client

  The IECC client consists of the IECC console and its tools and editors. (The client runs on Windows 95 and NT only.)

- The Server Agent

  The Server Agent is a process that monitors and administers an Informix server. (The Server Agent runs on Windows NT and UNIX.)

You must install the Server Agent on each computer on which you want IECC to manage your Informix servers. These computers must already have the Informix 7.3 DBMS installed on them.

The Server Agent retrieves information about a database server from the Informix system catalogs. Therefore, if you start a server with the -**i** option, you must wait for the server to finish creating the system catalogs in the **sysmaster** and **sysutils** databases before you use IECC to manage that server. To see if the server has finished creating these tables, check the on-line log file defined by the MSGPATH **onconfig** parameter for the following messages:

'sysmaster' database built successfully.

'sysutils' database built successfully.

You must install the IECC client on a computer networked to the computers where the servers are running, or on the same computer on which the servers are installed.

Important: *After installation, you must run a Server Agent for each Informix server that you want IECC to manage. In UNIX environments, you start the Server Agent as described in "Starting Up and Shutting Down the Server Agent" on page 15. In Windows environments, the first Server Agent is started for you; you start additional Server Agents as described in "Starting Up the Server Agent" on page 9.*

Order of Installation

You must install your Informix server before you install the IECC Server Agent.

You can install the IECC Client before or after you install the server, and before or after you install the IECC Server Agent.

The IECC Client and Server Agent products are described in "The IECC Products" on page 6.

Installing IECC on Windows 95 and NT

To install IECC, you run the IECC Installation wizard. A wizard is a series of pages that guide you through a task. Wizard pages have the following standard navigation buttons:

- **Next**

  Displays the next page. Click this button after you have made whatever entries are required on the current page.

- **Back**

  Displays the previous page. Click this button to back up if you need to verify or change an entry.

- **Cancel**

  Exits the wizard without performing the task.

- **Finish**

  Appears on the last wizard page. Click this button to perform the task and exit the wizard.

The installation options are described in the following table.

Option	Description
Typical	Includes all IECC components, their on-line help, and examples.
Custom	You select which IECC components to install.

To avoid conflicts such as locked files, exit all Windows programs before launching the Installation wizard.

To launch the Installation wizard from the CD

1. Insert the CD in the drive.

2. Double-click the **My Computer** icon.

3. Double-click the CD drive icon to display the files on the CD.

4. Double-click the folder that contains the IECC product you want to install:

    ■   The **Client** folder contains the IECC console and its tools and editors.

        This wizard also installs Enterprise Replication Manager; if you do not want to install this product, choose **Custom** install and do not select this product (the installation options **Typical** and **Custom** are described earlier in this section).

        If you select the **Custom** option and choose to install Enterprise Replication Manager only, the Client Configuration feature of IECC is installed automatically. When the installation is complete, you must launch IECC from the **Informix** program group that appears on your NT **Start** menu. You must configure the Enterprise Replication Manager client computer using the **Control Panel** folder of IECC. See the *Informix Enterprise Command Center User Guide* and IECC release notes for information on how to configure your client using IECC.

    ■   The **ServerAgent** folder contains the Server Agent. You must install your Informix server before you install the IECC Server Agent.

    These products are described more fully in "The IECC Products" on page 6.

5. Double-click **install.exe**. The Installation wizard appears.

*Warning: When installing IECC, use the **install.exe** program in the **Client** or **ServerAgent** folder. Do not use any of the **setup.exe** programs in the subdirectories.*

6. Click **Next** on the wizard welcome page.

7. Follow the instructions provided by the Installation wizard. The Installation wizard includes on-line help to assist you.

8. Click **Finish** on the Setup Complete page after all components have been installed.

*Warning: If you install IECC on a Windows 95 computer, you must run **40comupd.exe**, as described in "COMCTL32.DLL Updated Common Control Library" on page 5, before you run IECC.*

Starting Up the Server Agent

When you install the Server Agent, IECC automatically starts a Server Agent process for each server running on your computer.

To add another server on this computer, you use the Instance Manager. The Instance Manager automatically starts another Server Agent for each new server that you add.

