Interaction Concentrator Deployment Guide

Planning Your Deployment

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This topic provides the following information that you need in order to plan an Interaction Concentrator (ICON) installation:

- Compatibility
- Prerequisites
- Antivirus Guidelines
- General Considerations
- Database Sizing

Compatibility

This section lists the various Genesys components with which Interaction Concentrator release 8.1 is compatible. For information about supported operating systems and relational database management systems (RDBMSs), see the *Genesys Supported Operating Environment Reference Guide*.

The table below lists the Genesys product components with which Interaction Concentrator operates. Refer to *Interaction Concentrator 8.1 Release Note* for any updates to the release requirements for the various components.

Area of Functionality	Component/Product
Configuration Layer	Configuration Server release 7.6 or higher DB Server release 7.6 or higher **Notes:** • Unicode support on a Microsoft SQL IDB requires DB Server 8.1.301.11 or higher. • PostgreSQL IDB requires you to use DB Server release 8.1.301.11 or higher, which uses DB Client 8.5.1. Use the following configuration setting to point DB Server to the 8.5.1 DB Client: `postgre_name=./dbclient_851/dbclient_postgre`. • Configuration Server 8.5 and higher accepts `Person` object Employee ID values of up to 255 characters. However, Interaction Concentrator only supports Employee ID values of 64 characters or fewer. This constraint applies to the value written to the EmployeeID field in the GC_AGENT table.

Area of Functionality	Component/Product
Management Layer	Message Server release 7.6 or higher Local Control Agent release 7.6 or higher
T-Server	T-Server release 7.6 or higher **Note:** The feature to determine which party released the call requires T-Server release 8.0 or higher, and is supported for the Alcatel A4400/OXE switch and Avaya switches (requires Avaya Communication Manager 8.0.101.05 or higher).
eServices (formerly Multimedia or Multi-Channel Routing (MCR))	eServices Interaction Server release 7.5 or higher **Note:** To configure the total number of keep-in-memory interactions that can reside concurrently in an interaction queue or interaction workbin requires Interaction Server release 7.6.1 or higher.
Outbound Contact	Outbound Contact Server release 7.6 or higher
Universal Routing	Universal Routing Server release 7.6 or higher

Prerequisites

Interaction Concentrator has important specific requirements noted in the following subsections. Before you install Interaction Concentrator, review the requirements and recommendations in thefollowing sections:

- Hosting
- Genesys Management Framework
- Telephony Objects
- T-Server
- Outbound Contact
- Universal Routing
- Multimedia
- Interaction Database (IDB)
- Security Features

Hosting

Genesys recommends that you or your IT specialist assign host computers to Genesys software before you start a Genesys installation. Keep in mind the following restrictions:

- Do not install all Genesys server applications on the same host computer.
- When installing multiple server applications on the same host computer, prevent all of them, except

Configuration Server, from using swap space.

See Network Locations for Framework Components for information about the optimal locations for:

- Configuration Layer components
- Management Layer components
- T-Server

For Interaction Concentrator and its DB Server, observe the following recommendations:

- Install DB Server on the same computer as the Interaction Database (IDB).
- For better data reliability install ICON as close to T-Server as possible. Ideally, ICON should be on same physical host as the T-Server or Interaction Server for which it gathers data. This prevents network disruptions within the LAN from making an impact on data quality. If you are running a high availability environment, the second instance of ICON should be on a different host but in same subnet as the T-Server or Interaction Server.

Time Synchronization Among Hosts

In an environment with either a single ICON instance or multiple ICON instances operating with multiple T-Servers, synchronize the system time on the T-Server host computers to one second or better.

Genesys Framework

Deploy the Genesys Framework components *before* you deploy Interaction Concentrator.

Configuration Layer

At the very least, you must set up the Configuration Layer of Genesys Framework. You cannot configure Interaction Concentrator components without the Configuration Layer. This layer contains DB Server, Configuration Server, Configuration Database, Configuration Manager, and, optionally, Deployment Wizards.

For performance reasons, Genesys recommends that you set up the DB Server on the same host as the RDBMS server.

- In an environment with multiple IDB instances at separate sites, deploy one DB Server per IDB.
- In an environment with multiple IDB instances at the same site, deploying one DB Server for all IDB instances is sufficient.

