Getting Started With HP Domain XE

Edition 3

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1 Overview of HP Domain XE

This chapter summarizes the structure of this document, and then gives a broad overview of HP Domain XE and its major components.

Structure of This Document

This document contains information in three basic categories, and therefore is broken down accordingly into three chapters that include:

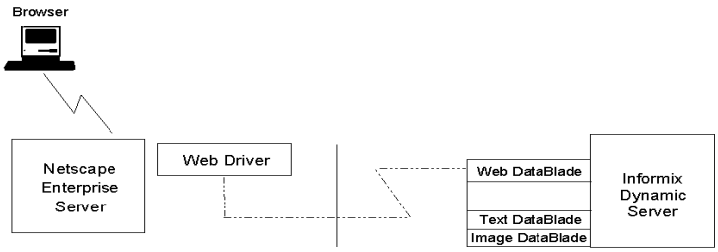
- Overview of HP Domain XE and components
- HP Domain XE configuration, installation, verification
- Guide to component manuals

About This Chapter

This chapter gives a broad overview of HP Domain XE and its major components:

- Netscape Enterprise Server
- Informix Dynamic Server
- DataBlades
- Informix Universal Web Connect

Figure 1-1 Major Components of Domain XE



Description of HP Domain XE

Through the bundling of Informix Dynamic Server, Web DataBlade, Image DataBlade, Text DataBlade, Universal Web Connect, and HP Domain/Netscape Enterprise Server, HP Domain XE allows users to manage complex web content from the Internet and intranet with an object-relational database management system.

The configuration and installation sections in Chapter 2 discuss how the HP Domain XE components can be installed all on one machine or installed in a two-machine configuration.

The web driver is a component of HP Domain XE that is installed on the same machine with Netscape Enterprise Server to allow for communication between Netscape Enterprise Server and Informix Dynamic Server.

The HP Domain XE product and its components are supported by Hewlett Packard.

Chapter 3 provides references to documentation that describes different tasks that can be performed using HP Domain XE.

Netscape Enterprise Server

Netscape Enterprise Server is part of the HP Domain XE product. Netscape Enterprise Server offers such features as:

- Encryption--communication between clients and the server can be done through the Secure Sockets Layer (SSL) 3.0 protocol, enabling encrypted and authenticated transactions.
- Access control--confidential files or directories can be protected by implementing access control by username, password, domain name, or IP address.
- Server management--one point-and-click user interface allows you to manage the servers. You can start, stop, configure and manage the server from any machine that has Internet access.
- Content creation and management--WYSIWYG HTML editing with Netscape Communicator allows you to create Web pages. Text-search capabilities and revision control allow you to manage your content.

The following is a list of Netscape Enterprise Server components that are included with HP Domain XE:

- HP 9000 Domain Enterprise Server Management system (DESMS). DESMS includes the operations and problem-management software called HP 9000 Domain Enterprise Server Operations Manager (DESOP) and a web-based user interface.
- Netscape Communicator browsers.

Informix Dynamic Server

Informix Dynamic Server is an object-relational database-management system (ORDBMS). An object-relational database is organized in tables that consist of rows and columns, just as a relational database is. However, it also supports large objects and enables you to extend its data management capabilities by adding data types and supporting routines that you define.

NOTE

Older versions of Domain XE called the Informix database "INFORMIX-Universal Server." Informix has changed the name to "Informix Dynamic Server." However, some of the Informix manuals still use the old name (INFORMIX-Universal Server).

Informix Dynamic Server, combined with DataBlade technology, provides a new way in which to build and deploy web site applications. With this technology, content such as HTML, text, and images can be managed natively within the database, allowing for dynamic Web page creation and maintenance.

Informix Dynamic Server includes the following components:

- SQL-3 (Structured Query Language) API.
- Application development tools--DataBlade API (used to access data stored in Informix Dynamic Server), Global Language Support (GLS) API (used by DataBlade API and ESQL/C programmers), LOB Locator (for large objects), Informix SPL (Stored Procedure Language, used for developing user-defined routines).
- Supported languages--INFORMIX-ESQL/C, INFORMIX-CLI, INFORMIX-SQL, C++, Java.