You can stop a Server Agent by opening the **Control Panel** and double-clicking **Services**. Select the Server Agent and click **Stop**. You may also use the services dialog box to restart a Server Agent.

The Instance Manager is described in the *Installation Guide for Informix Dynamic Server on Windows NT.*

Modifying Environment Variables

The Installation wizard sets all the environment variables necessary to successfully run IECC. After you install IECC, you can use the **Setnet32** utility to modify environment variables, or you can modify them from the command line.

IECC accesses environment variables to obtain information about Informix products and the operating system environment. The **INFORMIX** subkey in the Windows registry stores environment variables that both the client applications and database servers use. The Installation wizard automatically creates the **INFORMIX** subkey in the Windows registry under **HKEY_CURRENT_USER** and **HKEY_LOCAL_MACHINE**:

> **\\HKEY_CURRENT_USER\\SOFTWARE\\INFORMIX**
>
> **\\HKEY_LOCAL_MACHINE\\SOFTWARE\\INFORMIX**

For information about specific environment variables, see the *Informix Guide to SQL: Reference* and the *Informix Client Products Installation and Configuration Guide for Microsoft Windows Environments* for your server.

The *Informix Guide to GLS Functionality* describes in detail how to use all GLS environment variables.

Configuring Your Environment

To perform configuration tasks such as setting most environment variables and changing user and password settings, use the **Setnet32** utility. Use the Client Configuration feature of the IECC console to configure:

- servers.
- server groups.
- shared server machines.
- connection timeout and retry parameters.

Using Setnet32

To launch the **Setnet32** utility, choose **Programs→Informix→Informix Setnet32** from the Windows **Start** menu.

Set your environment variables using the **Environment** tab of the **Setnet32** utility. For more information about the **Setnet32** utility, see the *Informix Client Products Installation and Configuration Guide for Microsoft Windows Environments*.

Using the IECC Client Configuration Feature

The **Control Panel** folder in the IECC console enables you to configure your IECC client. For information about using Client Configuration, refer to the *Informix Enterprise Command Center User Guide*.

Machine Configuration for Remote Domains

When you use IECC to administer servers in a remote domain, proper network configuration is important. Due to a known VisiGenic bug, you must list the fully qualified domain name for servers in the **Domain Suffix Search Order** listbox under the **DNS** tab in TCP/IP properties.

If you do not use the fully qualified domain name, the IECC connection to the remote server may fail.

To access the Domain Suffix Search Order list box

1. Open the **Control Panel** and double-click the **Network** icon. The Network dialog box appears.

2. Click the **Protocols** tab.

3. Select **TCP/IP** in the listbox.

4. Select the **Properties** button or double-click the **TCP/IP** entry. The Microsoft TCP/IP Properties dialog box appears.

5. Select the **DNS** tab and you will see the Domain Suffix Search Order listbox at the bottom of the dialog box.

6. Use the **Add** or **Edit** buttons to enter fully qualified domain names.

Uninstalling IECC

You can uninstall the IECC client by running the **uninstall.exe** program located in **%INFORMIXDIR%\uninstall**. The **uninstall.exe** program displays a list of components. You do not see a specific component called "Informix Enterprise Command Center"; the IECC client consists of several smaller component packages. To completely remove what was installed for the IECC client, you must uninstall all of the following components:

- Common Runtime

- INFORMIX-Connect
- CLI Runtime
- Client Config Snap-in
- Schema Editors
- Database Snap-in
- Enterprise Replication
- ★ ISM
- Spaces Snap-in
- SQL Editor
- WinPLoad

Warning: *When uninstalling the IECC client, uninstall all the components listed here. Do not uninstall individual components.*

To uninstall the Server Agent

1. Run `%INFORMIXDIR%\bin\agentinstall -uninstall`.
2. Run `%INFORMIXDIR%\uninstall\uninstall.exe`.

Installing the IECC UNIX Server Agent

The IECC Server Agent consists of the Server Agent, which is a process that gathers information about and administers an Informix server, and Smart Agent, the VisiGenic CORBA implementation of a Basic Object Adapter (a distributed directory service for client applications and object implementations). Background information about configuring the VisiGenic Smart Agent is provided in Appendix A.

