



# ICM Application Gateway and ICM Gateway SQL planning

---

The Unified ICM Application Gateway and Unified ICM Gateway SQL options allow Unified ICM to integrate external contact center applications into the Unified CCE. Each of these options involves some pre-installation planning. For example, you may need to prepare host systems and databases; review fault tolerance issues; and, in the case of Unified ICM Gateway SQL, plan for data transfer.

- [ICM Application Gateway planning, on page 1](#)
- [ICM Gateway SQL Planning, on page 2](#)

## ICM Application Gateway planning

The Unified ICM Application Gateway option allows the Unified ICM system to interface with any external call center application. Within the Unified ICM software, the Unified ICM Application Gateway feature is implemented as a node in a call routing script. You add a Gateway node to a script to instruct the Unified ICM to execute an external application. This allows the script to evaluate responses from an external application. The Unified ICM can then base subsequent routing decisions on the results produced by the application.

A typical Unified ICM Application Gateway application can return a variable to the CallRouter that identifies the caller as having a certain type of account. The script can then use this information to control where and how the call is routed. Optionally, the Unified ICM software can pass the retrieved information to the site that is receiving the call. In this case, certain data such as account numbers, dates, billing phone numbers, and addresses are passed along with the call to an answering resource.

## Host System Preparation

To prepare for the Unified ICM Application Gateway option, you must set up the host system to communicate with the Unified ICM system. This involves configuring the host application to listen to a socket on the target Unified ICM machine. You also need to configure a name and port number to connect the host system to the Unified ICM central database. These steps are performed at system installation; however, you can begin preparing the host applications ahead of time.

During system installation, when connectivity between the Unified ICM system and host system is established, you must identify the host system to be queried by entering data in the Application\_Gateway table.

## Fault Tolerance

You can configure access to a single host application or duplicate host applications. In a single host configuration, configure the same host for both CallRouters (Side A and Side B). The single host method provides no protection against host failures; however, it does protect against connection failures.

In order to achieve a higher level of fault tolerance in an Unified ICM Application Gateway application, you can connect duplicate host applications to the CallRouter. For example, the Side A and Side B CallRouters can each manage a connection to one of the duplicated host applications. Each time a script initiates a request, both CallRouters query their corresponding host. The CallRouters use the response from the host that responds first. This method is highly reliable. Even if a host or a connection fails, all query requests are satisfied.

## ICM Gateway SQL Planning

The Unified ICM Gateway SQL option allows the CallRouter to query an external Microsoft SQL Server database and use the data in call routing.

**Note**

Before implementing the Gateway SQL and DB Lookup functionality, consider a Unified CVP VXML Application for database lookup instead. The DB Lookup node will interrupt routing while doing its queries. The Unified CVP VXML Application will scale well.