Information about these and other Informix Dynamic Server components can be found in the Informix document set, which includes a *Getting Started With INFORMIX-Universal Server* guide. That guide provides a roadmap to all Informix Dynamic Server product components.

DataBlade Technology

A DataBlade is a plug-in object extension to the Informix Dynamic Server. It allows the Informix Dynamic Server to manage complex datatypes such as text, image and Web (HTML). A DataBlade module is a collection of related data types, routines, operators, and access methods that extend Informix Dynamic Server by adding functionality. A DataBlade module can enable the server to provide the same level of support for new datatypes that it provides for built-in datatypes with an infinite level of extensibility.

Three DataBlade modules are included with this release of HP Domain XE:

- Informix Web DataBlade module
- Excalibur Image DataBlade module
- Excalibur Text DataBlade module

Informix Web DataBlade Module

The Web DataBlade module is designed for creating dynamic, scalable, multimedia-rich Web applications. The Web DataBlade module allows all Web site content and application logic to be stored in Informix Dynamic Server.

The Web DataBlade provides the interface between the Informix Dynamic Server database and the Netscape Enterprise Server to serve web content retrieved from the Informix Dynamic Server database.

Excalibur Image DataBlade Module

This DataBlade module provides image read/write capabilities, and allows search by image, color and texture.

Excalibur Text DataBlade Module

This DataBlade module provides text search capabilities that include phrase matching, exact and fuzzy searches, compensation for misspelling, and synonym matching.

Informix Universal Web Connect

Universal Web Connect includes:

- Web-DB Publisher--an application that generates HTML reports from an Informix OnLine Database and publishes the reports on a web server. It includes a scheduling agent for getting batch or timed reports from data in various databases.
- Informix Universal Web Connect API--a set of C library functions which provide web connectivity services and tools for building and deploying client/server database applications on the Web. Applications can be developed using C, C++ and Java.
- Informix AppPage Builder--an application for building AppPages that make up a Universal Web Connect application. An AppPage is an HTML file that can include special tags, variables, and functions that query the database.

2 Installation of HP Domain XE

This section covers the installation of HP Domain XE for both supported configurations:

- Single-system configuration
- Two-system configuration

Single System Configuration

The single-system configuration of HP Domain XE is the configuration in which all components of HP Domain XE are to reside on a single HP 9000 machine, as shown in Table 2-1.

This means that the web server (Netscape Enterprise Server), web server components (including web driver), Informix Dynamic Server, DataBlades (text, image, Web) and Informix Universal Web Connect will all be on the same machine.

The installation steps below describe what you must do to install all HP Domain XE components on one machine.

NOTE The steps tell you first to install Enterprise Server, then install all Informix Dynamic Server components, then run a script for Informix Dynamic Server. Do not install other databases on the same system that contains Informix Dynamic Server.

Table 2-1 HP Domain XE Components in Single-System Configuration

Components on One Machine
Enterprise Server
Web Driver
Informix Dynamic Server
DataBlades: Text, Image, Web
Informix Universal Web Connect

Pre-Installation Checklist

1. HP Domain XE must be installed on HP 9000 Servers running version 10.20.
2. Disk space requirements:

   Enterprise Server: 165 MB.

Informix Dynamic Server: 195 MB, plus 75 MB for sample database.

3. Call Hewlett Packard at (415) 960-5111 to obtain your license and key for Informix Dynamic Server. Call toll free from the United States and Canada at (800) 538-1733. You will need this information during the installation process. Keep a copy of this information.

Installation Steps

1. Load the CD which contains HP Domain XE software.
2. Logon as *root*. Run *swinstall*, and select the Enterprise Server option to copy the Enterprise Server bits to your disk. Enterprise Server will use about 165 MB of disk space. (If Enterprise Server is already installed on this machine, skip to step 4.)
3. Configure the Enterprise Server. Refer to the *Netscape Enterprise Server Administrator's Guide*. Then, start Enterprise Server. Refer to the *HP Domain Software Installation Card* or the *HP Domain Software Release Notes*. Make sure that the web-driver machine is configured to recognize *cgi-bin* programs. Refer to the *Netscape Enterprise Server Administrator's Guide* for details.
4. After Enterprise Server is up and running, run *swinstall* again. Select the item called "HP Domain Intelligent Web Platform for HP 800 Series."