You must install your Informix server before you install the IECC Server Agent.

To install and start up the IECC UNIX Server Agent

1. Enter the following command to become a superuser, if you are not already running as a superuser:

   ```
   csh> su
   ```

2.   Set the **INFORMIXDIR** environment variable and add it to your path, as described in "Setting the INFORMIXDIR Environment Variable" on page 13.

3.   Load the product source files supplied by Informix onto your computer, as described in "Loading Product Source Files" on page 14.

4.   Run the installation script, as described in "Loading Product Source Files."

5.   Start a Server Agent for each server in your Informix Dynamic Server installation that you want IECC to manage. You start the Server Agent as described in "Starting Up and Shutting Down the Server Agent" on page 15.

6.   Read the on-line notes located in the directory **$INFORMIXDIR/release/en_us/0333**.

These steps are explained in the following sections, and are repeated in the on-line file **$INFORMIXDIR/release/en_us/0333/IECC_7.3**. The commands are shown for the C-shell.

Setting the INFORMIXDIR Environment Variable

The **INFORMIXDIR** environment variable specifies the Informix installation root directory. You must set the **INFORMIXDIR** environment variable and include it in your **PATH** environment variable.

To set the INFORMIXDIR environment variable

1.   Set the **INFORMIXDIR** environment variable to the full path where you have installed your Informix Dynamic Server:

```
csh> setenv INFORMIXDIR DS_install_dir
```

For example, if Informix Dynamic Server was installed in **/usr/informix**, you use the following command:

```
csh> setenv INFORMIXDIR /usr/informix
```

2.   Add **INFORMIXDIR** to your **PATH** environment variable:

```
setenv PATH $INFORMIXDIR/bin:$PATH
```

See the *Installation Guide* for your server for information about setting Informix UNIX environment variables.

Loading Product Source Files

Your Informix product materials include a serial-number keycard and electronic media that contain all product files. If you do not have the serial-number keycard or the proper media, contact your supplier or Informix sales representative.

To load the source files

1. Load the media supplied with your software into the appropriate tape drive, floppy disk drive, or other device in your computer.

2. If you are not currently in the **INFORMIXDIR** directory, enter the following command:

    ```
    csh> cd $INFORMIXDIR
    ```

3. Transfer the software from the media to the current directory by entering the appropriate **cpio** or **tar** command shown here:

    ```
    csh> cpio -ivdBum < devicename

    csh> tar xvf[b] devicename [20]
    ```

    devicename is the full pathname to the device where you inserted the IECC media. Devices are commonly in **/dev**, so the device name is usually **/dev/devicename**.

    If you are loading the software from floppy disks, you might need to repeat the system command for each disk, or else you might be prompted to insert each new disk and press RETURN.

Running the Installation Script

To install the UNIX IECC Server Agent, enter the following command:

```
./installiecc
```

The script prompts you to enter the serial number and key from your serial-number keycard.

*Warning: In the **sqlhosts** file, you must set the NETTYPE parameter of the server defined by the DBSERVERNAME **onconfig** parameter to a network-enabled protocol. For example, you can set it to* ontlitcp.

*Tip: The IECC console uses the value defined by the DBSERVERNAME **onconfig** parameter to display the server name.*

Starting Up and Shutting Down the Server Agent

An IECC Server Agent must be running for each Informix server that you want IECC to manage. If you run more than one Informix server on a computer, you must have a separate Server Agent process for each server.

The user **informix** must start up and shut down a Server Agent. To ensure that you always start a Server Agent for a server, start the Server Agent process during the startup of the computer on which the server is installed; you can use **/etc/inittab** to do this.

To start an IECC Server Agent

1. Verify that the following environment variables are set to the same values as defined for your Informix DBMS installation area:

    ⋆ **INFORMIXDIR**

    ⋆ **PATH**

2. Set the **ONCONFIG** and **INFORMIXSERVER** environment variables to point to the server for which you want to start a Server Agent. For example:

    ```
    ONCONFIG = onconfig.server1

    INFORMIXSERVER = myserver1
    ```

    See the *Installation Guide for Informix Dynamic Server on UNIX* for information about setting UNIX environment variables.

