

INFORMIX-Enterprise Gateway Manager

Version 7.2

TECHBRIEF

INFORMIX-Enterprise Gateway Manager is a member of the INFORMIX-Enterprise Gateway family, a complete set of standards-based gateways that includes INFORMIX-Enterprise Gateway with DRDA and INFORMIX-Enterprise Gateway for EDA/SQL. INFORMIX-Enterprise Gateway Manager allows Informix database application developers and users to access information on Oracle, Sybase, and other non-Informix databases as easily and transparently as if they were accessing an Informix database server. In combination with the industry-leading parallel capabilities of Informix Dynamic Server, INFORMIX-Enterprise Gateway products provide high-performance solutions for joining data across heterogeneous data sources such as Oracle, Sybase, DB2, and others.

Universal Access to Enterprise Data

INFORMIX-Enterprise Gateway Manager is designed for Informix customers who also need access to non-Informix databases such as Oracle and Sybase. At the core of the product is an SQL-based gateway that allows a customer's Informix tools, applications, and databases to interoperate transparently with non-Informix databases. Enterprise Gateway Manager helps customers migrate from or coexist in a heterogeneous environment.

Based on the Open Database Connectivity (ODBC) specification from Microsoft, Enterprise Gateway Manager provides access to non-Informix data sources through ODBC drivers that can be loaded dynamically. Specific ODBC drivers are available from Informix for both Oracle and Sybase.

In addition, because of Enterprise Gateway Manager's underlying open architecture, customers and third-party vendors such as Intersolv, TechGnosis, etc. can provide ODBC drivers based on the ODBC specification. When combined with these custom drivers, Enterprise Gateway Manager provides access to other non-Informix data sources in addition to Oracle and Sybase.

ODBC-The De Facto Industry Standard

Microsoft has developed a call level interface (CLI) called Open Database Connectivity (ODBC), which implements a version of the standard CLI from the X/Open SQL Access Group (SAG). ODBC is an API that provides transparent data access to relational databases. Application developers can use ODBC as a standardized way of writing database-independent applications.

The ODBC architecture has four components:

- ODBC-Compliant Application--the ODBC-compliant application performs the ODBC function calls, submits SQL statements and retrieves results
- ODBC Driver Manager--the ODBC driver manager is supplied by Microsoft as a dynamically linked library (DLL) for Windows(TM), and as shared libraries for UNIX® from other vendors.

The driver manager loads the requested driver on behalf of the application and provides the interface to the application

- ODBC Driver--the ODBC driver processes the ODBC function calls, modifies the request to conform to the data source's syntax, submits SQL requests to a specific data source, and returns results to the application
- Data Source--the data source is the DBMS where the data resides

The ODBC driver and the driver manager appear to the application as one unit that processes ODBC calls.

INFORMIX-Enterprise Gateway Manager Features

Enterprise Gateway Manager translates Informix SQL requests into ODBC-compliant function calls. Using emulation, it makes the underlying target DBMS appear to both client and server applications as an instance of INFORMIX-Dynamic Server(TM). Users can access data on the target DBMS from Informix client applications written with products such as INFORMIX-ESQL/C, using an OnLine 5.x or DSA-based engine to coordinate a distributed join.

Distributed Access Mode

Distributed access means that the Informix client application connects to Informix Dynamic Server or other Informix DSA-based server, version 5.x or higher. This server coordinates a distributed join between one or more Informix servers and/or other data sources, using INFORMIX-Enterprise Gateway Manager, INFORMIX-Enterprise Gateway for EDA/SQL, or INFORMIX-Enterprise Gateway *with DRDA*. Figure 1 illustrates distributed access.

When the client connects to Enterprise Gateway Manager in distributed-access mode from a coordinating Informix DSA-based server, 5.x or higher, Enterprise Gateway Manager identifies itself as a database with characteristics identical to those of the coordinating database server.

Distributed Join Capability

Using Informix Dynamic Server, customers can perform distributed joins with Informix, Oracle, and Sybase data in a single SQL statement. In fact, customers can transparently join data between OnLine 5.x or Informix Dynamic Server and any data source accessible through Enterprise Gateway Manager, INFORMIX-Enterprise Gateway with DRDA, or INFORMIX-Enterprise Gateway for EDA/SQL. With this capability, data from various locations within a company can be integrated with data in an Informix database.

Security

Enterprise Gateway Manager enforces a security system that permits only authorized users to access remote data sources. The user of Enterprise Gateway Manager must have a valid user ID for the data source. Enterprise Gateway Manager provides mechanisms that enable mapping of user IDs and passwords between the different database servers. This mechanism is built into the gateway facility *egmdba*.

Unrestricted Connection Support

The ODBC interface allows Enterprise Gateway Manager to connect to a wide range of data sources that might have varying levels of support for transactions or different isolation levels. Combined with the appropriate ODBC driver, unrestricted connection support can provide access to non-relational data sources such as file systems that do not provide transaction- or isolation- level support.

SQL Syntax Support

Enterprise Gateway Manager provides SQL92 Entry Level support. Tools and applications can use SQL to read from and write to Oracle, Sybase, and other data sources. The SQL syntax supported includes the ANSI-standard SQL statements SELECT, INSERT, UPDATE, and DELETE.

Scrolling Cursor Support

INFORMIX-Enterprise Gateway Manager includes scrolling cursor support, which lets users to move backward and forward through retrieved data sets for added convenience and enhanced user productivity.