   The *swinstall* program allows you to choose whether you wish to install all Informix Dynamic Server components or only the web-server components of Informix Dynamic Server. Because you are performing a single-system configuration, you should choose to install "All Informix Dynamic Server components." The swinstall program copies all Informix Dynamic Server bits to your disk into a directory called /opt/ifmxIUSBe that requires about 165 MB of disk space.
5. Next, you will run the *IUSBack.setup* script located in the directory */opt/ifmxIUSBe*. This script expands the files that contain the bits from *swinstall* and puts them into two directories. The directory called */usr/informix* contains the binaries (195 MB), and the directory called */var/tmp/ius.install* contains the *domain7* database (75 MB).

NOTE

To run the script, you must have superuser capabilities. There must be a user *informix* and a group *informix* known to the system.

To read a detailed description of what this script does and what the directory and file structure are, you can look at the actual file containing the script. The file is called IUSBack.setup and is located in the directory /opt/ifmxIUSBe.

Now, run the script *IUSBack.setup*.

Some important files will remain in the */var/tmp/ius.install* directory. The log file, *install.log_$pid*, contains all installation activity including the license and key that you will be asked to enter. The error message file, *install.err_$pid*, contains any error messages received during installation. If you receive error messages, consult the Informix documentation or contact your HP representative. You should make copies of the log and error files.

The */var/tmp/ius.install* directory contains a sample database with the Web DataBlade included. The sample database is called *domain7* and is built once the installation script is run.

6. The script will first check to make sure requirements such as disk space and proper directories have been set up. If any requirements have not been met, a web page will show these results. Otherwise, the script will then ask you to enter the license and key for Informix Dynamic Server. This will be the only prompt you see when first executing the script.

7. The script continues. Final bits are installed. You will see messages indicating that various components of Informix Dynamic Server are being installed. This whole process can take as long as one hour, and several minutes may elapse between messages.

   When the script has finished, you will see the message “Install script done.” This message indicates successful installation. If errors occur during installation, you will receive a message to see the install.err_$pid file. You should then refer to the Informix documentation to resolve the error.

8. If you have a Netscape browser, a page is brought up that shows product information (including your license and key), configuration files, Informix Readme files, script and log files, and links to Hewlett Packard and Informix web sites. The page will also contain links to demonstrations of the image and text data blades.

You will need to customize Informix Dynamic Server components that you have just installed. For this information, refer to the *Getting Started With Informix Dynamic Server* guide and the other Informix documentation that you ordered with HP Domain XE.

NOTE

Each DataBlade must be registered for every database it is going to be used with. See the script for an example on how to register a DataBlade. Also, see the *BladeManager User's Guide* and the documentation notes in the directory */usr/informix/extend* for more information. In the */usr/informix/extend* directory, go to a directory for one of the installed DataBlades to locate the notes.

Two-System Configuration

The two-system configuration of HP Domain XE is the configuration in which the web server and web driver reside on one machine and Informix Dynamic Server and DataBlades reside on a second machine, as shown in Table 2-2.

NOTE

Enterprise Server must reside on the same machine as the web driver. Also, do not install other databases on the same system that contains Informix Dynamic Server. *Important:* Install the Machine 1 components first. When you run the script on Machine 2, you will be prompted for the hostname of Machine 1. The script on Machine 2 will verify that the database server is running on Machine 1 and will set up the configuration files for web driver to connect to Machine 1.

Table 2-2 **HP Domain XE Components in Two-System Configuration**

Machine 2 Components	Machine 1 Components
Enterprise Server	Informix Dynamic Server
Web driver/Informix Universal Web Connect (NT only)	DataBlades: Web, Image, Text

Pre-Installation Checklist

1. HP Domain XE must be installed on HP 9000 Servers running version 10.20.
2. Disk space requirements for machine 1:

   Enterprise Server: 165 MB.

   Informix Dynamic Server binaries and PC tools: 74 MB

Disk space requirements for machine 2:

Informix Dynamic Server: 195 MB, plus 75 MB for sample database.