3. Start the IECC Server Agent using the following command:

    ```
    csh> startsa
    ```

*Important: The **startsa** command must be run by the user **informix**.*

4.   To start a Server Agent for a second server belonging to the same Informix DBMS installation area, reset the **ONCONFIG** and **INFOR-MIXSERVER** environment variables to point to the second server. For example:

```
ONCONFIG = onconfig.server2

INFORMIXSERVER = myserver2
```

5.   Start the second IECC Server Agent using the following command:

```
csh> startsa
```

*Tip: The **startsa** script uses a default UDP port number of 14016. To use a different port number, edit the **startsa** script located in $INFORMIXDIR/bin.*

To shut down an IECC Server Agent

1.   Set the **ONCONFIG** and **INFORMIXSERVER** environment variables to point to the configuration file and server for which you want to stop the Server Agent. For example:

```
ONCONFIG = onconfig.server2

INFORMIXSERVER = myserver2
```

2.   Issue the following command:

```
csh> stopsa
```

Uninstalling the Server Agent

These instructions explain how to uninstall the Server Agent on a UNIX computer.

To uninstall the Server Agent

1.   Log in as **root**.
2.   Stop the server agent:
```
$INFORMIXDIR/bin/stopsa
```
3.   Verify that the **admagent** process is no longer running:
```
ps -ef | grep admagent
```

4. Get the process ID of the **osagent** process:

   ```
   ps -ef | grep osagent
   ```

5. Stop the **osagent** process:

   ```
   kill process_id
   ```

6. Verify that the **osagent** process is no longer running:

   ```
   ps -ef | grep osagent
   ```

7. Remove the following files from **$INFORMIXDIR**:

   - **agent_*.log**
   - **event_*.log**
   - **bin/admagent**
   - **bin/osagent**
   - **bin/startsa**
   - **bin/stopsa**
   - **etc/.eventsetup***
   - **msg/*/*/iecc.iem**

Performing a Silent Installation in a Windows Environment

If you have multiple, similar installations to perform, you may want to use the IECC *silent installation* feature. Silent installation allows you to store answers to the Installation wizard questions in a parameter file, called **playback.ini**. You can launch subsequent installations from the command line, specifying the parameter file, license number, and key as arguments. The installation runs "silently," taking its input from the parameter file and writing any errors to the log **%TEMP%\iinstall.log**.

To perform a silent installation

1. Run the Installation wizard in Record mode on the first computer on which you want to install IECC:

   ```
   install.exe record, path_to_playback_file
   ```

   Record mode creates a *playback* file called **playback.ini** in the directory you specify (if you do not specify a directory, **playback.ini** is written to your **%TEMP%** directory).

   playback.ini records your answers to the Installation wizard's prompts.

   Generally, you should not edit **playback.ini**, but you can use a text editor such as Notepad to edit the following parameters, if necessary:

INSTALL_DIR	The installation's root directory; this directory is used as the setting for the **INFORMIXDIR** environment variable. The INSTALL_DIR parameter appears only once in **playback.ini**.
ACTUAL_INSTALL_DIR	Set to the same directory as INSTALL_DIR. The ACTUAL_INSTALL_DIR parameter appears multiple times in **playback.ini**, once for each product.

2. Make the playback file, **playback.ini**, available on a shared drive that is accessible to the next computer on which you want to install IECC.

3. Run the installation on the next computer with the command:

   ```
   install playback, playback_file_directory, license#, key#
   ```

   The install program on the CD must be available on a shared drive that your computer can access.

   In the following example, the IECC install driver uses the **playback.ini** file in the **c:\silentdir** directory, and uses a license number of ABC#F234567 and a key of TCYIBL to run the install:

   ```
   install playback, c:\silentdir, ABC#F234567, TCYIBL
   ```

4. Check the error log **%TEMP%\iinstall.log** to see if there were any errors during the installation.

Enterprise Replication and IECC

This section includes important information if you are using Enterprise Replication.