Management Layer

If you intend to monitor or control Interaction Concentrator and its DB Server through the Management Layer, you must also configure and install Management Layer components—in particular, LCA, Message Server, Solution Control Server (SCS), and SCI or Genesys Administrator/ Genesys Administrator Extension.

To monitor the status of Interaction Concentrator components through the Management Layer, you

must load an LCA instance on every host that is running ICON and DB Server instances. Without LCA, the Management Layer cannot monitor the status of these components. If you do not use the Management Layer, you do not need LCA.

> **Important**
>
> For information about, and deployment instructions for, these Framework components, see the *Management Framework Deployment Guide* and the *Framework Management Layer User's Guide*.

Telephony Objects

Create configuration objects for every PBX about which you want Interaction Concentrator to store data.

Use Configuration Manager to configure telephony objects, including a Switching Office object and Switch object for the PBX, and one DN (Directory Number) object for each user's telephone number.

- For configuration settings that are specific to Interaction Concentrator, see Switch Configuration Options and DN Configuration Options.

T-Server

If you intend to collect computer-telephony integration (CTI)–related (call) reporting data, configure and install a T-Server application for your particular PBX, if it is not yet deployed. Make sure that the Switch object that this T-Server will serve is specified in the T-Server Application Properties dialog box.

In a multi-site environment, deploy one T-Server application for each PBX.

All T-Servers and, if applicable, Interaction Servers of type T-Server from which an ICON instance should collect data must be listed among the ICON Application object's connections.

> **Important**
>
> For information about, and deployment instructions for, telephony objects and T-Server, see the *Framework T-Server Deployment Guide* for your particular T-Server.

Outbound Contact

To provide outbound information to ICON, at least one OCS application must exist and be properly configured. All OCS instances from which an ICON instance should collect data must be listed among the ICON Application object's connections.

For deployment instructions for Outbound Contact components, see the *Outbound Contact Deployment Guide*. For Outbound Contact migration instructions, see the *Genesys Migration Guide*. For recommendations on how to enable outbound reporting in Interaction Concentrator, refer to Integrating with Outbound Contact.

Universal Routing

If you intend to collect data about virtual queues, deploy components of Universal Routing that support virtual queue functionality. If you have an earlier release of Universal Routing, upgrade to a release that supports virtual queue functionality.

In order to provide virtual queue information to Interaction Concentrator, at least one URS application must exist.

Interaction Concentrator functionality related to writing extended routing results from virtual queues into IDB requires Universal Routing Server (URS) release 7.6 or higher. To enable extraction of this extended routing information, you must also set the values of the **report_reasons** and **report_targets** configuration options in URS to `true`.

For deployment instructions for Universal Routing components, see the *Universal Routing 8.1 Deployment Guide*. For Universal Routing migration instructions, see the *Genesys Migration Guide*. For recommendations on how to enable virtual queue reporting in Interaction Concentrator, refer to Monitoring Virtual Queues and Routing Points.

Interaction Concentrator functionality related to storing virtual queue history in IDB requires URS release 8.1 or higher.

Multimedia

If you intend to collect interaction, agent state, and agent login session data for eServices (email and chat) and/or 3rd Party Media interactions, configure and install Interaction Server, if it is not yet deployed (for instructions, see the *eServices Deployment Guide*).

- For deployment architectures supported by ICON, see the Multimedia tab of the Supported Deployment Scenarios page.

The Interaction Server from which an ICON instance should collect data must be listed among the connections of the ICON Application object. (Or, if you are running a release of ICON prior to 8.1.502.04, the connection to Interaction Server will be represented by a T-Server object. For more information, see Configuring for Multimedia Data.)

> **Important**
>
> The functionality introduced in ICON release 7.6.1 to support a large number of concurrently active multimedia interactions requires Interaction Server release 7.6.1 or higher.

For information about—and deployment instructions for—Interaction Server, see the *eServices*

Deployment Guide. For recommendations on how to enable multimedia reporting in Interaction Concentrator, refer to Integrating with eServices and 3rd Party Media in the *Interaction Concentrator User's Guide*.

Interaction Database

Interaction Concentrator uses IDB to store reporting data. At least one IDB instance is required, which can be running on any Genesys-supported RDBMS except Sybase and Informix. For full information about supported RDBMSs and RDBMS versions, see the *Genesys Supported Operating Environment Reference Guide*. For the changes in RDBMS support introduced with Interaction Concentrator 8.1, see the *Interaction Concentrator 8.1 Release Note*.