3. Call Hewlett Packard at (415) 960-5111 to obtain your license and key for Informix Dynamic Server. Call toll free from the United States and Canada at (800) 538-1733. You will need this information during the installation process for Machines 1 and 2. Keep a copy of this information.

Installation Steps for Machine 1

Follow the installation steps described in "Single System Configuration" earlier in this chapter.

Installation Steps for Machine 2

1. Load the CD which contains HP Domain XE software.
2. Logon as *root*. Run *swinstall*, and select the Enterprise Server option to copy the Enterprise Server bits to your disk. Enterprise Server will use about 165 MB of disk space. (If Enterprise Server is already installed on this machine, skip to step 4.)
3. Configure the Enterprise Server. Refer to the *Netscape Enterprise Server Administrator's Guide*. Then, start Enterprise Server. Refer to the *HP Domain Software Installation Card* or the *HP Domain Software Release Notes*. Make sure that the web-driver machine is configured to recognize *cgi-bin* programs. Refer to the *Netscape Enterprise Server Administrator's Guide* for details.
4. After Enterprise Server is up and running, run *swinstall again*. Select the item called "HP Domain Intelligent Web Platform for HP 800 Series."

   The *swinstall* program allows you to choose whether you wish to install all Informix Dynamic Server components or only the web-server components of Informix Dynamic Server. Choose to install the web server components only. The swinstall program copies the bits for these components, including the web driver, to your disk into a directory called /opt/ifmxIUSFe that requires about 74 MB of disk space.

5. Next, you will run the *IUSFront.setup* script located in the */opt/ifmxIUSFe* directory. This script expands the files that contains the bits from *swinstall* and puts them into the directory */usr/informix*. About 32 MB of disk space is required for this directory.

   To run the script, you must have superuser capabilities. There must be a user *informix* and a group *informix* known to the system.

   To read a detailed description of what this script does and what the directory and file structure are, you can look at the actual file containing the script. The file is called *IUSFront.setup* and is located in the directory */opt/ifmxIUSFe*.

   Now, run the script *IUSFront.setup*.

   Some important files will be written to a directory called */var/tmp/ius.install*. The log file, *install.log_$pid*, contains all installation activity. The error message file, *install.err_$pid*, contains any error messages received during installation. If you receive error messages, consult the Informix documentation or contact your HP representative. You should make copies of these files.

6. The script will ask you to enter the license and key for Informix Dynamic Server. This will be the only prompt you see when first executing the script.

7. The script checks that the web server components are correctly installed.

8. If the script finishes successfully, you will see the message “Install script done.” If you have a Netscape browser, a page is brought up that shows product information (including your license and key), configuration files, Informix Readme files, script and log files, and links to Hewlett Packard and Informix web sites.

9. The *swinstall* program installs the PC client tools for NT. If desired, you may *ftp* the file */opt/ifmxIUSFe/client_tools.tar* into the destination machine. You will need about 29 MB of disk space for these files on the destination machine.

Checking Version Numbers

To check Informix Dynamic Server version numbers, type */usr/informix/bin/ifx_getversion libnam*e

where libname is {[libos.so libasf.so libsql.so or libgen.so].

To check versions of DataBlades, go to the directory */usr/informix/extend*. DataBlades are listed with their version in the form *DataBladename.version*.

3 Guide to Documentation

This chapter provides a listing of HP Domain XE documentation and some pointers to where specific tasks are covered.

Documents Distributed with HP Domain XE

Manuals for HP Domain XE can be broken down into the following categories:

- Manuals for HP Domain XE as a whole
- Manuals for Netscape Enterprise Server version 3.0
- Manuals for Informix Dynamic Server
- User's guides for individual DataBlades
- Manual for Informix Universal Web Connect

HP Domain XE Manuals

Two documents that are specific to HP Domain XE as a product are:

- *Getting Started with HP Domain XE* (this manual--J3685-90010)
- *HP Domain XE Release Notes* (J3685-90011)

Netscape Enterprise Server Manuals

Netscape Enterprise Server version 3.0 manuals for HP Domain XE can be ordered from Hewlett Packard under the product number J1639AA.