Installing and Configuring Enterprise Replication Manager (ERM)

You use the IECC Client Configuration snap-in to configure your client computer to connect to database servers used for replication and to configure server group definitions, as described in this section. The Client Configuration snap-in is automatically installed when you install IECC.

To add database server definitions

1. Double-click the **Control Panel** folder.
2. Double-click the **Network** icon. The Network Properties dialog box opens.
3. Click the **Servers** tab.
4. Click **Add**.
5. Enter information in the Add Database Server wizard pages.
6. Click **Finish** when you are done adding the database server.

To create a server group

1. Double-click the **Control Panel** folder.
2. Double-click the **Network** icon. The Network Properties dialog box opens.
3. Click the **Server Groups** tab.
4. Click **New Group**. The New Group dialog box opens.
5. Type a group name in the **Group Name** text box.
6. Check the **Use** group for replication check box and type a replication identifier in the text box.
7. Click **OK**.

After you create a server group definition, the database servers selected for the group appear in a tree view on the Server Groups page of the Network Properties dialog box.

Setting Up Enterprise Replication Manager (ERM)

To use Enterprise Replication Manager, you must use the **Setnet32** utility to set required environment variables and host information.

Use the **Setnet32** utility **Environment** tab to set **INFORMIXDIR**, **INFORMIXSERVER**, and **INFORMIXSQLHOSTS**. The **INFORMIXSQLHOSTS** environment variable must:

- match the **Machine Name** text box of the Shared Servers page of the Network Properties dialog box.
- be preceded by two backslashes (\\).

Use the **Host Information** tab to set the user to **informix** and to set the password for each server you want to connect to with Enterprise Replication Manager, including the server pointed to by **INFORMIXSERVER**.

For information on the **Setnet32** utility, see the *Informix Client Products Installation and Configuration Guide for Microsoft Windows Environments*.

Backup and Restore (BAR) and IECC

This section describes BAR issues for IECC.

Old BAR Jobs

You cannot use IECC to manage or convert BAR jobs created for pre-Version 7.3 Informix servers.

Using Backup Utilities

When you enable logging using the IECC BAR wizard, the LTAPEDEV parameter of your ONCONFIG file is set to one of the following, depending on your server platform:

- **/dev/tapedev** (UNIX)
- **\TAPE0** (Windows NT)

When you change or disable logging using the BAR wizard, the LTAPEDEV parameter is set to one of the following, depending on your server platform:

- **/dev/nul** (UNIX)
- **NUL** (Windows NT)

If you want to use **ontape** (or another backup utility other than **onbar**) to perform backups after you use the BAR wizard, you must modify the LTAPEDEV parameter to specify a backup device.

Setting Backup Mode

If you are using IECC to set the logical log backup mode, do not use the **ontape** utility. In addition:

- Do not set ALARMPROGRAM to **log_full.sh** (for information on ALARMPROGRAM, see the *Administrator's Guide* for your Informix database server).
- Do not manually edit the ONCONFIG file to change the value of LOG_BACKUP_MODE.

Canceling BAR Activities

For servers running on UNIX computers, you can use IECC to cancel BAR activities that are pending. However, due to a known bug (86553), you cannot use IECC to cancel BAR activities that have started running.

To cancel an executing BAR activity

1. Log in as **root** to the UNIX computer hosting Informix Dynamic Server Version 7.3.

> **2.** Get the process ID of **onbar**:
>
> ```
> ps -ef | grep onbar
> ```
>
> **3.** Stop the **onbar** process:
>
> ```
> kill -9 process_id
> ```

The **onbar** process terminates.

Using BAR and Informix Storage Manager (ISM)

To use both BAR and ISM from IECC, you must:

- set the **ISMDIR** environment variable and include the ISM path in your **PATH** environment variable (for Windows NT).
- edit a file (for UNIX).

These tasks are described in this section.

For more information on ISM, see the *Informix Storage Manager Administrator's Guide* and the release notes for ISM (located on the ftp site).