When planning an installation, observe the following recommendations for IDB:

- Review the information about the IDB structure in Introducing IDB Schema.
- Estimate IDB size, using the *Interaction Concentrator 8.1 Database Size Estimator*. For more information, see the Database Sizing tab on this page.
- To improve performance, locate your ICON IDB and the associated DB Server application close together in your network topology.

Security Features

Interaction Concentrator supports the following security features:

- Encrypted RDBMSs
- Hiding TEvent attached data from logs.
- Hiding sensitive attached data information in the ICON log file at all log levels.

Important

- If any attached data is configured to be hidden, ICON debug-level messages may hide all attached data keys and values, not just the keys configured to be hidden.
- The **default-filter-type** option in the **[log-filter]** section and the **<key-name>** options in the **[log-filter-data]** section are configured in the ICON Application object. However, the description of the default and valid values, and a full explanation of how these options work, are located in Hide Selected Data in Logs (in the *Genesys Security Deployment Guide*).

Support for Secure Connections

- Starting with release 8.1.1, Interaction Concentrator supports Transport Layer Security (TLS) and TLS-FIPS connections.
- Starting with release 8.1.2, Interaction Concentrator Supports client-side port definition, to provide

secured connections to T-Server, SIP Server, Configuration Server, and Message Server.

On Windows platforms, support for TLS is integrated into the operating system, and there are no additional requirements to enable Interaction Concentrator to support it. On UNIX-based platforms, you must install the Genesys Security Pack on the Interaction Concentrator host.

For details on all of the supported security features, see Security Features in the *Interaction Concentrator User's Guide* and the *Genesys Security Deployment Guide*.

Antivirus Guidelines

Antivirus software can affect system performance and response time but may be necessary to prevent and detect viruses. Genesys recommends that you keep antivirus software enabled on the host where the ICON application is running and monitor performance to ensure there is no impairment to ICON, or to other applications running on the same host.

If you find that antivirus scanning has a significant performance impact, consider excluding the following files and folders from antivirus scanning.

- The **log** folder.
- The three files ICON creates to store information before writing it to IDB. The filenames are configured in the cfg-dbname, pq-dbname, and agent-pstorage-name options.

To reduce the risk of disabling antivirus scanning, Genesys recommends that you do not put any executable files into unscanned folders and that you prohibit **execute** permissions on those folders.

> ### Important
> The recommendation to enable antivirus scanning assumes that your antivirus software is configured to enable all port connections and communication Interaction Concentrator requires. If any required port access or communication is blocked, ICON operations will be affected.

General Considerations

Interaction Concentrator is flexible enough to fit any contact center. When planning a deployment, evaluate your environment and your reporting needs. Review the main deployment scenarios in Deployment Scenarios, and answer the following questions:

- How many ICON servers do you need, and what data should each ICON instance handle? From what sources will the data come to a given ICON instance?
- How many Interaction Databases do you need, and what data will each IDB instance store? Which ICON

instances will store the data into a particular IDB instance? In the case of multiple IDB instances, will you need to deploy a centralized IDB, and, if so, from which subset of IDBs will data be merged into the centralized IDB? How often should the merge procedure be run?

- How many DB Server applications do you need, if you deploy multiple IDB instances? Will any of these DB Server instances handle database requests for servers other than ICON?
- How many Database Access Point (DAP) applications do you need? What data will each particular ICON instance store through each DAP?

The answers to these questions will help you determine the Interaction Concentrator deployment topology and the main configuration settings for all components.

Database Sizing

The size of your IDB depends on your deployment scenario, including such factors as typical call flows, attached data storage, values configured for storing outbound data in custom or secure fields, and the amount of time that records will be retained in the database.

Genesys provides an interactive tool to help you estimate the required size of your IDB. This tool, the *Interaction Concentrator 8.1 Database Size Estimator*, is a Microsoft Excel spreadsheet.

For more information about database sizing and deployment guidelines, see the Interaction Concentrator section in the *Genesys Hardware Sizing Guide*. The Genesys Info Mart section of the Genesys Hardware Sizing Guide can also provide helpful sizing and performance information for Interaction Concentrator.