The manual to refer to for installation, configuration and maintenance of Netscape Enterprise Server is:

Netscape Enterprise Server Administrator's Guide (J1582-90094)

Additional manuals in the set are:

- *HP Domain Software Installation Card* (J1582-90099)
- *HP Domain Enterprise Server Operations Manager Concepts Guide* (J1582-90091)
- *HP Domain Software Release Notes* (J1582-90098)
- *Netscape Directory Server Administrator's Guide* (J1582-90104)

- *HP Media Server Installation and Administration Guide* (J1582-90106)
- *Introduction to Communicator 4.0* (J1582-90100)

Informix Dynamic Server Manuals

The Informix manuals are available on CD-ROM. This CD-ROM is orderable from Hewlett Packard with the following HP product number: J1641AA.

These same manuals are orderable on an individual basis from Informix by calling 1-800-331-1763 or by sending email to moreinfo@informix.com. These documents are summarized in the *Getting Started With INFORMIX-Universal Server* guide, which also includes a list of specific tasks and the corresponding Informix manual.

The following are Informix manuals on the CD-ROM that you may need with Domain XE:

- *INFORMIX-Universal Server Installation Guide for Unix*
- *Informix Migration Guide for Database Servers*
- *Getting Started with INFORMIX-Universal Server*
- *INFORMIX-Universal Server Administrator's Guide*
- *INFORMIX-Universal Server Performance Guide*
- *INFORMIX-Universal Server Trusted Facility Manual*
- *INFORMIX-Universal Server Quick Reference Guide*
- *INFORMIX-Universal Server Guide to the High-Performance Loader*
- *INFORMIX-Universal Server Backup and Restore Guide*
- *INFORMIX-Universal Server Archive and Backup Guide*
- *ON-Archive Quick Start Guide*
- *INFORMIX-Universal Server DataBlade API Programmer's Manual*
- *Informix Guide to SQL: Reference*
- *Informix Guide to SQL: Tutorial*
- *DB-Access User Manual*
- *Informix Guide to GLS Functionality*

- *Extending INFORMIX-Universal Server: Data Types*
- *Extending INFORMIX-Universal Server: User-Defined Routines*
- *LOB Locator DataBlade Module Programmer's Guide*
- *BladeManager User's Guide*
- *Informix Error Messages*
- *INFORMIX-Universal Server Client Products Install Guide for Windows*
- *INFORMIX-Universal Server Client Products Installation Guide for UNIX*
- *Using the SQL Editor*
- *Schema Knowledge User's Guide*
- *Informix Web DataBlade Module User's Guide Version 3.3*

User's Guides for Individual DataBlades

The user's guides for the three DataBlades that come with HP Domain XE--Web, image and text DataBlades--are summarized in this section. These are the documents that tell you how to use each DataBlade to allow the Informix Dynamic Server to manage complex data types such as text, image and Web.

Web DataBlade Module User's Guide

The *Web DataBlade Module User's Guide* explains how to use the Web DataBlade to create Web applications that dynamically retrieve data from the Informix Dynamic Server database.

The *Web DataBlade Module User's Guide* provides information about the features that are provided with the Web DataBlade to assist you in developing web-enabled database applications. The guide is intended primarily for Web application designers who are familiar with HTML (including tables and forms), SQL, and database installation and system administration.

Excalibur Image DataBlade Module User's Guide

The *Excalibur Image DataBlade Module User's Guide* contains information about using the Excalibur Image DataBlade module with Informix Dynamic Server to add custom data types and supporting

routines to the server. This manual is part of the software installation of Informix Dynamic Server and therefore an HTML version can be obtained online. Open the *index.html* file to find the directory for this manual.

Excalibur Text Search DataBlade Module User's Guide

The *Excalibur Text Search DataBlade Module User's Guide* contains information to assist you in doing text search and retrieval operations using the Excalibur Text Search DataBlade module. The Excalibur Text Search DataBlade Module User's Guide is intended primarily for programmers who want to build applications that use this DataBlade to perform text searches.

This manual is part of the software installation of Informix Dynamic Server and therefore an HTML version can be obtained online. Open the *index.html* file to find the directory for this manual.

Universal Web Connect Manual

The *Universal Web Connect for Online* manual is part of the software installation of Informix Dynamic Server and therefore an HTML version can be obtained online.