To use both BAR and ISM from IECC

> **1.** Click the Windows **Start** button, and select **Settings→Control Panel**.
>
> **2.** Double-click the **System** icon. The **System Properties** dialog box opens.
>
> **3.** Click the Environment tab.
>
> **4.** Set the **ISMDIR** and **PATH** environment variables in the System Variables section as follows:
>
> ```
> ISMDIR=drive_letter:\ISM\1.00
>
> PATH=...;drive_letter:\ISM\1.00\bin
> ```
>
> For example, you might set them as follows:
>
> ```
> ISMDIR=D:\ISM\1.00
> PATH=...;D:\ISM\1.00\bin  ♦
> ```

To use both BAR and ISM from IECC

The Informix Storage Manager (ISM) initializes a file incorrectly (bug 88287). There are two ways to fix the problem:

- After running **ism_startup** -**init** but before using the IECC BAR wizard, edit the **/etc/sm_versions.std** file. Find this line:

  ```
  1|1.1.1|psm|1
  ```

  Add a pipe character to the end of the line, as an ending delimiter. The line must look like this:

  ```
  1|1.1.1|psm|1|
  ```

- If you have already tried to use IECC's BAR wizard, you must run the following two **insert** statements against the **bar_version** table of the **sysutils** database:

```
insert into bar_version values('1', '1.1.1', 'psm', '1');
insert into bar_version values('1', '1.0.1', 'ism', '1.00');
```
♦

Administering Servers on Remote Networks

You can use IECC 3.0 to administer database servers on remote networks.

To administer a single server on a remote LAN, set the VisiGenic **OSAGENT_ADDR** environment variable to the IP address of the server.

To administer several servers on a remote LAN, set the VisiGenic **OSAGENT_ADDR** environment variable to the IP address of one of the servers. (The server that you choose must be running the Server Agent.) This approach lets you view the servers on the remote LAN in IECC; however, you cannot at the same time view the servers on the local LAN. For further details about configuring the VisiGenic Smart Agent, see Appendix A.

Due to a known bug (88432), if you are administering the servers on the remote LAN via dial-up networking, the servers may appear locked. To access those servers, disconnect, then reconnect.

Modifying the Maximum Sessions Event

The Maximum Sessions event has a default setting of 1 session. Therefore, a Maximum Sessions event can occur shortly after the installation and launching of IECC. Use the Events Properties dialog box to modify the Maximum Sessions event setting to a number appropriate for your Informix installation. For instructions, see the information about event management in the *Informix Enterprise Command Center User Guide*.

Automatic Discovery of Connection Information

IECC does not support the automatic discovery of connection information for some of its features. This affects IECC in the following areas:

- Configuring server information

    If you click the **Discover** button on the **Servers** page of the Network Properties dialog box, a set of servers is displayed. Servers that have a check mark displayed next to them can be merged into the SQLHOSTS key with true values for all database server definition parameters. Servers that do not have a check mark can be merged into the SQLHOSTS key with true values for the server and host name, and default values of olsoctcp for the **protocol** field and turbo for the **servicename** field. You may need to correct these default values.

    For information on configuring server information on your IECC client, see the client configuration section of the *Informix Enterprise Command Center User Guide*.

- Using the **Databases** folder

    If you attempt to open a database server's **Databases** folder and that server's connection information is not contained in the SQLHOSTS key, the connection fails because automatic discovery is not supported. An error message box appears, describing the failure and the **Databases** folder is grayed.

    For information on the **Databases** folder and its contents, see the database object management section of the *Informix Enterprise Command Center User Guide*.

Setting Up IECC to Use Data Loading

In order to use the IECC data loading features you must use the **Setnet32** utility to set a required environment variable and other host information.

Use the **Setnet32** utility's Environment tab to set **INFORMIXSERVER**. Use the **Host Information** tab to set the user to **informix** and to set the password for the server pointed to by **INFORMIXSERVER**.

For information on the **Setnet32** utility, see the *Informix Client Products Installation and Configuration Guide for Microsoft Windows Environments*.

Enabling Mirroring

Informix Dynamic Server 7.3 comes with mirroring disabled. To mirror spaces with IECC, you must first enable mirroring for the database server by setting the ONCONFIG file MIRROR parameter to 1.

For more information on mirroring, see the *Administrator's Guide* for your Informix database server. For instructions on starting mirroring with IECC, see the *Informix Enterprise Command Center User Guide*.