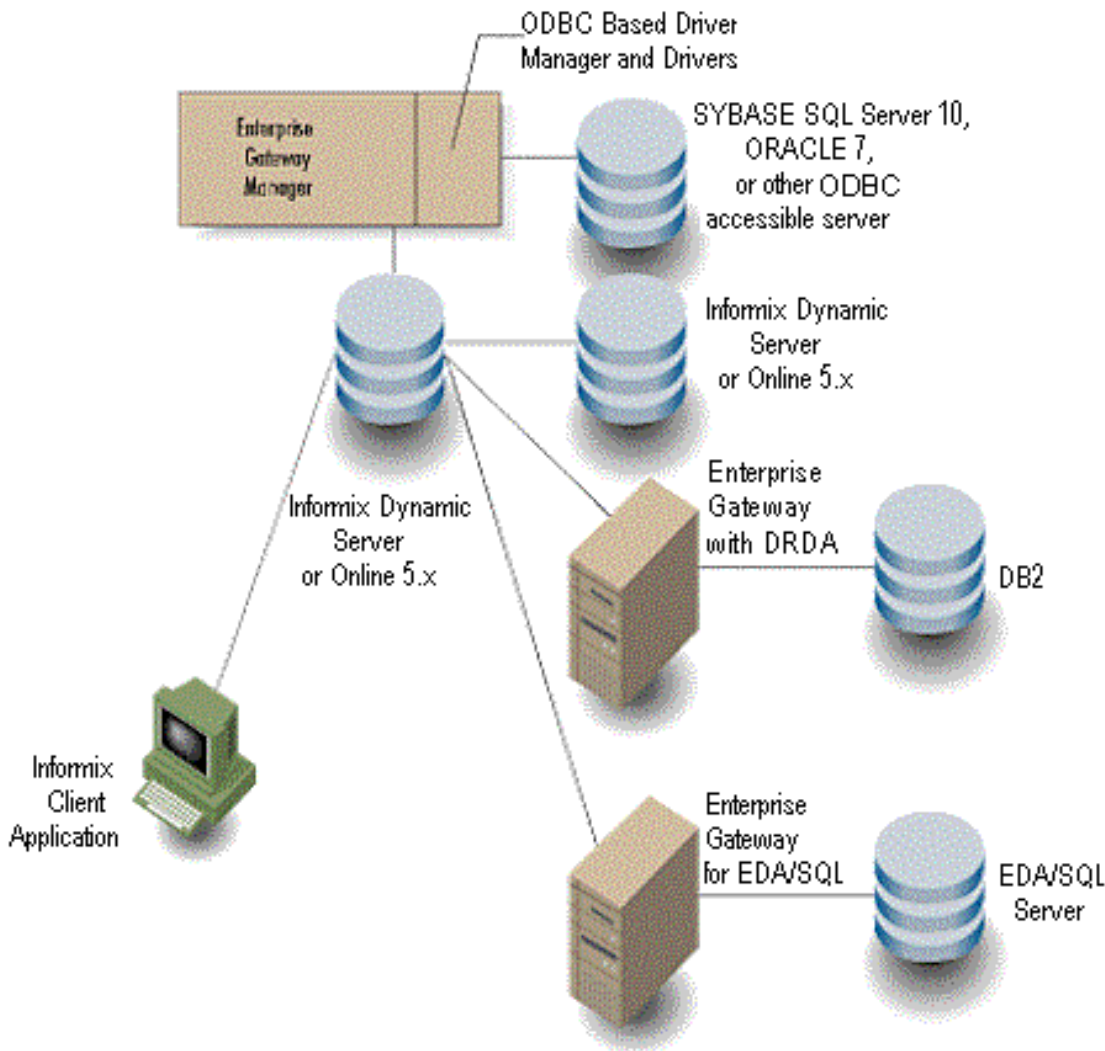


Figure 1: The Role of Enterprise Gateway Manager in Distributed Access Mode.

Technical Specifications for INFORMIX-Enterprise Gateway Manager 7.20

SYSTEM REQUIREMENTS

INFORMIX-Enterprise Gateway Manager requires:

- An installed target DBMS, such as Sybase SQL Server 10
- An installed, supported ODBC Driver or customized driver for the target DBMS (Informix-Open provides this for Oracle and Sybase)
- An installed INFORMIX-Enterprise Gateway Manager resident on the same computer as the ODBC Driver
- An installed client product that uses Informix protocols, such as ESQL/C
- Any valid connection between the Informix client product and the Gateway, such as local pipe, TCP, or IPX/SPX
- A copy of either INFORMIX-OnLine 5.05 or Informix Dynamic Server 7.1x and higher

HARDWARE RESOURCE REQUIREMENTS

INFORMIX-Enterprise Gateway Manager's estimated hardware resource requirements are:

- 4MB of disk space
- 1.2MB of fixed memory for the Enterprise Gateway Manager re-entrant process
- An average of 180KB of virtual memory per Gateway Manager user (varies by application)

COMPATIBILITY

INFORMIX-Enterprise Gateway Manager is accessible through OnLine 5.x or Informix Dynamic Servers using Informix's distributed capabilities. It provides distributed connectivity to the following products:

- INFORMIX-4GL for UNIX
- INFORMIX-ESQL/C for UNIX
- INFORMIX-ESQL/COBOL for UNIX
- INFORMIX-NewEra(TM) for Windows (Motif)
- INFORMIX-NewEra for NT (WOW mode)
- INFORMIX-NewEra ViewPoint Pro for Windows
- Powersoft PowerBuilder 4.0 for Windows
- Centura's SQLWindows 5.0 for Windows 3.1
- Microsoft Visual Basic 3.0 for Windows 3.1

For more information about Informix products and services, please contact the [sales office](#) nearest you.