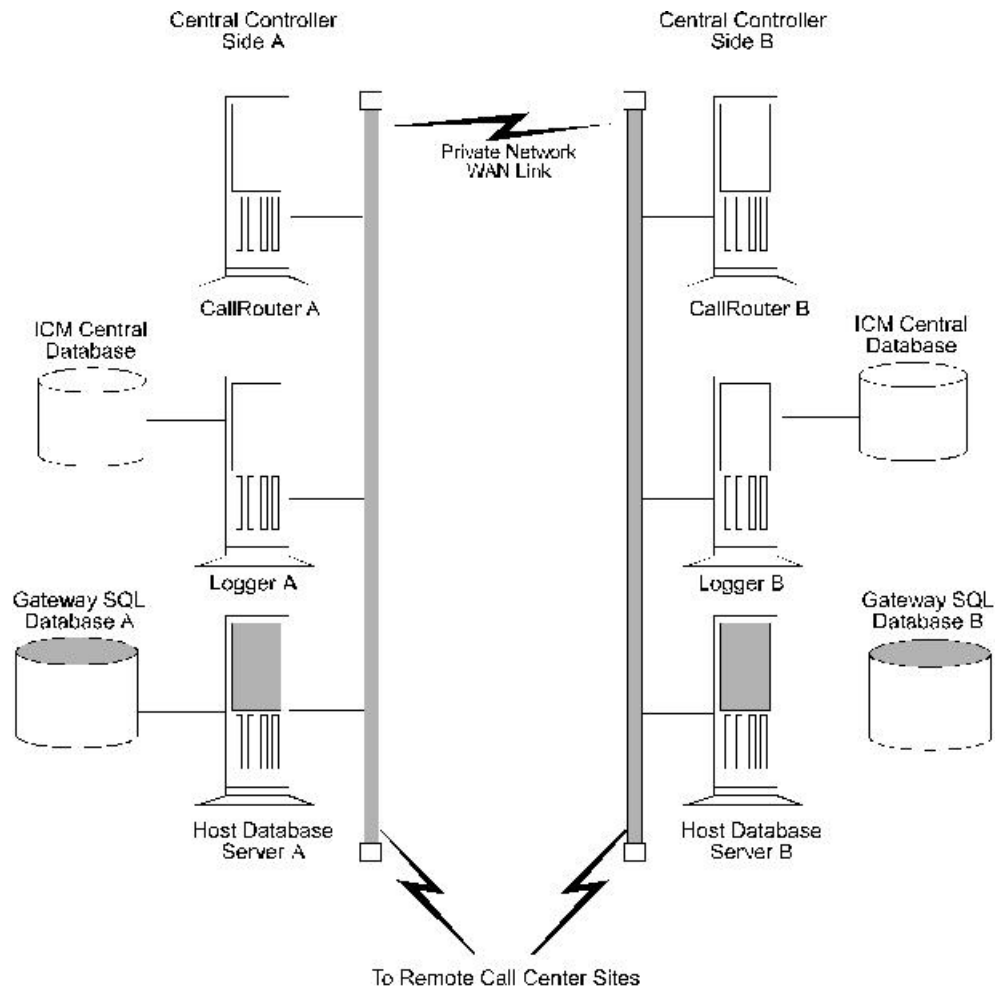
If you are going to use the Gateway SQL option, you need to review several pre-installation planning issues:

- Unified ICM Gateway SQL requires an additional Database Server hardware platform.
- Know the tasks involved in setting up the external host database and populating it with the data you want to use in call routing.

## Database Server Platform

The Unified ICM Gateway SQL option requires a host database server. Duplex the host database server to maintain Unified ICM fault tolerance. A duplexed Unified ICM Gateway SQL system requires two identical host database server platforms. Each host database server resides on the same LAN segment as its corresponding Unified ICM CallRouter. The following figure shows a duplexed Unified ICM system that has a duplexed Unified ICM Gateway SQL host database server.

Figure 1: ICM Gateway SQL Duplexed Configuration



## Data Transfer

To prepare an Unified ICM system for Unified ICM Gateway SQL, you need to make several decisions:

Decide which data you want to use in the external database. For example, will you be using:

- Customer records?
- Account information?
- Other types of data?

Decide where the data is coming from:

- Another database?
- A flat file?
- Other sources?

Make a plan to transfer the data to the external database:

- What type of media will you use to transfer the data (tape, disk, network)?
- Will the transferred data be in a certain format (comma-separated values, text file, Microsoft SQL Server syntax)?

## Database Configuration Overview

For Unified ICM Gateway SQL, you must set up and configure one or more host databases to function with the Unified ICM system.

Configuration considerations include:

- Choosing a host database server platform. The host database server must have adequate processing power and disk space. Cisco can provide you with specifications for basic and high-end host database server platforms.
- Setting up the host database. This includes:
  - Installing a Microsoft SQL Server
    - Creating a database on the host database server platform
    - Defining fields and indexes
    - Setting up permissions and replication
  - Transferring data from a data source. Transfer data to populate the database with the data to be used in call routing (for example, you might want to transfer customer records to the database).
  - Configuring the Unified ICM system to access the host database. Set up user names and passwords that the Unified ICM system can use to access the data in the host database.
  - Writing test scripts to test the Unified ICM Gateway SQL option. Monitor test scripts that use the Script Editor DB Lookup node. The monitoring results are captured and stored in the Route\_Call\_Detail table to validate that the Unified ICM Gateway SQL feature is functioning.