IECC Log Files

There are two IECC log files, both located in the **INFORMIXDIR** directory:

- **agent_*SERVERNAME*.log** contains Server Agent errors.
- **event_*SERVERNAME*.log** contains information about events.

Working with Operating System Equivalent GLS Locales

Currently, Informix provides Global Language Support (GLS) functionality for working with databases in various language environments. Prior to GLS, Informix products such as 7.1x Servers, supported Native Language Support (NLS), which was provided by Unix operating system vendors. All Informix GLS enabled products now use GLS locales rather than NLS locales.

Informix provides operating system equivalent GLS locales for users who migrated from NLS to GLS. Operating system equivalent GLS locales:

- Resolve a backward compatibility issue for connecting between GLS and NLS enabled products.
- Provide easy migration when you move your databases from Informix NLS products to Informix GLS products.

Operating system equivalent locales are GLS locales which contain the same information as the NLS operating system locales. Operating system equivalent locales are available for every platform on which Informix releases GLS enabled server products.

If you want to connect to a database that uses an operating system equivalent GLS locale, you should check if the correct GLS locales have been installed on your client computer. For example, the locales must be installed in the **gls\lc11\os** subdirectory of the **INFORMIXDIR** directory. Within this directory, a file must exist that has the same name as the operating equivalent GLS locale you want to use. If this file does not exist, you can install it by using the Informix International Language Supplement (ILS).

Refer to your operating system documentation for information about NLS.

Refer to the *Informix Migration Guide* for information on migrating from NLS products to GLS products.

Refer to the *Informix Guide to GLS Functionality* for information on working with GLS products and Language Supplements.

Configuring the Smart Agent

This appendix provides background information about configuring the VisiGenic Smart Agent over your network.

Connecting Smart Agents on Different Local Networks

If you start multiple Smart Agents on your local network, they discover each other by using UDP broadcast messages. Your network administrator configures your local network by specifying the scope of broadcast messages using the IP subnet mask.

Figure A-1 shows two Smart Agent processes on separate local networks that are connected by a network link.
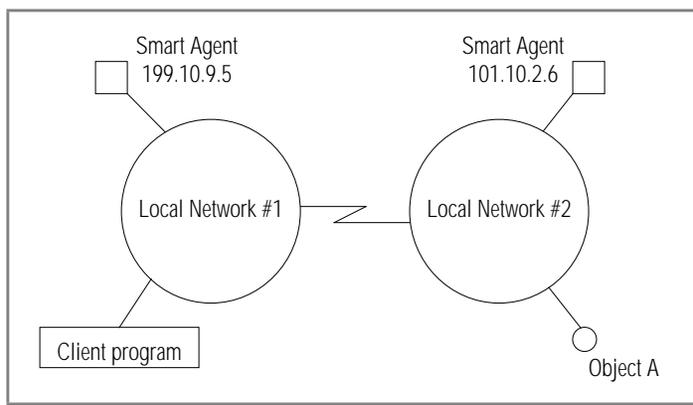
Figure A-1
Smart Agents on Two Local Networks

To allow the Smart Agent on one network to contact a Smart Agent on another local network, you must make the IP address of the remote Smart Agent available in a file named **agentaddr**. The following example shows what the file **agentaddr** must contain to allow the Smart Agent on Local Network #1 to connect to the Smart Agent on Local Network #2:

```
101.10.2.6
```

The path to the **agentaddr** file is specified by setting the **OSAGENT_ADDR_FILE** environment variable.

If the remote network has multiple Smart Agents running, you should list the IP addresses of all of the Smart Agents on the remote network in the **agentaddr** file.

Working with Multi-Homed Hosts

A multi-homed host is a computer that has more than one IP address. When you start a Smart Agent on a multi-homed host, all local networks to which that host is connected are able to communicate with the Smart Agent. This is a powerful method for bridging objects located on separate local networks. For example, Figure A-2 shows a Smart Agent on a multi-homed host that bridges two local networks.
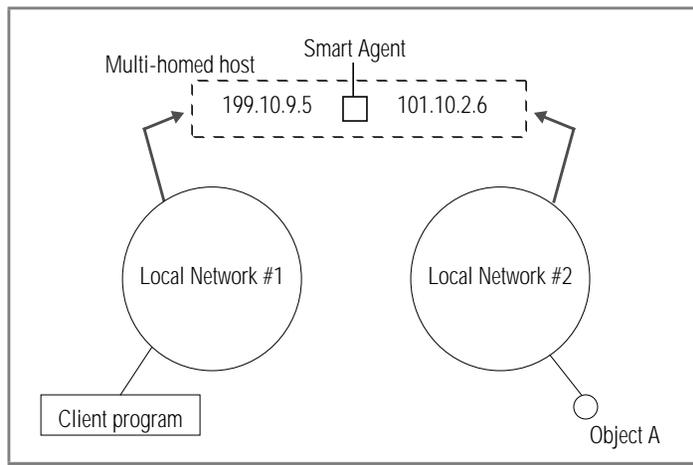
Figure A-2
Single Smart Agent on a Multi-homed Host

UNIX

On UNIX computers, the Smart Agent dynamically configures itself to listen and broadcast on all of the host's interfaces that support point-to-point or broadcast connections. Alternatively, you can use the **localaddr** file to specify interface settings, as described in "Specifying Interface Usage for Smart Agents" on page A-3. ♦

Windows

On Windows NT computers, you must use the **localaddr** file to specify the interface settings that you want the Smart Agent to use, as described in "Specifying Interface Usage for Smart Agents" on page A-3. ♦

Specifying Interface Usage for Smart Agents

Important: It is only necessary to specify interface information for multi-homed hosts, not for single-homed hosts.

You can use the **localaddr** file to specify interface information for each interface that you want the Smart Agent to use on your multi-homed host. The **localaddr** file should have a separate line for each interface that contains the host's:

- IP address
- subnet mask
- broadcast address

The path to the **localaddr** file is specified by setting the **OSAGENT_LOCAL_FILE** environment variable. Lines in the **localaddr** file that begin with # are comments. The following example shows the contents of the **localaddr** file for the multi-homed host shown in Figure A-2.

```
#entries of format <address> <subnet_mask> <broadcast address>
199.10.9.5 255.255.255.0 199.10.9.255
101.10.2.6 255.255.255.0 101.10.2.255
```

UNIX

On UNIX COMPUTERS, although the Smart Agent can automatically configure itself on a multi-homed host, you can use the **localaddr** file to explicitly specify the interfaces that your host contains. You can use the **ifconfig -a** command to display all the available interface values for your host. ♦

Windows

On Windows NT computers, you must use the **localaddr** file to specify the interface settings that you want the Smart Agent to use. You can obtain the appropriate values for this file by using the **ifconfig** command. ♦

Using Point-to-Point Communications

There are two alternative mechanisms you can use to locate a Smart Agent process that circumvent the use of UDP broadcast messages. When a Smart Agent is located with one of these alternate methods, that Smart Agent is used for all subsequent interactions. If a Smart Agent cannot be located by one of these alternate methods, the ORB reverts to using the broadcast message scheme.

The alternative methods are described in the rest of this section.

Specifying an IP Address with an Environment Variable

You can specify the IP address of a Smart Agent by setting the **OSAGENT_ADDR** environment variable prior to starting your client program. This environment variable method takes precedence over specifying a host using the **agentaddr** file.

Specifying Hosts Using the agentaddr File

Your client program can use the **agentaddr** file, described in "Connecting Smart Agents on Different Local Networks" on page A-1, to specify the hosts to search for a Smart Agent process.

To use the agentaddr file to specify hosts

1. Create a file containing the IP addresses or fully qualified hostname of each host where a Smart Agent is running.

1. Set the **OSAGENT_ADDR_FILE** environment variable to point to the path of the file.

   When a client program has this environment variable set, the ORB tries each address in the file until a Smart Agent is located.

This mechanism is overridden if you use an environment variable to specify an IP address, as described in "Specifying an IP Address with an Environment Variable," earlier.

Index

VisiGenic Smart Agent 12,
   A-1 to A-4

W

Windows registry 9